APPENDIX D

GIS METADATA

GIS metadata is provided in the following attachments:

Attachment D1 – Covered Lands
Attachment D2 – Indiana Bat
Attachment D3 – Bog Turtle
Attachment D4 – Madison Cave Isopod
Attachment D5 – Clubshell Mussel
Attachment D6 – Northern Riffleshell Mussel
Attachment D7 – Fanshell Mussel
Attachment D8 – James Spinymussel
Attachment D9 – Sheepnose Mussel
Attachment D10 – Nashville Crayfish
Attachment D11 – American Burying Beetle
Attachment D12 – Federal Data Sources
Attachment D13 – GAP Data

Attachment D1 – Covered Lands

coveredlands

```
Identification_Information:
  Citation:
    Citation_Information:
      Originator: ENSR
      Publication_Date: 20071203
      Title: NiSource Covered Lands (March 3, 2008)
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage:
\\03ftcollins\Graphics\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\
CoveredLands\CoveredLands_DISS_20080311.shp
  Description:
    Abstract: Version 3 of the Covered Lands Shapefile.  This version was created to
update the covered lands with the addition of areas around compressor stations and
storage fields.  This dataset also corrects irregularities in the data that existed
in the original release of the covered lands.  Additionally, this dataset was
modified in March, 2008 to represent the Granite State Gas Transmission operating
company being sold.
    Purpose: This shapefile was created to update the Covered Lands data for the
NiSource pipeline system.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 20071203
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -93.656699
      East_Bounding_Coordinate: -70.285965
      North_Bounding_Coordinate: 45.978766
      South_Bounding_Coordinate: 27.351978
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: Covered Lands
      Theme_Keyword: NiSource
      Theme_Keyword: Covered Lands
    Place:
      Place_Keyword: Eastern U.S.
  Access_Constraints: Contains sensitive location information, do not use or
distribute without direct permission from NiSource.
  Use_Constraints: Do not use without permission from NiSource
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Brent Read
        Contact_Organization: ENSR
      Contact_Position: GIS Analyst
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1601 Prospect Parkway
        City: Fort Collins
        State_or_Province: Colorado
        Postal_Code: 80525
        Country: USA
      Contact_Voice_Telephone: 970.493.8878
      Contact_Facsimile_Telephone: 970.493.0213
      Contact_Electronic_Mail_Address: bread@ensr.aecom.com
      Hours_of_Service: M-F Mountain Time
  Data_Set_Credit: Data used to create this dataset originate from NiSource.
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service
Pack 2; ESRI ArcCatalog 9.2.2.1350
```

Data_Quality_Information:
  Completeness_Report:
    Complete,
    Update as needed.
  Lineage:
    Source_Information:
      Source_Citation:
        Citation_Information:
          Originator: NiSource
          Publication_Date: Unpublished Material
          Title: David Styf
      Source_Scale_Denominator: Unknown
      Type_of_Source_Media: Shapefile
      Source_Citation_Abbreviation: NiSource
      Source_Contribution: Pipeline Centerlines for the Columbia Gas, Columbia Gulf, Granite State and Crossroads gas transmission systems.
    Process_Step:
      Process_Description:
        In the year 2006, ENSR recieved multiple shapefile datasets containing the NiSource pipeline system and compressor station locations. These pipeline datsets were merged into a single shapefile. This pipeline shapefiles was then buffered at a distance of .5 miles to create a 1 mile corridor surrounding the pipeline system.

        This pipeline corridor was released to various organizations to characterize the lands potential impacted by NiSource (CoveredLands).

        In 2007, ENSR noted irregularities in the original pipeline system, began a QAQC process that resulted in receiving from NiSource new shapefiles for all of the pipeline system. At this time ENSR also confirmed the accuracy of the compressor stations with NiSource and also worked with NiSource to devise a method for encorporating Storage Fields into the Covered Lands shapefile.

        The new (November, 2007) pipeline system was used to re-create the 1-mile corridor. The 1-mile corridor was then clipped to the shoreline extent as given by the 2007 NOAA shorelines shapefile for the coast of Louisiana.

        The compressor stations were buffered at .5 miles, and the storage facilities that are expected to expand in the future were delineated by the county in which they reside.

        These three polygon shapefiles were combined in ArcGIS using the Union tool to create the Covered Lands Version 2, and the atttributes were reclassified as follows:
        CS: Compressor Station
        SF: Storage Field
        PL: Pipeline Corridor
        or any combination of the above where they overlap.
      Process_Date: 20071203
      Process_Contact:
        Contact_Information:
          Contact_Person_Primary:
            Contact_Person: Brent Read
            Contact_Organization: ENSR
          Contact_Position: GIS Analyst
          Contact_Address:
            Address_Type: mailing and physical address
            Address: 1601 Prospect Parkway
            City: Fort Collins
            State_or_Province: Colorado
            Postal_Code: 80525
            Country: USA
          Contact_Voice_Telephone: 970.493.8878

coveredlands
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Hours_of_Service: 8-5 M-F
Process_Step:
Process_Description: The portion of the Covered Lands in Maine, Massachusetts and New Hampshire was removed from the shapefile to reflect the selling of the Granite State Gas Transmission operating company.
Process_Date: 20080311
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address
Address: 1601 Prospect Pkwy
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 0
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: CoveredLands_DISS_20080311
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are

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automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: Id
    Attribute:
      Attribute_Label: ACRES
Distribution_Information:
  Distributor:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Brent Read
        Contact_Organization: ENSR
      Contact_Position: GIS Analyst
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1601 Prospect Pkwy
        City: Fort Collins
        State_or_Province: Colorado
        Postal_Code: 80525
        Country: USA
      Contact_Voice_Telephone: 970.493.8878
      Contact_Facsimile_Telephone: 970.493.8878
      Contact_Electronic_Mail_Address: bread@ensr.aecom.com
  Distribution_Liability: ENSR shall not be held liable for improper or incorrect
use of the data described and/or contained herein. This dataset is restricted in
purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species
Habitat Conservation Plan (MSHCP).  It is not designed nor intended to
comprehensively capture all suitable habitat for any given species.  The information
contained in these data is dynamic and may change over time. The data are not better
than the original sources from which they were derived. It is the responsibility of
the data user to use the data appropriately and consistent within the limitations of
geospatial data in general and these data in particular. ENSR gives no warranty,
expressed or implied, as to the accuracy, reliability, or completeness of these
data. It is strongly recommended that these data are directly acquired from ENSR and
not indirectly through other sources which may have changed the data in some way.
Although these data have been processed successfully on a computer system by ENSR,
no warranty expressed or implied is made regarding the utility of the data on
another system or for general or scientific purposes, nor shall the act of
distribution constitute any such warranty. This disclaimer applies both to
individual use of the data and aggregate use with other data.
  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Format_Name: SHP
        Transfer_Size: 0.000
    Ordering_Instructions:
      Contact Rick Hall at NiSource or
      Contact Gabrielle Borin, Jamie Schlangen or Jessica Rubado at ENSR for
ordering instructions (970.493.8878).
Metadata_Reference_Information:
  Metadata_Date: 20080613
  Metadata_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Brent Read
        Contact_Organization: ENSR
      Contact_Position: GIS Analyst
      Contact_Address:
```

```
                                coveredlands
      Address_Type: mailing and physical address
      Address: 1601 Prospect Parkway
      City: Fort Collins
      State_or_Province: Colorado
      Postal_Code: 80528
      Country: USA
    Contact_Voice_Telephone: 970.493.8878
    Contact_Facsimile_Telephone: 970.493.0213
    Contact_Electronic_Mail_Address: bread@ensr.aecom.com
    Hours_of_Service: 8-5 M-F
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
  Online_Linkage: http://www.esri.com/metadata/esriprof80.html
  Profile_Name: ESRI Metadata Profile
```

Attachment D2 – Indiana Bat

Attachment D3 – Bog Turtle

Attachment D4 – Madison Cave Isopod

Attachment D5 – Clubshell Mussel

Attachment D6 – Northern Riffleshell Mussel

Attachment D7 – Fanshell Mussel

Attachment D8 – James Spinymussel

Attachment D9 – Sheepnose Mussel

Attachment D10 – Nashville Crayfish

Attachment D11 – American Burying Beetle

Attachment D12 – Federal Data Sources

Attachment D13 – GAP Data

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS
      Publication_Date: 10/09/09
      Title: Restricted_CoveredLands_eco_100909
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: Version 4.1 of the Covered Lands dataset. This version was created to update the covered lands where coverage width was reduced to lessen impact on some species. This dataset was modified in October, 2009.
    Purpose: This shapefile was created to update the Covered Lands data for the NiSource pipeline system.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 10/09/09
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -93.656699
      East_Bounding_Coordinate: -73.746345
      North_Bounding_Coordinate: 43.760846
      South_Bounding_Coordinate: 27.758233
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: Covered Lands
      Theme_Keyword: NiSource
      Theme_Keyword: Covered Lands
    Place:
      Place_Keyword: Eastern U.S.
  Access_Constraints: Contains sensitive location information, do not use or distribute without direct permission from NiSource.
  Use_Constraints: Do not use without permission from NiSource
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Erik Olson
        Contact_Organization: USFWS
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 Federal Drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Data_Set_Credit: Data used to create this dataset originate from NiSource.
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
  Completeness_Report:
    Complete,

Update as needed.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: NiSource
Publication_Date: Unpublished Material
Title: David Styf
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Shapefile
Source_Citation_Abbreviation: NiSource
Source_Contribution: Pipeline Centerlines for the Columbia Gas, Columbia Gulf, Granite State and Crossroads gas transmission systems.
Source_Information:
Source_Citation:
Citation_Information:
Originator: Brent Read
Publication_Date: 20080311
Title: ENSR
Geospatial_Data_Presentation_Form: vector digital data
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Shapefile
Source_Citation_Abbreviation: ENSR
Source_Contribution: Version 3 of Covered Lands Shapefile (CoveredLands_DISS_200803011)
Process_Step:
Process_Description:
In the year 2006, ENSR recieved multiple shapefile datasets containing the NiSource pipeline system and compressor station locations. These pipeline datsets were merged into a single shapefile. This pipeline shapefiles was then buffered at a distance of .5 miles to create a 1 mile corridor surrounding the pipeline system.

This pipeline corridor was released to various organizations to characterize the lands potential impacted by NiSource (CoveredLands).

In 2007, ENSR noted irregularities in the original pipeline system, began a QAQC process that resulted in receiving from NiSource new shapefiles for all of the pipeline system. At this time ENSR also confirmed the accuracy of the compressor stations with NiSource and also worked with NiSource to devise a method for encorporating Storage Fields into the Covered Lands shapefile.

The new (November, 2007) pipeline system was used to re-create the 1-mile corridor. The 1-mile corridor was then clipped to the shoreline extent as given by the 2007 NOAA shorelines shapefile for the coast of Louisiana.

The compressor stations were buffered at .5 miles, and the storage facilities that are expected to expand in the future were delineated by the county in which they reside.

These three polygon shapefiles were combined in ArcGIS using the Union tool to create the Covered Lands Version 2, and the atttributes were reclassified as follows:
CS: Compressor Station
SF: Storage Field
PL: Pipeline Corridor
or any combination of the above where they overlap.
Process_Date: 20071203
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address

Address: 1601 Prospect Parkway
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Hours_of_Service: 8-5 M-F
Process_Step:
Process_Description: The portion of the Covered Lands in Maine, Massachusetts and New Hampshire was removed from the shapefile to reflect the selling of the Granite State Gas Transmission operating company.
Process_Date: 20080311
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address
Address: 1601 Prospect Pkwy
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Process_Step:
Process_Description: Version 4 was created to restrict some portions of the covered lands to ROW boundaries to reduce species impacts. Areas of restriction were described by Rick Hall (NiSource) and edited by USFWS. Covered Lands were restricted to a 50 ft wide buffer around single pipelines, and 25 ft wide buffer around multiple pipelines close to one another. Decisions about appropriate buffer type and edits at transition points were made manually by USFWS. Polygon M values were stripped during this process to get around an ESRI bug (NIM044000).
Source_Used_Citation_Abbreviation: X:\NiSourceData\CoveredLands_DISS_20080311
Process_Date: 05/05/2009
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS
Contact_Position: GIS Technician
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Version 4.1 was created to restrict some portions of the covered lands to reduce species impacts. An area of the Upper Atchafalya River Basin was removed from the covered lands.
Process_Date: 10/09/2009
Process_Contact:
Contact_Information:

```
        Contact_Person_Primary:
          Contact_Person: Erik Olson
          Contact_Organization: USFWS
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Voice_Telephone: 6127135488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
    Process_Step:
      Process_Description: metadata updated
      Process_Date: 10/19/2009
      Process_Contact:
        Contact_Information:
        Contact_Person_Primary:
          Contact_Person: Erik Olson
          Contact_Organization: USFWS
        Contact_Position: Fish and Willife Biologist (GIS)
        Contact_Voice_Telephone: 6127135488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 46
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000328
          Ordinate_Resolution: 0.000328
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Resolution: 0.000100
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: Restricted_CoveredLands_eco_100909
    Attribute:
      Attribute_Label: OBJECTID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
```

Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: Original_A
Attribute:
Attribute_Label: Shape_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: Shape_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Address:
Address_Type: mailing and physical address
Country: USA
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data have been processed successfully on a computer system by USFWS, no warranty expressed or implied is made regarding the utility of the data on another system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SHP
Transfer_Size: 0.000
Ordering_Instructions: Contact Rick Hall at NiSource.
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS
Contact_Position: GIS Technician
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive

City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: ENSR
      Publication_Date: 20071203
      Title: Pipelines_Dissolved_eco_050409
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: Version 2.1 of the pipeline centerlines shapefile. This version was created to avoid an ESRI bug that was limiting processing.
    Purpose: This shapefile was created to update the Pipeline data for the NiSource pipeline system.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 20071203
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -93.648319
      East_Bounding_Coordinate: -73.758056
      North_Bounding_Coordinate: 43.753510
      South_Bounding_Coordinate: 27.766372
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: MSHCP
      Theme_Keyword: NiSource
      Theme_Keyword: Pipeline Centerlines
    Place:
      Place_Keyword: Eastern U.S.
  Access_Constraints: Contains sensitive location information, do not use or distribute without direct permission from NiSource.
  Use_Constraints: Do not use without permission from NiSource
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Brent Read
        Contact_Organization: ENSR
      Contact_Position: GIS Analyst
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1601 Prospect Parkway
        City: Fort Collins
        State_or_Province: Colorado
        Postal_Code: 80525
        Country: USA
      Contact_Voice_Telephone: 970.493.8878
      Contact_Facsimile_Telephone: 970.493.0213
      Contact_Electronic_Mail_Address: bread@ensr.aecom.com
      Hours_of_Service: M-F Mountain Time
  Data_Set_Credit: Data used to create this dataset originate from NiSource.
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:

Completeness_Report:
Complete,
Update as needed.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: NiSource
Publication_Date: Unpublished Material
Title: David Styf
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Shapefile
Source_Citation_Abbreviation: NiSource
Source_Contribution: Pipeline Centerlines for the Columbia Gas, Columbia Gulf, Granite State and Crossroads gas transmission systems.
Process_Step:
Process_Description:
In the year 2006, ENSR recieved multiple shapefile datasets containing the NiSource pipeline system and compressor station locations. These pipeline datsets were merged into a single shapefile.

In 2007, ENSR noted irregularities in the original pipeline system, began a QAQC process that resulted in receiving from NiSource new shapefiles for all of the pipeline system. At this time ENSR also confirmed the accuracy of the compressor stations with NiSource and also worked with NiSource to devise a method for encorporating Storage Fields into the Covered Lands shapefile. The new (November, 2007) pipeline system was used to re-create the 1-mile corridor.

(NOTE: This description was extracted from the covered lands process descriptions. The covered lands metadata was what was provided with the pipeline datasets provided by ENSR. No metadata specific to the creation of the original pipeline file was found.)
Process_Date: Unknown
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address
Address: 1601 Prospect Parkway
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Hours_of_Service: 8-5 M-F
Process_Step:
Process_Description: Shapefile features were imported into a file geodatabase feature class. Polyline M values were stripped during this process to avoid an ESRI bug (NIM044000) in further analysis.
Source_Used_Citation_Abbreviation: E:\current_projects\X_drive\NiSourceData\Pipelines_Dissolved_20080311.shp
Process_Date: 20090504
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address

```
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612.-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
    Process_Step:
      Process_Description: Metadata imported and updated.
      Source_Used_Citation_Abbreviation: E:\current_projects\X_drive\NiSourceData\NiSource_HalfMileBuff_20080311.shp.xml
      Process_Date: 20100621
      Process_Time: 12063300
      Process_Contact:
        Contact_Information:
          Contact_Person_Primary:
            Contact_Person: Erik Olson
            Contact_Organization: US Fish and Wildlife Service
          Contact_Position: Fish and Wildlife Biologist (GIS)
          Contact_Address:
            Address_Type: mailing and physical address
            Address: 1 Federal Drive
            City: Fort Snelling
            State_or_Province: Minnesota
            Postal_Code: 55111
            Country: USA
          Contact_Voice_Telephone: 612-713-5488
          Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: String
      Point_and_Vector_Object_Count: 27551
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000328
          Ordinate_Resolution: 0.000328
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
```

Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Pipelines_Dissolved_eco_050409
Attribute:
Attribute_Label: OBJECTID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: OP_COMPANY
Attribute:
Attribute_Label: Original_MILES
Attribute:
Attribute_Label: SHAPE_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SHP
Transfer_Size: 9.385
Ordering_Instructions:
Contact Rick Hall at NiSource or
Contact Gabrielle Borin, Jamie Schlangen or Jessica Rubado at ENSR for ordering instructions (970.493.8878).
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time

Metadata_Extensions:
  Online_Linkage: http://www.esri.com/metadata/esriprof80.html
  Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
  Online_Linkage: http://www.esri.com/metadata/esriprof80.html
  Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: ENSR
      Publication_Date: 20071203
      Title: Pipeline_HalfMileBuff_eco_052209
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: Version 2.1 of the Pipeline Corridor Shapefile. This version was created to avoid an ESRI bug that was limiting processing.
    Purpose: This shapefile was created to update the Pipeline Corridor data for the NiSource pipeline system.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 20071203
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -93.656699
      East_Bounding_Coordinate: -73.746345
      North_Bounding_Coordinate: 43.760846
      South_Bounding_Coordinate: 27.758233
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: MSHCP
      Theme_Keyword: NiSource
      Theme_Keyword: Pipeline Corridor
    Place:
      Place_Keyword: Eastern U.S.
  Access_Constraints: Contains sensitive location information, do not use or distribute without direct permission from NiSource.
  Use_Constraints: Do not use without permission from NiSource
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Brent Read
        Contact_Organization: ENSR
      Contact_Position: GIS Analyst
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1601 Prospect Parkway
        City: Fort Collins
        State_or_Province: Colorado
        Postal_Code: 80525
        Country: USA
      Contact_Voice_Telephone: 970.493.8878
      Contact_Facsimile_Telephone: 970.493.0213
      Contact_Electronic_Mail_Address: bread@ensr.aecom.com
      Hours_of_Service: M-F Mountain Time
  Data_Set_Credit: Data used to create this dataset originate from NiSource.
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:

Completeness_Report:
Complete,
Update as needed.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: NiSource
Publication_Date: Unpublished Material
Title: David Styf
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Shapefile
Source_Citation_Abbreviation: NiSource
Source_Contribution: Pipeline Centerlines for the Columbia Gas, Columbia Gulf, Granite State and Crossroads gas transmission systems.
Process_Step:
Process_Description:
In the year 2006, ENSR recieved multiple shapefile datasets containing the NiSource pipeline system and compressor station locations. These pipeline datsets were merged into a single shapefile. This pipeline shapefiles was then buffered at a distance of .5 miles to create a 1 mile corridor surrounding the pipeline system.

This pipeline corridor was released to various organizations to characterize the lands potential impacted by NiSource (CoveredLands).

In 2007, ENSR noted irregularities in the original pipeline system, began a QAQC process that resulted in receiving from NiSource new shapefiles for all of the pipeline system. At this time ENSR also confirmed the accuracy of the compressor stations with NiSource and also worked with NiSource to devise a method for encorporating Storage Fields into the Covered Lands shapefile.

The new (November, 2007) pipeline system was used to re-create the 1-mile corridor. The 1-mile corridor was then clipped to the shoreline extent as given by the 2007 NOAA shorelines shapefile for the coast of Louisiana.

The compressor stations were buffered at .5 miles, and the storage facilities that are expected to expand in the future were delineated by the county in which they reside.

These three polygon shapefiles were combined in ArcGIS using the Union tool to create the Covered Lands Version 2, and the atttributes were reclassified as follows:
CS: Compressor Station
SF: Storage Field
PL: Pipeline Corridor
or any combination of the above where they overlap.
Process_Date: 20071203
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address
Address: 1601 Prospect Parkway
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Hours_of_Service: 8-5 M-F

Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Analyses\CoveredLands\CoveredLands_20071203vs2006\SymDiff_CoveredLands20071203_NiSourceHalfMileBuff_ByState.shp.xml
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Analyses\CoveredLands\CoveredLands_20071203vs2006\SymDiff_CoveredLands20071203_NiSourceHalfMileBuff.shp.xml
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\CoveredLands\CoveredLands_CS_SF_PL_20071203.shp.xml
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\Pipelines\Pipelines_Dissolved_20071203.shp.xml
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\Pipelines\NiSource_HalfMileBuff_20080311
Process_Step:
Process_Description: Shapefile features were imported into a file geodatabase feature class. Polygon M values were stripped during this process to avoid an ESRI bug (NIM044000) in further analysis.
Source_Used_Citation_Abbreviation: E:\current_projects\X_drive\NiSourceData\NiSource_HalfMileBuff_20080311.shp
Process_Date: 20090522
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612.-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported and updated.
Source_Used_Citation_Abbreviation: E:\current_projects\X_drive\NiSourceData\NiSource_HalfMileBuff_20080311.shp.xml
Process_Date: 20100621
Process_Time: 12063300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 51
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:

```
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000328
          Ordinate_Resolution: 0.000328
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Resolution: 0.000100
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: Pipeline_HalfMileBuff_eco_052209
    Attribute:
      Attribute_Label: OBJECTID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: FEATURE
    Attribute:
      Attribute_Label: ACRES
    Attribute:
      Attribute_Label: SHAPE_Length
      Attribute_Definition: Length of feature in internal units.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Positive real numbers that are automatically generated.
    Attribute:
      Attribute_Label: SHAPE_Area
      Attribute_Definition: Area of feature in internal units squared.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Positive real numbers that are automatically generated.
Distribution_Information:
```

Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SHP
Transfer_Size: 9.385
Ordering_Instructions:
Contact Rick Hall at NiSource or
Contact Gabrielle Borin, Jamie Schlangen or Jessica Rubado at ENSR for ordering instructions (970.493.8878).
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: ENSR
      Publication_Date: 20071203
      Title: NiSource_ROW75ft_dissolved_eco_021610
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: Version 2.1 of the pipeline Right of Way (ROW) shapefile. This version was created to avoid an ESRI bug that was limiting processing.
    Purpose: This shapefile was created to update the Pipeline ROW data for the NiSource pipeline system.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 20071203
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -93.648438
      East_Bounding_Coordinate: -73.757890
      North_Bounding_Coordinate: 43.753614
      South_Bounding_Coordinate: 27.766251
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: MSHCP
      Theme_Keyword: NiSource
      Theme_Keyword: Pipeline ROW
    Place:
      Place_Keyword: Eastern U.S.
  Access_Constraints: Contains sensitive location information, do not use or distribute without direct permission from NiSource.
  Use_Constraints: Do not use without permission from NiSource
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Brent Read
        Contact_Organization: ENSR
      Contact_Position: GIS Analyst
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1601 Prospect Parkway
        City: Fort Collins
        State_or_Province: Colorado
        Postal_Code: 80525
        Country: USA
      Contact_Voice_Telephone: 970.493.8878
      Contact_Facsimile_Telephone: 970.493.0213
      Contact_Electronic_Mail_Address: bread@ensr.aecom.com
      Hours_of_Service: M-F Mountain Time
  Data_Set_Credit: Data used to create this dataset originate from NiSource.
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:

Completeness_Report:
Complete,
Update as needed.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: NiSource
Publication_Date: Unpublished Material
Title: David Styf
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Shapefile
Source_Citation_Abbreviation: NiSource
Source_Contribution: Pipeline Centerlines for the Columbia Gas, Columbia Gulf, Granite State and Crossroads gas transmission systems.
Process_Step:
Process_Description:
In the year 2006, ENSR recieved multiple shapefile datasets containing the NiSource pipeline system and compressor station locations. These pipeline datsets were merged into a single shapefile.

In 2007, ENSR noted irregularities in the original pipeline system, began a QAQC process that resulted in receiving from NiSource new shapefiles for all of the pipeline system. At this time ENSR also confirmed the accuracy of the compressor stations with NiSource and also worked with NiSource to devise a method for encorporating Storage Fields into the Covered Lands shapefile. The new (November, 2007) pipeline system was used to re-create the 1-mile corridor.

(NOTE: This description was extracted from the covered lands process descriptions. The covered lands metadata was what was provided with the pipeline ROW datasets provided by ENSR. No metadata text specific to the creation of the original pipeline ROW file was found.)
Process_Date: Unknown
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address
Address: 1601 Prospect Parkway
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Hours_of_Service: 8-5 M-F
Process_Step:
Process_Description: Pipeline features were Buffered with a radius of 37.5 feet (75 foot total width).
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\Pipelines\Pipelines_Dissolved_20071203.shp
Process_Date: 20080108
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person:
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:

Address_Type: mailing and physical address
Address: 1601 Prospect Parkway
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone:
Contact_Facsimile_Telephone:
Contact_Electronic_Mail_Address:
Hours_of_Service: 8-5 M-F
Process_Step:
Process_Description: Shapefile features were imported into a file geodatabase feature class. Polygon M values were stripped during this process to avoid an ESRI bug (NIM044000) in further analysis.
Source_Used_Citation_Abbreviation: E:\current_projects\X_drive\NiSourceData\NiSource_ROW75ft_20080311.shp
Process_Date: 20090504
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612.-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The buffer polygons were Dissolved into a single feature. An [acres] field was added, and the total acreage calculated.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\NiSource_ROW75ft_eco_050409
Process_Date: 20090504
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612.-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported and updated.
Source_Used_Citation_Abbreviation: E:\current_projects\X_drive\NiSourceData\Pipelines_Dissovled_eco_050409.shp.xml
Process_Date: 20100621
Process_Time: 12063300
Process_Contact:
Contact_Information:
Contact_Person_Primary:

```
          Contact_Person: Erik Olson
          Contact_Organization: US Fish and Wildlife Service
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Address:
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 1
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000328
          Ordinate_Resolution: 0.000328
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Resolution: 0.000100
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: NiSource_ROW75ft_dissolved_eco_021610
    Attribute:
      Attribute_Label: OBJECTID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
```

Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: SHAPE_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: SHAPE_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: acres
Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SHP
Transfer_Size: 9.385
Ordering_Instructions:
Contact Rick Hall at NiSource or
Contact Gabrielle Borin, Jamie Schlangen or Jessica Rubado at ENSR for ordering instructions (970.493.8878).
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
      Originator: ESRI
      Publication_Date: 20050401
      Title: U.S. Counties
      Edition: 2005
      Geospatial_Data_Presentation_Form: vector digital data
      Series_Information:
        Series_Name: ESRI® Data & Maps
        Issue_Identification: 2005
      Publication_Information:
        Publication_Place: Redlands, California, USA
        Publisher: ESRI
      Other_Citation_Details: Location: \usa\census
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\newly_generated_datasets\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: U.S. Counties represents the counties of the United States in the 50 states, the District of Columbia, and Puerto Rico.
    Purpose: U.S. Counties provides detailed boundaries that are consistent with the tract and state data sets and are effective at regional and state levels.
    Supplemental_Information: Largest scale when displaying the data: 1:100,000.
  Time_Period_of_Content:
    Time_Period_Information:
      Multiple_Dates/Times:
        Single_Date/Time:
          Calendar_Date: 200501
        Single_Date/Time:
          Calendar_Date: 200407
        Single_Date/Time:
          Calendar_Date: 2000
        Single_Date/Time:
          Calendar_Date: 1997
        Single_Date/Time:
          Calendar_Date: 20050210
    Currentness_Reference: publication date: 200501, 200407, 20050210; ground condition: 2000, 1997
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: Matches software update releases
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -178.227822
      East_Bounding_Coordinate: -65.244127
      North_Bounding_Coordinate: 71.390483
      South_Bounding_Coordinate: 17.881242
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: None
      Theme_Keyword: polygon
      Theme_Keyword: area
      Theme_Keyword: detail
      Theme_Keyword: demographics
      Theme_Keyword: population
      Theme_Keyword: households
      Theme_Keyword: farm information

Theme_Keyword: boundaries
Theme_Keyword: society
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: United States
Place_Keyword: U.S. Counties
Place_Keyword: Counties
Place_Keyword: Puerto Rico
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 2005
Temporal_Keyword: 2004
Temporal_Keyword: 2000
Temporal_Keyword: 1997
Temporal_Keyword: 1999
Temporal_Keyword: 2005
Access_Constraints: Access granted to Licensee only.
Use_Constraints:

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Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: ESRI
Contact_Person: Data Team
Contact_Address:
Address_Type: mailing and physical address
Address: 380 New York Street
City: Redlands
State_or_Province: California
Postal_Code: 92373-8100
Country: USA
Contact_Voice_Telephone: 909-793-2853
Contact_Facsimile_Telephone: 909-793-5953
Contact_Electronic_Mail_Address: info@esri.com
Hours_of_Service: 8:00 a.m.–5:30 p.m. Pacific time, Monday–Friday
Contact_Instructions:
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Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3000
Data_Quality_Information:
Logical_Consistency_Report: No duplicate features are present. The shapefile is converted to SDC (Smart Data Compression) format in ArcSDE®. This verifies and validates the geometry.
Completeness_Report: After processing, the data set is checked for drawing display and number of records and file sizes compared with source materials.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: The geospatial part of this data set was extracted from the 2002 Census TIGER/Line® files. The positional accuracy of the TIGER/Line coordinates varies with the source materials used but at best meets the established National Map Accuracy standards (+/- 167 feet approximately) where 1:100,000-scale maps from the USGS are the source. The Census Bureau cannot specify the accuracy of feature updates added by its field staff or of features derived from the GBF/DIME-

Files or other map sources. Thus, the level of positional accuracy in the TIGER/Line files is not suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface.

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Lineage:
  Source_Information:
    Source_Citation:
      Citation_Information:
        Originator: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
        Publication_Date: 200501
        Title: Dynamap/2000 v. 15.0
        Edition: Version 15.0
        Geospatial_Data_Presentation_Form: vector digital data
        Series_Information:
          Series_Name: Dynamap®/2000
          Issue_Identification: Version 15.0
        Publication_Information:
          Publication_Place: Lebanon, New Hampshire, USA
          Publisher: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
        Online_Linkage: http://www.geographic.com/home/index.cfm
    Source_Scale_Denominator: 100000
    Type_of_Source_Media: DVD–ROM
    Source_Time_Period_of_Content:
      Time_Period_Information:
        Single_Date/Time:
          Calendar_Date: 200501
      Source_Currentness_Reference: publication date
    Source_Citation_Abbreviation: TANA/GDT Dynamap/2000 v. 15.0
    Source_Contribution: Attribute and geospatial data
  Source_Information:
    Source_Citation:
      Citation_Information:
        Originator: Department of Commerce, Census Bureau
        Publication_Date: 2001
        Title: Summary File 1 (SF1)
        Edition: 2000
        Series_Information:
          Series_Name: Summary File 1 (SF1)
          Issue_Identification: 2000
        Publication_Information:
          Publication_Place: USA
          Publisher: Department of Commerce, Census Bureau
        Other_Citation_Details: The Summary File 1 (SF1) data is based on the 2000 Census of Population.
    Type_of_Source_Media: CD–ROM
    Source_Time_Period_of_Content:
      Time_Period_Information:
        Single_Date/Time:
          Calendar_Date: 2000
      Source_Currentness_Reference: ground condition
    Source_Citation_Abbreviation: Census SF1
    Source_Contribution: Attribute data
  Source_Information:
    Source_Citation:
      Citation_Information:
        Originator: ESRI Business Information Solutions
        Publication_Date: 200407
        Geospatial_Data_Presentation_Form: tabular digital data
        Publication_Information:
          Publication_Place: Vienna, Virginia, USA
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Publisher: ESRI Business Information Solutions
Other_Citation_Details: Provides the POP2004 attribute.
Type_of_Source_Media: CD–ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 200407
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: ESRI BIS
Source_Contribution: Attribute data
Source_Information:
Source_Citation:
Citation_Information:
Originator: U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
Publication_Date: 199903
Title: 1997 Census of Agriculture
Edition: 1997
Series_Information:
Series_Name: Census of Agriculture
Issue_Identification: 1997
Publication_Information:
Publication_Place: USA
Publisher: U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
Other_Citation_Details: The farm attributes come from data published by the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) based on the 1997 Census of Agriculture.
Type_of_Source_Media: CD–ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1997
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: USDA Farm
Source_Contribution: Attribute data
Source_Information:
Source_Citation:
Citation_Information:
Originator: United States Central Intelligence Agency
Publication_Date: 20050210
Title: The World Factbook
Geospatial_Data_Presentation_Form: document
Publication_Information:
Publication_Place: Washington, DC, USA
Publisher: United States Central Intelligence Agency
Other_Citation_Details: The Factbook has been an annual publication, but selected data and maps are updated periodically online.
Online_Linkage: http://www.odci.gov/cia/publications/factbook/geos/rq.html
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 20050210
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: CIA Factbook
Source_Contribution: Attribute data
Process_Step:
Process_Description: The following steps were performed by ESRI: Extracted county geography from TANA/GDT Dynamap/2000 v. 15.0. Cleaned up the coastal areas. Attached and formatted the attributes from 2004 U.S. Counties. Corrected the county names for the feature Puerto Rico. Moved attribute SQMI to the end of the attributes, rounded its values to the nearest tenth of

a mile, and calculated its values for Puerto Rico. Replaced attribute POP2003 with POP2004. Added attribute POP04_SQMI and calculated its values. Put "-99" values into all number attributes (except SQMI) for Puerto Rico. Created ArcGIS® layer file (.lyr), projection file (.prj), and spatial indices.
    Source_Used_Citation_Abbreviation: TANA/GDT Dynamap/2000 v. 15.0
    Source_Used_Citation_Abbreviation: Census SF1
    Source_Used_Citation_Abbreviation: ESRI BIS
    Source_Used_Citation_Abbreviation: USDA Farm
    Source_Used_Citation_Abbreviation: CIA Factbook
    Process_Date: 20050309
  Process_Step:
    Process_Description: Dataset copied.
  Process_Step:
    Process_Description: Dataset copied.
  Process_Step:
    Process_Description: Dataset copied.
    Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\PoliticalBoundaries\Counties_100kModified
  Process_Step:
    Process_Description: Dataset moved.
    Source_Used_Citation_Abbreviation: G:\ENSR 1776-034-NiSource (GIS)\NiSourceData\Counties_100kModified
  Process_Step:
    Process_Description: Dataset was imported into a file geodatabase to avoid some processing errors
    Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\Data\X_drive\NationalData\Counties_100kModified.shp
    Process_Date: Not complete
    Process_Contact:
      Contact_Information:
        Contact_Person_Primary:
          Contact_Person: Erik Olson
          Contact_Organization: US Fish and Wildlife Service
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Address:
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 0
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000

Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000328
Ordinate_Resolution: 0.000328
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Counties_100kModified
Entity_Type_Definition: A type of governmental unit that is the primary legal subdivision of every U.S. State. In Alaska (borough) and Louisiana (parish) they have different names. In Puerto Rico there are no first-order administrative divisions as defined by the US Government, but there are 78 municipalities (municipios, singular - municipio) at the second order.
Entity_Type_Definition_Source: Department of Commerce, Census Bureau
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: OBJECTID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: NAME
Attribute_Definition: The county name.
Attribute_Definition_Source: Tele Atlas North America, Inc./Geographic Data Technology, Inc.; United States Central Intelligence Agency
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: STATE_NAME
Attribute_Definition: The name for the state in which the county is located.
Attribute_Definition_Source: Department of Commerce, Census Bureau
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: STATE_FIPS
Attribute_Definition: The FIPS code (two-digit number) for the state in which the county is located.
Attribute_Definition_Source: Department of Commerce, National Institute of Standards and Technology
Attribute_Domain_Values:
Codeset_Domain:

Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: CNTY_FIPS
Attribute_Definition: The FIPS code (three-digit number) for the county.
Attribute_Definition_Source: Department of Commerce, National Institute of Standards and Technology
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: CO_CODE
Attribute:
Attribute_Label: TYPE
Attribute:
Attribute_Label: Shape_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: Shape_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: ESRI; ESRI International Distributors
Contact_Address:
Address_Type: mailing and physical address
Address: 380 New York Street
City: Redlands
State_or_Province: California
Postal_Code: 92373-8100
Country: USA
Contact_Voice_Telephone: 800-447-9778
Contact_Instructions:
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Resource_Description: Offline Data
Distribution_Liability: See use constraints.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SDC
Format_Specification: The SDC file contains the geospatial and attribute data. The SDI file contains the spatial and attribute indexes. The PRJ file contains the coordinate system information (optional). The XML file (*.sdc.xml) contains the metadata describing the data set (optional).
File_Decompression_Technique: ArcGIS® software
Transfer_Size: 0.000
Digital_Transfer_Option:
Offline_Option:
Offline_Media: DVD–ROM

Recording_Capacity:
Recording_Density: 4.38
Recording_Density_Units: GB (gigabytes)
Recording_Format: ISO 9660
Offline_Option:
Offline_Media: CD–ROM
Recording_Capacity:
Recording_Density: 650
Recording_Density_Units: MB (megabytes)
Recording_Format: ISO 9660
Fees: Software purchase price
Ordering_Instructions: ESRI Data & Maps is available only as part of ESRI® software.
Technical_Prerequisites: To use this data requires software that supports SDC files.
Metadata_Reference_Information:
Metadata_Date: 20100618
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: ESRI
Contact_Person: Data Team
Contact_Address:
Address_Type: mailing and physical address
Address: 380 New York Street
City: Redlands
State_or_Province: California
Postal_Code: 92373-8100
Country: USA
Contact_Voice_Telephone: 909-793-2853
Contact_Facsimile_Telephone: 909-793-5953
Contact_Electronic_Mail_Address: info@esri.com
Hours_of_Service: 8:00 a.m.–5:30 p.m. Pacific time, Monday–Friday
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
      Originator: ESRI
      Publication_Date: 20050401
      Title: U.S. Counties
      Edition: 2005
      Geospatial_Data_Presentation_Form: vector digital data
      Series_Information:
        Series_Name: ESRI® Data & Maps
        Issue_Identification: 2005
      Publication_Information:
        Publication_Place: Redlands, California, USA
        Publisher: ESRI
      Other_Citation_Details: Location: \usa\census
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\newly_generated_datasets\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: This dataset represents the states of the United States in the 50 states, the District of Columbia, and Puerto Rico.
    Purpose: U.S. Counties provides detailed boundaries that are consistent with the tract and state data sets and are effective at regional and state levels.
    Supplemental_Information: Largest scale when displaying the data: 1:100,000.
  Time_Period_of_Content:
    Time_Period_Information:
      Multiple_Dates/Times:
        Single_Date/Time:
          Calendar_Date: 200501
        Single_Date/Time:
          Calendar_Date: 200407
        Single_Date/Time:
          Calendar_Date: 2000
        Single_Date/Time:
          Calendar_Date: 1997
        Single_Date/Time:
          Calendar_Date: 20050210
    Currentness_Reference: publication date: 200501, 200407, 20050210; ground condition: 2000, 1997
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: Matches software update releases
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -178.227822
      East_Bounding_Coordinate: -65.244127
      North_Bounding_Coordinate: 71.390483
      South_Bounding_Coordinate: 17.881242
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: None
      Theme_Keyword: polygon
      Theme_Keyword: area
      Theme_Keyword: detail
      Theme_Keyword: boundaries
    Place:
      Place_Keyword_Thesaurus: None
      Place_Keyword: United States

Place_Keyword: U.S. States
Place_Keyword: Puerto Rico
Place_Keyword: States
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 2005
Temporal_Keyword: 2004
Temporal_Keyword: 2000
Temporal_Keyword: 1997
Temporal_Keyword: 1999
Temporal_Keyword: 2005
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Use_Constraints:
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In the event that the data vendor(s) has (have) granted the end user permission to redistribute the Geodata, please use proper proprietary or copyright attribution for the various data vendor(s), and provide the associated metadata file(s) with the Geodata. In compliance with FGDC metadata standards, ESRI has attempted to practice proper metadata methodologies by providing any data source information, descriptions, and file names to assist in this effort.

Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: ESRI
Contact_Person: Data Team
Contact_Address:
Address_Type: mailing and physical address
Address: 380 New York Street
City: Redlands
State_or_Province: California
Postal_Code: 92373-8100
Country: USA
Contact_Voice_Telephone: 909-793-2853
Contact_Facsimile_Telephone: 909-793-5953
Contact_Electronic_Mail_Address: info@esri.com
Hours_of_Service: 8:00 a.m.–5:30 p.m. Pacific time, Monday–Friday
Contact_Instructions:
In the United States–
Please direct all inquiries regarding software/data pricing and consulting services to your local ESRI Regional Office. For support, you may contact Technical Support by telephone (voice) between 6:00 a.m. and 5:00 p.m. Pacific time, Monday through Friday, by dialing 909-793-3774; facsimile (fax) available at 909-792-0960; electronic mail (e-mail) support@esri.com; or visit http://support.esri.com; ESRI holidays excluded.

Outside the United States–
Please direct all inquiries regarding software/data pricing, sales, support, and consulting services to your local ESRI International Distributor. This information can be found at http://gis.esri.com/intldist/contactint.cfm.

For other questions or comments, you may contact ESRI headquarters by e-mail, telephone, or fax or write to us.

Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3000

Data_Quality_Information:
Logical_Consistency_Report: No duplicate features are present. The shapefile is converted to SDC (Smart Data Compression) format in ArcSDE®. This verifies and validates the geometry.
Completeness_Report: After processing, the data set is checked for drawing display and number of records and file sizes compared with source materials.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: The geospatial part of this data set was extracted from the 2002 Census TIGER/Line® files. The positional accuracy of the TIGER/Line coordinates varies with the source materials used but at best meets the established National Map Accuracy standards (+/- 167 feet approximately) where 1:100,000-scale maps from the USGS are the source. The Census Bureau cannot specify the accuracy of feature updates added by its field staff or of features derived from the GBF/DIME-Files or other map sources. Thus, the level of positional accuracy in the TIGER/Line files is not suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface.
Lineage:
Source_Information:

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  Source_Citation:
    Citation_Information:
      Originator: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
      Publication_Date: 200501
      Title: Dynamap/2000 v. 15.0
      Edition: Version 15.0
      Geospatial_Data_Presentation_Form: vector digital data
      Series_Information:
        Series_Name: Dynamap®/2000
        Issue_Identification: Version 15.0
      Publication_Information:
        Publication_Place: Lebanon, New Hampshire, USA
        Publisher: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
      Online_Linkage: http://www.geographic.com/home/index.cfm
  Source_Scale_Denominator: 100000
  Type_of_Source_Media: DVD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 200501
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: TANA/GDT Dynamap/2000 v. 15.0
  Source_Contribution: Attribute and geospatial data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Department of Commerce, Census Bureau
      Publication_Date: 2001
      Title: Summary File 1 (SF1)
      Edition: 2000
      Series_Information:
        Series_Name: Summary File 1 (SF1)
        Issue_Identification: 2000
      Publication_Information:
        Publication_Place: USA
        Publisher: Department of Commerce, Census Bureau
      Other_Citation_Details: The Summary File 1 (SF1) data is based on the 2000 Census of Population.
  Type_of_Source_Media: CD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 2000
    Source_Currentness_Reference: ground condition
  Source_Citation_Abbreviation: Census SF1
  Source_Contribution: Attribute data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: ESRI Business Information Solutions
      Publication_Date: 200407
      Geospatial_Data_Presentation_Form: tabular digital data
      Publication_Information:
        Publication_Place: Vienna, Virginia, USA
        Publisher: ESRI Business Information Solutions
      Other_Citation_Details: Provides the POP2004 attribute.
  Type_of_Source_Media: CD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
```

Single_Date/Time:
Calendar_Date: 200407
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: ESRI BIS
Source_Contribution: Attribute data
Source_Information:
Source_Citation:
Citation_Information:
Originator: U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
Publication_Date: 199903
Title: 1997 Census of Agriculture
Edition: 1997
Series_Information:
Series_Name: Census of Agriculture
Issue_Identification: 1997
Publication_Information:
Publication_Place: USA
Publisher: U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
Other_Citation_Details: The farm attributes come from data published by the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) based on the 1997 Census of Agriculture.
Type_of_Source_Media: CD–ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1997
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: USDA Farm
Source_Contribution: Attribute data
Source_Information:
Source_Citation:
Citation_Information:
Originator: United States Central Intelligence Agency
Publication_Date: 20050210
Title: The World Factbook
Geospatial_Data_Presentation_Form: document
Publication_Information:
Publication_Place: Washington, DC, USA
Publisher: United States Central Intelligence Agency
Other_Citation_Details: The Factbook has been an annual publication, but selected data and maps are updated periodically online.
Online_Linkage: http://www.odci.gov/cia/publications/factbook/geos/rq.html
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 20050210
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: CIA Factbook
Source_Contribution: Attribute data
Process_Step:
Process_Description: The following steps were performed by ESRI: Extracted county geography from TANA/GDT Dynamap/2000 v. 15.0. Cleaned up the coastal areas. Attached and formatted the attributes from 2004 U.S. Counties. Corrected the county names for the feature Puerto Rico. Moved attribute SQMI to the end of the attributes, rounded its values to the nearest tenth of a mile, and calculated its values for Puerto Rico. Replaced attribute POP2003 with POP2004. Added attribute POP04_SQMI and calculated its values. Put "-99" values into all number attributes (except SQMI) for Puerto Rico. Created ArcGIS® layer file (.lyr), projection file (.prj), and spatial indices.
Source_Used_Citation_Abbreviation: TANA/GDT Dynamap/2000 v. 15.0
Source_Used_Citation_Abbreviation: Census SF1

Source_Used_Citation_Abbreviation: ESRI BIS
Source_Used_Citation_Abbreviation: USDA Farm
Source_Used_Citation_Abbreviation: CIA Factbook
Process_Date: 20050309
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\PoliticalBoundaries\States_100kModified
Process_Step:
Process_Description: Dataset moved.
Source_Used_Citation_Abbreviation: G:\ENSR 1776-034-NiSource (GIS)\NiSourceData\States_100kModified
Process_Step:
Process_Description: Dataset was imported into a file geodatabase to avoid some processing errors. At some point prior to this step, counties were dissolved by state, to produce a state boundary dataset.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\Data\X_drive\NationalData\States_100kModified.shp
Process_Date: 20091015
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 0
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000328

Ordinate_Resolution: 0.000328
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: States_100kModified
Entity_Type_Definition: A type of governmental unit that is the primary legal subdivision of every U.S. State. In Alaska (borough) and Louisiana (parish) they have different names. In Puerto Rico there are no first-order administrative divisions as defined by the US Government, but there are 78 municipalities (municipios, singular - municipio) at the second order.
Entity_Type_Definition_Source: Department of Commerce, Census Bureau
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: OBJECTID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: STATE_NAME
Attribute_Definition: The name for the state in which the county is located.
Attribute_Definition_Source: Department of Commerce, Census Bureau
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: STATE_FIPS
Attribute_Definition: The FIPS code (two-digit number) for the state in which the county is located.
Attribute_Definition_Source: Department of Commerce, National Institute of Standards and Technology
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: ABBREV
Attribute:
Attribute_Label: Shape_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: Shape_Area
Attribute_Definition: Area of feature in internal units squared.

Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: ESRI; ESRI International Distributors
Contact_Address:
Address_Type: mailing and physical address
Address: 380 New York Street
City: Redlands
State_or_Province: California
Postal_Code: 92373-8100
Country: USA
Contact_Voice_Telephone: 800-447-9778
Contact_Instructions:
In the United States, contact the ESRI Telesales staff at 800-447-9778 for more information about our software and data.

Outside the United States, please direct all inquiries to your local ESRI International Distributor. This information can be found at http://gis.esri.com/intldist/contactint.cfm.
Resource_Description: Offline Data
Distribution_Liability: See use constraints.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SDC
Format_Specification: The SDC file contains the geospatial and attribute data. The SDI file contains the spatial and attribute indexes. The PRJ file contains the coordinate system information (optional). The XML file (*.sdc.xml) contains the metadata describing the data set (optional).
File_Decompression_Technique: ArcGIS® software
Transfer_Size: 0.000
Digital_Transfer_Option:
Offline_Option:
Offline_Media: DVD–ROM
Recording_Capacity:
Recording_Density: 4.38
Recording_Density_Units: GB (gigabytes)
Recording_Format: ISO 9660
Offline_Option:
Offline_Media: CD–ROM
Recording_Capacity:
Recording_Density: 650
Recording_Density_Units: MB (megabytes)
Recording_Format: ISO 9660
Fees: Software purchase price
Ordering_Instructions: ESRI Data & Maps is available only as part of ESRI® software.
Technical_Prerequisites: To use this data requires software that supports SDC files.
Metadata_Reference_Information:
Metadata_Date: 20100621
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: ESRI
Contact_Person: Data Team
Contact_Address:
Address_Type: mailing and physical address
Address: 380 New York Street

City: Redlands
State_or_Province: California
Postal_Code: 92373-8100
Country: USA
Contact_Voice_Telephone: 909-793-2853
Contact_Facsimile_Telephone: 909-793-5953
Contact_Electronic_Mail_Address: info@esri.com
Hours_of_Service: 8:00 a.m.–5:30 p.m. Pacific time, Monday–Friday
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
      Originator: ESRI
      Publication_Date: 20050401
      Title: SF_Counties_09_01_09
      Edition: 2009
      Geospatial_Data_Presentation_Form: vector digital data
      Series_Information:
        Series_Name: ESRI® Data & Maps
        Issue_Identification: 2005
      Publication_Information:
        Publication_Place: Redlands, California, USA
        Publisher: ESRI
      Other_Citation_Details: Location: \usa\census
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: This feature class contains the subset of counties in which NiSource may expand storage fields. It is based on an ESRI counties shapefile.
    Purpose: This dataset was created to analyze impacts from any expansion of storage fields within the NiSource Pipeline System.
    Supplemental_Information: Largest scale when displaying the data: 1:100,000.
  Time_Period_of_Content:
    Time_Period_Information:
      Multiple_Dates/Times:
        Single_Date/Time:
          Calendar_Date: 200501
        Single_Date/Time:
          Calendar_Date: 200407
        Single_Date/Time:
          Calendar_Date: 2000
        Single_Date/Time:
          Calendar_Date: 1997
        Single_Date/Time:
          Calendar_Date: 20050210
    Currentness_Reference: publication date: 200501, 200407, 20050210; ground condition: 2000, 1997
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: Matches software update releases
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -83.201550
      East_Bounding_Coordinate: -78.036328
      North_Bounding_Coordinate: 41.116210
      South_Bounding_Coordinate: 37.632587
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: None
      Theme_Keyword: polygon
      Theme_Keyword: area
      Theme_Keyword: detail
      Theme_Keyword: boundaries
      Theme_Keyword: NiSource
      Theme_Keyword: Storage Field
    Place:

Place_Keyword_Thesaurus: None
Place_Keyword: United States
Place_Keyword: U.S. Counties
Place_Keyword: Counties
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 2009
Access_Constraints: Contains sensitive location information, do not use or distribute without direct permission from NiSource.
Use_Constraints: Do not use without permission from NiSource
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: US Fish and Wildlife Service
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Hours_of_Service: 8:00 a.m.–5:30 p.m. Pacific time, Monday–Friday
Contact_Instructions:
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Logical_Consistency_Report: No duplicate features are present. The shapefile is converted to SDC (Smart Data Compression) format in ArcSDE®. This verifies and validates the geometry.
Completeness_Report: After processing, the data set is checked for drawing display and number of records and file sizes compared with source materials.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: The geospatial part of this data set was extracted from the 2002 Census TIGER/Line® files. The positional accuracy of the TIGER/Line coordinates varies with the source materials used but at best meets the established National Map Accuracy standards (+/- 167 feet approximately) where 1:100,000-scale maps from the USGS are the source. The Census Bureau cannot specify the accuracy of feature updates added by its field staff or of features derived from the GBF/DIME-Files or other map sources. Thus, the level of positional accuracy in the TIGER/Line files is not suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
Publication_Date: 200501
Title: Dynamap/2000 v. 15.0
Edition: Version 15.0
Geospatial_Data_Presentation_Form: vector digital data
Series_Information:
Series_Name: Dynamap®/2000
Issue_Identification: Version 15.0
Publication_Information:
Publication_Place: Lebanon, New Hampshire, USA
Publisher: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
Online_Linkage: http://www.geographic.com/home/index.cfm
Source_Scale_Denominator: 100000

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  Type_of_Source_Media: DVD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 200501
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: TANA/GDT Dynamap/2000 v. 15.0
  Source_Contribution: Attribute and geospatial data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Department of Commerce, Census Bureau
      Publication_Date: 2001
      Title: Summary File 1 (SF1)
      Edition: 2000
      Series_Information:
        Series_Name: Summary File 1 (SF1)
        Issue_Identification: 2000
      Publication_Information:
        Publication_Place: USA
        Publisher: Department of Commerce, Census Bureau
      Other_Citation_Details: The Summary File 1 (SF1) data is based on the 2000 Census of Population.
  Type_of_Source_Media: CD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 2000
    Source_Currentness_Reference: ground condition
  Source_Citation_Abbreviation: Census SF1
  Source_Contribution: Attribute data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: ESRI Business Information Solutions
      Publication_Date: 200407
      Geospatial_Data_Presentation_Form: tabular digital data
      Publication_Information:
        Publication_Place: Vienna, Virginia, USA
        Publisher: ESRI Business Information Solutions
      Other_Citation_Details: Provides the POP2004 attribute.
  Type_of_Source_Media: CD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 200407
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: ESRI BIS
  Source_Contribution: Attribute data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
      Publication_Date: 199903
      Title: 1997 Census of Agriculture
      Edition: 1997
      Series_Information:
        Series_Name: Census of Agriculture
        Issue_Identification: 1997
```

Publication_Information:
Publication_Place: USA
Publisher: U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
Other_Citation_Details: The farm attributes come from data published by the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) based on the 1997 Census of Agriculture.
Type_of_Source_Media: CD–ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1997
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: USDA Farm
Source_Contribution: Attribute data
Source_Information:
Source_Citation:
Citation_Information:
Originator: United States Central Intelligence Agency
Publication_Date: 20050210
Title: The World Factbook
Geospatial_Data_Presentation_Form: document
Publication_Information:
Publication_Place: Washington, DC, USA
Publisher: United States Central Intelligence Agency
Other_Citation_Details: The Factbook has been an annual publication, but selected data and maps are updated periodically online.
Online_Linkage: http://www.odci.gov/cia/publications/factbook/geos/rq.html
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 20050210
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: CIA Factbook
Source_Contribution: Attribute data
Process_Step:
Process_Description: The following steps were performed by ESRI: Extracted county geography from TANA/GDT Dynamap/2000 v. 15.0. Cleaned up the coastal areas. Attached and formatted the attributes from 2004 U.S. Counties. Corrected the county names for the feature Puerto Rico. Moved attribute SQMI to the end of the attributes, rounded its values to the nearest tenth of a mile, and calculated its values for Puerto Rico. Replaced attribute POP2003 with POP2004. Added attribute POP04_SQMI and calculated its values. Put "-99" values into all number attributes (except SQMI) for Puerto Rico. Created ArcGIS® layer file (.lyr), projection file (.prj), and spatial indices.
Source_Used_Citation_Abbreviation: TANA/GDT Dynamap/2000 v. 15.0
Source_Used_Citation_Abbreviation: Census SF1
Source_Used_Citation_Abbreviation: ESRI BIS
Source_Used_Citation_Abbreviation: USDA Farm
Source_Used_Citation_Abbreviation: CIA Factbook
Process_Date: 20050309
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\StorageFacilities\StorageFacilityCountys
Process_Step:

Process_Description: A subset of the counties in the StorageFacilityCountys shapefile were selected and copied into a file geodatabase.
Source_Used_Citation_Abbreviation: E:\current_projects\X_drive\NiSourceData\StorageFacilityCountys.shp
Process_Date: 20090901
Process_Time: 10074600
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: C:\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Common_base_data\sf_counties_0900109_metadata_2.xml
Process_Date: 20100621
Process_Time: 11132900
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 12
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000328
Ordinate_Resolution: 0.000328
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:

Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: SF_Counties_09_01_09
Entity_Type_Definition: A type of governmental unit that is the primary legal subdivision of every U.S. State. In Alaska (borough) and Louisiana (parish) they have different names. In Puerto Rico there are no first-order administrative divisions as defined by the US Government, but there are 78 municipalities (municipios, singular - municipio) at the second order.
Entity_Type_Definition_Source: Department of Commerce, Census Bureau
Attribute:
Attribute_Label: OBJECTID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: NAME
Attribute_Definition: The county name.
Attribute_Definition_Source: Tele Atlas North America, Inc./Geographic Data Technology, Inc.; United States Central Intelligence Agency
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: STATE_NAME
Attribute_Definition: The name for the state in which the county is located.
Attribute_Definition_Source: Department of Commerce, Census Bureau
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: FIELDNAMES
Attribute:
Attribute_Label: FEATURE
Attribute:
Attribute_Label: EXPANSION
Attribute:
Attribute_Label: Shape_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: Shape_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:

Attribute_Label: Acres_columbia
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: ESRI; ESRI International Distributors
Contact_Address:
Address_Type: mailing and physical address
Address: 380 New York Street
City: Redlands
State_or_Province: California
Postal_Code: 92373-8100
Country: USA
Contact_Voice_Telephone: 800-447-9778
Contact_Instructions:
In the United States, contact the ESRI Telesales staff at 800-447-9778 for more information about our software and data.

Outside the United States, please direct all inquiries to your local ESRI International Distributor. This information can be found at http://gis.esri.com/intldist/contactint.cfm.
Resource_Description: Offline Data
Distribution_Liability: See use constraints.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SDC
Format_Specification: The SDC file contains the geospatial and attribute data. The SDI file contains the spatial and attribute indexes. The PRJ file contains the coordinate system information (optional). The XML file (*.sdc.xml) contains the metadata describing the data set (optional).
File_Decompression_Technique: ArcGIS® software
Transfer_Size: 0.000
Digital_Transfer_Option:
Offline_Option:
Offline_Media: DVD–ROM
Recording_Capacity:
Recording_Density: 4.38
Recording_Density_Units: GB (gigabytes)
Recording_Format: ISO 9660
Offline_Option:
Offline_Media: CD–ROM
Recording_Capacity:
Recording_Density: 650
Recording_Density_Units: MB (megabytes)
Recording_Format: ISO 9660
Fees: Software purchase price
Ordering_Instructions: ESRI Data & Maps is available only as part of ESRI® software.
Technical_Prerequisites: To use this data requires software that supports SDC files.
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: US Fish and Wildlife Service
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drivet
City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Hours_of_Service: 8:00 a.m.–5:30 p.m. Pacific time, Monday–Friday
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS
      Publication_Date: 10/09/09
      Title: Restricted_CoveredLands_SF_v_PB
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: A split of the covered lands into storage field, pipeline buffer and both storage field and pipeline buffer areas.
    Purpose: This feature class was created to separately analyze the impacts from storage field and linear portions of the Covered Lands data for the NiSource pipeline system.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 10/09/09
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -93.656699
      East_Bounding_Coordinate: -73.746345
      North_Bounding_Coordinate: 43.760846
      South_Bounding_Coordinate: 27.758233
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: Covered Lands
      Theme_Keyword: NiSource
      Theme_Keyword: Covered Lands
    Place:
      Place_Keyword: Eastern U.S.
  Access_Constraints: Contains sensitive location information, do not use or distribute without direct permission from NiSource.
  Use_Constraints: Do not use without permission from NiSource
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Erik Olson
        Contact_Organization: USFWS
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 Federal Drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Data_Set_Credit: Data used to create this dataset originate from NiSource.
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
  Completeness_Report:
    Complete,

Update as needed.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: NiSource
Publication_Date: Unpublished Material
Title: David Styf
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Shapefile
Source_Citation_Abbreviation: NiSource
Source_Contribution: Pipeline Centerlines for the Columbia Gas, Columbia Gulf, Granite State and Crossroads gas transmission systems.
Source_Information:
Source_Citation:
Citation_Information:
Originator: Brent Read
Publication_Date: 20080311
Title: ENSR
Geospatial_Data_Presentation_Form: vector digital data
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Shapefile
Source_Citation_Abbreviation: ENSR
Source_Contribution: Version 3 of Covered Lands Shapefile (CoveredLands_DISS_200803011)
Process_Step:
Process_Description:
In the year 2006, ENSR recieved multiple shapefile datasets containing the NiSource pipeline system and compressor station locations. These pipeline datsets were merged into a single shapefile. This pipeline shapefiles was then buffered at a distance of .5 miles to create a 1 mile corridor surrounding the pipeline system.

This pipeline corridor was released to various organizations to characterize the lands potential impacted by NiSource (CoveredLands).

In 2007, ENSR noted irregularities in the original pipeline system, began a QAQC process that resulted in receiving from NiSource new shapefiles for all of the pipeline system. At this time ENSR also confirmed the accuracy of the compressor stations with NiSource and also worked with NiSource to devise a method for encorporating Storage Fields into the Covered Lands shapefile.

The new (November, 2007) pipeline system was used to re-create the 1-mile corridor. The 1-mile corridor was then clipped to the shoreline extent as given by the 2007 NOAA shorelines shapefile for the coast of Louisiana.

The compressor stations were buffered at .5 miles, and the storage facilities that are expected to expand in the future were delineated by the county in which they reside.

These three polygon shapefiles were combined in ArcGIS using the Union tool to create the Covered Lands Version 2, and the atttributes were reclassified as follows:
CS: Compressor Station
SF: Storage Field
PL: Pipeline Corridor
or any combination of the above where they overlap.
Process_Date: 20071203
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address

Address: 1601 Prospect Parkway
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Hours_of_Service: 8-5 M-F
Process_Step:
Process_Description: The portion of the Covered Lands in Maine, Massachusetts and New Hampshire was removed from the shapefile to reflect the selling of the Granite State Gas Transmission operating company.
Process_Date: 20080311
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address
Address: 1601 Prospect Pkwy
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Process_Step:
Process_Description: Version 4 was created to restrict some portions of the covered lands to ROW boundaries to reduce species impacts. Areas of restriction were described by Rick Hall (NiSource) and edited by USFWS. Covered Lands were restricted to a 50 ft wide buffer around single pipelines, and 25 ft wide buffer around multiple pipelines close to one another. Decisions about appropriate buffer type and edits at transition points were made manually by USFWS. Polygon M values were stripped during this process to get around an ESRI bug (NIM044000).
Source_Used_Citation_Abbreviation: X:\NiSourceData\CoveredLands_DISS_20080311
Process_Date: 05/05/2009
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS
Contact_Position: GIS Technician
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Version 4.1 was created to restrict some portions of the covered lands to reduce species impacts. An area of the Upper Atchafalya River Basin was removed from the covered lands.
Process_Date: 10/09/2009
Process_Contact:
Contact_Information:

Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Voice_Telephone: 6127135488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Covered lands (V4.1) polygons were Identitied with storage field areas outside of the pipeline buffer. The result was Identitied again with the storage field county boudaries. The resulting features were classifed using a new field [FEATURE] and then Dissolved by [Feature].
Source_Used_Citation_Abbreviation: \Common_base_data\frequently_used_data.gdb\Derived\SF_County_Areas_Outside_HalfMileBuff_082009
Source_Used_Citation_Abbreviation: \Common_base_data\frequently_used_data.gdb\Derived\SF_Counties_09_01_09
Process_Date: 20091016
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 3
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000328
Ordinate_Resolution: 0.000328
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222

Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Restricted_CoveredLands_SF_v_PB
Attribute:
Attribute_Label: OBJECTID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FEATURE
Attribute:
Attribute_Label: Shape_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: Shape_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Address:
Address_Type: mailing and physical address
Country: USA
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data have been processed successfully on a computer system by USFWS, no warranty expressed or implied is made regarding the utility of the data on another system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SHP
Transfer_Size: 5.693

Ordering_Instructions: Contact Rick Hall at NiSource.
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS
Contact_Position: GIS Technician
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
      Originator: ESRI
      Publication_Date: 20050401
      Title: SF_County_Areas_Outside_HalfMileBuff_082009
      Edition: 2009
      Geospatial_Data_Presentation_Form: vector digital data
      Series_Information:
        Series_Name: ESRI® Data & Maps
        Issue_Identification: 2005
      Publication_Information:
        Publication_Place: Redlands, California, USA
        Publisher: ESRI
      Other_Citation_Details: Location: \usa\census
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Common_base_data\frequently_used_data.gdb
  Description:
    Abstract: This feature class contains areas in which the only expected impacts would be where NiSource may expand storage fields.
    Purpose: This dataset was created to analyze impacts from any expansion of storage fields within the NiSource Pipeline System.
    Supplemental_Information: Largest scale when displaying the data: 1:100,000.
  Time_Period_of_Content:
    Time_Period_Information:
      Multiple_Dates/Times:
        Single_Date/Time:
          Calendar_Date: 200501
        Single_Date/Time:
          Calendar_Date: 200407
        Single_Date/Time:
          Calendar_Date: 2000
        Single_Date/Time:
          Calendar_Date: 1997
        Single_Date/Time:
          Calendar_Date: 20050210
    Currentness_Reference: publication date: 200501, 200407, 20050210; ground condition: 2000, 1997
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: Matches software update releases
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -83.201550
      East_Bounding_Coordinate: -78.036328
      North_Bounding_Coordinate: 41.116210
      South_Bounding_Coordinate: 37.632587
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: None
      Theme_Keyword: polygon
      Theme_Keyword: area
      Theme_Keyword: detail
      Theme_Keyword: boundaries
      Theme_Keyword: NiSource
      Theme_Keyword: Storage Field
    Place:

Place_Keyword_Thesaurus: None
Place_Keyword: United States
Place_Keyword: U.S. Counties
Place_Keyword: Counties
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 2009
Access_Constraints: Contains sensitive location information, do not use or distribute without direct permission from NiSource.
Use_Constraints: Do not use without permission from NiSource
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: US Fish and Wildlife Service
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Hours_of_Service: 8:00 a.m.–5:30 p.m. Pacific time, Monday–Friday
Contact_Instructions:
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Logical_Consistency_Report: No duplicate features are present. The shapefile is converted to SDC (Smart Data Compression) format in ArcSDE®. This verifies and validates the geometry.
Completeness_Report: After processing, the data set is checked for drawing display and number of records and file sizes compared with source materials.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: The geospatial part of this data set was extracted from the 2002 Census TIGER/Line® files. The positional accuracy of the TIGER/Line coordinates varies with the source materials used but at best meets the established National Map Accuracy standards (+/- 167 feet approximately) where 1:100,000-scale maps from the USGS are the source. The Census Bureau cannot specify the accuracy of feature updates added by its field staff or of features derived from the GBF/DIME-Files or other map sources. Thus, the level of positional accuracy in the TIGER/Line files is not suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
Publication_Date: 200501
Title: Dynamap/2000 v. 15.0
Edition: Version 15.0
Geospatial_Data_Presentation_Form: vector digital data
Series_Information:
Series_Name: Dynamap®/2000
Issue_Identification: Version 15.0
Publication_Information:
Publication_Place: Lebanon, New Hampshire, USA
Publisher: Tele Atlas North America, Inc./Geographic Data Technology, Inc.
Online_Linkage: http://www.geographic.com/home/index.cfm
Source_Scale_Denominator: 100000

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  Type_of_Source_Media: DVD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 200501
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: TANA/GDT Dynamap/2000 v. 15.0
  Source_Contribution: Attribute and geospatial data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Department of Commerce, Census Bureau
      Publication_Date: 2001
      Title: Summary File 1 (SF1)
      Edition: 2000
      Series_Information:
        Series_Name: Summary File 1 (SF1)
        Issue_Identification: 2000
      Publication_Information:
        Publication_Place: USA
        Publisher: Department of Commerce, Census Bureau
      Other_Citation_Details: The Summary File 1 (SF1) data is based on the 2000 Census of Population.
  Type_of_Source_Media: CD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 2000
    Source_Currentness_Reference: ground condition
  Source_Citation_Abbreviation: Census SF1
  Source_Contribution: Attribute data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: ESRI Business Information Solutions
      Publication_Date: 200407
      Geospatial_Data_Presentation_Form: tabular digital data
      Publication_Information:
        Publication_Place: Vienna, Virginia, USA
        Publisher: ESRI Business Information Solutions
      Other_Citation_Details: Provides the POP2004 attribute.
  Type_of_Source_Media: CD–ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 200407
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: ESRI BIS
  Source_Contribution: Attribute data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
      Publication_Date: 199903
      Title: 1997 Census of Agriculture
      Edition: 1997
      Series_Information:
        Series_Name: Census of Agriculture
        Issue_Identification: 1997
```

Publication_Information:
Publication_Place: USA
Publisher: U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS)
Other_Citation_Details: The farm attributes come from data published by the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) based on the 1997 Census of Agriculture.
Type_of_Source_Media: CD–ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1997
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: USDA Farm
Source_Contribution: Attribute data
Source_Information:
Source_Citation:
Citation_Information:
Originator: United States Central Intelligence Agency
Publication_Date: 20050210
Title: The World Factbook
Geospatial_Data_Presentation_Form: document
Publication_Information:
Publication_Place: Washington, DC, USA
Publisher: United States Central Intelligence Agency
Other_Citation_Details: The Factbook has been an annual publication, but selected data and maps are updated periodically online.
Online_Linkage: http://www.odci.gov/cia/publications/factbook/geos/rq.html
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 20050210
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: CIA Factbook
Source_Contribution: Attribute data
Process_Step:
Process_Description: The following steps were performed by ESRI: Extracted county geography from TANA/GDT Dynamap/2000 v. 15.0. Cleaned up the coastal areas. Attached and formatted the attributes from 2004 U.S. Counties. Corrected the county names for the feature Puerto Rico. Moved attribute SQMI to the end of the attributes, rounded its values to the nearest tenth of a mile, and calculated its values for Puerto Rico. Replaced attribute POP2003 with POP2004. Added attribute POP04_SQMI and calculated its values. Put "-99" values into all number attributes (except SQMI) for Puerto Rico. Created ArcGIS® layer file (.lyr), projection file (.prj), and spatial indices.
Source_Used_Citation_Abbreviation: TANA/GDT Dynamap/2000 v. 15.0
Source_Used_Citation_Abbreviation: Census SF1
Source_Used_Citation_Abbreviation: ESRI BIS
Source_Used_Citation_Abbreviation: USDA Farm
Source_Used_Citation_Abbreviation: CIA Factbook
Process_Date: 20050309
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Process_Step:
Process_Description: Dataset copied.
Source_Used_Citation_Abbreviation:
X:\0Projects\01776_034_NiSource_Columbia_Gas\Project_Components\StorageFacilities\StorageFacilityCountys
Process_Step:

Process_Description: A subset of the counties in the StorageFacilityCountys shapefile were selected. Areas within the pipeline half-mile buffer were Erased from the counties.
Source_Used_Citation_Abbreviation: E:\current_projects\X_drive\NiSourceData\StorageFacilityCountys.shp
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Pipeline_HalfMileBuff_eco_052209
Process_Date: 20090820
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: US Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported and updated.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\calculation_datasets_060710\sf_counties_090109_metadata.xml
Process_Date: 20100621
Process_Time: 17192200
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 12
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000328
Ordinate_Resolution: 0.000328
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100

Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: SF_County_Areas_Outside_HalfMileBuff_082009
Entity_Type_Definition: A type of governmental unit that is the primary legal subdivision of every U.S. State. In Alaska (borough) and Louisiana (parish) they have different names. In Puerto Rico there are no first-order administrative divisions as defined by the US Government, but there are 78 municipalities (municipios, singular - municipio) at the second order.
Entity_Type_Definition_Source: Department of Commerce, Census Bureau
Attribute:
Attribute_Label: OBJECTID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: NAME
Attribute_Definition: The county name.
Attribute_Definition_Source: Tele Atlas North America, Inc./Geographic Data Technology, Inc.; United States Central Intelligence Agency
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: STATE_NAME
Attribute_Definition: The name for the state in which the county is located.
Attribute_Definition_Source: Department of Commerce, Census Bureau
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Federal Information Processing Standards
Codeset_Source: National Institute of Standards and Technology
Attribute:
Attribute_Label: FIELDNAMES
Attribute:
Attribute_Label: FEATURE
Attribute:
Attribute_Label: EXPANSION
Attribute:
Attribute_Label: Shape_Length
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: Shape_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Distribution_Information:
Distributor:

Contact_Information:
Contact_Organization_Primary:
Contact_Organization: ESRI; ESRI International Distributors
Contact_Address:
Address_Type: mailing and physical address
Address: 380 New York Street
City: Redlands
State_or_Province: California
Postal_Code: 92373-8100
Country: USA
Contact_Voice_Telephone: 800-447-9778
Contact_Instructions:
In the United States, contact the ESRI Telesales staff at 800-447-9778 for more information about our software and data.

Outside the United States, please direct all inquiries to your local ESRI International Distributor. This information can be found at http://gis.esri.com/intldist/contactint.cfm.
Resource_Description: Offline Data
Distribution_Liability: See use constraints.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SDC
Format_Specification: The SDC file contains the geospatial and attribute data. The SDI file contains the spatial and attribute indexes. The PRJ file contains the coordinate system information (optional). The XML file (*.sdc.xml) contains the metadata describing the data set (optional).
File_Decompression_Technique: ArcGIS® software
Transfer_Size: 0.000
Digital_Transfer_Option:
Offline_Option:
Offline_Media: DVD–ROM
Recording_Capacity:
Recording_Density: 4.38
Recording_Density_Units: GB (gigabytes)
Recording_Format: ISO 9660
Offline_Option:
Offline_Media: CD–ROM
Recording_Capacity:
Recording_Density: 650
Recording_Density_Units: MB (megabytes)
Recording_Format: ISO 9660
Fees: Software purchase price
Ordering_Instructions: ESRI Data & Maps is available only as part of ESRI® software.
Technical_Prerequisites: To use this data requires software that supports SDC files.
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: US Fish and Wildlife Service
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drivet
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Hours_of_Service: 8:00 a.m.–5:30 p.m. Pacific time, Monday–Friday
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: This set of data was compiled from several data sources by USFWS.
Publication_Date: Unpublished Material
Title: Ibat_merged_data_3.xls
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset is a collection of tables that describe hibernacula data for the Indiana Bat. This includes locational information, habitat quality information, and several other attributes. It is based on sensitive data, and should not be transferred or shared without specific need.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Supplemental_Information: SENSITIVE DATA: Examine access and use constraints before use!
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: unknown
Currentness_Reference: ground condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate:
East_Bounding_Coordinate:
North_Bounding_Coordinate:
South_Bounding_Coordinate:
Keywords:
Theme:
Theme_Keyword: Indiana Bat
Theme_Keyword: NiSource
Theme_Keyword: MSHCP
Theme_Keyword: Mulit-species Habitat Conservation Plan
Access_Constraints: This dataset is accessible to USFWS employees only. USFWS can not release this dataset. It is based on sensitive data provided by outside organizations (typically states) for exclusive USFWS use. Anyone seeking to access this data should contact the source organizations to get the source data.
Use_Constraints: This dataset contains location specific species information received under data use agreements which restrict use. Permission for use must be granted by the organization releasing the data to USFWS. This dataset is restricted in purpose and extent to the NiSource Covered Lands and the 'May Affect' Counties as outlined in the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. Any map products derived from this dataset should only be released if the scale or generalization is sufficient to protect the underlying data.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111

Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Logical_Consistency_Report: Data were provide for several states in two excel files. Data were combined into this single file, and updated with the latest information available.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: Positional accuracy varies from point to point, as values were collected in different coordinate systems by different authors at different times.
Lineage:
Process_Step:
Process_Description: Data tables were combined and reformatted for entry into ArcGIS. Reformatting primarily consisted of creating a GIS_ID value, a new table with fewer attributes, and modifying the field headers.
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Distribution_Information:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota

Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, Bloomington Field Office
      Publication_Date: October 2009
      Title: Myotis sodalis area
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\source_data\Myotis sodalis area.shp
  Description:
    Abstract: The extent of the known range of the Indiana Bat.
    Purpose: To delineate the full extent of the Indiana Bat range.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: October 2009
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -95.453102
      East_Bounding_Coordinate: -72.649072
      North_Bounding_Coordinate: 45.191612
      South_Bounding_Coordinate: 33.058659
  Keywords:
    Theme:
      Theme_Keyword: Indiana Bat Range
  Access_Constraints: This dataset is accessible to USFWS employees. Anyone seeking to to use this data should contact USFWS.
  Use_Constraints: none
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
  Lineage:
    Process_Step:
      Process_Description: Dataset copied.
      Source_Used_Citation_Abbreviation: C:\WorkSpace\Current_Projects\HCP_project\Data\provided datasets\IBat\Updated_Ibat_range\Myotis sodalis area
      Process_Date: 20100614
      Process_Time: 15225900
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 1
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.000000
      Longitude_Resolution: 0.000000
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.400000
      Denominator_of_Flattening_Ratio: 294.978698
Entity_and_Attribute_Information:

Detailed_Description:
Entity_Type:
Entity_Type_Label: Myotis sodalis area
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: AREA
Attribute:
Attribute_Label: PERIMETER
Attribute:
Attribute_Label: PG_MYOSODL
Attribute:
Attribute_Label: SPECIES
Attribute:
Attribute_Label: COMMON_NAM
Attribute:
Attribute_Label: URL1
Attribute:
Attribute_Label: F_AREA
Distribution_Information:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.027
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, Bloomington Field Office
      Publication_Date: Unknown
      Title: Myotis sodalis
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\source_data\Myotis sodalis.shp
  Description:
    Abstract: The extent of the known range of the Indiana Bat. This dataset is known to be out of date, and should only be used for historic purposes.
    Purpose: To delineate the full extent of the Indiana Bat range.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: unknown
    Currentness_Reference: ground condition
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: out of date
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -95.402587
      East_Bounding_Coordinate: -72.585429
      North_Bounding_Coordinate: 45.180077
      South_Bounding_Coordinate: 33.003202
  Keywords:
    Theme:
      Theme_Keyword: Indiana Bat Range
  Access_Constraints: This dataset is accessible to USFWS employees. Anyone seeking to to use this data should contact USFWS.
  Use_Constraints: This dataset is known to be out of date, and should only be used for historic purposes.
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
  Lineage:
    Process_Step:
      Process_Description: Dataset copied.
      Source_Used_Citation_Abbreviation: C:\WorkSpace\Current_Projects\HCP_project\Data\provided datasets\IBat\First_Ibat_range\Myotis sodalis
      Process_Date: 20100614
      Process_Time: 15223900
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 1
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.000000
      Longitude_Resolution: 0.000000
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000

Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Myotis sodalis
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: AREA
Attribute:
Attribute_Label: PERIMETER
Attribute:
Attribute_Label: PG_MYOSODL
Attribute:
Attribute_Label: SPECIES
Attribute:
Attribute_Label: COMMON_NAM
Attribute:
Attribute_Label: URL1
Distribution_Information:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.028
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: CL_SH_MAco_ident_CL_SFvPB_SumStats
Geospatial_Data_Presentation_Form: tabular digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\CL_SH_MAco_ident_CL_SFvPB_SumStats.dbf
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This table summarizes linear and storage field portions of the Indiana Bat suitable habitat within covered lands.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88.407230
East_Bounding_Coordinate: -73.962255
North_Bounding_Coordinate: 42.932564
South_Bounding_Coordinate: 33.543068
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: An Identity overlay was run with an input of suitable habitat within the covered lands may affect counties and using a covered lands category polygon as the identity features. The covered lands polygons identified the extents of the storage field and pipeline buffer covered lands.
Source_Used_Citation_Abbreviation: CL_SHonly_MAcounties_042110.shp
Source_Used_Citation_Abbreviation: Restricted_CoveredLands_SF_v_PB
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Statistics were calculated on all polygons to summarize the acreages by category, specifically for storage fields, pipeline buffer, and areas of overlap that included both.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100609
Process_Time: 11465400
Process_Contact:
Contact_Information:
Contact_Organization_Primary:

```
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 Federal Drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Process_Step:
    Process_Description: Metadata imported.
    Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\CL_SH_MAco_ident_CL_SFv
PB.shp.xml
    Process_Date: 20100610
    Process_Time: 17272600
Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: G-polygon
    Point_and_Vector_Object_Count: 772804
Spatial_Reference_Information:
 Horizontal_Coordinate_System_Definition:
  Planar:
    Map_Projection:
      Map_Projection_Name: Albers Conical Equal Area
      Albers_Conical_Equal_Area:
        Standard_Parallel: 29.500000
        Standard_Parallel: 45.500000
        Longitude_of_Central_Meridian: -96.000000
        Latitude_of_Projection_Origin: 23.000000
        False_Easting: 0.000000
        False_Northing: 0.000000
    Planar_Coordinate_Information:
      Planar_Coordinate_Encoding_Method: coordinate pair
      Coordinate_Representation:
        Abscissa_Resolution: 0.000000
        Ordinate_Resolution: 0.000000
      Planar_Distance_Units: meters
  Geodetic_Model:
    Horizontal_Datum_Name: North American Datum of 1983
    Ellipsoid_Name: Geodetic Reference System 80
    Semi-major_Axis: 6378137.000000
    Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
 Detailed_Description:
  Entity_Type:
    Entity_Type_Label: CL_SH_MAco_ident_CL_SFvPB_SumStats
  Attribute:
    Attribute_Label: OID
    Attribute_Definition: Internal feature number.
    Attribute_Definition_Source: ESRI
    Attribute_Domain_Values:
      Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
```

Attribute:
Attribute_Label: FEATURE
Attribute:
Attribute_Label: FREQUENCY
Attribute:
Attribute_Label: SUM_acres
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.000
Ordering_Instructions:
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_Hib_rlvnt_ident_dslv2_clean
Geospatial_Data_Presentation_Form: tabular digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\Ibat_Hib_rlvnt_ident_dslv2_clean.dbf
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset provides non-sensitive information about areas within swarming and staging habitat of known hibernacula that intersect the existing (estimated at 75 foot wide) NiSource ROW.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate:
East_Bounding_Coordinate:
North_Bounding_Coordinate:
South_Bounding_Coordinate:
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Relevant hibernacula locations were Buffered with a 10 mile radius, without any dissolve to keep a complete area for each individual hibernaculum.
Source_Used_Citation_Abbreviation: Ibat_Hib_relevant_merge_3_columbia.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Hibernacula buffer areas near storage fields were Identitied using 75 foot wide ROW as the identity features to determine what portions of hibernacula buffer areas were within the existing linear ROW.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\NiSource_ROW75ft_eco_050409
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The portions of hibernacula buffer areas that fell within the linear ROW were selected, and the polygons were Dissolved (by [GIS_KEY_ID]) to combine areas around each hibernaculum into hibernaculum specific multipart polygons.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: An [Acres_75ft] field was added and the area around each hibernaculum was Calculated (Calculate Geometry). The mean value of acreage (i.e. 331 acres) across all 76 hibernacula buffer areas was calculated (by Statistics).
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The attribute table associated with the shapefile was exported without any potentially sensitive location information.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100614
Process_Time: 09292700

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    Process_Contact:
      Contact_Information:
        Contact_Organization_Primary:
          Contact_Organization: USFWS
          Contact_Person: Erik Olson
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Address:
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method:
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type:
      Point_and_Vector_Object_Count:
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name:
        Albers_Conical_Equal_Area:
          Standard_Parallel:
          Standard_Parallel:
          Longitude_of_Central_Meridian:
          Latitude_of_Projection_Origin:
          False_Easting:
          False_Northing:
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method:
        Coordinate_Representation:
          Abscissa_Resolution:
          Ordinate_Resolution:
        Planar_Distance_Units:
    Geodetic_Model:
      Horizontal_Datum_Name:
      Ellipsoid_Name:
      Semi-major_Axis:
      Denominator_of_Flattening_Ratio:
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: Ibat_Hib_rlvnt_ident_dslv2_clean
    Attribute:
      Attribute_Label: OID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: GIS_KEY_ID
      Attribute_Definition: Unique identifier to join attribute data to points in GIS
    Attribute:
```

Attribute_Label: Priority_N
Attribute_Definition: Hibernaculum priority number
Attribute:
Attribute_Label: Acres_75ft
Attribute_Definition: Calculated acres within the 75 foot wide ROW
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.004
Ordering_Instructions:
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_Hib_rlvntbfr_SFco_ident_dslv2_clean
Geospatial_Data_Presentation_Form: tabular digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\Ibat_Hib_rlvntbfr_SFco_ident_dslv2_clean.dbf
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset provides non-sensitive information about areas within swarming and staging habitat of known hibernacula that intersect the potential storage field counites of the MSHCP.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate:
East_Bounding_Coordinate:
North_Bounding_Coordinate:
South_Bounding_Coordinate:
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Relevant hibernacula locations were Buffered with a 10 mile radius, without any dissolve to keep a complete area for each individual hibernaculum. Those hibernacula buffers that intersected storage field counties were Selected (by Location) and placed in a separate layer.
Source_Used_Citation_Abbreviation: Ibat_Hib_relevant_merge_3_columbia.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Hibernacula buffer areas near storage fields were Identitied using storage field counties as the identity features to determine what portions of hibernacula buffer areas were within storage field counties.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\SF_Counties_09_01_09
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The portions of hibernacula buffer areas that fell within storage field counties were selected, and the polygons were Dissolved (by [GIS_KEY_ID]) to combine areas around each hibernaculum into hibernaculum specific multipart polygons.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:

Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: An [Acres_SF] field was added and the area around each hibernaculum was Calculated (Calculate Geometry). The mean value of acreage (i.e. 90314 acres) across all 11 hibernacula buffer areas was calculated (by Statistics).
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The attribute table associated with the shapefile was exported without any potentially sensitive location information.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml

```
      Process_Date: 20100614
      Process_Time: 10073700
      Process_Contact:
        Contact_Information:
          Contact_Organization_Primary:
            Contact_Organization: USFWS
            Contact_Person: Erik Olson
          Contact_Position: Fish and Wildlife Biologist (GIS)
          Contact_Address:
            Address_Type: mailing and physical address
            Address: 1 Federal Drive
            City: Fort Snelling
            State_or_Province: Minnesota
            Postal_Code: 55111
            Country: USA
          Contact_Voice_Telephone: 612-713-5488
          Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method:
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type:
      Point_and_Vector_Object_Count:
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name:
        Albers_Conical_Equal_Area:
          Standard_Parallel:
          Standard_Parallel:
          Longitude_of_Central_Meridian:
          Latitude_of_Projection_Origin:
          False_Easting:
          False_Northing:
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method:
        Coordinate_Representation:
          Abscissa_Resolution:
          Ordinate_Resolution:
        Planar_Distance_Units:
    Geodetic_Model:
      Horizontal_Datum_Name:
      Ellipsoid_Name:
      Semi-major_Axis:
      Denominator_of_Flattening_Ratio:
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: Ibat_Hib_rlvntbfr_SFco_ident_dslv2_clean
    Attribute:
      Attribute_Label: OID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: GIS_KEY_ID
```

Attribute_Definition: Unique identifier to join attribute data to points in GIS
Attribute:
Attribute_Label: Acres_SF
Attribute_Definition: Calculated acres within storage field counties
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.001
Ordering_Instructions:
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_Hypo_Acres_dslv_Clip
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\Ibat_Hypo_Acres_dslv_Clip.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset simulates areas of a dense storage field.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -80.843712
East_Bounding_Coordinate: -80.736296
North_Bounding_Coordinate: 39.808725
South_Bounding_Coordinate: 39.727429
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Wells were modeled by creating a triangular grid of points with a separation distance of 2400 feet for an area larger than a single maternity colony home range. The Repeating Shapes tool (Jenness Enterprises) was used to create the grid of points.
Source_Used_Citation_Abbreviation: NiSource MSCHP Appendix A
Source_Used_Citation_Abbreviation: http://www.jennessent.com/arcgis/repeat_shapes.htm
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Well construction areas (300 foot by 300 foot squares) were approximated over the well sites using the Feature Outline Masks tool (Cartography Tools->Masking Tools) to create Box masks to a margin (minimum distance) of 150 feet around the points.
Source_Used_Citation_Abbreviation: NiSource MSCHP Appendix A
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Connection lines were digitized between well sites. Lines were snapped to wells, and each well had at least one connecting line.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:

Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Each connection line was assigned a ROW width. A few central lines were assigned a 75 foot wide ROW, while the rest were assigned a 50 foot wide ROW. Digitized lines were Buffered to their ROW sizes (radius = ROW width / 2), to simulate the ROW areas.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The well construction areas and the connection pipe ROWs were Unioned to simulate the possible construction area of a storage field network. The result was Dissolved for easier calculations.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: A simulated maternity colony home range (a circle with 2.5 mile radius) was placed over the storage field network, located where it would intersect 115 wells (The largest number that could be found within a 2.5 mile radius).

Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The storage field network was Clipped by the simulated maternity colony home range to simulate the maximum acreage of construction within a maternity colony. The area within the resulting portion of the network was 540 acres (538.53 rounded).
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100610
Process_Time: 16212800
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111

Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 1
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Ibat_Hypo_Acres_dslv_Clip
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: Id
Attribute:
Attribute_Label: acres
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information

contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.015
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100614
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: IBat_Rgwd_Cliptorange_noNY900ft_joined_suit_only
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\IBat_Rgwd_Cliptorange_noNY900ft_joined_suit_only.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset contains modeled points within the Indiana Bat range considered to be viable maternity colony locations based on NLCD class of the surrounding areas (and elevation in the state of New York).
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -95.504799
East_Bounding_Coordinate: -71.678363
North_Bounding_Coordinate: 46.447909
South_Bounding_Coordinate: 31.666377
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: The extended range points within the most up-to-date Indiana bat range were Selected (Select by Location). This new layer was further edited to remove points (Erase) in the area of New York with elevation over 900 feet Indiana bat range.
Source_Used_Citation_Abbreviation: Ibat_Rgwd_Updated_12_75mi_from_Union.shp
Source_Used_Citation_Abbreviation: Myotis sodalis area.shp
Source_Used_Citation_Abbreviation: All_rcl_merge_dslv_clip_xyt1.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The points within the Ibat range were Joined to the habitat amounts table based on the Unique_ID field. The points with enough suitable habitat to be considered viable were identified (Select by Attributes). There were 19823 such points identified.
Source_Used_Citation_Abbreviation: Full_UpdatedA_Table.dbf
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The subset of suitable points was exported to a separate file to preserve the joined attributes.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:

```
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 Federal Drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Process_Step:
    Process_Description: Metadata imported.
    Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
    Process_Date: 20100609
    Process_Time: 17125900
    Process_Contact:
      Contact_Information:
        Contact_Organization_Primary:
          Contact_Organization: USFWS
          Contact_Person: Erik Olson
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Address:
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Entity point
      Point_and_Vector_Object_Count: 19823
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: international feet
    Geodetic_Model:
```

Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: IBat_Rgwd_Cliptorange_noNY900ft_joined_suit_only
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: Unique_ID
Attribute:
Attribute_Label: X_coord
Attribute:
Attribute_Label: Y_coord
Attribute:
Attribute_Label: OID_
Attribute:
Attribute_Label: OBJECTID
Attribute:
Attribute_Label: UNIQUE_I_1
Attribute:
Attribute_Label: VALUE_11
Attribute_Definition: Square Meters of Open Water
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_21
Attribute_Definition: Square Meters of Developed, Open Space
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_22
Attribute_Definition: Square Meters of Developed, Low Intensity
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_23
Attribute_Definition: Square Meters of Developed, Medium Intensity
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_24
Attribute_Definition: Square Meters of Developed, High Intensity
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_31
Attribute_Definition: Square Meters of Barren Land
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_41

Attribute_Definition: Square Meters of Deciduous Forest
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_42
Attribute_Definition: Square Meters of Evergreen Forest
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_43
Attribute_Definition: Square Meters of Mixed Forest
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_52
Attribute_Definition: Square Meters of Shrub/Scrub
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_71
Attribute_Definition: Square Meters of Herbaceuous
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_81
Attribute_Definition: Square Meters of Hay/Pasture
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_82
Attribute_Definition: Square Meters of Cultivated Crops
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_90
Attribute_Definition: Square Meters of Woody Wetlands
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_95
Attribute_Definition: Square Meters of Emergent Herbaceuous Wetlands
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: total_of_v
Attribute_Definition: Total of NLCD values
Attribute:
Attribute_Label: total_of_s
Attribute_Definition: Total of Suitable NLCD values
Attribute:
Attribute_Label: suit_ov_10
Attribute_Definition: Site suitability categorization
Attribute_Definition_Source: Based on [total_of_s] > 5084820 square meters
Attribute:
Attribute_Label: perc_suit
Attribute_Definition: Percent suitable (total_of_s/total_of_v)
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully

on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.529
Ordering_Instructions:

Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_rgwd_colonies_2_5mi_from_CL_suitable_export
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\Ibat_rgwd_colonies_2_5mi_from_CL_suitable_export.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset contains the viable modelled maternity colony points near the covered lands. Attributes describe how near each point is to areas of covered lands.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88.398687
East_Bounding_Coordinate: -73.783557
North_Bounding_Coordinate: 43.309413
South_Bounding_Coordinate: 33.664325
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Points from the Indiana bat range that were within 2.5 miles of the covered lands were Selected (by Location) and exported to a new file.
Source_Used_Citation_Abbreviation: Ibat_Rgwd_Cliptorange_noNY900ft.shp
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Restricted_CoveredLands_eco_100909
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The shapefile of points within 2.5 miles of the covered lands was Joined (using [Unique_ID]) to the habitat amounts table. A new field [Suitable] was added to the shapefile and calculated to indicate viable colonies based on the habitat amounts table.
Source_Used_Citation_Abbreviation: Full_UpdatedA_Table.dbf
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The Near tool was used to calculate the distance of each point from to each category of covered lands. The Near tool was used to calculate distance to storage fields (up to 13500 feet away) and the result added to a new field [SF_Co_Dist]. The Near tool was used again to calculate the distance to the half mile buffer around pipelines. This result was also added to a new field [PipeBf_Dis].
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Pipeline_HalfMileBuff_eco_052209
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\SF_Counties_09_01_09
Process_Date:
Process_Time:
Process_Contact:

Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Distance data was categorized into two new fields ([SF_Cat] and [Pipe_Cat]). Using the classes In (distance = 0), Near (distance between 0 and 13200 ft), and Away (distance greater than 13200 ft) each point was categorized based on its distance from each type of the covered lands. There were a total of 1881 points near the covered lands in all categories combined. One additional point in the dataset was Away from both the linear corridor and storage fields, and was removed from calculations by a definition query {NOT ("SF_Cat" = 'Away SF' AND "Pipe_Cat" = 'Away Pipe')}.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100609
Process_Time: 17473200
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 1882
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Ibat_rgwd_colonies_2_5mi_from_CL_suitable_export
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: Unique_ID
Attribute:
Attribute_Label: X_coord
Attribute:
Attribute_Label: Y_coord
Attribute:
Attribute_Label: Suitable
Attribute_Definition: Indicator that the point has sufficient suitable habitat to be vialbe.
Attribute:
Attribute_Label: SF_Co_Dist
Attribute_Definition: Distance to the nearest storage field county (in feet).

Attribute:
Attribute_Label: PipeBf_Dis
Attribute_Definition: Distance to the nearest part of the linear buffer (in feet).
Attribute:
Attribute_Label: SF_Cat
Attribute_Definition: Distance to storage field category.
Attribute:
Attribute_Label: Pipe_Cat
Attribute_Definition: Distance to pipeline buffer category.
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.050
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: pipe_25ftBfr_SH_MAcounties_042110
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\pipe_25ftBfr_SH_MAcounties_042110.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset was used to estimate the number of acres of O and M work that will be done within the covered lands. Additional calculations based on this dataset (that produce the 3900 acre estimate) are described in the process steps.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88.397228
East_Bounding_Coordinate: -73.970577
North_Bounding_Coordinate: 42.843101
South_Bounding_Coordinate: 33.632860
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111

Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: The pipelines shapefile was Buffered with a 25 foot radius to simulate a 50 foot wide ROW.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The pipeline buffer polygon border was converted to a polyline file (Feature to Line) to represent only the perimeter of the ROW.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The pipeline ROW perimeter file was Intersected with the with the suitable habitat polygon to identify areas of the perimeter in Indiana bat suitable habitat.
Source_Used_Citation_Abbreviation: b4a_poly_CLclip_Merge_suit_only.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The suitable habitat perimeter lines were Clipped by the may affect counties boundaries.
Source_Used_Citation_Abbreviation: IBat_MA_counties_042110.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The length of the remaining suitable habitat perimeter was calculated for use in estimating the area of clearing required by O and M activities.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The total length from the GIS file (67809229.9 ft) was multiplied by 2.5 feet to estimate the amount of clearing needed along the sides of the ROW. The resulting measure (169523074.75 sq ft) was divided by 43560 sq ft per acre to estimate the number of acres impacted (i.e. 3891.71 acres). This was rounded to 3900 acres.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:

```
    Process_Contact:
      Contact_Information:
        Contact_Organization_Primary:
          Contact_Organization: USFWS
          Contact_Person: Erik Olson
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Address:
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Process_Step:
    Process_Description: Metadata imported.
    Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
    Process_Date: 20100609
    Process_Time: 14524800
    Process_Contact:
      Contact_Information:
        Contact_Organization_Primary:
          Contact_Organization: USFWS
          Contact_Person: Erik Olson
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Address:
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: String
      Point_and_Vector_Object_Count: 70310
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
```

Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: pipe_25ftBfr_SH_MAcounties_042110
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_pipeli
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: FID_b4a_po
Attribute:
Attribute_Label: ID
Attribute:
Attribute_Label: GRIDCODE
Attribute_Definition: NLCD Class Code
Attribute_Definition_Source: NLCD 2001
Attribute:
Attribute_Label: length_ft
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 18.142
Ordering_Instructions:

Metadata_Reference_Information:
  Metadata_Date: 20100614
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: SSFS_CLSH_MAco_Int_Statistic
Geospatial_Data_Presentation_Form: tabular digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\SSFS_CLSH_MAco_Int_Statistic.dbf
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This data summarizes the areas of modelled spring staging/fall swarming habitat within the covered lands. Areas are grouped based on hibernacula priority designations.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate:
East_Bounding_Coordinate:
North_Bounding_Coordinate:
South_Bounding_Coordinate:
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
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Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Priority 1 or 2 hibernacula locations within 10 miles of the covered lands were Selected (by attributes) and Buffered with a radius of 10 miles (results dissolved) to represent the fall swarming and spring staging areas around the P1 and P2 hibernacula.
Source_Used_Citation_Abbreviation: Ibat_Hib_relevant_merge_3_columbia.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Priority 3 and 4 hibernacula locations within 10 miles of the covered lands were Selected (by attributes) and Buffered with a radius of 10 miles (results dissolved) to represent the fall swarming and spring staging areas around the P3and P4 hibernacula.
Source_Used_Citation_Abbreviation: Ibat_Hib_relevant_merge_3_columbia.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Areas around P3 or P4 hibernacula were Intersected with the covered lands category polygons to categorize the types of covered lands within the swarming/staging habitat.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Restricted_CoveredLands_SF_v_PB
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:

Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Areas within the covered lands near P34 hibernacula were Identitied with areas near P12 hibernacula to classify areas near P12 differently than areas only near P34 hibernacula.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The Indiana bat suitable habitat in covered lands in may affect counties data was imported to a file geodatabase to resolve some data processing errors.
Source_Used_Citation_Abbreviation: CL_SHonly_MAcounties_042110.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The Indiana bat suitable habitat areas within the covered lands may affect counties were Intersected with the swarming and staging areas classified by proximity to P12 or P34 hibernacula within the covered lands. The resulting polygons could be categorized by hibernacula priority class and type of covered lands.

Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Acreages within each category of covered lands were Summarized into a separate table.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100611
Process_Time: 17262800
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method:
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type:
Point_and_Vector_Object_Count:
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name:
Albers_Conical_Equal_Area:
Standard_Parallel:
Standard_Parallel:
Longitude_of_Central_Meridian:
Latitude_of_Projection_Origin:
False_Easting:
False_Northing:
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method:
Coordinate_Representation:
Abscissa_Resolution:
Ordinate_Resolution:
Planar_Distance_Units:
Geodetic_Model:
Horizontal_Datum_Name:
Ellipsoid_Name:
Semi-major_Axis:
Denominator_of_Flattening_Ratio:
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: SSFS_CLSH_MAco_Int_Statistic
Attribute:
Attribute_Label: OID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: FEATURE
Attribute_Definition: Covered lands classification
Attribute:
Attribute_Label: priority
Attribute_Definition: Hibernacula priority category
Attribute:
Attribute_Label: FREQUENCY
Attribute:
Attribute_Label: SUM_acres_
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in

general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.000
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100614
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Viia_MatCo_HRs_1881_Clip_Row75ft
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\calculations_data\Viia_MatCo_HRs_1881_Clip_Row75ft.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset calculates the acrage of existing ROW through modelled maternity colonies. It is used to estimate the mean impacts of linear construction on a maternity colony.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88.394721
East_Bounding_Coordinate: -73.822099
North_Bounding_Coordinate: 43.340877
South_Bounding_Coordinate: 33.636689
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: The maternity colony home range circles were Selected (by Location) that contained viable maternity colony points. The selected results were exported to a new shapefile.
Source_Used_Citation_Abbreviation: Ibat_Rgwd_bfr_UpdatedA.shp
Source_Used_Citation_Abbreviation: Ibat_rgwd_colonies_2_5mi_from_CL_suitable_export.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The viable maternity colony home ranges were Clipped by the boundary of the 75 foot wide ROW.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\NiSource_ROW75ft_dissolved_eco_021610
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The [acres] field was added and the acreage for each colony was Calculated (Calculate Geometry). The average acreage per colony (i.e. 61 acres) was determined using the Statistics tool.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100610
Process_Time: 17300100
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 1498
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Viia_MatCo_HRs_1881_Clip_Row75ft
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: Unique_ID
Attribute:
Attribute_Label: X_coord
Attribute:
Attribute_Label: Y_coord
Attribute:
Attribute_Label: BUFF_DIST
Attribute:
Attribute_Label: acres
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 20.178
Ordering_Instructions:
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:

Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date:
      Title: All_rcl_merge_dslv_clip_xyt1
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\All_rcl_merge_dslv_clip_xyt1.shp
  Description:
    Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset defines areas above and below an elevation of 900 feet within New York State.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -79.995665
      East_Bounding_Coordinate: -71.800860
      North_Bounding_Coordinate: 45.013410
      South_Bounding_Coordinate: 40.404808
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: Suitable Habitat Model
      Theme_Keyword: Indiana Bat
  Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
  Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov

Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: DEMs of New York State were obtained.
Source_Used_Citation_Abbreviation: National Elevation Dataset 10 meter resolution DEMs
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: DEMs were Reclassified into a binary raster, with elevations over 900 feet (274.32001 meters) set to 0 and elevations below 900 feet set to 1.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Rasters were converted (RasterToPolygon)to polygon features.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota

Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Elevation polygons were Merged, and then Dissolved (on the [GRIDCODE] field) to remove artifacts.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The combined elevation polygons were clipped by the New York state boundary. The clip was performed with an XY tolerance of 1 foot to remove additional artifacts.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\States_100kModified_eco_101509
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100614
Process_Time: 14171200
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:

```
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 3
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Grid_Coordinate_System:
        Grid_Coordinate_System_Name: Universal Transverse Mercator
        Universal_Transverse_Mercator:
          UTM_Zone_Number: 18
          Transverse_Mercator:
            Scale_Factor_at_Central_Meridian: 0.999600
            Longitude_of_Central_Meridian: -75.000000
            Latitude_of_Projection_Origin: 0.000000
            False_Easting: 500000.000000
            False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: meters
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: All_rcl_merge_dslv_clip_xyt1
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: GRIDCODE
      Attribute_Definition: Reclassified elevation indicator
      Attribute_Domain_Values:
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Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: elevation under 900 feet
Enumerated_Domain:
Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition: elevation over 900 feet
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 11.194
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: b4a_poly_CLclip_Merge_suit_only
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\b4a_poly_CLclip_Merge_suit_only.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset was created to identify habitat considered suitable for Indiana Bats within the extent of the covered lands. Suitability was based on NLCD 2001 classifications.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88.407381
East_Bounding_Coordinate: -73.782549
North_Bounding_Coordinate: 43.507316
South_Bounding_Coordinate: 33.542840
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: NLCD rasters were obtained for all superzones within the covered lands.
Source_Used_Citation_Abbreviation: landcover8_3k_022007.img
Source_Used_Citation_Abbreviation: landcover9_3k_022007.img
Source_Used_Citation_Abbreviation: landcover10_3k_022007.img
Source_Used_Citation_Abbreviation: landcover11_3k_022007.img
Source_Used_Citation_Abbreviation: landcover12_3k_022007.img
Source_Used_Citation_Abbreviation: landcover13_3k_022007.img
Source_Used_Citation_Abbreviation: landcover14_3k_022007.img
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: A Buffer of the covered lands was created with a radius of 10 miles. This includes all areas that might be relevant to analysis of the covered lands intersection with maternity colony home ranges (2.5 mile radius) or spring staging/fall swarming habitat (10 mile radius) around hibernacula.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Restricted_CoveredLands_eco_100909
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Relevant portions of each NLCD raster were Extracted using the covered lands 10 mile buffer to reduce the size of the datasets for analysis.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:

Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The (10 mile buffer extracted) raster for NLCD superzone 12 was Extracted again to remove areas within the states of Louisiana and Mississippi.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\States_100kModified_eco_101509
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The (10 mile buffer extracted) raster for NLCD superzone 13 was edited (multiple steps) to remove areas of New York above 900 feet in elevation. DEMs for New York were obtained and mosaicked together. The mosaic was reclassified to identify areas over 900 ft. The reclassified raster was clipped to the New York border and 10 mile covered lands buffer. This area was then used with a conditional statement (CON) to extract any areas in New York over 900 feet from the (10 mile buffer extracted) raster for NLCD superzone 13.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\States_100kModified_eco_101509
Source_Used_Citation_Abbreviation: National Elevation Dataset 10 meter resolution
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Each NLCD raster was Reclassified to convert the 127 value into NoData for compilation with other datasets.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The cleaned up NLCD rasters were Mosaicked together into a single raster that provided complete coverage of the covered lands range.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The NLCD raster mosaic was Clipped into two separate sections (east and west) because the mosaic was too large for conversion to a shapefile.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive

City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Each raster dataset (east and west) was converted (Raster to Polygon) into a polygon shapefile.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Each dataset (east and west) was Clipped by the boundaries of the covered lands to reduce the amount of data in the dataset.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The east and west shapefiles were Merged into a single shapefile representing suitable habitat across the entire extent of the covered lands.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100609
Process_Time: 11464300
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 850983
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -96.000000
Latitude_of_Projection_Origin: 23.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: b4a_poly_CLclip_Merge_suit_only
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: ID
Attribute:
Attribute_Label: GRIDCODE
Attribute_Definition: NLCD Class Code
Attribute_Definition_Source: NLCD 2001
Attribute:
Attribute_Label: acres
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 236.583
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: CL_SH_MAco_ident_CL_SFvPB
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\CL_SH_MAco_ident_CL_SFvPB.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset separates linear and storage field portions of the Indiana Bat suitable habitat within covered lands.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88.407230
East_Bounding_Coordinate: -73.962255
North_Bounding_Coordinate: 42.932564
South_Bounding_Coordinate: 33.543068
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: An Identity overlay was run with an input of suitable habitat within the covered lands may affect counties and using a covered lands category polygon as the identity features. The covered lands polygons identified the extents of the storage field and pipeline buffer covered lands.
Source_Used_Citation_Abbreviation: CL_SHonly_MAcounties_042110.shp
Source_Used_Citation_Abbreviation: Restricted_CoveredLands_SF_v_PB
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100609
Process_Time: 11465400
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 772804
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:

Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -96.000000
Latitude_of_Projection_Origin: 23.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: CL_SH_MAco_ident_CL_SFvPB
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_CL_SHo
Attribute:
Attribute_Label: ID
Attribute:
Attribute_Label: GRIDCODE
Attribute_Definition: NLCD Class Code
Attribute_Definition_Source: NLCD 2001
Attribute:
Attribute_Label: acres
Attribute:
Attribute_Label: FID_Restri
Attribute:
Attribute_Label: FEATURE
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in

general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 219.783
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Metadata_Reference_Information:
  Metadata_Date: 20100614
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
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        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
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Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: CL_SHonly_MAcounties_042110
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\CL_SHonly_MAcounties_042110.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset shows the extent of suitable habitat within the covered lands and within counties designated as "May Affect."
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88.407230
East_Bounding_Coordinate: -73.962255
North_Bounding_Coordinate: 42.932564
South_Bounding_Coordinate: 33.543068
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: The suitable habitat was Clipped to include only areas within Indiana bat may affect counties (as of 042110). This removed areas of suitable habitat outside of the may affect counties.
Source_Used_Citation_Abbreviation: b4a_poly_CLclip_Merge_suit_only.shp
Source_Used_Citation_Abbreviation: IBat_MA_counties_042110.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100609
Process_Time: 14174500
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 764135
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:

Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -96.000000
Latitude_of_Projection_Origin: 23.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: CL_SHonly_MAcounties_042110
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: ID
Attribute:
Attribute_Label: GRIDCODE
Attribute_Definition: NLCD Class Code
Attribute_Definition_Source: NLCD 2001
Attribute:
Attribute_Label: acres
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and

information.
  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 216.882
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100614
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Full_UpdatedA_Table
Geospatial_Data_Presentation_Form: tabular digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\Full_UpdatedA_Table.dbf
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This table contains a summary of NLCD 2001 data within 2.5 miles of points used to model Indiana Bat maternity colonies. This table is linked to the spatial data using the [Unique_ID] field.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate:
East_Bounding_Coordinate:
North_Bounding_Coordinate:
South_Bounding_Coordinate:
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Seven NLCD 2001 landcover rasters were processed (SingleOutputMapAlgebra setnull) to convert all 127 values to a null value.
Source_Used_Citation_Abbreviation: landcover8_3k_022007.img
Source_Used_Citation_Abbreviation: landcover9_3k_022007.img
Source_Used_Citation_Abbreviation: landcover10_3k_022007.img
Source_Used_Citation_Abbreviation: landcover11_3k_022007.img
Source_Used_Citation_Abbreviation: landcover12_3k_022007.img
Source_Used_Citation_Abbreviation: landcover13_3k_022007.img
Source_Used_Citation_Abbreviation: landcover14_3k_022007.img
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The processed NLCD rasters were mosaicked into a single raster with coverage over the entire Indiana bat range.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: A 2.5 mile radius circular Buffer was created for each point the set of Indiana bat extended range points to represent maternity colony home ranges. These buffer circles maintained the Unique_ID field used by the points.
Source_Used_Citation_Abbreviation: Ibat_Rgwd_Updated_12_75mi_from_Union.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:

Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The NLCD mosaic was used to calculate the habitat area in a home range buffer for each point in the Indiana bat extended range. The buffers and NLCD mosaic were input into a python script to Tabulate Area (Spatial Analyst->Zonal) within each buffer. Because of the memory requirements for this process, the buffer polygons were split into subsets which were run concurrently on separate computers, and the resulting tables were merged back together to produce a final table with habitat amounts for all points (identified by the [Unique_ID] field) in the extended home range.
Source_Used_Citation_Abbreviation: zonal_stat_cycle_7.py
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The Tabulate Area tool created fields for each NLCD value. To assess the suitable habitat, additional calculations (Field Calculator) were done within the habitat amounts table. The sum of suitable habitat was calculated [total_of_s] by summing the 7 Indiana Bat suitable habitat fields (Values 21, 22, 23, 41, 42, 43, and 90; this field shows values in square meters). Another field [suit_ov_10] was created to categorize each point as viable or non-viable. This field was given a value of Y if the total of suitable was over the 10% needed (5084820 sq m, i.e. 1256 acres) for a viable colony home range, and N if the habitat was not sufficient.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota

Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100609
Process_Time: 16132200
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Albers_Conical_Equal_Area:
Standard_Parallel:
Standard_Parallel:
Longitude_of_Central_Meridian:
Latitude_of_Projection_Origin:
False_Easting:
False_Northing:
Planar_Coordinate_Information:
Coordinate_Representation:
Geodetic_Model:
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Full_UpdatedA_Table
Attribute:
Attribute_Label: OID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: OBJECTID
Attribute:
Attribute_Label: UNIQUE_ID
Attribute:
Attribute_Label: VALUE_11

Attribute_Definition: Square Meters of Open Water
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_21
Attribute_Definition: Square Meters of Developed, Open Space
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_22
Attribute_Definition: Square Meters of Developed, Low Intensity
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_23
Attribute_Definition: Square Meters of Developed, Medium Intensity
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_24
Attribute_Definition: Square Meters of Developed, High Intensity
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_31
Attribute_Definition: Square Meters of Barren Land
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_41
Attribute_Definition: Square Meters of Deciduous Forest
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_42
Attribute_Definition: Square Meters of Evergreen Forest
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_43
Attribute_Definition: Square Meters of Mixed Forest
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_52
Attribute_Definition: Square Meters of Shrub/Scrub
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_71
Attribute_Definition: Square Meters of Herbaceuous
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_81
Attribute_Definition: Square Meters of Hay/Pasture
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_82
Attribute_Definition: Square Meters of Cultivated Crops
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_90
Attribute_Definition: Square Meters of Woody Wetlands
Attribute_Definition_Source: NLCD 2001 Landcover
Attribute:
Attribute_Label: VALUE_95
Attribute_Definition: Square Meters of Emergent Herbaceuous Wetlands
Attribute_Definition_Source: NLCD 2001 Landcover

Attribute:
Attribute_Label: total_of_v
Attribute_Definition: Total of NLCD values
Attribute:
Attribute_Label: total_of_s
Attribute_Definition: Total of Suitable NLCD values
Attribute:
Attribute_Label: suit_ov_10
Attribute_Definition: Site suitability categorization
Attribute_Definition_Source: Based on [total_of_s] > 5084820 square meters
Attribute:
Attribute_Label: perc_suit
Attribute_Definition: Percent suitable (total_of_s/total_of_v)
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 9.027
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_Hib_relevant_merge_3_columbia
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\Ibat_Hib_relevant_merge_3_columbia.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This data is a compilation of hibernacula locations in or near the MSHCP covered lands across several states. It is based on sensitive data, and should not be transferred or shared without specific need.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Supplemental_Information: SENSITIVE DATA: Examine access and use constraints before use!
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -84.502013
East_Bounding_Coordinate: -77.967488
North_Bounding_Coordinate: 41.425865
South_Bounding_Coordinate: 36.526470
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS employees only. USFWS can not release this dataset. It is based on sensitive data provided by outside organizations (typically states) for exclusive USFWS use. Anyone seeking to access this data should contact the source organizations to get the source data.
Use_Constraints: This dataset contains location specific species information received under data use agreements which restrict use. Permission for use must be granted by the organization releasing the data to USFWS. This dataset is restricted in purpose and extent to the NiSource Covered Lands and the 'May Affect' Counties as outlined in the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. Any map products derived from this dataset should only be released if the scale or generalization is sufficient to protect the underlying data.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive

City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Coordinates for hibernaculum locations were converted (Display XY Data) to points. Because the coordinates were in several different projections, the coordinate file was converted to points multiple times (once in each projection) and definition queries were applied to each coordinate set layer to remove any incorrectly projected points.
Source_Used_Citation_Abbreviation: Ibat_merged_data_3.xls
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Hibernacula location point layers (after application of definition queries) were Merged into a single dataset (in UTM 17N NAD 83).
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: A subset of the Indiana bat Hibernacula features were Selected (by Location and by Attributes) for those that were within 10 miles of covered lands and currently extant or uncertain populations ([Current_Po] field).
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Restricted_CoveredLands_eco_100909
Process_Date:
Process_Time:

Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
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City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: A subset of the Indiana bat Hibernacula features were Selected (by Location and by Attributes) for those that were within 10 miles of covered lands and historic or no data on populations ([Current_Pop_Status] field), but potential importance to recovery was moderate or unknown ([Rate_Overall_Potential Importance_to_Recovery] field).
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Restricted_CoveredLands_eco_100909
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Indiana bat hibernacula subsets were Merged to retain only relevant hibernacula for further analysis.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:

Process_Description: Hibernacula location points were Projected into Columbia-North America Albers Equal Area Conic.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The Near function was used to identify the distance (up to 10 miles) from each hibernaculum location to the mile-wide buffer around pipelines, and also to storage field counties. The distance values (in feet) were saved to additional fields [pipe_dist] and [SF_dist]. These values could then be used to select by attributes rather than location, and save effort later.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Restricted_CoveredLands_SF_v_PB
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_sensitive_template_metadata.xml
Process_Date: 20100611
Process_Time: 12541400
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota

```
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Entity point
      Point_and_Vector_Object_Count: 86
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: Ibat_Hib_relevant_merge_3_columbia
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: GIS_KEY_ID
      Attribute_Definition: Unique identifier to join attribute data to points in GIS
      Attribute_Definition_Source: Ibat_merged_data_3.xls
    Attribute:
      Attribute_Label: County
      Attribute_Definition_Source: Ibat_merged_data_3.xls
    Attribute:
      Attribute_Label: Hibernacul
```

Attribute_Definition: Hibernaculum_Name
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Alternativ
Attribute_Definition: Alternative_Cave_Name_or_Number
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Hib_Type
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Mine_Type
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Coordinate
Attribute_Definition: Coordinate_Datum
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: UTM_Zone
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: UTM_EASTIN
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: UTM_NORTHI
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Latitude_D
Attribute_Definition: Latitude_DMS
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Longitude_
Attribute_Definition: Longitude_DMS
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Current_Po
Attribute_Definition: Current_Pop_Status
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: CRITICAL_H
Attribute_Definition: CRITICAL_HABITAT
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Bastion_of
Attribute_Definition: Bastion_of_Survival
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Ecological
Attribute_Definition: Ecological_Trap
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: High_Poten
Attribute_Definition: High_Potential
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Rate_Overa
Attribute_Definition: Rate_Overall_Current_Importance_to_Recovery
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:

Attribute_Label: Rate_Ove_1
Attribute_Definition: Rate_Overall_Potential_Importance_to_Recovery
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Priority_N
Attribute_Definition: Priority_Number
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Subcategor
Attribute_Definition: Subcategory
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: remove_fro
Attribute_Definition: remove_from_anaysis
Attribute_Definition_Source: Ibat_merged_data_3.xls
Attribute:
Attribute_Label: Latitude_1
Attribute:
Attribute_Label: Longitude1
Attribute:
Attribute_Label: pipe_dist
Attribute_Definition: Distance to the nearest part of the linear buffer (in feet).
Attribute:
Attribute_Label: SF_dist
Attribute_Definition: Distance to the nearest storage field county (in feet).
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.002
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota

Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_Hib_rlvnt_ident_dslv2
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\Ibat_Hib_rlvnt_ident_dslv2.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset identifies areas within swarming and staging habitat of known hibernacula that intersect the existing (estimated at 75 foot wide) NiSource ROW. It is based on sensitive data, and should not be transferred or shared without specific need.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Supplemental_Information: SENSITIVE DATA: Examine access and use constraints before use!
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -84.599283
East_Bounding_Coordinate: -77.775936
North_Bounding_Coordinate: 41.576948
South_Bounding_Coordinate: 36.809329
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS employees only. USFWS can not release this dataset. It is based on sensitive data provided by outside organizations (typically states) for exclusive USFWS use. Anyone seeking to access this data should contact the source organizations to get the source data.
Use_Constraints: This dataset contains location specific species information received under data use agreements which restrict use. Permission for use must be granted by the organization releasing the data to USFWS. This dataset is restricted in purpose and extent to the NiSource Covered Lands and the 'May Affect' Counties as outlined in the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. Any map products derived from this dataset should only be released if the scale or generalization is sufficient to protect the underlying data.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:

Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Relevant hibernacula locations were Buffered with a 10 mile radius, without any dissolve to keep a complete area for each individual hibernaculum.
Source_Used_Citation_Abbreviation: Ibat_Hib_relevant_merge_3_columbia.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Hibernacula buffer areas near storage fields were Identitied using 75 foot wide ROW as the identity features to determine what portions of hibernacula buffer areas were within the existing linear ROW.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\NiSource_ROW75ft_eco_050409
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The portions of hibernacula buffer areas that fell within the linear ROW were selected, and the polygons were Dissolved (by [GIS_KEY_ID]) to combine areas around each hibernaculum into hibernaculum specific multipart polygons.
Source_Used_Citation_Abbreviation:
Process_Date:

Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: An [Acres_75ft] field was added and the area around each hibernaculum was Calculated (Calculate Geometry). The mean value of acreage (i.e. 331 acres) across all 76 hibernacula buffer areas was calculated (by Statistics).
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_sensitive_template_metadata.xml
Process_Date: 20100614
Process_Time: 09291600
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 76
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: Ibat_Hib_rlvnt_ident_dslv2
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: GIS_KEY_ID
      Attribute_Definition: Unique identifier to join attribute data to points in GIS
    Attribute:
      Attribute_Label: County
    Attribute:
      Attribute_Label: Hibernacul
      Attribute_Definition: Hibernaculum name
    Attribute:
      Attribute_Label: Alternativ
      Attribute_Definition: Hibernaculum alternate name
    Attribute:
      Attribute_Label: Priority_N

Attribute_Definition: Hibernaculum priority number
Attribute:
Attribute_Label: Acres_75ft
Attribute_Definition: Calculated acres within the 75 foot wide ROW
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 5.153
Ordering_Instructions:
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_Hib_rlvntbfr_SFco_ident_dslv2
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\Ibat_Hib_rlvntbfr_SFco_ident_dslv2.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset identifies areas within swarming and staging habitat of known hibernacula that intersect the potential storage field counties of the MSHCP. It is based on sensitive data, and should not be transferred or shared without specific need.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Supplemental_Information: SENSITIVE DATA: Examine access and use constraints before use!
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -82.784125
East_Bounding_Coordinate: -78.130025
North_Bounding_Coordinate: 40.702048
South_Bounding_Coordinate: 38.956407
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS employees only. USFWS can not release this dataset. It is based on sensitive data provided by outside organizations (typically states) for exclusive USFWS use. Anyone seeking to access this data should contact the source organizations to get the source data.
Use_Constraints: This dataset contains location specific species information received under data use agreements which restrict use. Permission for use must be granted by the organization releasing the data to USFWS. This dataset is restricted in purpose and extent to the NiSource Covered Lands and the 'May Affect' Counties as outlined in the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. Any map products derived from this dataset should only be released if the scale or generalization is sufficient to protect the underlying data.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:

Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Relevant hibernacula locations were Buffered with a 10 mile radius, without any dissolve to keep a complete area for each individual hibernaculum. Those hibernacula buffers that intersected storage field counties were Selected (by Location) and placed in a separate layer.
Source_Used_Citation_Abbreviation: Ibat_Hib_relevant_merge_3_columbia.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Hibernacula buffer areas near storage fields were Identitied using storage field counties as the identity features to determine what portions of hibernacula buffer areas were within storage field counties.
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\SF_Counties_09_01_09
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The portions of hibernacula buffer areas that fell within storage field counties were selected, and the polygons were Dissolved (by [GIS_KEY_ID]) to combine areas around each hibernaculum into hibernaculum specific multipart polygons.

Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: An [Acres_SF] field was added and the area around each hibernaculum was Calculated (Calculate Geometry). The mean value of acreage (i.e. 90314 acres) across all 11 hibernacula buffer areas was calculated (by Statistics).
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_sensitive_template_metadata.xml
Process_Date: 20100614
Process_Time: 10082000
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

```
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 11
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: Ibat_Hib_rlvntbfr_SFco_ident_dslv2
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: GIS_KEY_ID
      Attribute_Definition: Unique identifier to join attribute data to points in GIS
    Attribute:
      Attribute_Label: Acres_10mi
    Attribute:
      Attribute_Label: Acres_SF
      Attribute_Definition: Calculated acres within storage field counties
Distribution_Information:
  Distributor:
  Resource_Description: Downloadable Data
```

Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

```
  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.111
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100614
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS
Publication_Date: 04/22/10
Title: IBat_MA_counties_042110
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\IBat_MA_counties_042110.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset shows the counties covered by the NiSource MSCHP where activites may result in impacts to Indiana bats.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario. This shapefile was created to update the list of May Affect counties for use in MSCHP calculations.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 04/22/10
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -88.802141
East_Bounding_Coordinate: -73.724431
North_Bounding_Coordinate: 43.124684
South_Bounding_Coordinate: 33.586015
Keywords:
Theme:
Theme_Keyword_Thesaurus: Covered Lands
Theme_Keyword: NiSource
Theme_Keyword: Covered Lands
Theme_Keyword: Indiana Bat
Theme_Keyword: May Affect Counties
Place:
Place_Keyword: Eastern U.S.
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Data_Set_Credit: Data used to create this dataset originate from NiSource.
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Completeness_Report:
Complete,
Update as needed.
Lineage:
Process_Step:
Process_Description: Counties were selected from a national county dataset based on information from FWS field offices about which counties would have impacts. This dataset has been updated over time as additional data has been provided by field offices
Process_Date: 04/21/10
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Dataset copied.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\Data\newly_generated_datasets\IBat\suitable_ROW_3_042110\IBat_MA_counties_042110
Process_Date: 20100614
Process_Time: 13100800
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 245
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair

Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: IBat_MA_counties_042110
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: OBJECTID
Attribute:
Attribute_Label: NAME
Attribute:
Attribute_Label: STATE_NAME
Attribute:
Attribute_Label: STATE_FIPS
Attribute:
Attribute_Label: CNTY_FIPS
Attribute:
Attribute_Label: CO_CODE
Attribute:
Attribute_Label: TYPE
Attribute:
Attribute_Label: Shape_Leng
Attribute:
Attribute_Label: Shape_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: FIPS
Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson

Contact_Organization: USFWS
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to areas relelvant to the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data have been processed successfully on a computer system by USFWS, no warranty expressed or implied is made regarding the utility of the data on another system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: SHP
Transfer_Size: 5.368
Ordering_Instructions: Contact Rick Hall at NiSource.
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_Rgwd_bfr_UpdatedA
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\Ibat_Rgwd_bfr_UpdatedA.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset is made up of buffers around a set of possible Indiana Bat maternity colony locations, for use in impacts modeling. Locations are created in a grid to approximate maximum density of bat colonies, and are NOT based on any known maternity colony locations.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -95.791589
East_Bounding_Coordinate: -71.151627
North_Bounding_Coordinate: 46.932778
South_Bounding_Coordinate: 31.389979
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111

Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: A 2.5 mile radius circular Buffer was created for each point the set of Indiana bat extended range points to represent maternity colony home ranges. These buffer circles maintained the Unique_ID field used by the points.
Source_Used_Citation_Abbreviation: Ibat_Rgwd_Updated_12_75mi_from_Union.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
Process_Date: 20100614
Process_Time: 13401600
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 26129
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:

Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Ibat_Rgwd_bfr_UpdatedA
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: Unique_ID
Attribute:
Attribute_Label: X_coord
Attribute:
Attribute_Label: Y_coord
Attribute:
Attribute_Label: BUFF_DIST
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and

information.
  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 179.613
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100614
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Ibat_Rgwd_Updated_12_75mi_from_Union
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\Ibat_Rgwd_Updated_12_75mi_from_Union.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset represents a set of possible Indiana Bat maternity colony locations, for use in impacts modeling. Locations are created in a grid to approximate maximum density of bat colonies, and are NOT based on any known maternity colony locations.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -95.738580
East_Bounding_Coordinate: -71.213616
North_Bounding_Coordinate: 46.896430
South_Bounding_Coordinate: 31.432822
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111

Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: To attempt to account for any potential updates to the Indiana bat range extent, an old extent range and the current extent range were combined (Union). The unioned extent was buffered with a radius of 10 miles make sure the extent would include all edge areas, and also to anticipate additional minor changes to the range boundaries.
Source_Used_Citation_Abbreviation: Myotis sodalis area.shp
Source_Used_Citation_Abbreviation: Myotis sodalis.shp [old range extent]
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The Repeating Shapes tool (Jenness Enterprises) was used to create a triangular grid of points covering the extent rectangle of the extended Indiana bat range polygon. The spacing of the points was set to 5 miles (to create a maximum number of non-overlapping home ranges) and the degree offset was set to 15 degrees. Each generated point had a unique identifier field [Unique_ID].
Source_Used_Citation_Abbreviation: http://www.jennessent.com/arcgis/repeat_shapes.htm
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The grid of points was subset (Select by Location) to include only points within 12.5 miles of the combined ranges of the Indiana bat to reduce processing. The result was exported to a new shapefile.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:

```
    Process_Contact:
      Contact_Information:
        Contact_Organization_Primary:
          Contact_Organization: USFWS
          Contact_Person: Erik Olson
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Address:
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Process_Step:
    Process_Description: Metadata imported.
    Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_non_sensitive_template_metadata.xml
    Process_Date: 20100609
    Process_Time: 15203100
    Process_Contact:
      Contact_Information:
        Contact_Organization_Primary:
          Contact_Organization: USFWS
          Contact_Person: Erik Olson
        Contact_Position: Fish and Wildlife Biologist (GIS)
        Contact_Address:
          Address_Type: mailing and physical address
          Address: 1 Federal Drive
          City: Fort Snelling
          State_or_Province: Minnesota
          Postal_Code: 55111
          Country: USA
        Contact_Voice_Telephone: 612-713-5488
        Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Entity point
      Point_and_Vector_Object_Count: 26129
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
```

Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Ibat_Rgwd_Updated_12_75mi_from_Union
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: Unique_ID
Attribute:
Attribute_Label: X_coord
Attribute:
Attribute_Label: Y_coord
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.698
Ordering_Instructions:
Metadata_Reference_Information:
Metadata_Date: 20100614
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)

Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: SSFS_CLSH_MAco_Int
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Ibat\work_steps_data\SSFS_CLSH_MAco_Int.shp
Description:
Abstract: This Indiana Bat dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This dataset contains areas of modelled spring staging/fall swarming habitat within the covered lands. Areas are grouped based on hibernacula priority designations. This dataset is based on sensitive data, and should not be transferred or shared without specific need.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Supplemental_Information: SENSITIVE DATA: Examine access and use constraints before use!
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -84.636516
East_Bounding_Coordinate: -77.772802
North_Bounding_Coordinate: 41.579888
South_Bounding_Coordinate: 36.629650
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Suitable Habitat Model
Theme_Keyword: Indiana Bat
Access_Constraints: This dataset is accessible to USFWS employees only. USFWS can not release this dataset. It is based on sensitive data provided by outside organizations (typically states) for exclusive USFWS use. Anyone seeking to access this data should contact the source organizations to get the source data.
Use_Constraints: This dataset contains location specific species information received under data use agreements which restrict use. Permission for use must be granted by the organization releasing the data to USFWS. This dataset is restricted in purpose and extent to the NiSource Covered Lands and the 'May Affect' Counties as outlined in the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. Any map products derived from this dataset should only be released if the scale or generalization is sufficient to protect the underlying data.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:

Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Priority 1 or 2 hibernacula locations within 10 miles of the covered lands were Selected (by attributes) and Buffered with a radius of 10 miles (results dissolved) to represent the fall swarming and spring staging areas around the P1 and P2 hibernacula.
Source_Used_Citation_Abbreviation: Ibat_Hib_relevant_merge_3_columbia.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Priority 3 or 4 hibernacula locations within 10 miles of the covered lands were Selected (by attributes) and Buffered with a radius of 10 miles (results dissolved) to represent the fall swarming and spring staging areas around the P3 and P4 hibernacula.
Source_Used_Citation_Abbreviation: Ibat_Hib_relevant_merge_3_columbia.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Areas around P3 and P4 hibernacula were Intersected with the covered lands category polygons to categorize the types of covered lands within the swarming/staging habitat.

Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Restricted_CoveredLands_SF_v_PB
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Areas within the covered lands near P34 hibernacula were Identitied with areas near P12 hibernacula to classify areas near P12 differently than areas only near P34 hibernacula.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The Indiana bat suitable habitat in covered lands in may affect counties data was imported to a file geodatabase to resolve some data processing errors.
Source_Used_Citation_Abbreviation: CL_SHonly_MAcounties_042110.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The Indiana bat suitable habitat areas within the covered lands may affect counties were Intersected with the swarming and staging areas classified by proximity to P12 or P34 hibernacula within the covered lands. The resulting polygons could be categorized by hibernacula priority class and type of covered lands.
Source_Used_Citation_Abbreviation:
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\Ibat_sensitive_template_metadata.xml
Process_Date: 20100611
Process_Time: 17284400
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 105674
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000

Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: SSFS_CLSH_MAco_Int
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FEATURE
Attribute_Definition: Covered lands classification
Attribute:
Attribute_Label: priority
Attribute_Definition: Hibernacula priority category
Attribute:
Attribute_Label: FID_CL_SHo
Attribute:
Attribute_Label: ID
Attribute:
Attribute_Label: GRIDCODE
Attribute_Definition: NLCD Class Code
Attribute_Definition_Source: NLCD 2001
Attribute:
Attribute_Label: acres_1
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through

other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 30.464
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100614
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

bogturtle

```
Identification_Information:
  Citation:
    Citation_Information:
      Originator: ENSR
      Publication_Date: 20080616
      Title: Number of Sites Estimation Model - Bog Turtle
      Geospatial_Data_Presentation_Form: vector digital data
  Description:
    Abstract: A suitable habitat model for Bog Turtle was created to identify the
number of sites that may be impacted by Covered Activities.
    Purpose: This dataset was created for use in the development of the NiSource
Multi-Species Habitat Conservation Plan.  Information was developed on species
within the MSHCP Covered Lands with potential to be impacted by Covered Activities.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 20080616
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -78.086009
      East_Bounding_Coordinate: -73.972726
      North_Bounding_Coordinate: 41.853939
      South_Bounding_Coordinate: 39.197581
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: Suitable Habitat Model
      Theme_Keyword: Bog Turtle
  Access_Constraints: ENSR can not release this dataset as it is based on sensitive
data.
  Use_Constraints: This dataset contains location specific species information
received under data use agreements which restrict use.  Permission for use must be
granted by the organization releasing the data to ENSR.  This dataset is restricted
in purpose and extent to the NiSource Covered Lands and the 'May Affect' Counties as
outlined in the Habitat Conservation Plan (HCP).  It is not designed nor intended to
comprehensively capture all suitable habitat for any given species.
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Brent Read
        Contact_Organization: ENSR
      Contact_Position: GIS Analyst
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1601 Prospect Parkway
        City: Fort Collins
        State_or_Province: Colorado
        Postal_Code: 80525
        Country: USA
      Contact_Voice_Telephone: 970.493.8878
      Contact_Facsimile_Telephone: 970.493.0213
      Contact_Electronic_Mail_Address: bread@ensr.aecom.com
      Hours_of_Service: 8-5 M-F
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service
Pack 2; ESRI ArcCatalog 9.2.5.1450
Data_Quality_Information:
  Lineage:
```

```
    Source_Information:
      Source_Citation:
        Citation_Information:
          Originator: Digital Data Services
          Publication_Date: 200704
          Title: USGS National Elevation Dataset (NED)
          Online_Linkage: http://ned.usgs.gov/
      Source_Scale_Denominator: 10 m
      Type_of_Source_Media: External Hard Drive
      Source_Time_Period_of_Content:
        Time_Period_Information:
          Single_Date/Time:
            Calendar_Date: 200704
        Source_Currentness_Reference: publication date
      Source_Citation_Abbreviation: USGS National Elevation Dataset (NED)
    Source_Information:
      Source_Citation:
        Citation_Information:
          Originator: The Natural Resources Conservation Service (NRCS)
          Title: Soil Survey Geographic (SSURGO) Database
          Online_Linkage: http://soils.usda.gov/survey/geography/ssurgo/
      Type_of_Source_Media: Electronic File Transfer
      Source_Citation_Abbreviation: NRCS
    Source_Information:
      Source_Citation:
        Citation_Information:
          Originator: Nature Serve
          Publication_Date: 2007
          Title: Species Ranges
          Online_Linkage: http://www.natureserve.org/
      Type_of_Source_Media: Electronic File Transfer
      Source_Citation_Abbreviation: NatureServe
    Source_Information:
      Source_Citation:
        Citation_Information:
          Originator: US Fish and Wildlife Service
          Title: National Wetlands Inventory
          Online_Linkage: http://www.fws.gov/nwi/
      Source_Scale_Denominator: 24000
      Type_of_Source_Media: Electronic File Transfer
      Source_Citation_Abbreviation: USFWS
    Process_Step:
      Process_Description:
        A model was developed for the purpose of estimating the number of potential
sites and acres of habitat within the Covered Lands and the existing right-of-way
(ROW).  Note the purpose was not to model suitable habitat.  National Wetland
Inventory (NWI) was the main data source.  Based on feedback from the New York Field
Office, it was assumed that bog turtle sites are unlikely above 1000 feet in New
York (Niver 2008).  Understanding the limitations of NWI data, a 1.6 correction
factor was applied to the numbers estimated as recommended by Pennsylvania Field
Office.  Local service field offices and State natural resource agencies provided
counts of the numbers of known sites in the Covered Lands and ROW as well as
feedback on the model.  The estimate of the number of sites was further refined
using previous bog turtle survey information available for portions of the NiSource
ROW in New York and Pennsylvania.

        National Wetland Inventory (NWI) data was primarily used to estimate the
number of potential sites and acres of habitat within the NiSource Covered Lands and
ROW.  The NatureServe range for the Bog Turtle was downloaded from their website
(http://www.natureserve.org/) in shapefile format.  NWI data was obtained for the
extent of the range and the tiles were merged together to create continuous coverage
for the range.  The wetland attribute codes were analyzed and with the assistance of
the USFWS were narrowed down to those wetland types believed to accommodate Bog
```

Turtle. The National Elevation Dataset (NED) was used to identify areas of elevation greater than 1000 ft. within the range within New York per the USFWS request.

Two numbers were need from the Bog Turtle Analysis, 1) the area in acres of the suitable wetlands within the Covered Lands and ROW and 2) the total number of wetland complexes (sites) within the Covered Lands and in the ROW. To determine the acres of suitable wetland with the Covered Lands and the ROW, the acreage was calculated using ESRI's ArcGIS v. 9.2. The more complex estimation of number of wetland complexes was determined by merging nearby wetlands into each other. It was determined that multiple nearby wetlands would realistically be part of the same wetland complex; hence the wetlands were buffered at a distance of 300 ft and then dissolved. This buffer and dissolve method was applied to wetlands within and without the covered lands to capture wetlands that may be connected outside of the Covered Lands, but then re-enter at another point. The buffered and dissolved complexes were later converted from single part to multi-part polygons followed by clipping them to the Covered Lands and ROW. With this method, a complex that would go outside of the Covered Lands or ROW and later re-enter would remain as a single record in the attribute table. Finally a count from the attribute table would yield the number of wetland complexes (sites) with Covered Lands or the ROW.

In addition to the NWI wetland data, survey results available for some areas were used to determine wetland complexes (sites) that were known to have or not to have Bog Turtle occurrences.

```
      Process_Date: 200805
      Process_Contact:
        Contact_Information:
          Contact_Person_Primary:
            Contact_Person: Brent Read
            Contact_Organization: ENSR
          Contact_Position: GIS Analyst
          Contact_Address:
            Address_Type: mailing and physical address
            Address: 1601 Prospect Pkwy
            City: Fort Collins
            State_or_Province: Colorado
            Postal_Code: 80525
            Country: USA
          Contact_Voice_Telephone: 970.493.8878
          Contact_Facsimile_Telephone: 970.493.0213
          Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 2849
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
```

bogturtle
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: INT_ModelA3below1000_CoveredLandsDISS
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FEATURE
Attribute:
Attribute_Label: ATTRIBUTE
Attribute:
Attribute_Label: WETLAND_TY
Attribute:
Attribute_Label: ACRES
Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Brent Read
Contact_Organization: ENSR
Contact_Position: GIS Analyst
Contact_Address:
Address_Type: mailing and physical address
Address: 1601 Prospect Parkway
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525
Country: USA
Contact_Voice_Telephone: 970.493.8878
Contact_Facsimile_Telephone: 970.493.0213
Contact_Electronic_Mail_Address: bread@ensr.aecom.com
Hours_of_Service: 8-5 M-F
Resource_Description: Downloadable Data
Distribution_Liability: ENSR shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. ENSR gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from ENSR and not indirectly through other sources which may have changed the data in some way.

Although these data have been processed successfully on a computer system by ENSR, no warranty expressed or implied is made regarding the utility of the data on another system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 1.166
Metadata_Reference_Information:
  Metadata_Date: 20080616
  Metadata_Review_Date: 20080616
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: ENSR
        Contact_Person: Brent Read
      Contact_Position: GIS Analyst
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1601 Prospect Parkway
        City: Fort Collins
        State_or_Province: Colorado
        Postal_Code: 80525
        Country: USA
      Contact_Voice_Telephone: 970.493.8878
      Contact_Facsimile_Telephone: 970.493.0213
      Contact_Electronic_Mail_Address: bread@ensr.aecom.com
      Hours_of_Service: 8-5 M-F
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date:
      Title: probability_in_CL_Dissolve
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\MCI\probability_in_CL_Dissolve.shp
  Description:
    Abstract: This Madison Cave Isopod dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). This data identifies locations where Madison Cave Isopod may be present in the MSHCP covered lands. It is based on sensitive data, and should not be transferred or shared without specific need.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
    Supplemental_Information: SENSITIVE DATA: Examine access and use constraints before use!
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date:
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -79.648274
      East_Bounding_Coordinate: -78.058585
      North_Bounding_Coordinate: 39.008800
      South_Bounding_Coordinate: 37.711023
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: Suitable Habitat Model
      Theme_Keyword: Madison Cave Isopod
  Access_Constraints: This dataset is accessible to USFWS employees only. USFWS can not release this dataset. It is based on sensitive data provided by outside organizations (typically states) for exclusive USFWS use. Anyone seeking to access this data should contact the source organizations to get the source data.
  Use_Constraints: This dataset contains location specific species information received under data use agreements which restrict use. Permission for use must be granted by the organization releasing the data to USFWS. This dataset is restricted in purpose and extent to the NiSource Covered Lands and the 'May Affect' Counties as outlined in the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. Any map products derived from this dataset should only be released if the scale or generalization is sufficient to protect the underlying data.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive

City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Locations of Madison Cave Isopod habitat were Intersected with the covered lands. The result was Dissolved and acreage Calculated (Calculate Geometry).
Source_Used_Citation_Abbreviation: frequently_used_data.gdb\Derived\Restricted_CoveredLands_eco_100909
Source_Used_Citation_Abbreviation: MCI_VA_range.shp
Process_Date:
Process_Time:
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Dataset created.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\Data\newly_generated_datasets\MCI\probability_in_CL_Dissolve
Process_Date: 20100630
Process_Time: 11355700
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 2

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.000000
      Longitude_Resolution: 0.000000
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: probability_in_CL_Dissolve
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: PROBABILIT
    Attribute:
      Attribute_Label: Acres
Distribution_Information:
  Resource_Description: Downloadable Data
  Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.026
Metadata_Reference_Information:
  Metadata_Date: 20100630
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)

Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date:
      Title: CLB_impacted_streamlines
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\CLB\CLB_impacted_streamlines.shp
  Description:
    Abstract: This Clubshell mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents portions of streams where Clubshell mussels might be impacted by NiSource activities.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -83.467675
      East_Bounding_Coordinate: -79.606482
      North_Bounding_Coordinate: 41.404926
      South_Bounding_Coordinate: 38.308995
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: Stream Sediment Model
      Theme_Keyword: Clubshell
      Theme_Keyword: Mussels
  Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
  Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by Clubshell in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: Clubshell occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: Clubshell occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: Clubshell intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building

Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for Clubshell were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: Clubshell intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments.

Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.

Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The downstream impacts lines resulting from the geprocessing were Dissolved to remove overlapping lines. The impacts lines dataset was then converted back into an individual species dataset by Intersecting it with the Clubshell assumed occupied streams.

Source_Used_Citation_Abbreviation: Clubshell occupied streams
Source_Used_Citation_Abbreviation: merged_intersects.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Potentially impacted streams were classified as either stable or small/isolated populations. The lengths of impacted streams of each type were summed, and the results used as the Geographic Downstream Distance values in the take calculation spreadsheet.

Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_GDD_template_metadata.xml
Process_Date: 20100628
Process_Time: 13442700
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 23
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: CLB_impacted_streamlines
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI

Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_merged
Attribute:
Attribute_Label: Id
Attribute:
Attribute_Label: FID_CLB_MA
Attribute:
Attribute_Label: ComID
Attribute:
Attribute_Label: FDate
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Resolution
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_ID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: LengthKM
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ReachCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: species
Attribute_Definition: species abbreviation
Attribute:
Attribute_Label: src_size
Attribute_Definition: Size class of sediment source stream
Attribute:

Attribute_Label: pop_status
Attribute_Definition: status of mussel population in stream
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.032
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Cross_group_IDed
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\Cross_group_IDed.shp
Description:
Abstract: This multi-species mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations that were used to assess potential additional impacts from NiSource activities to currently unknown locations. It includes locations for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose mussels.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -90.688170
East_Bounding_Coordinate: -79.618729
North_Bounding_Coordinate: 41.869259
South_Bounding_Coordinate: 32.406896
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Stream Sediment Model
Theme_Keyword: Clubshell
Theme_Keyword: Fanshell
Theme_Keyword: Northern Riffleshell
Theme_Keyword: Sheepnose
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by one of the species in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: {species} occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: {species} occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)

Contact_Address:
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Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for each species were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
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State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments. Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Crossings that resulted in impacts to occupied streams were grouped into crossing areas. A crossing area generally included any crossing points within 100 feet of each other (with a few exceptions). Crossing areas were used to determine the Additional Downstream Distance for Loops value. For each crossing area, 50 feet were added to account for loops added at that crossing area, where nearly all impacts would overlap other impacts. Each crossing area was also classified as large or small. The number of large additional crossings was multiplied by 0.1538 (15.38%) to calculate the number of new unusual crossings that might occur. The 15.38% value represents approximately how often unusually isolated pipelines are built (i.e. pipelines within the NiSource network that are built across large streams but are not within existing crossing areas), and was based on aggregated crossing information for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose mussels. For each anticipated unusual crossing an additional 3700 feet of impacted stream length were added to the Additional Downstream Distance for Loops value.
Source_Used_Citation_Abbreviation: merged_crossing_points.shp
Process_Date: 20100219
Source_Produced_Citation_Abbreviation: Cross_group_IDed.shp
Source_Produced_Citation_Abbreviation: Crossing_groups_table_v2_021910.xlsx
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_ADD_template_metadata_V1.xml
Process_Date: 20100628
Process_Time: 13415300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 50
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Cross_group_IDed
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_inters
Attribute:
Attribute_Label: Num_Pts
Attribute_Definition: Number of intersection points in the crossing group

Attribute:
Attribute_Label: SPN
Attribute_Definition: assumed Sheepnose stream
Attribute:
Attribute_Label: FAN
Attribute_Definition: assumed Fanshell stream
Attribute:
Attribute_Label: NRF
Attribute_Definition: assumed Northern Riffleshell stream
Attribute:
Attribute_Label: CLB
Attribute_Definition: assumed Clubshell stream
Attribute:
Attribute_Label: FID_NHD_cl
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Area_Name
Attribute_Definition: Crossing area unique name
Attribute:
Attribute_Label: spcs_comb
Attribute_Definition: assumed species (combined for easier symbology)
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.035
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: merged_crossing_points
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\merged_crossing_points.shp
Description:
Abstract: This multi-species mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations that were used to assess potential additional impacts from NiSource activities to currently unknown locations. It combines data from four different mussel species: Clubshell, Fanshell, Northern Riffleshell, and Sheepnose.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -90.687999
East_Bounding_Coordinate: -79.618939
North_Bounding_Coordinate: 41.869116
South_Bounding_Coordinate: 32.407051
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Stream Sediment Model
Theme_Keyword: Clubshell
Theme_Keyword: Fanshell
Theme_Keyword: Northern Riffleshell
Theme_Keyword: Sheepnose
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive

City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by one of the species in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: {species} occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: {species} occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
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Address: BHW Federal Building
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State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for each species were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
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Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
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Address_Type: mailing and physical address
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Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments. Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
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Address_Type: mailing and physical address
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State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_merged_points_metadata.xml
Process_Date: 20100628
Process_Time: 13454300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 89
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:

Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: merged_crossing_points
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_Pipeli
Attribute:
Attribute_Label: OP_COMPANY
Attribute_Definition_Source: NiSource
Attribute:
Attribute_Label: Original_M
Attribute:
Attribute_Label: FID_Perm_F
Attribute:
Attribute_Label: ComID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FDate
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Resolution
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_ID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: LengthKM
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Attribute:
Attribute_Label: ReachCode
Attribute_Definition_Source: NHD

Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
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Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
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Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ORIG_FID
Attribute:
Attribute_Label: strm_width
Attribute_Definition: estimated stream width (feet)
Attribute:
Attribute_Label: strm_type
Attribute_Definition: Main stream, tributary, or intermittent stream
Attribute:
Attribute_Label: strm_size
Attribute_Definition: stream size class
Attribute:
Attribute_Label: cross_req
Attribute_Definition: crossing classification
Attribute:
Attribute_Label: species
Attribute_Definition: species code
Attribute:
Attribute_Label: FID_SPN_MA
Attribute_Definition: sheepnose may affect streams FID
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: FID_NRF_MA
Attribute_Definition: northern riffleshell may affect streams FID
Attribute:
Attribute_Label: FID_FAN_MA
Attribute_Definition: fanshell may affect streams FID
Attribute:
Attribute_Label: FID_CLB_MA
Attribute_Definition: clubshell may affect streams FID
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and

information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.004
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100630
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: NRF_impacted_streamlines
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\NRF\NRF_impacted_streamlines.shp
Description:
Abstract: This Northern Riffleshell mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents portions of streams where Northern Riffleshell mussels might be impacted by NiSource activities.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -83.448578
East_Bounding_Coordinate: -79.606482
North_Bounding_Coordinate: 41.403061
South_Bounding_Coordinate: 38.308995
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Stream Sediment Model
Theme_Keyword: Northern Riffleshell
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by Northern Riffleshell in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: Northern Riffleshell occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: Northern Riffleshell occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: Northern Riffleshell intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building

Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for Northern Riffleshell were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: Northern Riffleshell intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
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Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
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Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments.

Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.

Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The downstream impacts lines resulting from the geprocessing were Dissolved to remove overlapping lines. The impacts lines dataset was then converted back into an individual species dataset by Intersecting it with the Northern Riffleshell assumed occupied streams.
Source_Used_Citation_Abbreviation: Northern Riffleshell occupied streams
Source_Used_Citation_Abbreviation: merged_intersects.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Potentially impacted streams were classified as either stable or small/isolated populations. The lengths of impacted streams of each type were summed, and the results used as the Geographic Downstream Distance values in the take calculation spreadsheet.
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_GDD_template_metadata.xml
Process_Date: 20100628
Process_Time: 13444300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 20
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: NRF_impacted_streamlines
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI

Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_merged
Attribute:
Attribute_Label: Id
Attribute:
Attribute_Label: FID_NRF_MA
Attribute:
Attribute_Label: ComID
Attribute:
Attribute_Label: FDate
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Attribute_Label: Resolution
Attribute_Definition_Source: NHD
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Attribute_Label: GNIS_ID
Attribute_Definition_Source: NHD
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Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: LengthKM
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ReachCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: species
Attribute_Definition: species abbreviation
Attribute:
Attribute_Label: src_size
Attribute_Definition: Size class of sediment source stream
Attribute:

Attribute_Label: pop_status
Attribute_Definition: status of mussel population in stream
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.031
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Cross_group_IDed
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\Cross_group_IDed.shp
Description:
Abstract: This multi-species mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations that were used to assess potential additional impacts from NiSource activities to currently unknown locations. It includes locations for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose mussels.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -90.688170
East_Bounding_Coordinate: -79.618729
North_Bounding_Coordinate: 41.869259
South_Bounding_Coordinate: 32.406896
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Stream Sediment Model
Theme_Keyword: Clubshell
Theme_Keyword: Fanshell
Theme_Keyword: Northern Riffleshell
Theme_Keyword: Sheepnose
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by one of the species in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: {species} occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: {species} occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)

Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
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Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for each species were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
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Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
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Address_Type: mailing and physical address
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Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments. Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Crossings that resulted in impacts to occupied streams were grouped into crossing areas. A crossing area generally included any crossing points within 100 feet of each other (with a few exceptions). Crossing areas were used to determine the Additional Downstream Distance for Loops value. For each crossing area, 50 feet were added to account for loops added at that crossing area, where nearly all impacts would overlap other impacts. Each crossing area was also classified as large or small. The number of large additional crossings was multiplied by 0.1538 (15.38%) to calculate the number of new unusual crossings that might occur. The 15.38% value represents approximately how often unusually isolated pipelines are built (i.e. pipelines within the NiSource network that are built across large streams but are not within existing crossing areas), and was based on aggregated crossing information for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose mussels. For each anticipated unusual crossing an additional 3700 feet of impacted stream length were added to the Additional Downstream Distance for Loops value.
Source_Used_Citation_Abbreviation: merged_crossing_points.shp
Process_Date: 20100219
Source_Produced_Citation_Abbreviation: Cross_group_IDed.shp
Source_Produced_Citation_Abbreviation: Crossing_groups_table_v2_021910.xlsx
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_ADD_template_metadata_V1.xml
Process_Date: 20100628
Process_Time: 13415300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 50
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Cross_group_IDed
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_inters
Attribute:
Attribute_Label: Num_Pts
Attribute_Definition: Number of intersection points in the crossing group

Attribute:
Attribute_Label: SPN
Attribute_Definition: assumed Sheepnose stream
Attribute:
Attribute_Label: FAN
Attribute_Definition: assumed Fanshell stream
Attribute:
Attribute_Label: NRF
Attribute_Definition: assumed Northern Riffleshell stream
Attribute:
Attribute_Label: CLB
Attribute_Definition: assumed Clubshell stream
Attribute:
Attribute_Label: FID_NHD_cl
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Area_Name
Attribute_Definition: Crossing area unique name
Attribute:
Attribute_Label: spcs_comb
Attribute_Definition: assumed species (combined for easier symbology)
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.035
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: merged_crossing_points
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\merged_crossing_points.shp
Description:
Abstract: This multi-species mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations that were used to assess potential additional impacts from NiSource activities to currently unknown locations. It combines data from four different mussel species: Clubshell, Fanshell, Northern Riffleshell, and Sheepnose.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -90.687999
East_Bounding_Coordinate: -79.618939
North_Bounding_Coordinate: 41.869116
South_Bounding_Coordinate: 32.407051
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Stream Sediment Model
Theme_Keyword: Clubshell
Theme_Keyword: Fanshell
Theme_Keyword: Northern Riffleshell
Theme_Keyword: Sheepnose
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive

City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by one of the species in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: {species} occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: {species} occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for each species were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments. Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_merged_points_metadata.xml
Process_Date: 20100628
Process_Time: 13454300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 89
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:

Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: merged_crossing_points
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_Pipeli
Attribute:
Attribute_Label: OP_COMPANY
Attribute_Definition_Source: NiSource
Attribute:
Attribute_Label: Original_M
Attribute:
Attribute_Label: FID_Perm_F
Attribute:
Attribute_Label: ComID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FDate
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Resolution
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_ID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: LengthKM
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ReachCode
Attribute_Definition_Source: NHD

Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ORIG_FID
Attribute:
Attribute_Label: strm_width
Attribute_Definition: estimated stream width (feet)
Attribute:
Attribute_Label: strm_type
Attribute_Definition: Main stream, tributary, or intermittent stream
Attribute:
Attribute_Label: strm_size
Attribute_Definition: stream size class
Attribute:
Attribute_Label: cross_req
Attribute_Definition: crossing classification
Attribute:
Attribute_Label: species
Attribute_Definition: species code
Attribute:
Attribute_Label: FID_SPN_MA
Attribute_Definition: sheepnose may affect streams FID
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: FID_NRF_MA
Attribute_Definition: northern riffleshell may affect streams FID
Attribute:
Attribute_Label: FID_FAN_MA
Attribute_Definition: fanshell may affect streams FID
Attribute:
Attribute_Label: FID_CLB_MA
Attribute_Definition: clubshell may affect streams FID
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and

information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.004
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100630
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date:
      Title: FAN_impacted_streamlines
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\FAN\FAN_impacted_streamlines.shp
  Description:
    Abstract: This Fanshell mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents portions of streams where Fanshell mussels might be impacted by NiSource activities.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -85.950193
      East_Bounding_Coordinate: -81.340104
      North_Bounding_Coordinate: 40.518226
      South_Bounding_Coordinate: 36.310073
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: Stream Sediment Model
      Theme_Keyword: Fanshell
      Theme_Keyword: Mussels
  Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
  Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by Fanshell in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: Fanshell occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: Fanshell occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: Fanshell intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building

Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for Fanshell were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: Fanshell intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments.

Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.

Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The downstream impacts lines resulting from the geprocessing were Dissolved to remove overlapping lines. The impacts lines dataset was then converted back into an individual species dataset by Intersecting it with the Fanshell assumed occupied streams.
Source_Used_Citation_Abbreviation: Fanshell occupied streams
Source_Used_Citation_Abbreviation: merged_intersects.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Potentially impacted streams were classified as either stable or small/isolated populations. The lengths of impacted streams of each type were summed, and the results used as the Geographic Downstream Distance values in the take calculation spreadsheet.
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_GDD_template_metadata.xml
Process_Date: 20100628
Process_Time: 13443600
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 34
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: FAN_impacted_streamlines
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI

Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_merged
Attribute:
Attribute_Label: Id
Attribute:
Attribute_Label: FID_FAN_MA
Attribute:
Attribute_Label: ComID
Attribute:
Attribute_Label: FDate
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Resolution
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_ID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: LengthKM
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ReachCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: species
Attribute_Definition: species abbreviation
Attribute:
Attribute_Label: src_size
Attribute_Definition: Size class of sediment source stream
Attribute:

Attribute_Label: pop_status
Attribute_Definition: status of mussel population in stream
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.009
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date:
      Title: Cross_group_IDed
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\Cross_group_IDed.shp
  Description:
    Abstract: This multi-species mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations that were used to assess potential additional impacts from NiSource activities to currently unknown locations. It includes locations for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose mussels.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -90.688170
      East_Bounding_Coordinate: -79.618729
      North_Bounding_Coordinate: 41.869259
      South_Bounding_Coordinate: 32.406896
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: Stream Sediment Model
      Theme_Keyword: Clubshell
      Theme_Keyword: Fanshell
      Theme_Keyword: Northern Riffleshell
      Theme_Keyword: Sheepnose
      Theme_Keyword: Mussels
  Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
  Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by one of the species in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: {species} occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: {species} occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)

Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for each species were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
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Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments. Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
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State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Crossings that resulted in impacts to occupied streams were grouped into crossing areas. A crossing area generally included any crossing points within 100 feet of each other (with a few exceptions). Crossing areas were used to determine the Additional Downstream Distance for Loops value. For each crossing area, 50 feet were added to account for loops added at that crossing area, where nearly all impacts would overlap other impacts. Each crossing area was also classified as large or small. The number of large additional crossings was multiplied by 0.1538 (15.38%) to calculate the number of new unusual crossings that might occur. The 15.38% value represents approximately how often unusually isolated pipelines are built (i.e. pipelines within the NiSource network that are built across large streams but are not within existing crossing areas), and was based on aggregated crossing information for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose mussels. For each anticipated unusual crossing an additional 3700 feet of impacted stream length were added to the Additional Downstream Distance for Loops value.
Source_Used_Citation_Abbreviation: merged_crossing_points.shp
Process_Date: 20100219
Source_Produced_Citation_Abbreviation: Cross_group_IDed.shp
Source_Produced_Citation_Abbreviation: Crossing_groups_table_v2_021910.xlsx
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_ADD_template_metadata_V1.xml
Process_Date: 20100628
Process_Time: 13415300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 50
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Cross_group_IDed
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_inters
Attribute:
Attribute_Label: Num_Pts
Attribute_Definition: Number of intersection points in the crossing group

Attribute:
Attribute_Label: SPN
Attribute_Definition: assumed Sheepnose stream
Attribute:
Attribute_Label: FAN
Attribute_Definition: assumed Fanshell stream
Attribute:
Attribute_Label: NRF
Attribute_Definition: assumed Northern Riffleshell stream
Attribute:
Attribute_Label: CLB
Attribute_Definition: assumed Clubshell stream
Attribute:
Attribute_Label: FID_NHD_cl
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Area_Name
Attribute_Definition: Crossing area unique name
Attribute:
Attribute_Label: spcs_comb
Attribute_Definition: assumed species (combined for easier symbology)
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.035
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: merged_crossing_points
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\merged_crossing_points.shp
Description:
Abstract: This multi-species mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations that were used to assess potential additional impacts from NiSource activities to currently unknown locations. It combines data from four different mussel species: Clubshell, Fanshell, Northern Riffleshell, and Sheepnose.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -90.687999
East_Bounding_Coordinate: -79.618939
North_Bounding_Coordinate: 41.869116
South_Bounding_Coordinate: 32.407051
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Stream Sediment Model
Theme_Keyword: Clubshell
Theme_Keyword: Fanshell
Theme_Keyword: Northern Riffleshell
Theme_Keyword: Sheepnose
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive

City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by one of the species in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: {species} occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: {species} occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for each species were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments. Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_merged_points_metadata.xml
Process_Date: 20100628
Process_Time: 13454300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 89
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:

Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: merged_crossing_points
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_Pipeli
Attribute:
Attribute_Label: OP_COMPANY
Attribute_Definition_Source: NiSource
Attribute:
Attribute_Label: Original_M
Attribute:
Attribute_Label: FID_Perm_F
Attribute:
Attribute_Label: ComID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FDate
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Resolution
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_ID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: LengthKM
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ReachCode
Attribute_Definition_Source: NHD

Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ORIG_FID
Attribute:
Attribute_Label: strm_width
Attribute_Definition: estimated stream width (feet)
Attribute:
Attribute_Label: strm_type
Attribute_Definition: Main stream, tributary, or intermittent stream
Attribute:
Attribute_Label: strm_size
Attribute_Definition: stream size class
Attribute:
Attribute_Label: cross_req
Attribute_Definition: crossing classification
Attribute:
Attribute_Label: species
Attribute_Definition: species code
Attribute:
Attribute_Label: FID_SPN_MA
Attribute_Definition: sheepnose may affect streams FID
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: FID_NRF_MA
Attribute_Definition: northern riffleshell may affect streams FID
Attribute:
Attribute_Label: FID_FAN_MA
Attribute_Definition: fanshell may affect streams FID
Attribute:
Attribute_Label: FID_CLB_MA
Attribute_Definition: clubshell may affect streams FID
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and

information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.004
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100630
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date:
      Title: combined_downstream_Intsct_Dslvd
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\JSM\combined_downstream_Intsct_Dslvd.shp
  Description:
    Abstract: This James Spinymussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents portions of streams where James spinymussels might be impacted by NiSource activities.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -80.234056
      East_Bounding_Coordinate: -77.375133
      North_Bounding_Coordinate: 38.544672
      South_Bounding_Coordinate: 37.362804
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: James Spinymussel
      Theme_Keyword: Mussels
  Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
  Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams in watersheds identified as occupied by James Spinymussel by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD). All non-intermittent streams were assumed to be occupied. Intermittent streams were not considered as occupied, although they were included as potential tributaries in the following analysis.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: James Spinymussel occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 500 feet was used as a buffer to limit analysis. James Spinymussel does not occur in large streams, so it is expected that any crossings that may impact James Spinymussel will be dry ditch crossings. Intersections were traced downstream for 185 feet to represent the impacts of dry ditch crossings. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: James Spinymussel occupied streams
Source_Used_Citation_Abbreviation: mussel_tributary_identification_6_2JSM.py (geoprocessing script)
Process_Date: 20100119
Source_Produced_Citation_Abbreviation: James Spinymussel intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:

Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for James Spinymussel were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Process_Date: 20100119
Source_Produced_Citation_Abbreviation: James Spinymussel intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The downstream impacts lines resulting from the geprocessing were Dissolved to remove overlapping lines.
Source_Used_Citation_Abbreviation: combined_downstream_intersect.shp
Process_Date: 20100119
Source_Produced_Citation_Abbreviation: combined_downstream_Intsct_Dslvd.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Potentially impacted streams were assumed to contain small/isolated populations. The lengths of impacted

streams of each size were summed, and the results for small streams used as the Geographic Downstream Distance values in the take calculation spreadsheet. Large stream values were ignored, because James Spinymussel does not occur in large streams.

```
      Process_Date: 20100119
      Process_Contact:
        Contact_Information:
          Contact_Person_Primary:
            Contact_Person: Erik Olson
            Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
          Contact_Position: Fish and Wildlife Biologist (GIS)
          Contact_Address:
            Address_Type: mailing and physical address
            Address: BHW Federal Building
            Address: 1 Federal Drive
            City: Fort Snelling
            State_or_Province: MN
            Postal_Code: 55111
            Country: USA
          Contact_Voice_Telephone: 612_713_5488
          Contact_Electronic_Mail_Address: erik_olson@fws.gov
    Process_Step:
      Process_Description: Metadata imported.
      Source_Used_Citation_Abbreviation: C:\WorkSpace\Current_Projects\HCP_project\metadata\JSM_GDD_metadata.xml
      Process_Date: 20100628
      Process_Time: 17220400
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: String
      Point_and_Vector_Object_Count: 2
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Resolution: 0.000100
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
```

Detailed_Description:
Entity_Type:
Entity_Type_Label: combined_downstream_Intsct_Dslvd
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: strm_size
Attribute_Definition: stream size class
Attribute:
Attribute_Label: len_ft
Attribute_Definition: length in feet
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.013
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
  Online_Linkage: http://www.esri.com/metadata/esriprof80.html
  Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: crossing_pts_merge
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\JSM\crossing_pts_merge.shp
Description:
Abstract: This James Spinymussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations where James spinymussels might be impacted by NiSource activities.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -80.234344
East_Bounding_Coordinate: -77.375563
North_Bounding_Coordinate: 38.544490
South_Bounding_Coordinate: 37.362625
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: James Spinymussel
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov

Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams in watersheds identified as occupied by James Spinymussel by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD). All non-intermittent streams were assumed to be occupied. Intermittent streams were not considered as occupied, although they were included as potential tributaries in the following analysis.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: James Spinymussel occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 500 feet was used as a buffer to limit analysis. James Spinymussel does not occur in large streams, so it is expected that any crossings that may impact James Spinymussel will be dry ditch crossings. Intersections were traced downstream for 185 feet to represent the impacts of dry ditch crossings. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: James Spinymussel occupied streams
Source_Used_Citation_Abbreviation: mussel_tributary_identification_6_2JSM.py (geoprocessing script)
Process_Date: 20100119
Source_Produced_Citation_Abbreviation: James Spinymussel intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address

Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for James Spinymussel were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Process_Date: 20100119
Source_Produced_Citation_Abbreviation: James Spinymussel intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: C:\WorkSpace\Current_Projects\HCP_project\metadata\JSM_GDD_metadata_V2.xml
Process_Date: 20100629
Process_Time: 11312800
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 105
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:

Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: crossing_pts_merge
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_JSM_HU
Attribute:
Attribute_Label: OP_COMPANY
Attribute:
Attribute_Label: Original_M
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: FID_Perm_F
Attribute:
Attribute_Label: ComID
Attribute:
Attribute_Label: FDate
Attribute:
Attribute_Label: Resolution
Attribute:
Attribute_Label: GNIS_ID
Attribute:
Attribute_Label: GNIS_Name
Attribute:
Attribute_Label: LengthKM
Attribute:
Attribute_Label: ReachCode
Attribute:
Attribute_Label: FlowDir
Attribute:
Attribute_Label: WBAreaComI

Attribute:
Attribute_Label: FType
Attribute:
Attribute_Label: FCode
Attribute:
Attribute_Label: Enabled
Attribute:
Attribute_Label: ORIG_FID
Attribute:
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Attribute_Definition: stream size class
Attribute:
Attribute_Label: OBJECTID
Attribute:
Attribute_Label: Strm_Miles
Attribute:
Attribute_Label: FID_JSM__1
Attribute:
Attribute_Label: species
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.005
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date:
      Title: crossing_pts_merge_Buffer_50ft
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\JSM\crossing_pts_merge_Buffer_50ft.shp
  Description:
    Abstract: This James Spinymussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations where James spinymussels might be impacted by NiSource activities.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -80.234543
      East_Bounding_Coordinate: -77.375358
      North_Bounding_Coordinate: 38.544645
      South_Bounding_Coordinate: 37.362467
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: James Spinymussel
      Theme_Keyword: Mussels
  Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
  Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams in watersheds identified as occupied by James Spinymussel by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD). All non-intermittent streams were assumed to be occupied. Intermittent streams were not considered as occupied, although they were included as potential tributaries in the following analysis.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: James Spinymussel occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 500 feet was used as a buffer to limit analysis. James Spinymussel does not occur in large streams, so it is expected that any crossings that may impact James Spinymussel will be dry ditch crossings. Intersections were traced downstream for 185 feet to represent the impacts of dry ditch crossings. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: James Spinymussel occupied streams
Source_Used_Citation_Abbreviation: mussel_tributary_identification_6_2JSM.py (geoprocessing script)
Process_Date: 20100119
Source_Produced_Citation_Abbreviation: James Spinymussel intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:

Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for James Spinymussel were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Process_Date: 20100119
Source_Produced_Citation_Abbreviation: James Spinymussel intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Crossings that resulted in impacts to occupied streams were grouped into crossing areas. A crossing area generally included any crossing points within 100 feet of each other (with a few exceptions). Crossing areas were used to determine the Additional Downstream Distance for Loops value. Each crossing area was classified as large or small, based on stream widths. Large crossings were ignored because James Spinymussel does not occur in large streams. For each small crossing area, 50 feet were added to account for loops added at that crossing area, where most impacts would overlap other impacts.
Process_Date: 20100119
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov

```
    Process_Step:
      Process_Description: Metadata imported.
      Source_Used_Citation_Abbreviation: C:\WorkSpace\Current_Projects\HCP_project\metadata\JSM_ADD_metadata_V2.xml
      Process_Date: 20100629
      Process_Time: 11464000
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 81
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Resolution: 0.000100
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: crossing_pts_merge_Buffer_50ft
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: species
Distribution_Information:
  Distributor:
```

Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.054
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date:
      Title: SPN_impacted_streamlines
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\SPN\SPN_impacted_streamlines.shp
  Description:
    Abstract: This Sheepnose mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents portions of streams where Sheepnose mussels might be impacted by NiSource activities.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -90.690949
      East_Bounding_Coordinate: -81.455440
      North_Bounding_Coordinate: 40.176085
      South_Bounding_Coordinate: 32.553706
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: Stream Sediment Model
      Theme_Keyword: Sheepnose
      Theme_Keyword: Mussels
  Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
  Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by Sheepnose in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: Sheepnose occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: Sheepnose occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: Sheepnose intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building

Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for Sheepnose were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: Sheepnose intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
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Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments.

Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.

Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The downstream impacts lines resulting from the geprocessing were Dissolved to remove overlapping lines. The impacts lines dataset was then converted back into an individual species dataset by Intersecting it with the Sheepnose assumed occupied streams.

Source_Used_Citation_Abbreviation: Sheepnose occupied streams
Source_Used_Citation_Abbreviation: merged_intersects.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Potentially impacted streams were classified as either stable or small/isolated populations. The lengths of impacted streams of each type were summed, and the results used as the Geographic Downstream Distance values in the take calculation spreadsheet.

Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_GDD_template_metadata.xml
Process_Date: 20100628
Process_Time: 13445300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 37
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: SPN_impacted_streamlines
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI

Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_merged
Attribute:
Attribute_Label: Id
Attribute:
Attribute_Label: FID_SPN_MA
Attribute:
Attribute_Label: ComID
Attribute:
Attribute_Label: FDate
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Resolution
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_ID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: LengthKM
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ReachCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: species
Attribute_Definition: species abbreviation
Attribute:
Attribute_Label: src_size
Attribute_Definition: Size class of sediment source stream
Attribute:

Attribute_Label: pop_status
Attribute_Definition: status of mussel population in stream
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.013
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Cross_group_IDed
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\Cross_group_IDed.shp
Description:
Abstract: This multi-species mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations that were used to assess potential additional impacts from NiSource activities to currently unknown locations. It includes locations for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose mussels.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -90.688170
East_Bounding_Coordinate: -79.618729
North_Bounding_Coordinate: 41.869259
South_Bounding_Coordinate: 32.406896
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Stream Sediment Model
Theme_Keyword: Clubshell
Theme_Keyword: Fanshell
Theme_Keyword: Northern Riffleshell
Theme_Keyword: Sheepnose
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling

State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by one of the species in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: {species} occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: {species} occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)

Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
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Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for each species were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
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Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
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Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488

Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments. Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
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State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Crossings that resulted in impacts to occupied streams were grouped into crossing areas. A crossing area generally included any crossing points within 100 feet of each other (with a few exceptions). Crossing areas were used to determine the Additional Downstream Distance for Loops value. For each crossing area, 50 feet were added to account for loops added at that crossing area, where nearly all impacts would overlap other impacts. Each crossing area was also classified as large or small. The number of large additional crossings was multiplied by 0.1538 (15.38%) to calculate the number of new unusual crossings that might occur. The 15.38% value represents approximately how often unusually isolated pipelines are built (i.e. pipelines within the NiSource network that are built across large streams but are not within existing crossing areas), and was based on aggregated crossing information for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose mussels. For each anticipated unusual crossing an additional 3700 feet of impacted stream length were added to the Additional Downstream Distance for Loops value.
Source_Used_Citation_Abbreviation: merged_crossing_points.shp
Process_Date: 20100219
Source_Produced_Citation_Abbreviation: Cross_group_IDed.shp
Source_Produced_Citation_Abbreviation: Crossing_groups_table_v2_021910.xlsx
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_ADD_template_metadata_V1.xml
Process_Date: 20100628
Process_Time: 13415300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 50
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Cross_group_IDed
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_inters
Attribute:
Attribute_Label: Num_Pts
Attribute_Definition: Number of intersection points in the crossing group

Attribute:
Attribute_Label: SPN
Attribute_Definition: assumed Sheepnose stream
Attribute:
Attribute_Label: FAN
Attribute_Definition: assumed Fanshell stream
Attribute:
Attribute_Label: NRF
Attribute_Definition: assumed Northern Riffleshell stream
Attribute:
Attribute_Label: CLB
Attribute_Definition: assumed Clubshell stream
Attribute:
Attribute_Label: FID_NHD_cl
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Area_Name
Attribute_Definition: Crossing area unique name
Attribute:
Attribute_Label: spcs_comb
Attribute_Definition: assumed species (combined for easier symbology)
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.035
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: merged_crossing_points
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Mussels\merged_crossing_points.shp
Description:
Abstract: This multi-species mussel dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations that were used to assess potential additional impacts from NiSource activities to currently unknown locations. It combines data from four different mussel species: Clubshell, Fanshell, Northern Riffleshell, and Sheepnose.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -90.687999
East_Bounding_Coordinate: -79.618939
North_Bounding_Coordinate: 41.869116
South_Bounding_Coordinate: 32.407051
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Stream Sediment Model
Theme_Keyword: Clubshell
Theme_Keyword: Fanshell
Theme_Keyword: Northern Riffleshell
Theme_Keyword: Sheepnose
Theme_Keyword: Mussels
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive

City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams or stream portions identified as occupied by one of the species in the 5-year review and/or in information provided by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD) using GNIS names and political (state and county) boundaries.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: {species} occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. A distance of 3700 feet was used as a potential downstream impact distance to limit analysis. The 3700 foot distance is based on the results of the ENSR sediment transport model.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: {species} occupied streams
Source_Used_Citation_Abbreviation: Mussel Tributary Identification Tool V 6.1
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species

Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Stream crossings were classified as large (greater than 100 feet) or small (less than 100 feet) based on the estimated widths. Average large and small stream widths for each species were derived from these values.
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: {species} intersection points
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The size classified intersection points for Clubshell, Fanshell, Northern Riffleshell, and Sheepnose were Merged for more efficient additional analysis.
Source_Used_Citation_Abbreviation: Clubshell intersection points
Source_Used_Citation_Abbreviation: Fanshell intersection points
Source_Used_Citation_Abbreviation: Northern Riffleshell intersection points
Source_Used_Citation_Abbreviation: Sheepnose intersection points
Source_Produced_Citation_Abbreviation: crossings_ALL_potential.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA

Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The merged file was run though another geoprocessing tool that estimated downstream impact segments. Large streams (greater than 100 feet wide) were expected to have impacts 3700 feet downstream. Small streams (less than 100 feet wide) were expected to have impacts 185 feet downstream. Pipeline intersections with tributaries were removed from analysis unless downstream impacts extended to the occupied streams. When tributary crossing impacts extented to occupied streams, only the impacted areas of the occupied streams were retained.
Source_Used_Citation_Abbreviation: crossings_ALL_potential.shp
Source_Used_Citation_Abbreviation: Downstream length from points V2.1 (tool)
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: ENSR Sediment Transport Model
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Produced_Citation_Abbreviation: merged_intersects.shp
Source_Produced_Citation_Abbreviation: merged_crossing_points.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\mussel_merged_points_metadata.xml
Process_Date: 20100628
Process_Time: 13454300
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 89
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:

```
        Abscissa_Resolution: 0.000000
        Ordinate_Resolution: 0.000000
      Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Resolution: 0.000100
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: merged_crossing_points
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: FID_Pipeli
    Attribute:
      Attribute_Label: OP_COMPANY
      Attribute_Definition_Source: NiSource
    Attribute:
      Attribute_Label: Original_M
    Attribute:
      Attribute_Label: FID_Perm_F
    Attribute:
      Attribute_Label: ComID
      Attribute_Definition_Source: NHD
    Attribute:
      Attribute_Label: FDate
      Attribute_Definition_Source: NHD
    Attribute:
      Attribute_Label: Resolution
      Attribute_Definition_Source: NHD
    Attribute:
      Attribute_Label: GNIS_ID
      Attribute_Definition_Source: NHD
    Attribute:
      Attribute_Label: GNIS_Name
      Attribute_Definition_Source: NHD
    Attribute:
      Attribute_Label: LengthKM
      Attribute_Definition_Source: NHD
    Attribute:
      Attribute_Label: ReachCode
      Attribute_Definition_Source: NHD
```

Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ORIG_FID
Attribute:
Attribute_Label: strm_width
Attribute_Definition: estimated stream width (feet)
Attribute:
Attribute_Label: strm_type
Attribute_Definition: Main stream, tributary, or intermittent stream
Attribute:
Attribute_Label: strm_size
Attribute_Definition: stream size class
Attribute:
Attribute_Label: cross_req
Attribute_Definition: crossing classification
Attribute:
Attribute_Label: species
Attribute_Definition: species code
Attribute:
Attribute_Label: FID_SPN_MA
Attribute_Definition: sheepnose may affect streams FID
Attribute:
Attribute_Label: SHAPE_Leng
Attribute:
Attribute_Label: FID_NRF_MA
Attribute_Definition: northern riffleshell may affect streams FID
Attribute:
Attribute_Label: FID_FAN_MA
Attribute_Definition: fanshell may affect streams FID
Attribute:
Attribute_Label: FID_CLB_MA
Attribute_Definition: clubshell may affect streams FID
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and

information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

```
  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.004
    Ordering_Instructions:
Metadata_Reference_Information:
  Metadata_Date: 20100630
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: main_downstream_dissolve_Identity_NHD
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Nashville Crayfish\main_downstream_dissolve_Identity_NHD.shp
Description:
Abstract: This Nashville Crayfish dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents portions of streams where Nashville Crayfish might be impacted by NiSource activities.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -86.727162
East_Bounding_Coordinate: -86.640284
North_Bounding_Coordinate: 36.061742
South_Bounding_Coordinate: 35.971375
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Nashville Crayfish
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500

Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams in watersheds identified as occupied by Nashville Crayfish by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD). All streams were assumed to be occupied.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: Nashville Crayfish occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. Intersections were traced downstream for 185 feet to represent the impacts of dry ditch crossings. All impacts were expected to be through dry ditch crossings.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: Nashville Crayfish occupied streams
Source_Used_Citation_Abbreviation: mussel_tributary_identification_6_2NCF.py (geoprocessing script)
Process_Date: 20100114
Source_Produced_Citation_Abbreviation: main_stream_crossings_downstream_distance_lines.shp
Source_Produced_Citation_Abbreviation: Main_stream_pipe_intersections.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN

Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The downstream impacts lines resulting from the geoprocessing were Dissolved to remove overlapping lines.
Source_Used_Citation_Abbreviation: main_stream_crossings_downstream_distance_lines.shp
Process_Date: 20100114
Source_Produced_Citation_Abbreviation: main_downstream_dissolve.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Dissolved streams were then Identitied with the NHD to reattach NHD attributes. Streams with a GNIS_Name of Mill Creek were classified as main atreams, and other streams were classified as tributaries for the purpose of later calculations.
Source_Used_Citation_Abbreviation: main_downstream_dissolve.shp
Source_Used_Citation_Abbreviation: NHD
Process_Date: 20100114
Source_Produced_Citation_Abbreviation: main_downstream_dissolve_Identity_NHD.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Potentially impacted streams were assumed to contain stable populations. The lengths of impacted streams of each type (main or tributary) were summed, and the results for each type of stream used as the Geographic Downstream Distance values in the take calculation spreadsheet.
Source_Used_Citation_Abbreviation: main_downstream_dissolve_Identity_NHD.shp
Process_Date: 20100114
Process_Contact:
Contact_Information:
Contact_Person_Primary:

Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\NCF\NCF_combined_downstream_Intsct_Dslvd.shp.xml
Process_Date: 20100629
Process_Time: 16174000
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 12
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Resolution: 0.000100
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: main_downstream_dissolve_Identity_NHD
Attribute:
Attribute_Label: FID

Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FID_main_d
Attribute:
Attribute_Label: Id
Attribute:
Attribute_Label: st_len_ft
Attribute_Definition: dissolved streams length
Attribute:
Attribute_Label: FID_NHDFlo
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ComID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FDate
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Resolution
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_ID
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: GNIS_Name
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: LengthKM
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: ReachCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FlowDir
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: WBAreaComI
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: Enabled
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: SHAPE_Leng

Attribute:
Attribute_Label: strm_len
Attribute_Definition: stream segment length (feet)
Attribute:
Attribute_Label: strm_type
Attribute_Definition: stream type class (main or tributary)
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.005
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: main_pt_buffers_50ft
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Nashville Crayfish\main_pt_buffers_50ft.shp
Description:
Abstract: This Nashville Crayfish dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations where Nashville Crayfish might be impacted by NiSource activities.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -86.727316
East_Bounding_Coordinate: -86.640139
North_Bounding_Coordinate: 36.061522
South_Bounding_Coordinate: 35.971510
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Nashville Crayfish
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500

Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams in watersheds identified as occupied by Nashville Crayfish by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD). All streams were assumed to be occupied.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: Nashville Crayfish occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. Intersections were traced downstream for 185 feet to represent the impacts of dry ditch crossings. All impacts were expected to be through dry ditch crossings.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: Nashville Crayfish occupied streams
Source_Used_Citation_Abbreviation: mussel_tributary_identification_6_2NCF.py (geoprocessing script)
Process_Date: 20100114
Source_Produced_Citation_Abbreviation: main_stream_crossings_downstream_distance_lines.shp
Source_Produced_Citation_Abbreviation: Main_stream_pipe_intersections.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN

Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Average stream widths for Nashville Crayfish were NOT derived from these values.
Source_Used_Citation_Abbreviation: Main_stream_pipe_intersections.shp
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Process_Date: 20100114
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Crossings in streams with a [GNIS_Name] of Mill Creek were classified as main streams, and other streams were classified as tributaries for the purpose of later calculations.
Source_Used_Citation_Abbreviation: Main_stream_pipe_intersections.shp
Process_Date: 20100114
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Crossings were grouped into crossing areas. A crossing area generally included any crossing points within 100 feet of each other (with a few exceptions). Crossings used the main and tributary classifications based on [GNIS_Name] so that different density values could be applied to the results. Crossing areas were used to determine the Additional Downstream Distance for Loops value. For each crossing area, 50 feet were added to account for loops added at that crossing area, where most impacts would overlap other impacts.
Source_Used_Citation_Abbreviation: Main_stream_pipe_intersections.shp
Process_Date: 20100114

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      Source_Produced_Citation_Abbreviation: main_pt_buffers_50ft.shp
      Process_Contact:
        Contact_Information:
          Contact_Person_Primary:
            Contact_Person: Erik Olson
            Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
          Contact_Position: Fish and Wildlife Biologist (GIS)
          Contact_Address:
            Address_Type: mailing and physical address
            Address: BHW Federal Building
            Address: 1 Federal Drive
            City: Fort Snelling
            State_or_Province: MN
            Postal_Code: 55111
            Country: USA
          Contact_Voice_Telephone: 612_713_5488
          Contact_Electronic_Mail_Address: erik_olson@fws.gov
    Process_Step:
      Process_Description: Metadata imported.
      Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\NCF\NCF_crossing_pts_merge_Buffer_50ft.shp.xml
      Process_Date: 20100629
      Process_Time: 16174700
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 18
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Resolution: 0.000100
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
  Detailed_Description:
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Entity_Type:
Entity_Type_Label: main_pt_buffers_50ft
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: species
Attribute_Definition: species code
Attribute:
Attribute_Label: strm_type
Attribute_Definition: stream type class (main or tributary)
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.016
Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
  Online_Linkage: http://www.esri.com/metadata/esriprof80.html
  Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: USFWS, Region 3, ES, Division of Endangered Species
Publication_Date:
Title: Main_stream_pipe_intersections
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\Nashville Crayfish\Main_stream_pipe_intersections.shp
Description:
Abstract: This Nashville Crayfish dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents locations where Nashville Crayfish might be impacted by NiSource activities.
Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -86.727132
East_Bounding_Coordinate: -86.640324
North_Bounding_Coordinate: 36.061375
South_Bounding_Coordinate: 35.971657
Keywords:
Theme:
Theme_Keyword_Thesaurus: NiSource
Theme_Keyword: NiSource
Theme_Keyword: Habitat Conservation Plan
Theme_Keyword: Nashville Crayfish
Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500

Data_Quality_Information:
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS
Publication_Date: 2009
Title: USGS (High Resolution) National Hydrography Dataset
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: http://nhd.usgs.gov/
Source_Scale_Denominator: 1:24000
Type_of_Source_Media: Electronic File Transfer
Source_Citation_Abbreviation: NHD
Process_Step:
Process_Description: Streams in watersheds identified as occupied by Nashville Crayfish by USFWS Field Offices were extracted from the High Resolution National Hydrography Dataset (NHD). All streams were assumed to be occupied.
Source_Used_Citation_Abbreviation: NHD
Source_Produced_Citation_Abbreviation: Nashville Crayfish occupied streams
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
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Address: 1 Federal Drive
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The occupied stream dataset, the NiSource pipeline dataset, and the NHD dataset were run through a geoprocessing tool to identify locations where pipelines crossed occupied streams or tributaries near occupied streams. Intersections were traced downstream for 185 feet to represent the impacts of dry ditch crossings. All impacts were expected to be through dry ditch crossings.
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Source_Used_Citation_Abbreviation: Nashville Crayfish occupied streams
Source_Used_Citation_Abbreviation: mussel_tributary_identification_6_2NCF.py (geoprocessing script)
Process_Date: 20100114
Source_Produced_Citation_Abbreviation: main_stream_crossings_downstream_distance_lines.shp
Source_Produced_Citation_Abbreviation: Main_stream_pipe_intersections.shp
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
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State_or_Province: MN

Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Stream widths at crossings (points of intersection between occupied streams and pipelines) were estimated from aerial imagery. Streams that could not be measured based on the imagery were assumed to be 30 feet wide. Average stream widths for Nashville Crayfish were NOT derived from these values.
Source_Used_Citation_Abbreviation: Main_stream_pipe_intersections.shp
Source_Used_Citation_Abbreviation: I3_Imagery_Prime_World_2D
Source_Used_Citation_Abbreviation: NHD
Source_Used_Citation_Abbreviation: \frequently_used_data.gdb\Derived\Pipelines_Dissolved_eco_050409
Process_Date: 20100114
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
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Contact_Position: Fish and Wildlife Biologist (GIS)
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Address_Type: mailing and physical address
Address: BHW Federal Building
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State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Intersections in streams with a GNIS_Name of Mill Creek were classified as main streams, and other streams were classified as tributaries for the purpose of later calculations.
Source_Used_Citation_Abbreviation: Main_stream_pipe_intersections.shp
Process_Date: 20100114
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
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City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612_713_5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\WorkSpace\Current_Projects\HCP_project\metadata\NCF\NCF_crossing_pts_merge.shp.xml
Process_Date: 20100629
Process_Time: 16175400
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector

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  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Entity point
      Point_and_Vector_Object_Count: 40
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -95.000000
          Latitude_of_Projection_Origin: 37.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: international feet
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Resolution: 0.000100
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
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    Entity_Type:
      Entity_Type_Label: Main_stream_pipe_intersections
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
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    Attribute:
      Attribute_Label: OP_COMPANY
    Attribute:
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    Attribute:
      Attribute_Label: SHAPE_Leng
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      Attribute_Label: ComID
      Attribute_Definition_Source: NHD
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Attribute:
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Attribute_Label: GNIS_Name
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Attribute_Definition_Source: NHD
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Attribute_Label: ReachCode
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Attribute_Label: FlowDir
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Attribute_Definition_Source: NHD
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Attribute_Label: FType
Attribute_Definition_Source: NHD
Attribute:
Attribute_Label: FCode
Attribute_Definition_Source: NHD
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Attribute_Label: FID_Pipeli
Attribute_Definition_Source: NHD
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Attribute_Label: Enabled
Attribute_Definition_Source: NHD
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Attribute_Label: ORIG_FID
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Attribute_Label: strm_width
Attribute_Definition: estimated stream width
Attribute:
Attribute_Label: strm_size
Attribute_Definition: stream type class (main or tributary)
Attribute:
Attribute_Label: OBJECTID
Attribute:
Attribute_Label: species
Attribute_Definition: species code
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness

of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data and information have been processed successfully on a computer system at the USFWS, no warranty expressed or implied is made regarding the accuracy or utility of the data and information on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data, and information, and aggregate use with other data and information. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data and information.

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  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.002
Metadata_Reference_Information:
  Metadata_Date: 20100630
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USFWS
        Contact_Person: Erik Olson
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: 1 federal drive
        City: Fort Snelling
        State_or_Province: Minnesota
        Postal_Code: 55111
        Country: USA
      Contact_Voice_Telephone: 612-713-5488
      Contact_Electronic_Mail_Address: erik_olson@fws.gov
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: http://www.esri.com/metadata/esriprof80.html
    Profile_Name: ESRI Metadata Profile
```

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USFWS, Region 3, ES, Division of Endangered Species
      Publication_Date: 20090721
      Title: ABB_Columbia_NAAEAC_Dissolve
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\IFW3RO-CPGIS2\C$\WorkSpace\Current_Projects\HCP_project\Data\calculation_datasets_060710\ABB\ABB_Columbia_NAAEAC_Dissolve.shp
  Description:
    Abstract: This American Burying Beetle dataset was created to identify potential impacts of activities covered by the NiSource Multi-Species Habitat Conservation Plan (MSHCP). It represents areas where American Burying Beetle might be impacted by NiSource activities.
    Purpose: This dataset was created for use in the development of the NiSource Multi-Species Habitat Conservation Plan (MSHCP). Information was developed on species within the MSHCP covered lands with potential to be impacted by covered activities. This information was used to estimate the possible impacts to individuals, populations, and the species overall. Areas of potential impact are not necessarily likely to be impacted, but NiSource wanted to have conservative estimates, and so this dataset was used to estimate a reasonable worst case scenario.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 20090721
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: As needed
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -82.259707
      East_Bounding_Coordinate: -81.842299
      North_Bounding_Coordinate: 39.669595
      South_Bounding_Coordinate: 39.392027
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: NiSource
      Theme_Keyword: NiSource
      Theme_Keyword: Habitat Conservation Plan
      Theme_Keyword: Suitable Habitat Model
      Theme_Keyword: American Burying Beetle
  Access_Constraints: This dataset is accessible to USFWS and NiSource employees. Anyone seeking to to use this data should contact NiSource or USFWS.
  Use_Constraints: This dataset contains information related to the development of the NiSource MSHCP. Data may have been edited or modified to meet the needs of the MSHCP, and should not be used for any other purpose.
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Erik Olson
        Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
      Contact_Position: Fish and Wildlife Biologist (GIS)
      Contact_Address:
        Address_Type: mailing and physical address
        Address: BHW Federal Building
        City: Fort Snelling
        State_or_Province: MN
        Postal_Code: 55111
        Country: USA

Contact_Voice_Telephone: 612/713-5488
Contact_Facsimile_Telephone:
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Hours_of_Service:
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 3; ESRI ArcCatalog 9.3.1.3500
Data_Quality_Information:
Lineage:
Source_Information:
Process_Step:
Process_Description: A release of American burying beetles has been conducted near where Perry, Morgan, and Athens counties meet in Ohio. A point placed at the coordinates of the release was buffered a distance of 10 miles. This followed procedures previously used by ENSR per direction from Angela Boyer-Zimmerman, USFWS (2007). This produced an area of known occurance for ABB.
Process_Date: 03/18/09
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612/713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: The ABB area of known occurance was intersected with the NiSource Covered Lands to determine the area of known occurrences impacted by the NiSource Covered Lands.
Process_Date: 03/18/09
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Erik Olson
Contact_Organization: USFWS, Region 3, ES, Division of Endangered Species
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: BHW Federal Building
City: Fort Snelling
State_or_Province: MN
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612/713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: C:\WorkSpace\Current_Projects\HCP_project\metadata\ABB_metadata.xml
Process_Date: 20100630
Process_Time: 10071400
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon

Point_and_Vector_Object_Count: 1
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -95.000000
Latitude_of_Projection_Origin: 37.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000000
Ordinate_Resolution: 0.000000
Planar_Distance_Units: international feet
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: ABB_Columbia_NAAEAC_Dissolve
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: ID
Attribute:
Attribute_Label: Acres
Attribute_Definition: Area of feature in Acres (from Calculate Geometry tool).
Attribute_Definition_Source: USFWS
Distribution_Information:
Distributor:
Resource_Description: Downloadable Data
Distribution_Liability: USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein. This dataset is restricted in purpose and extent to the NiSource Covered Lands as outlined in the Multi-Species Habitat Conservation Plan (MSHCP). It is not designed nor intended to comprehensively capture all suitable habitat for any given species. The information contained in these data is dynamic and may change over time. The data are not better than the original sources from which they were derived. It is the responsibility of the data user to use the data appropriately and consistent within the limitations of geospatial data in general and these data in particular. USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is strongly recommended that these data are directly acquired from USFWS or NiSource and not indirectly through other sources which may have changed the data in some way. Although these data have been processed successfully on a computer system by USFWS, no warranty expressed or implied is made regarding the utility of the data on another system or for general or

scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data.

Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.074
Ordering_Instructions: Contact Rick Hall at NiSource.

Metadata_Reference_Information:
Metadata_Date: 20100630
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USFWS
Contact_Person: Erik Olson
Contact_Position: Fish and Wildlife Biologist (GIS)
Contact_Address:
Address_Type: mailing and physical address
Address: 1 federal drive
City: Fort Snelling
State_or_Province: Minnesota
Postal_Code: 55111
Country: USA
Contact_Voice_Telephone: 612-713-5488
Contact_Electronic_Mail_Address: erik_olson@fws.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

General Data Sources Examples (6 files)

Metadata for large datasets distributed by federal agencies are frequently broken into smaller subsets for distribution with metadata that is specific to each subset. Rather than publishing all of the individual metadata files, a single representative metadata file for each data type is included. Additional information on datasets, including information regarding additional metadata and how to download data can be found through the following websites:

EcoRegions
http://www.epa.gov/wed/pages/ecoregions.htm

2001 National Land Cover Data
http://www.epa.gov/mrlc/nlcd-2001.html

National Elevation Dataset
http://ned.usgs.gov/

National Hydrography Dataset
http://nhd.usgs.gov/

Level III and IV Ecoregions of MississippiLevel III and IV Ecoregions of Mississippi
Metadata also available as
Metadata:
  Identification_Information
  Data_Quality_Information
  Spatial_Data_Organization_Information
  Spatial_Reference_Information
  Entity_and_Attribute_Information
  Distribution_Information
  Metadata_Reference_Information

  Identification_Information:
    Citation:
      Citation_Information:
        Originator: US Environmental Protection Agency
        Publication_Date: 2003
        Title: Level III and IV Ecoregions of Mississippi
        Geospatial_Data_Presentation_Form: vector digital data
        Online_Linkage: <ftp://ftp.epa.gov/wed/ecoregions/ms/>
    Description:
      Abstract:
      Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources. They are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. By recognizing the spatial differences in the capacities and potentials of ecosystems, ecoregions stratify the environment by its probable response to disturbance (Bryce and others, 1999). These general purpose regions are critical for structuring and implementing ecosystem management strategies across federal agencies, state agencies, and nongovernment organizations that are responsible for different types of resources within the same geographical areas (Omernik and others, 2000). The approach used to compile this map is based on the premise that ecological regions are hierarchical and can be identified through the analysis of the spatial patterns and the composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem quality and integrity (Wiken 1986; Omernik 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each characteristic varies from one ecological region to another regardless of the hierarchical level. A Roman numeral hierarchical scheme has been adopted for different levels of ecological regions. Level I is the coarsest level, dividing North America into 15 ecological regions. Level II divides the continent into 52 regions (Commission for Environmental Cooperation Working Group 1997). At level III, the continental United States contains 104 ecoregions and the conterminous United States has 84 ecoregions (United States Environmental Protection Agency [USEPA] 2003). Level IV is a further subdivision of level III ecoregions. Explanations of the methods used to define the USEPA's ecoregions are given in Omernik (1995), Omernik and others (2000), and Gallant and others (1989). Ecological and biological diversity within Mississippi is great. The state contains barrier islands and coastal lowlands, large river floodplain forests, rolling and hilly coastal plains with evergreen and deciduous forests, and a variety of aquatic habitats. There are 4 level III ecoregions and 21 level IV ecoregions in Mississippi

and most continue into ecologically similar parts of adjacent states. The level III and IV ecoregions were compiled at a scale of 1:250,000 and depict revisions and subdivisions of earlier level III ecoregions that were originally compiled at a smaller scale (USEPA 2003; Omernik 1987). Delineation of these ecoregions is part of a collaborative project primarily between USEPA Region IV, USEPA National Health and Environmental Effects Research Laboratory (Corvallis, Oregon), Mississippi Department of Environmental Quality (MDEQ), and the United States Department of Agriculture- Natural Resources Conservation Service (NRCS). Collaboration and consultation also occurred with the United States Department of Agriculture-Forest Service (USFS), United States Department of the Interior-Geological Survey (USGS), USGS Earth Resources Observation Systems (EROS) Data Center, United States Army Corps of Engineers (USACE), and with other State of Mississippi agencies. The project is associated with an interagency effort to develop a common framework of ecological regions (McMahon and others, 2001). Reaching that objective requires recognition of the differences in the conceptual approaches and mapping methodologies applied to develop the most common ecoregion-type frameworks, including those developed by the USFS (Bailey and others, 1994), the USEPA (Omernik 1987, 1995), and the NRCS (U.S. Department of Agriculture-Soil Conservation Service, 1981). As each of these frameworks is further refined, their differences are becoming less discernible. Regional collaborative projects such as this one in Mississippi, where some agreement has been reached among multiple resource management agencies, are a step toward attaining consensus and consistency in ecoregion frameworks for the entire nation.

Comments and questions regarding this Level III and IV Ecoregions of North Carolina map should be addressed to Glenn Griffith, Dynamac, Inc., 200 SW 35th Street, Corvallis, OR 97333, (541) 754-4465, FAX: (541) 754-4716, email: griffith.glenn@epa.gov, or to James Omernik, USGS, c/o US EPA - NHEERL, 200 SW 35th Street, Corvallis, OR 97333, (541) 754-4458, email: omernik.james@epa.gov.

Purpose:

Assist managers of aquatic and terrestrial resources in understanding the regional patterns of the realistically attainable quality of these resources.

Supplemental_Information:

Revisions

1. Original level III lines digitized 1986
2. Updated level III and IV lines. 9/2002
3. Updated level III and IV lines as per edits to AR and LA. 11/2003

Reviews_Applied_to_Data

1. Lines and map were reviewed by multiple state and federal personnel
2. Revised lines were reviewed by Glenn Griffith, Dynamac, Inc., c/o US EPA
3. Revisions were reviewed by Glenn Griffith, Dynamac, Inc., c/o US EPA

REFERENCES

Bailey, R.G., Avers, P.E., King, T., and McNab, W.H., eds., 1994, Ecoregions and subregions of the United States (map) (supplementary table of map unit descriptions compiled and edited by McNab, W.H. and Bailey, R.G.): Washington, D.C., U.S. Department of Agriculture-Forest Service, scale 1:7,500,000.

Bryce, S.A., Omernik, J.M., and Larsen, D.P., 1999, Ecoregions - a geographic framework to guide risk characterization and ecosystem management: Environmental Practice, v. 1, no. 3, p. 141-155. Commission for Environmental Cooperation Working Group, 1997, Ecological regions of North America - toward a common perspective: Montreal, Quebec, Commission for Environmental Cooperation, 71 p.

Gallant, A.L., Whittier, T.R., Larsen, D.P., Omernik, J.M., and Hughes, R.M., 1989, Regionalization as a tool for managing environmental resources: Corvallis, Oregon, U.S. Environmental Protection Agency, EPA/600/3-89/060, 152 p.
McMahon, G., Gregonis, S.M., Waltman, S.W., Omernik, J.M., Thorson, T.D., Freeouf, J.A., Rorick, A.H., and Keys, J.E., 2001, Developing a spatial framework of common ecological regions for the conterminous United States: Environmental Management, v. 28, no. 3, p. 293-316.
Omernik, J.M., 1987, Ecoregions of the conterminous United States (map supplement): Annals of the Association of American Geographers, v. 77, no. 1, p. 118-125, scale 1:7,500,000.
Omernik, J.M., 1995, Ecoregions - a spatial framework for environmental management, in Davis, W.S., and Simon, T.P., eds., Biological assessment and criteria-tools for water resource planning and decision making: Boca Raton, Florida, Lewis Publishers, p. 49-62.
Omernik, J.M., Chapman, S.S., Lillie, R.A., and Dumke, R.T., 2000, Ecoregions of Wisconsin: Transactions of the Wisconsin Academy of Sciences, Arts and Letters, v. 88, no. 2000, p. 77-103.
U.S. Department of Agriculture-Soil Conservation Service, 1981, Land resource regions and major land resource areas of the United States: Agriculture Handbook 296, 156 p.
U.S. Environmental Protection Agency, 2003, Level III ecoregions of the continental United States (revision of Omernik, 1987): Corvallis, Oregon, U.S. Environmental Protection Agency-National Health and Environmental Effects Research Laboratory, Map M-1, various scales.
Wiken, E., 1986, Terrestrial ecozones of Canada: Ottawa, Environment Canada, Ecological Land Classification Series no. 19, 26 p.
Overview_Description
Entity_and_Attribute_Overview
Arc attributes:
9 = state boundary
8 = coastline
4 = level IV ecoregion boundary
3 = level III ecoregion boundary
Attributes: Polygon coverage- polygons identified by ecocode Regions:
65 Southeastern Plains
65a Blackland Prairie
65b Flatwoods/Blackland Prairie Margins
65d Southern Hilly Gulf Coastal Plain
65e Northern Hilly Gulf Coastal Plain
65f Southern Pine Plains and Hills
65i Fall Line Hills
65j Transition Hills
65p Southeastern Floodplains and Low Terraces
65q Buhrstone/Lime Hills
65r Jackson Prairie
73 Mississippi Alluvial Plain
73a Northern Holocene Meander Belts
73b Northern Pleistocene Valley Trains
73d Northern Backswamps
73k Southern Holocene Meander Belts
73m Southern Backswamps
74 Mississippi Valley Loess Plains
74a Bluff Hills
74b Loess Plains
74c Southern Rolling Plains
75 Southern Coastal Plain
75a Gulf Coast Flatwoods

75i Floodplains and Low Terraces
75k Gulf Barrier Islands and Coastal Marshes
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
REQUIRED: The year (and optionally month, or month and day) for which the data set corresponds to the ground.
Currentness_Reference:
REQUIRED: The basis on which the time period of content information is determined.
Status:
Progress: REQUIRED: The state of the data set.
Maintenance_and_Update_Frequency:
REQUIRED: The frequency with which changes and additions are made to the data set after the initial data set is completed.
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -91.697965
East_Bounding_Coordinate: -87.922244
North_Bounding_Coordinate: 35.174691
South_Bounding_Coordinate: 30.114717
Keywords:
Theme:
Theme_Keyword_Thesaurus:
REQUIRED: Reference to a formally registered thesaurus or a similar authoritative source of theme keywords.
Theme_Keyword:
REQUIRED: Common-use word or phrase used to describe the subject of the data set.
Access_Constraints:
REQUIRED: Restrictions and legal prerequisites for accessing the data set.
Use_Constraints:
REQUIRED: Restrictions and legal prerequisites for using the data set after access is granted.
Native_Data_Set_Environment:
Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 1; ESRI ArcCatalog 9.0.0.535

Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Dataset copied.
Source_Used_Citation_Abbreviation:
u:\uber2\data\jobs\j412.glenn.ms\work1\ms_eco

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 199
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Label point

```
    Point_and_Vector_Object_Count: 76
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
    Point_and_Vector_Object_Count: 75
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Point
    Point_and_Vector_Object_Count: 1700
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Label point
    Point_and_Vector_Object_Count: 0


Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Albers Conical Equal Area
        Albers_Conical_Equal_Area:
          Standard_Parallel: 29.500000
          Standard_Parallel: 45.500000
          Longitude_of_Central_Meridian: -96.000000
          Latitude_of_Projection_Origin: 23.000000
          False_Easting: 0.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000276
          Ordinate_Resolution: 0.000276
        Planar_Distance_Units: meters
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.400000
      Denominator_of_Flattening_Ratio: 294.978698


Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: ms_eco.aat
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain:
        Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: FNODE#
```

Attribute_Definition: Internal node number for the beginning of an arc (from-node).
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: TNODE#
Attribute_Definition: Internal node number for the end of an arc (to-node).
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: LPOLY#
Attribute_Definition: Internal node number for the left polygon.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: RPOLY#
Attribute_Definition: Internal node number for the right polygon.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: LENGTH
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: MS_ECO#
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: MS_ECO-ID
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Attribute:
Attribute_Label: LNTYPE
Detailed_Description:
Entity_Type:
Entity_Type_Label: ms_eco.pat
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.

```
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: AREA
      Attribute_Definition: Area of feature in internal units squared.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Positive real numbers that are automatically
        generated.
    Attribute:
      Attribute_Label: PERIMETER
      Attribute_Definition: Perimeter of feature in internal units.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Positive real numbers that are automatically
        generated.
    Attribute:
      Attribute_Label: MS_ECO#
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain:
        Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: MS_ECO-ID
      Attribute_Definition: User-defined feature number.
      Attribute_Definition_Source: ESRI
    Attribute:
      Attribute_Label: ECO
    Attribute:
      Attribute_Label: LEVEL4
    Attribute:
      Attribute_Label: LEVEL4_NAME
    Attribute:
      Attribute_Label: LEVEL3
    Attribute:
      Attribute_Label: LEVEL3_NAME


Distribution_Information:
  Resource_Description: Downloadable Data
  Standard_Order_Process:
    Digital_Form:
      Digital_Transfer_Information:
        Transfer_Size: 0.272


Metadata_Reference_Information:
  Metadata_Date: 20041005
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
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Contact_Organization:
REQUIRED: The organization responsible for the metadata information.
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type:
REQUIRED: The mailing and/or physical address for the organization or individual.
City: REQUIRED: The city of the address.
State_or_Province: REQUIRED: The state or province of the address.
Postal_Code: REQUIRED: The ZIP or other postal code of the address.
Contact_Voice_Telephone:
REQUIRED: The telephone number by which individuals can speak to the organization or individual.
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

Generated by mp version 2.8.6 on Tue Oct 05 17:05:35 2004

Identification_Information:
Citation:
Citation_Information:
Originator: U.S. Geological Survey
Publication_Date: 20030901
Title: National Land Cover Database Zone 01 Land Cover Layer
Edition: 1.0
Geospatial_Data_Presentation_Form: remote-sensing image
Series_Information:
Series_Name: None
Issue_Identification: None
Publication_Information:
Publication_Place: Sioux Falls, SD
Publisher: U.S. Geological Survey
Other_Citation_Details:
References:
Homer, C., C. Huang, L. Yang, B. Wylie and M. Coan, 2004. Development of a 2001 national land cover database for the United States. Photogrammetric Engineering and Remote Sensing Vol.70,No.7,pp 829-840 or online at www.mrlc.gov/publications.
The USGS acknowledges the support of NOAA and Space Imaging in development of data in this zone.
Online_Linkage: http://www.mrlc.gov
Larger_Work_Citation:
Citation_Information:
Originator: National Oceanographic and Atmospheric Administration (NOAA) Coastal Services Center (CSC)/Coastal Change Analysis Program (C-CAP)
Publication_Date: 20041001
Title: C-CAP Washington 2000-Era Land Cover Metadata
Geospatial_Data_Presentation_Form: map
Publication_Information:
Publication_Place: NOAA CSC, Charleston, SC
Publisher: NOAA Coastal Change Analysis Program (C-CAP)
Online_Linkage: http://www.csc.noaa.gov
Description:
Abstract:
The National Land Cover Database 2001 land cover layer for mapping zone 01 was produced through a cooperative project conducted by the Multi-Resolution Land Characteristics (MRLC) Consortium. The MRLC Consortium is a partnership of federal agencies (www.mrlc.gov), consisting of the U.S. Geological Survey (USGS), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), the U.S. Forest Service (USFS), the National Park Service (NPS), the U.S. Fish and Wildlife Service (FWS), the Bureau of Land Management (BLM) and the USDA Natural Resources Conservation Service (NRCS). One of the primary goals of the project is to generate a current, consistent, seamless, and accurate National Land cover Database (NLCD) circa 2001 for the United States at medium spatial resolution. This landcover map and all documents pertaining to it are considered "provisional" until a formal accuracy assessment can be conducted. For a detailed definition and discussion on MRLC and the NLCD 2001 products, refer to Homer et al. (2004) and http://www.mrlc.gov/mrlc2k.asp.

The NLCD 2001 is created by partitioning the U.S. into mapping zones. A total of 66 mapping zones were delineated within the conterminous U.S. based on ecoregion and geographical characteristics, edge matching features and the size requirement of Landsat mosaics. Mapping zone 01 encompasses whole or portions of several states, including the state of Washington. Questions about the NLCD mapping zone 01 can be directed to the NLCD 2001 land cover mapping team at the USGS/EROS, Sioux Falls, SD (605) 594-6151 or mrlc@usgs.gov.
Purpose: The goal of this project is to provide the Nation with complete, current and consistent public domain information on its land use and land cover.
Supplemental_Information:
Corner Coordinates (center of pixel, projection meters)
Upper Left Corner: -2147160.00 meters(X), 3180540.00 meters(Y)
Lower Right Corner: -1736280.00 meters(X), 2777100.00 meters(Y)
Time_Period_of_Content:
Time_Period_Information:

Range_of_Dates/Times:
Beginning_Date: 19991018
Ending_Date: 20020722
Currentness_Reference: ground condition
Status:
Progress: In work
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -125.274529
East_Bounding_Coordinate: -118.634037
North_Bounding_Coordinate: 49.660920
South_Bounding_Coordinate: 45.144016
Keywords:
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: Land Cover
Theme_Keyword: GIS
Theme_Keyword: U.S. Geological Survey
Theme_Keyword: USGS
Theme_Keyword: digital spatial data
Theme:
Theme_Keyword_Thesaurus: ISO 19115 Category
Theme_Keyword: imagery
Theme_Keyword: Base Maps
Theme_Keyword: Earth Cover
Place:
Place_Keyword_Thesaurus: U.S. Department of Commerce, 1995, Countries, dependencies, areas of special sovereignty, and their principal administrative divisions, Federal Information Processing Standard 10-4,): Washington, D.C., National Institute of Standards and Technology
Place_Keyword: United States
Place_Keyword: U.S.
Place_Keyword: US
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: zone 01
Place:
Place_Keyword_Thesaurus: U.S. Department of Commerce, 1987, Codes for the identification of the States, the District of Columbia and the outlying areas of the United States, and associated areas (Federal Information Processing Standard 5-2): Washington, D.C., National Institute of Standards and Technology
Place_Keyword: Washington
Place_Keyword: WA
Place_Keyword: US West Coast
Place_Keyword: Coastal Zone
Access_Constraints: None
Use_Constraints: None
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: U.S. Geological Survey
Contact_Position: Customer Services Representative
Contact_Address:
Address_Type: mailing and physical address
Address: USGS/EROS
Address: 47914 252nd Street
City: Sioux Falls
State_or_Province: SD
Postal_Code: 57198-0001

Country: USA
Contact_Voice_Telephone: 605/594-6151
Contact_TDD/TTY_Telephone: 605/594-6933
Contact_Facsimile_Telephone: 605/594-6589
Contact_Electronic_Mail_Address: custserv@usgs.gov
Hours_of_Service: 0800 - 1600 CT, M - F (-6h CST/-5h CDT GMT)
Contact_Instructions:
The USGS point of contact is for questions relating to the data display and download from this web site. For questions regarding data content and quality, refer to:
http://www.mrlc.gov/mrlc2k.asp or email: mrlc@usgs.gov
Data_Set_Credit: U.S. Geological Survey, NOAA, Space Imaging
Security_Information:
Security_Classification_System: None
Security_Classification: Unclassified
Security_Handling_Description: N/A
Native_Data_Set_Environment: Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 1; ESRI ArcCatalog 9.0.0.535
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
According to accuracy assessment performed by Space Imaging, the overall accuracy is 86.1% and 85.0% Kappa. The accuracy results shown below are from a combined accuracy completed on both Oregon and Washington C-CAP areas. A total of 1043 points are located in Washington and 1165 points are located in Oregon.

Each class accuracy is as follows: (Errors of Omission/Commission)
0 Background (N/A)
1 Unclassified (Cloud, Shadow, etc)(N/A)
2 High Intensity Developed (88%/98%)
3 Low Intensity Developed (99%/89%)
4 Cultivated Land (81%/79%)
5 Grassland (86%/81%)
6 Deciduous Forest (76%/81%)
7 Evergreen Forest (95%/90%)
8 Mixed Forest (80%/76%)
9 Scrub/Shrub (74%/88%)
10 Palustrine Forested Wetland (77%/78%)
11 Palustrine Scrub/Shrub Wetland (67%/70%)
12 Palustrine Emergent Wetland (83%/79%)
13 Estuarine Forested Wetland (N/A)
14 Estuarine Scrub/Shrub Wetland (N/A)
15 Estuarine Emergent Wetland (79%/79%)
16 Unconsolidated Shore (94%/96%)
17 Bare Land (88%/91%)
18 Water (98%/99%)
19 Palustrine Aquatic Bed (N/A)
20 Estuarine Aquatic Bed (100%/96%)
21 Tundra (N/A)
22 Snow/Ice (96%/100%)

The validation points were both collected in the field and photo interpreted. The accuracy assessment selection methods were developed to minimize spatial autocorrelation between the training and accuracy assessment. The first pool of accuracy assessment sites came from field data and photo interpretation of black and white digital orthophotos and digital color infrared imagery (primarily Emerge and Ikonos data). These sites were collected prior to initial mapping and were collected at the same time as the training data. The sites were selected to capture the physical and spectral diversity of the land cover. After these sites

were identified, they were separated into training and accuracy assessment sites by imposing a 1 km x 1 km grid over the study area. Accuracy assessment sites could only be selected from alternate 1 km squares. Only 1 sample per class was allowed from each potential square. After the first criteria was met, the accuracy assessment sites were buffered to see if they fell within 1000 meters of another accuracy assessment site of the same class or within 1000 meters of a training site of the same class. Those that fell within the 1000 meter buffer were eliminated. All sites were to be from a homogeneous 3x3 area.

After an analysis of the point distribution, it became clear that there were not enough samples for every class. The remaining points were selected from the initial draft final classification and had to be a homogeneous 3x3 area. A stratified random sample was used to locate sites. These sites were restricted to the same alternate 1 km x 1 km grid that was used to separate training from AA sites in the initial analysis. Sampling was limited to areas where there was high resolution color infrared imagery. The imagery included the previous Ikonos and Emerge imagery, but also included an additional 60 scenes of Ikonos imagery. The additional Ikonos imagery provided sampling areas across the entire study area. When possible, we tried to identify 50 samples of the uncommon classes and 20 sites of the common classes. Samples were selected for the common classes so that there were samples for classes using this methodology.

In total, an additional 637 additional points to the accuracy assessment analysis for a total of 2208. All classes have a minimum of 50 accuracy assessment points except for estuarine aquatic bed and estuarine emergent. These classes have 24 and 29 sites respectively. These classes are limited in the study area and to some extent in the imagery that was available to sample from.

Also as part of the assessment, NOAA staff field tested the classification to determine a subjective goodness of fit.

Post-Processing Steps: None

Known Problems: None

Spatial Filters: None

Quantitative_Attribute_Accuracy_Assessment:

Attribute_Accuracy_Value: 85.1

Attribute_Accuracy_Explanation: Accuracy value obtained using 518 accuracy points compared against the classification produced. Results gave per class accuracy values as well as overall accuracy of 85.1% The U.S. Geological Survey can make no guarantee as to the accuracy or completeness of this information, and it is provided with the understanding that it is not guaranteed to be correct or complete. Conclusions drawn from this information are the responsibility of the user.

Logical_Consistency_Report:

The NLCD 2001 database for mapping zone 01 consists of three main data products including: (1) per pixel classified land-cover data (2) sub-pixel percent imperviousness and (3) sub-pixel percent tree canopy density. The land-cover database also includes three additional metadata layers that provide users a spatial node map of the land cover classification. The three layers are: (a) a spatial node map of the land cover classification, (b) a spatial confidence map of the land cover classification, and, (c) a text file of logical statements related to the land cover classification.

Conceptually, the descriptive tree is a classification tree generated by using the final minimum-map- unit land cover product (1 acre) as training data, and Landsat and other ancillary data as predictors. The goal of the descriptive tree is to summarize the effects of boosted trees (10 sequential classification trees) into a single condensed decision tree that can be used as a diagnostic tool for the classification process. This descriptive tree can be used to assess the relative importance of each of the input data sets on each land cover class. Such information may also be useful to customize the minimum-mapping-unit classification to meet a user's specific needs through raster modeling. Descriptive trees usually capture 60 to 80% of the information from the original land cover data.

The leaf or terminal nodes of the descriptive tree are assigned to sequential numbers (called node numbers) and mapped across the entire mapping zone on a pixel-by-pixel basis. These node numbers can then be matched with the various conditional statements

associated with each respective terminal node. This spatial layer appears similar to a cluster map, but is the result of a supervised classification - not an unsupervised clustering. This node map can potentially be used as input by users to customize NLCD land cover, by linking the spatial extent of an individual node with the rules of the conditional statement.

The Land Cover spatial classification confidence data layer is provided to users to help determine the per-pixel spatial confidence of the NLCD 2001 land cover prediction from the descriptive tree. The C5 algorithm produces an estimate (a value between 0% and 100%) that indicates the confidence of rule predictions at each node based on the training data. This spatial confidence map should be considered as only one indicator of relative reliability of the land cover classification, rather than a precise estimate. Users should be aware that this estimate is made based on only training data, and is derived from a generalized descriptive decision tree that reproduces the final land cover data. However, this layer provides valuable insight for a user to determine the risk or confidence they choose to place in each pixel of land cover.

A logic statement from a descriptive tree classification describes each classification rule for each classified pixel. An example of the logic statement follows:

IF tasseled-cap wetness > 140 and imperviousness = 0 and canopy density < 4, then classify as Water

This logic file can be used in combination with the spatial node map to identify classification logic and allow modifications of the classification based on user's knowledge and/or additional data sets.

Additional information may be found at http://www.mrlc.gov/mrlc2k_nlcd.asp.
Completeness_Report: This NLCD product of mapping zone 01 Land Cover layer is the version dated November 8, 2006.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: N/A
Vertical_Positional_Accuracy:
Vertical_Positional_Accuracy_Report: N/A
Lineage:
Process_Step:
Process_Description:
This dataset was created by Space Imaging.
This version of the classification is the late-date (2000-era). The study
area is the Coastal Washington Region. An early-date (1995-era)
classification is also available for the same area.

Summary-
This section outlines the classification procedure for the Oregon
C-CAP. The three dates of imagery were first reviewed for image quality
and shifts between image dates. Training points were used as the dependent
variable in a CART (Classification Analysis by Regression Tree) approach.
Ancillary data layers were calculated from the TM data and were used as
additional independent variables in the analysis. Different versions of the
map were produced using different combinations of independent variables. The
rough map represented the output from the CART classification routine.
Ancillary data were used in spatial models were applied to the rough map to
produce the provisional map. This represented a fully automated product. This
product was then altered by hand edits to refine the classification. In addition,
a percent impervious data layer developed from TM data using high resolution
imagery, was imbedded into the classification to define the developed classes.
This produced the final-with-edits version which is the final version of the
classification and is the one described here.

Pre-processing steps-
Each Landsat TM scene was geo-referenced by USGS (United States Geological
Survey) EROS. The Space Imaging staff reviewed the spectral and
spatial quality of the imagery. Areas that were greater than 1-2 pixels off
were sent back to USGS for reprocessing. The data was geo-referenced to
Albers Conical Equal Area, with a spheroid of GRS 1980, and Datum of WGS84.

The data units is in meters. The Washington TM data was delivered in the form of USGS zone mosaics. The data included three dates of TM: leaf-on, leaf-off, and spring. For each date of TM, spectral and tasseled cap data were received.

Acquisition dates of Landsat ETM+ (TM) scenes used for land cover classification in zone 01 are as follows:
SPRING-
Index 1 for Path 45/Row 26 on 03/21/01 = Scene_ID 5045026000108010
Index 2 for Path 45/Row 27 on 03/26/00 = Scene_ID 7045027000008650
Index 1 for Path 45/Row 28 on 03/21/01 = Scene_ID 5045028000108010
Index 3 for Path 46/Row 26 on 05/07/01 = Scene_ID 7046026000112750
Index 4 for Path 46/Row 27 on 05/31/01 = Scene_ID 5046027000115110
Index 5 for Path 46/Row 28 on 04/10/00 = Scene_ID 5046028000010110
Index 6 for Path 47/Row 26 on 02/13/00 = Scene_ID 5047026000004410
Index 7 for Path 47/Row 27 on 02/26/02 = Scene_ID 7047027000205750
Index 7 for Path 47/Row 28 on 02/26/02 = Scene_ID 7047028000205750
Index 8 for Path 48/Row 26 on 04/03/01 = Scene_ID 7048026000109350
Index 8 for Path 48/Row 27 on 04/03/01 = Scene_ID 7048027000109350
LEAF ON (Summer)-
Index 1 for Path 45/Row 26 on 07/16/00 = Scene_ID 7045026000019850
Index 2 for Path 45/Row 27 on 07/22/02 = Scene_ID 7045027000220350
Index 1 for Path 45/Row 28 on 07/16/00 = Scene_ID 7045028000019850
Index 3 for Path 46/Row 26 on 08/11/01 = Scene_ID 7046026000122350
Index 4 for Path 46/Row 27 on 07/07/00 = Scene_ID 7046027000018950
Index 4 for Path 46/Row 28 on 07/07/00 = Scene_ID 7046028000018950
Index 5 for Path 47/Row 26 on 07/30/00 = Scene_ID 7047026000021250
Index 5 for Path 47/Row 27 on 07/30/00 = Scene_ID 7047027000021250
Index 6 for Path 47/Row 28 on 07/01/01 = Scene_ID 7047028000118250
Index 7 for Path 48/Row 26 on 07/21/00 = Scene_ID 7048026000020350
Index 8 for Path 48/Row 27 on 06/03/00 = Scene_ID 7048027000015550
LEAF-OFF (Fall)-
Index 1 for Path 45/Row 26 on 10/18/99 = Scene_ID 7045026009929150
Index 2 for Path 45/Row 27 on 10/04/00 = Scene_ID 7045027000027850
Index 3 for Path 45/Row 28 on 08/17/00 = Scene_ID 7045028000023050
Index 4 for Path 46/Row 26 on 09/12/01 = Scene_ID 7046026000125550
Index 5 for Path 46/Row 27 on 09/25/00 = Scene_ID 7046027000026950
Index 5 for Path 46/Row 28 on 09/25/00 = Scene_ID 7046028000026950
Index 6 for Path 47/Row 26 on 10/05/01 = Scene_ID 7047026000127850
Index 7 for Path 47/Row 27 on 11/01/99 = Scene_ID 7047027009930550
Index 8 for Path 47/Row 28 on 10/16/99 = Scene_ID 7047028009928950
Index 9 for Path 48/Row 26 on 09/23/00 = Scene_ID 7048026000026750
Index 9 for Path 48/Row 27 on 09/23/00 = Scene_ID 7048027000026750

Field-Collected Data-
The goals of the field data collection were to sample the diversity of the landscape, within the classes, and among image dates. Classes that would be more difficult to collect from air photos were targeted for field data collection. To meet these goals, Space Imaging stratified the image into spectral clusters and located the field sites throughout the study area based on these. In addition to these pre-arranged sites, Space Imaging collected points while driving between locations. Due to limited time and accessibility, not all polygons were assessed in the field. Those that we did not visit on the ground were labeled with digital orthophotographs or Emerge data if it was available. Both training and validation points were collected together. See the accuracy assessment section to see how the points were split into training and validation points.

Space Imaging used laptop computers and GPS (Global Positioning System)to correctly locate field points on the TM imagery. Software downloaded from the Minnesota's

Department of Natural Resources (DNR)was used to connect the Garmin GPS to the laptop (http://www.dnr.state.mn.us/mis/gis/tools/arcview/extensions/DNRGarmin/DNRGarmin.html) computer and ESRI's ArcView software. Space Imaging's programmer developed an ArcView application that allowed entry of location and field notes with a click of the mouse. These data were stored in a shape file.

The items that were collected were-
Land Cover characterization
Special conditions and remarks
Photograph Number
Date/time
X,Y location

The data and equipment used for the fieldwork are as follows-
Ancillary datasets-
TIGER 2000
NLCD
NWI - mosaicked into zones
State road map and Delorme state atlas www.delorme.com

Hardware-
Lap-tops with ArcView and data
GARMIN GPS modules and external antennae, redundant data cables
Cameras
Backup devices (Floppy Drives)
Extra batteries (lap-top and GPS)
Mobile phones
System backup CD's with data and software
Compass
Binoculars
Field notebooks with instructions and road maps with pre-determined routes
Wetland and Vegetation Field Guides

Imagery-
Multi-spectral data for each zone
Initial classifications

Classification-
After the field points for training were collected, they were combined with photo-interpreted points and used as the dependent variable in a CART classification approach. Many layers tested as independent layers. They included three dates of spectral and tasseled cap imagery, DEM, slope, aspect, texture, band indices (NDVI, Moisture, NDVI-Green), shape indices fractal dimension, compactness, convexity, and form), Census data (housing and population density). Statistical analyses and visual inspection of the output was used to eliminate data that was redundant or not useful in the classification. Additional training points were added to help reduce some of the confusion between classes. The rough classification was created at the end of this process using only the CART discrete decision-tree software. A provisional classification was produced by applying spatial models using ancillary data to the rough classification. The provisional map was then edited using hand editing techniques while using high resolution imagery as reference data. Independently, of this process, Space Imaging produced percent impervious data layers for Washington. This layer was developed from Regression Tree and used impervious classifications from IKONOS imagery to predict pixel level percent impervious at the TM pixel level. The continuous percent impervious data was thresholded to produce the developed categories and imbedded into the final map.

Attributes for this product are as follows-
0 Background
1 Unclassified (Cloud, Shadow, etc)
2 High Intensity Developed
3 Low Intensity Developed
4 Cultivated Land
5 Grassland
6 Deciduous Forest
7 Evergreen Forest
8 Mixed Forest
9 Scrub/Shrub
10 Palustrine Forested Wetland
11 Palustrine Scrub/Shrub Wetland
12 Palustrine Emergent Wetland
13 Estuarine Forested Wetland
14 Estuarine Scrub/Shrub Wetland
15 Estuarine Emergent Wetland
16 Unconsolidated Shore
17 Bare Land
18 Water
19 Palustrine Aquatic Bed
20 Estuarine Aquatic Bed
21 Tundra
22 Snow/Ice

Ancillary Datasets-
Non-TM image datasets used are DEM (Digital Elevation Model), slope, aspect, positional index, NWI, NLCD, TIGER2000, field-collected points, photo-interpreted points, Washington (Gap Analysis Program), Census data (housing and population density), Ecoregions, IVMP (Interagency Vegetation Mapping Program), Washington Coastal Atlas, Washington ShoreZone Inventory Data.

QA/QC Process-
There were several QA/QC steps involved in the creation of this product. First, there was an internal QA/QC. This was done by viewing the classification frame-by-frame along with the TM imagery, the classification, and high resolution reference imagery. NOAA staff completed a similar review and provided both general and point comments.

Post-Processing Steps-
Both Washington and Oregon zones were classified concurrently but independently. When they were completed, they were edgematched to each other.
Process_Date: 20021001 - 20041001
Source_Produced_Citation_Abbreviation: NOAA CSC
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: CRS (Coastal Remote Sensing) Program Manager
Contact_Organization: NOAA Coastal Services Center Coastal Change Analysis Program (C-CAP)
Contact_Position: CRS Program Manager
Contact_Address:
Address_Type: mailing and physical address
Address: 2234 S. Hobson Ave.
City: Charleston
State_or_Province: SC
Postal_Code: 29405
Country: USA
Contact_Voice_Telephone: 843-740-1210

Contact_TDD/TTY_Telephone: NA
Contact_Facsimile_Telephone: 843-740-1224
Contact_Electronic_Mail_Address: clearinghouse@csc.noaa.gov
Hours_of_Service: 8:00 am to 5:00 p.m. EST. M-F
Process_Step:
Process_Description:
Methods used to generate the land cover dataset for zone 01 described above are similar to and compatible with methods used in other zones of the NLCD dataset. For coastal zones mapped by NOAA and/or NOAA contractors, the land cover dataset classification codes and the source dataset for classification of urban areas is different. For national consistency, an additional process step was added to cross-walk the NOAA class codes to standard NLCD 2001 class codes described in the Entity and Attribute Information section of this document. NOAA urban pixel values were replaced with values determined from the NLCD 2001 percent imperviousness mapping product. The four classes in urban and suburban areas were determined from the percent imperviousness mapping product (described in the next section). The threshold for the four classes is: (1) developed open space (imperviousness < 20%), (2) low-intensity developed (imperviousness from 20 - 49%), (3) medium intensity developed (imperviousness from 50 -79%), and (4) high-intensity developed (imperviousness > 79%).

The completed single pixel product was then generalized to a 1 acre (approximately 5 ETM+ 30 m pixel patch) minimum mapping unit product using a "smart eliminate" algorithm. This aggregation program subsumes pixels from the single pixel level to a 5-pixel patch using a queens algorithm at doubling intervals. The algorithm consults a weighting matrix to guide merging of cover types by similarity, resulting in a product that preserves land cover logic as much as possible.
Source_Used_Citation_Abbreviation: Landsat ETM, DOQQ, USDA, FIA, DEM, USGS/EROS, IKONOS
Process_Date: Unknown
Source_Produced_Citation_Abbreviation: USGS NLCD
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: U.S. Geological Survey
Contact_Position: Customer Services Representative
Contact_Address:
Address_Type: mailing and physical address
Address: USGS/EROS
Address: 47914 252nd Street
City: Sioux Falls
State_or_Province: SD
Postal_Code: 57198-0001
Country: USA
Contact_Voice_Telephone: 605/594-6151
Contact_TDD/TTY_Telephone: 605/594-6933
Contact_Facsimile_Telephone: 605/594-6589
Contact_Electronic_Mail_Address: custserv@usgs.gov
Hours_of_Service: 0800 - 1600 CT, M - F (-6h CST/-5h CDT GMT)
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Raster
Raster_Object_Information:
Raster_Object_Type: Pixel
Row_Count: 13449
Column_Count: 13697
Vertical_Count: 1
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:

Map_Projection_Name: Albers Conical Equal Area
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000
Longitude_of_Central_Meridian: -96.000000
Latitude_of_Projection_Origin: 23.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: row and column
Coordinate_Representation:
Abscissa_Resolution: 30.000000
Ordinate_Resolution: 30.000000
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Layer_1
Entity_Type_Definition: NLDC Land Cover Layer
Entity_Type_Definition_Source: National Land Cover Database 2001
Attribute:
Attribute_Label: ObjectID
Attribute_Definition: Internal feature number
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Count
Attribute_Definition: A nominal integer value that designates the number of pixels that have each value in the file; histogram column in ERDAS Imagine raster attributes table
Attribute_Definition_Source: NLCD 2001
Attribute_Domain_Values:
Unrepresentable_Domain: Integer
Attribute:
Attribute_Label: Value
Attribute_Definition: Land Cover Class Code Value. Class definitions marked with an asterisk (*) are Coastal NLCD Classes only.
Attribute_Definition_Source: NLCD 2001
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: No data value, Alaska zones only
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 11
Enumerated_Domain_Value_Definition: Open Water - All areas of open water, generally with less than 25% cover or vegetation or soil
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 12
Enumerated_Domain_Value_Definition: Perennial Ice/Snow - All areas characterized by a perennial cover of ice and/or snow, generally greater than 25% of total cover.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:
Enumerated_Domain_Value: 21
Enumerated_Domain_Value_Definition: Developed, Open Space - Includes areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 22
Enumerated_Domain_Value_Definition: Developed, Low Intensity -Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-49 percent of total cover. These areas most commonly include single-family housing units.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 23
Enumerated_Domain_Value_Definition: Developed, Medium Intensity - Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50-79 percent of the total cover. These areas most commonly include single-family housing units.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 24
Enumerated_Domain_Value_Definition: Developed, High Intensity - Includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses and commercial/industrial. Impervious surfaces account for 80 to100 percent of the total cover.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 31
Enumerated_Domain_Value_Definition: Barren Land (Rock/Sand/Clay) - Barren areas of bedrock, desert pavement, scarps, talus, slides, volcanic material, glacial debris, sand dunes, strip mines, gravel pits and other accumulations of earthen material. Generally, vegetation accounts for less than 15% of total cover.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 32
Enumerated_Domain_Value_Definition: Unconsolidated Shore* - Unconsolidated material such as silt, sand, or gravel that is subject to inundation and redistribution due to the action of water. Characterized by substrates lacking vegetation except for pioneering plants that become established during brief periods when growing conditions are favorable. Erosion and deposition by waves and currents produce a number of landforms representing this class.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 41
Enumerated_Domain_Value_Definition: Deciduous Forest - Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75 percent of the tree species shed foliage simultaneously in response to seasonal change.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 42
Enumerated_Domain_Value_Definition: Evergreen Forest - Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. More than 75 percent of the tree species maintain their leaves all year. Canopy is never without green foliage.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 43
Enumerated_Domain_Value_Definition: Mixed Forest - Areas dominated by trees generally greater than 5 meters tall, and greater than 20% of total vegetation cover. Neither deciduous nor evergreen species are greater than 75 percent of total tree cover.
Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions
Enumerated_Domain:
Enumerated_Domain_Value: 51
Enumerated_Domain_Value_Definition: Dwarf Scrub - Alaska only areas dominated by shrubs less than 20 centimeters tall

with shrub canopy typically greater than 20% of total vegetation. This type is often co-associated with grasses, sedges, herbs, and non-vascular vegetation.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 52

Enumerated_Domain_Value_Definition: Shrub/Scrub - Areas dominated by shrubs; less than 5 meters tall with shrub canopy typically greater than 20% of total vegetation. This class includes true shrubs, young trees in an early successional stage or trees stunted from environmental conditions.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 71

Enumerated_Domain_Value_Definition: Grassland/Herbaceous - Areas dominated by grammanoid or herbaceous vegetation, generally greater than 80% of total vegetation. These areas are not subject to intensive management such as tilling, but can be utilized for grazing.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 72

Enumerated_Domain_Value_Definition: Sedge/Herbaceous - Alaska only areas dominated by sedges and forbs, generally greater than 80% of total vegetation. This type can occur with significant other grasses or other grass like plants, and includes sedge tundra, and sedge tussock tundra.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 73

Enumerated_Domain_Value_Definition: Lichens - Alaska only areas dominated by fruticose or foliose lichens generally greater than 80% of total vegetation.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 74

Enumerated_Domain_Value_Definition: Moss- Alaska only areas dominated by mosses, generally greater than 80% of total vegetation.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 81

Enumerated_Domain_Value_Definition: Pasture/Hay - Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20 percent of total vegetation.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 82

Enumerated_Domain_Value_Definition: Cultivated Crops - Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total vegetation. This class also includes all land being actively tilled.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 90

Enumerated_Domain_Value_Definition: Woody Wetlands - Areas where forest or shrub land vegetation accounts for greater than 20 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 91

Enumerated_Domain_Value_Definition: Palustrine Forested Wetland* -Includes all tidal and non-tidal wetlands dominated by woody vegetation greater than or equal to 5 meters in height and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is below 0.5 percent. Total vegetation coverage is greater than 20 percent.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 92

Enumerated_Domain_Value_Definition: Palustrine Scrub/Shrub Wetland* - Includes all tidal and non-tidal wetlands dominated by woody vegetation less than 5 meters in height, and all such wetlands that occur in tidal areas in which salinity due to ocean-

derived salts is below 0.5 percent. Total vegetation coverage is greater than 20 percent. The species present could be true shrubs, young trees and shrubs or trees that are small or stunted due to environmental conditions.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 93

Enumerated_Domain_Value_Definition: Estuarine Forested Wetland* - Includes all tidal wetlands dominated by woody vegetation greater than or equal to 5 meters in height, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is equal to or greater than 0.5 percent. Total vegetation coverage is greater than 20 percent.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 94

Enumerated_Domain_Value_Definition: Estuarine Scrub/Shrub Wetland* - Includes all tidal wetlands dominated by woody vegetation less than 5 meters in height, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is equal to or greater than 0.5 percent. Total vegetation coverage is greater than 20 percent.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 95

Enumerated_Domain_Value_Definition: Emergent Herbaceous Wetlands - Areas where perennial herbaceous vegetation accounts for greater than 80 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 96

Enumerated_Domain_Value_Definition: Palustrine Emergent Wetland (Persistent)* - Includes all tidal and non-tidal wetlands dominated by persistent emergent vascular plants, emergent mosses or lichens, and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is below 0.5 percent. Plants generally remain standing until the next growing season.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 97

Enumerated_Domain_Value_Definition: Estuarine Emergent Wetland* - Includes all tidal wetlands dominated by erect, rooted, herbaceous hydrophytes (excluding mosses and lichens) and all such wetlands that occur in tidal areas in which salinity due to ocean-derived salts is equal to or greater than 0.5 percent and that are present for most of the growing season in most years. Perennial plants usually dominate these wetlands.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 98

Enumerated_Domain_Value_Definition: Palustrine Aquatic Bed* - The Palustrine Aquatic Bed class includes tidal and nontidal wetlands and deepwater habitats in which salinity due to ocean-derived salts is below 0.5 percent and which are dominated by plants that grow and form a continuous cover principally on or at the surface of the water. These include algal mats, detached floating mats, and rooted vascular plant assemblages.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Enumerated_Domain:

Enumerated_Domain_Value: 99

Enumerated_Domain_Value_Definition: Estuarine Aquatic Bed* - Includes tidal wetlands and deepwater habitats in which salinity due to ocean-derived salts is equal to or greater than 0.5 percent and which are dominated by plants that grow and form a continuous cover principally on or at the surface of the water. These include algal mats, kelp beds, and rooted vascular plant assemblages.

Enumerated_Domain_Value_Definition_Source: NLCD 2001 land cover class descriptions

Attribute:

Attribute_Label: Red

Attribute_Definition: Red color code for RGB slice by value for canopy image display purposes. The value is arbitrarily assigned by the display software package, unless defined by user. Standard user defined ramp for NLCD project is start color light gray, end color red.

Attribute_Definition_Source: NLCD 2001

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 100

Attribute_Units_of_Measure: CSS Color Value Percentage

Attribute_Measurement_Resolution: 0.1
Attribute:
Attribute_Label: Green
Attribute_Definition: Green color code for RGB slice by value for canopy image display purposes. The value is arbitrarily assigned by the display software package, unless defined by user. Standard user defined ramp for NLCD project is start color light gray, end color red.
Attribute_Definition_Source: NLCD 2001
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 0
Range_Domain_Maximum: 100
Attribute_Units_of_Measure: CSS Color Value Percentage
Attribute_Measurement_Resolution: 0.1
Attribute:
Attribute_Label: Blue
Attribute_Definition: Blue color code for RGB slice by value for canopy image display purposes. The value is arbitrarily assigned by the display software package, unless defined by user. Standard user defined ramp for NLCD project is start color light gray, end color red.
Attribute_Definition_Source: NLCD 2001
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 0
Range_Domain_Maximum: 100
Attribute_Units_of_Measure: CSS Color Value Percentage
Attribute_Measurement_Resolution: 0.1
Attribute:
Attribute_Label: Opacity
Attribute_Definition: A measure of how opaque, or solid, a color is displayed in a layer.
Attribute_Definition_Source: NLCD 2001
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 0
Range_Domain_Maximum: 100
Attribute_Units_of_Measure: Percentage
Attribute_Measurement_Resolution: 0.1
Overview_Description:
Entity_and_Attribute_Overview:
Attributes defined by USGS and ESRI.

Class	Red	Green	Blue
0	0.000000000	0.000000000	0.000000000
1	0.000000000	1.000000000	0.000000000
11	0.325490196	0.462745098	0.662745098
12	0.854901961	0.913725490	1.000000000
21	0.913725490	0.819607843	0.815686275
22	0.890196078	0.615686275	0.545098039
23	0.976470588	0.000000000	0.000000000
24	0.705882353	0.000000000	0.000000000
31	0.741176471	0.725490196	0.670588235
32	1.000000000	1.000000000	1.000000000
41	0.443137255	0.701960784	0.419607843
42	0.137254902	0.423529412	0.231372549
43	0.752941176	0.827450980	0.607843137
51	0.694117647	0.588235294	0.235294118
52	0.835294118	0.764705882	0.533333333
71	0.925490196	0.925490196	0.796078431
72	0.823529412	0.823529412	0.505882353
73	0.635294118	0.796078431	0.321568627
74	0.513725490	0.725490196	0.619607843

81	0.901960784	0.882352941	0.282352941
82	0.709803922	0.486274510	0.200000000
90	0.760784314	0.878431373	0.949019608
95	0.486274510	0.674509804	0.772549020

Entity_and_Attribute_Detail_Citation: Attribute accuracy is described, where present, with each attribute defined in the Entity and Attribute Section. Note: To ensure all areas of mapping zone 01 are completely covered, a 3,000 meter (100 Landsat pixels) buffer was added to the boundary of mapping zone 01.

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: U.S. Geological Survey
Contact_Position: Customer Service Representative
Contact_Address:
Address_Type: mailing and physical address
Address: USGS/EROS
Address: 47914 252nd Street
City: Sioux Falls
State_or_Province: SD
Postal_Code: 57198-0001
Country: USA
Contact_Voice_Telephone: 605/594-6151
Contact_TDD/TTY_Telephone: 605/594-6933
Contact_Facsimile_Telephone: 605/594-6589
Contact_Electronic_Mail_Address: custserv@usgs.gov
Hours_of_Service: 0800 - 1600 CT, M - F (-6h CST/-5h CDT GMT)
Contact_Instructions: The USGS point of contact is for questions relating to the data display and download from this web site. Questions about the NLCD mapping zone 01 can be directed to the NLCD 2001 land cover mapping team at the USGS/EROS, Sioux Falls, SD (605) 594-6151 or mrlc@usgs.gov.
Resource_Description: Downloadable data
Distribution_Liability: Although these data have been processed successfully on a computer system at the USGS, no warranty expressed or implied is made by the USGS regarding the use of the data on any other system, nor does the act of distribution constitute any such warranty. Data may have been compiled from various outside sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification. The USGS shall not be liable for any activity involving these data, installation, fitness of the data for a particular purpose, its use, or analyses results.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: Arc/Info Export Format and/or ArcView Shapefile
Format_Version_Number: ArcGIS 9.0
Format_Specification: ASCII
Transfer_Size: 0.001
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: http://seamless.usgs.gov
Access_Instructions: The URL http://seamless.usgs.gov provides a map interface that allows for data downloads within a customer defined area of interest. Zoom tools are available that can be used to investigate areas of interest on the map interface. The download tool allows the customer to capture layers from the map, utilizing the Seamless Data Distribution System process for downloading. A request summary page is then generated with the download layers listed. By clicking the "download" button on the summary page, a zipped file will be generated that can be saved on the customer's computer. The file can then be unzipped and imported into various user software applications.
Online_Computer_and_Operating_System: Not available for dissemination
Fees: None
Ordering_Instructions: Contact Customer Services
Turnaround: Variable
Custom_Order_Process: Contact Customer Services Representative

Technical_Prerequisites: ESRI ArcMap Suite and/or Arc/Info software, and supporting operating systems.
Metadata_Reference_Information:
Metadata_Date: 20061116
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: U.S. Geological Survey
Contact_Position: Customer Services Representative
Contact_Address:
Address_Type: mailing and physical address
Address: USGS/EROS
Address: 47914 252nd Street
City: Sioux Falls
State_or_Province: SD
Postal_Code: 57198-0001
Country: USA
Contact_Voice_Telephone: 605/594-6151
Contact_TDD/TTY_Telephone: 605/594-6933
Contact_Facsimile_Telephone: 605/594-6589
Contact_Electronic_Mail_Address: custserv@usgs.gov
Hours_of_Service: 0800 - 1600 CT, M - F (-6h CST/-5h CDT GMT)
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Access_Constraints: None
Metadata_Use_Constraints: None
Metadata_Security_Information:
Metadata_Security_Classification_System: None
Metadata_Security_Classification: None
Metadata_Security_Handling_Description: None
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USDA/NRCS - National Cartography & Geospatial Center
      Title: National Elevation Data 10 meter or better
  Description:
    Purpose: The NED is a seamless mosaic of best-available elevation data. One of the effects of the NED processing steps is a much-improved base of elevation data for calculating slope and hydrologic derivatives. The datasets are utilized by the scientific and resource management communities for global change research, hydrologic modeling, soils mapping, resource monitoring, mapping, and visualization applications.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: Unknown
  Status:
    Progress: In Work
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -75.357358
      East_Bounding_Coordinate: -73.068764
      North_Bounding_Coordinate: 45.0640442857142
      South_Bounding_Coordinate: 41.8979582857142
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: Standard for Geospatial Dataset File Naming
      Theme_Keyword: Elevation
  Use_Constraints:

    The U.S. Department of Agriculture, Service Center Agencies should be acknowledged as the data source in products derived from these data.

    This data set is not designed for use as a primary regulatory tool in permitting or citing decisions, but may be used as a reference source. This information may be interpreted by organizations, agencies, units of government, or others based on needs; however, they are responsible for the appropriate application. Federal, State, or local regulatory bodies are not to reassign to the Service Center Agencies any authority for the decisions that they make. The Service Center Agencies will not perform any evaluations of these data for purposes related solely to State or local regulatory programs.

    Photographic or digital enlargement of these data to scales greater than at which they were originally mapped can cause misinterpretation of the data. Digital data files are periodically updated, and users are responsible for obtaining the latest version of the data.
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: National Cartography and Geospatial Center
      Contact_Address:
        Address: 501 W. Felix St, Bldg 23
        City: Fort Worth
        State_or_Province: Texas
        Postal_Code: 76115
Data_Quality_Information:
  Lineage:
    Source_Information:
      Source_Citation:
        Citation_Information:
          Originator:
            U.S. Geological Survey
          Publication_Date: 2000-Present

Title: USGS National Elevation Data
Source_Scale_Denominator: 10 meter
Process_Step:
Process_Description: The USGS delivers an Oracle Transportable TableSpace to NCGC via USB where it is loaded into SDE. An index map is made so that only 10 meter or better 7.5 quads can be extracted with the Gateway dataservice.
Process_Date: 200905
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Grid_Coordinate_System:
Grid_Coordinate_System_Name: Universal Transverse Mercator
Universal_Transverse_Mercator:
UTM_Zone_Number: 18
Transverse_Mercator:
Scale_Factor_at_Central_Meridian: 0.9996
Longitude_of_Central_Meridian: -75
Latitude_of_Projection_Origin: 0.0
False_Easting: 500000.0
False_Northing: 0.0
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983 (NAD83)
Ellipsoid_Name: GRS1980
Semi-major_Axis: 6378137.0
Denominator_of_Flattening_Ratio: 298.257222101
Entity_and_Attribute_Information:
Overview_Description:
Entity_and_Attribute_Overview:
The attributes of each source dataset, such as original resolution, production method, and date entered into NED, are linked to this polygonal footprint
Entity_and_Attribute_Detail_Citation: Additional information about the data is available from documents provided with each gateway request and from the NED home page at http://ned.usgs.gov/
Distribution_Information:
Distribution_Liability:

Although these data have been processed successfully on a computer system at the U.S. Department of Agriculture, no warranty expressed or implied is made by the Service Center Agencies regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. The U.S. Department of Agriculture will warrant the delivery of this product in computer readable format, and will offer appropriate adjustment of credit when the product is determined unreadable by correctly adjusted computer input peripherals, or when the physical medium is delivered in damaged condition. Request for adjustment of credit must be made within 90 days from the date of this shipment from the ordering site.

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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: geoTIFF
Metadata_Reference_Information:
Metadata_Date: YYYY-11-DD
Metadata_Standard_Name: SCI Minimum Compliance Metadata
Metadata_Standard_Version: SCI Std 003-02

Identification_Information:
Citation:
Citation_Information:
Originator: U.S. Geological Survey (USGS) Water Resources Division (WRD) and U.S. Department of Agricultural (USDA) Natural Resources Conservation Service (NRCS) Watershed Boundaries Dataset (WBD).
Publication_Date: Unknown
Title: HydrologicUnits
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: \\03ftcollins\Graphics\data_national\NHD\HighResolution\NHDH0205.mdb
Description:
Abstract: This file contains Hydrologic Unit boundaries and codes for the United States, Puerto Rico, and the U.S. Virgin Islands. The data is a seamless National representation of Hydrologic Unit Code (HUC) boundaries at HUC2 to HUC12 levels compiled from U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) and U.S. Department of Agricultural (USDA) National Resources Conservation Services (NRCS) Watershed Boundary Dataset (WBD) sources.
Purpose: This data is intended primarily for geographic display and analysis of regional and national data, and can also be used for illustration purposes at intermediate or small scales (1:250,000 to 1:2,000,000).
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: REQUIRED: The year (and optionally month, or month and day) for which the data set corresponds to the ground.
Currentness_Reference: See dataset specific metadata.
Status:
Progress: In work
Maintenance_and_Update_Frequency: Irregular
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -114.313889
East_Bounding_Coordinate: -64.565191
North_Bounding_Coordinate: 46.366289
South_Bounding_Coordinate: 17.673737
Keywords:
Theme:
Theme_Keyword_Thesaurus: U.S. Department of the Interior, U.S. Geological Survey, 1999, Standards for National Hydrography Dataset. (http://mapping.usgs.gov/standards/)
Theme_Keyword: Hydrologic Unit Boundaries
Theme_Keyword: Hydrologic Unit Codes
Theme_Keyword: Drainage Basins
Theme_Keyword: Cataloging Units
Theme_Keyword: Hydrologic Units
Theme_Keyword: Watersheds
Place:
Place_Keyword_Thesaurus: U.S. Department of Commerce, 1977, Countries, dependencies, areas of sovereignty, and their principal administative divisions (Federal Information Processing Standard 10-3): Washington, D.C., National Institute of Standards and Technology.
Place_Keyword: US
Access_Constraints: None. Acknowledgment of the originating agencies would be appreciated in products derived from these data.
Use_Constraints: These data were digitized and edited from best available sources at a scales ranging from 1:24,000, or better, up to 1:2,000,000. This data is not intended to be the authoritative source for hyrologic units, but only as a reference to NHD data that has some interdependecies with hydrologic unit delineation for reach code assignments.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: NRCS (http://www.nrcs.usda.gov/)
Data_Set_Credit: Original data from the USGS Water Resources Division (WRD), NHD, and the USDA NRCS Watershed Boundary Dataset (WBD) . Other updates contributed by U.S. Environmental Protection Agency (EPA), U.S. Forest Service and USGS NHD program data compilers as well as various State, Regional and Local agencies.

Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.2.2.1350
Data_Quality_Information:
Lineage:
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 0
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 12
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 9
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 41
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 0
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
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Horizontal_Coordinate_System_Definition:
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Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Datum_Name: National Geodetic Vertical Datum of 1929
Altitude_Resolution: 0.000100
Altitude_Distance_Units: meters
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Region
Detailed_Description:
Entity_Type:
Entity_Type_Label: Basin
Detailed_Description:
Entity_Type:
Entity_Type_Label: Subregion
Detailed_Description:
Entity_Type:
Entity_Type_Label: Subbasin
Detailed_Description:
Entity_Type:
Entity_Type_Label: Watershed
Detailed_Description:

Entity_Type:
Entity_Type_Label: Subwatershed
Distribution_Information:
Resource_Description: Downloadable Data
Metadata_Reference_Information:
Metadata_Date: 20070711
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: U.S. Geological Survey
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type: mailing address
Address: 507 National Center
City: Reston
State_or_Province: VA
Postal_Code: 20192
Country: USA
Contact_Voice_Telephone: 1 888 ASK USGS
Contact_Voice_Telephone: 1 888 276 8747
Contact_Electronic_Mail_Address: ask@usgs.gov
Hours_of_Service: 0800-1600 Eastern Time
Contact_Instructions: In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: <http://mapping.usgs.gov/esic/esic_index.html>
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: U.S. Geological Survey in cooperation with U.S. Environmental Protection Agency, USDA Forest Service, and other Federal, State and local partners (see dataset specific metadata under Data_Set_Credit for details).
Publication_Date: See dataset specific metadata.
Publication_Time: Unknown
Title: Hydrography
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Reston, Virginia
Publisher: U.S. Geological Survey
Online_Linkage: \\03ftcollins\Graphics\data_national\NHD\HighResolution\NHDH0205.mdb
Description:
Abstract: The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system. NHD data was originally developed at 1:100,000-scale and exists at that scale for the whole country. This high-resolution NHD, generally developed at 1:24,000/1:12,000 scale, adds detail to the original 1:100,000-scale NHD. (Data for Alaska, Puerto Rico and the Virgin Islands was developed at high-resolution, not 1:100,000 scale.) Local resolution NHD is being developed where partners and data exist. The NHD contains reach codes for networked features, flow direction, names, and centerline representations for areal water bodies. Reaches are also defined on waterbodies and the approximate shorelines of the Great Lakes, the Atlantic and Pacific Oceans and the Gulf of Mexico. The NHD also incorporates the National Spatial Data Infrastructure framework criteria established by the Federal Geographic Data Committee.
Purpose: The NHD is a national framework for assigning reach addresses to water-related entities, such as industrial discharges, drinking water supplies, fish habitat areas, wild and scenic rivers. Reach addresses establish the locations of these entities relative to one another within the NHD surface water drainage network, much like addresses on streets. Once linked to the NHD by their reach addresses, the upstream/downstream relationships of these water-related entities--and any associated information about them--can be analyzed using software tools ranging from spreadsheets to geographic information systems (GIS). GIS can also be used to combine NHD-based network analysis with other data layers, such as soils, land use and population, to help understand and display their respective effects upon one another. Furthermore, because the NHD provides a nationally consistent framework for addressing and analysis, water-related information linked to reach addresses by one organization (national, state, local) can be shared with other organizations and easily integrated into many different types of applications to the benefit of all.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: REQUIRED: The year (and optionally month, or month and day) for which the data set corresponds to the ground.
Currentness_Reference: See dataset specific metadata.
Status:
Progress: In work
Maintenance_and_Update_Frequency: Irregular
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -78.917275
East_Bounding_Coordinate: -74.588733
North_Bounding_Coordinate: 42.980977
South_Bounding_Coordinate: 39.000110
Keywords:
Theme:
Theme_Keyword_Thesaurus: U.S. Department of the Interior, U.S. Geological Survey, 1999, Standards for National Hydrography Dataset (http://mapping.usgs.gov/standards/)
Theme_Keyword: FWHYDROGRAPHY
Theme_Keyword: Hydrography
Theme_Keyword: Stream / River
Theme_Keyword: Lake / Pond
Theme_Keyword: Canal / Ditch
Theme_Keyword: Reservoir
Theme_Keyword: Spring / Seep

Theme_Keyword: Swamp / Marsh
Theme_Keyword: Artificial Path
Theme_Keyword: Reach Code
Place:
Place_Keyword_Thesaurus: U.S. Department of Commerce, 1977, Countries, dependencies, areas of special sovereignty, and their principal administrative divisions (Federal Information Processing Standards 10-3): Washington, D.C., National Institute of Standards and Technology.
Place_Keyword: US
Access_Constraints: None
Use_Constraints:
None. Acknowledgment of the originating agencies would
be appreciated in products derived from these data.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Earth Science Information Center, U.S. Geological Survey
Contact_Address:
Address_Type: mailing address
Address: 507 National Center
City: Reston
State_or_Province: VA
Postal_Code: 20192
Country: USA
Contact_Voice_Telephone: 1 888 ASK USGS
Contact_Voice_Telephone: 1 888 275 8747
Contact_Electronic_Mail_Address: ask@usgs.gov
Hours_of_Service: 0800-1600 Eastern Time
Contact_Instructions: In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: http://mapping.usgs.gov/esic/esic_index.html
Data_Set_Credit: See dataset specific metadata.
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.2.2.1350
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
Statements of attribute accuracy are based on accuracy statements made for U.S. Geological Survey Digital Line Graph (DLG) data, which is estimated to be 98.5 percent. One or more of the following methods were used to test attribute accuracy: manual comparison of the source with hardcopy plots; symbolized display of the DLG on an interactive computer graphic system; selected attributes that could not be visually verified on plots or on screen were interactively queried and verified on screen. In addition, software validated feature types and characteristics against a master set of types and characteristics, checked that combinations of types and characteristics were valid, and that types and characteristics were valid for the delineation of the feature. Feature types, characteristics, and other attributes conform to the Standards for National Hydrography Dataset (USGS, 1999) as of the date they were loaded into the database. All names were validated against a current extract from the Geographic Names Information System (GNIS). The entry and identifier for the names match those in the GNIS. The association of each name to reaches has been interactively checked, however, operator error could in some cases apply a name to a wrong reach.
This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.
Logical_Consistency_Report: Points, nodes, lines, and areas conform to topological rules. Lines intersect only at nodes, and all nodes anchor the ends of lines. Lines do not overshoot or undershoot other lines where they are supposed to meet. There are no duplicate lines. Lines bound areas and lines identify the areas to the left and right of the lines. Gaps and overlaps among areas do not exist. All areas close.
Completeness_Report:
The completeness of the data reflects the content of the sources, which most often are the published USGS topographic quadrangle and/or the USDA Forest Service Primary Base Series (PBS) map. The USGS topographic quadrangle is usually supplemented by Digital Orthophoto Quadrangles (DOQs). Features found on the ground may have been eliminated or generalized on the source map because of scale and legibility constraints. In general, streams longer than one mile (approximately 1.6 kilometers) were collected. Most streams that flow from a lake were collected regardless of their length. Only definite channels were collected so not all swamp/marsh features have stream/rivers delineated through them. Lake/ponds having an area greater than 6 acres were collected. Note, however, that these general rules were applied unevenly among maps during compilation. Reaches codes are defined on all

features of type stream/river, canal/ditch, artificial path, coastline, and connector. Waterbody reach codes are defined on all lake/pond and most reservoir features. Names were applied from the GNIS database. Detailed capture conditions are provided for every feature type in the Standards for National Hydrography Dataset available online through http://mapping.usgs.gov/standards/.

This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Statements of horizontal positional accuracy are based on accuracy statements made for U.S. Geological Survey topographic quadrangle maps. These maps were compiled to meet National Map Accuracy Standards. For horizontal accuracy, this standard is met if at least 90 percent of points tested are within 0.02 inch (at map scale) of the true position. Additional offsets to positions may have been introduced where feature density is high to improve the legibility of map symbols. In addition, the digitizing of maps is estimated to contain a horizontal positional error of less than or equal to 0.003 inch standard error (at map scale) in the two component directions relative to the source maps. Visual comparison between the map graphic (including digital scans of the graphic) and plots or digital displays of points, lines, and areas, is used as control to assess the positional accuracy of digital data. Digital map elements along the adjoining edges of data sets are aligned if they are within a 0.02 inch tolerance (at map scale). Features with like dimensionality (for example, features that all are delineated with lines), with or without like characteristics, that are within the tolerance are aligned by moving the features equally to a common point. Features outside the tolerance are not moved; instead, a feature of type connector is added to join the features.

This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report:

Statements of vertical positional accuracy for elevation of water surfaces are based on accuracy statements made for U.S. Geological Survey topographic quadrangle maps. These maps were compiled to meet National Map Accuracy Standards. For vertical accuracy, this standard is met if at least 90 percent of well-defined points tested are within one-half contour interval of the correct value. Elevations of water surface printed on the published map meet this standard; the contour intervals of the maps vary. These elevations were transcribed into the digital data; the accuracy of this transcription was checked by visual comparison between the data and the map.

This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

Lineage:

Process_Step:

Process_Description: The processes used to create and maintain high-resolution NHD data can be found in the table called "NHDMetadata". Because NHD data can be downloaded using several user-defined areas, the process descriptions can vary for each download. The NHDMetadata table contains a list of all the process descriptions that apply to a particular download. These process descriptions are linked using the DuuID to the NHDFeatureToMetadata table which contains the com_ids of all the features within the download. In addition, another table, the NHDSourceCitation, can also be linked through the DuuID to determine the sources used to create or update NHD data.

Process_Date: Unknown

Process_Step:

Process_Description: Converted NHD data to geodatabase format. Conversion included assignment of FCodes, FDate, and Resolution attribute values; assignment of reach codes to associated features; replacement of branched reaches with linear reaches; merge of area features with identical classification that adjoin or overlap; split of large area features that exceed 100/25 sq. km. (depending on feature type) at subbasin boundaries; reduction of feature classes, feature types, and attribution to simplify data; merge of network flow features at vertical relationship locations; conversion of artificial paths along coastline to coastline feature type; addition of M coordinates and values to network flow features; addition of Z coordinates, but not values, to all feature geometry; addition of value added attributes; switch to primary flow navigation by network features (NHDFlowline, route.drain) in place of reach features; and elimination of metadata boundaries.

Process_Date: 2004

Process_Step:

Process_Description: See dataset specific metadata.

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: G-polygon

Point_and_Vector_Object_Count: 640

SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 46801
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 120637
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 2707
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 286
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 0
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 302
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 116930
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Datum_Name: National Geodetic Vertical Datum of 1929
Altitude_Resolution: 0.000100
Altitude_Distance_Units: meters
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: NHDArea
Detailed_Description:
Entity_Type:
Entity_Type_Label: NHDWaterbody
Detailed_Description:
Entity_Type:
Entity_Type_Label: NHDFlowline
Detailed_Description:
Entity_Type:
Entity_Type_Label: NHDLine
Detailed_Description:
Entity_Type:
Entity_Type_Label: NHDPoint
Detailed_Description:
Entity_Type:
Entity_Type_Label: NHDLineEventFC
Detailed_Description:

Entity_Type:
Entity_Type_Label: NHDPointEventFC
Detailed_Description:
Entity_Type:
Entity_Type_Label: HYDRO_NET_Junctions
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Earth Science Information Center, U.S. Geological Survey
Contact_Address:
Address_Type: mailing address
Address: 507 National Center
City: Reston
State_or_Province: VA
Postal_Code: 20192
Country: USA
Contact_Voice_Telephone: 1 888 ASK USGS
Contact_Voice_Telephone: 1 888 275 8747
Contact_Electronic_Mail_Address: ask@usgs.gov
Hours_of_Service: 0800-1600 Eastern Time
Contact_Instructions: In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: http://mapping.usgs.gov/esic/esic_index.html
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: ArcGIS Geodatabase
Format_Version_Number: 8.3
File_Decompression_Technique: tar and uncompress
Metadata_Reference_Information:
Metadata_Date: 20070711
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Earth Science Information Center, U.S. Geological Survey
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type: mailing address
Address: 507 National Center
City: Reston
State_or_Province: VA
Postal_Code: 20192
Country: USA
Contact_Voice_Telephone: 1 888 ASK USGS
Contact_Voice_Telephone: 1 888 275 8747
Contact_Electronic_Mail_Address: nhd@usgs.gov
Hours_of_Service: 0800-1600 Eastern Time
Contact_Instructions: In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: http://mapping.usgs.gov/esic/esic_index.html
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: U.S. Geological Survey in cooperation with U.S. Environmental Protection Agency, USDA Forest Service, and other Federal, State and local partners (see dataset specific metadata under Data_Set_Credit for details).
Publication_Date: See dataset specific metadata.
Publication_Time: Unknown
Title: NHDArea
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Reston, Virginia
Publisher: U.S. Geological Survey
Online_Linkage: \\03ftcollins\Graphics\data_national\NHD\HighResolution\NHDH0808.mdb
Description:
Abstract: The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system. NHD data was originally developed at 1:100,000-scale and exists at that scale for the whole country. This high-resolution NHD, generally developed at 1:24,000/1:12,000 scale, adds detail to the original 1:100,000-scale NHD. (Data for Alaska, Puerto Rico and the Virgin Islands was developed at high-resolution, not 1:100,000 scale.) Local resolution NHD is being developed where partners and data exist. The NHD contains reach codes for networked features, flow direction, names, and centerline representations for areal water bodies. Reaches are also defined on waterbodies and the approximate shorelines of the Great Lakes, the Atlantic and Pacific Oceans and the Gulf of Mexico. The NHD also incorporates the National Spatial Data Infrastructure framework criteria established by the Federal Geographic Data Committee.
Purpose: The NHD is a national framework for assigning reach addresses to water-related entities, such as industrial discharges, drinking water supplies, fish habitat areas, wild and scenic rivers. Reach addresses establish the locations of these entities relative to one another within the NHD surface water drainage network, much like addresses on streets. Once linked to the NHD by their reach addresses, the upstream/downstream relationships of these water-related entities--and any associated information about them--can be analyzed using software tools ranging from spreadsheets to geographic information systems (GIS). GIS can also be used to combine NHD-based network analysis with other data layers, such as soils, land use and population, to help understand and display their respective effects upon one another. Furthermore, because the NHD provides a nationally consistent framework for addressing and analysis, water-related information linked to reach addresses by one organization (national, state, local) can be shared with other organizations and easily integrated into many different types of applications to the benefit of all.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: REQUIRED: The year (and optionally month, or month and day) for which the data set corresponds to the ground.
Currentness_Reference: See dataset specific metadata.
Status:
Progress: In work
Maintenance_and_Update_Frequency: Irregular
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -168.500000
East_Bounding_Coordinate: -64.549578
North_Bounding_Coordinate: 71.499607
South_Bounding_Coordinate: 17.673030
Keywords:
Theme:
Theme_Keyword_Thesaurus: U.S. Department of the Interior, U.S. Geological Survey, 1999, Standards for National Hydrography Dataset (http://mapping.usgs.gov/standards/)
Theme_Keyword: FWHYDROGRAPHY
Theme_Keyword: Hydrography
Theme_Keyword: Stream / River
Theme_Keyword: Lake / Pond
Theme_Keyword: Canal / Ditch
Theme_Keyword: Reservoir
Theme_Keyword: Spring / Seep

Theme_Keyword: Swamp / Marsh
Theme_Keyword: Artificial Path
Theme_Keyword: Reach Code
Place:
Place_Keyword_Thesaurus: U.S. Department of Commerce, 1977, Countries, dependencies, areas of special sovereignty, and their principal administrative divisions (Federal Information Processing Standards 10-3): Washington, D.C., National Institute of Standards and Technology.
Place_Keyword: US
Access_Constraints: None
Use_Constraints:
None. Acknowledgment of the originating agencies would be appreciated in products derived from these data.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Earth Science Information Center, U.S. Geological Survey
Contact_Address:
Address_Type: mailing address
Address: 507 National Center
City: Reston
State_or_Province: VA
Postal_Code: 20192
Country: USA
Contact_Voice_Telephone: 1 888 ASK USGS
Contact_Voice_Telephone: 1 888 275 8747
Contact_Electronic_Mail_Address: ask@usgs.gov
Hours_of_Service: 0800-1600 Eastern Time
Contact_Instructions: In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: http://mapping.usgs.gov/esic/esic_index.html
Data_Set_Credit: See dataset specific metadata.
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.2.2.1350
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
Statements of attribute accuracy are based on accuracy statements made for U.S. Geological Survey Digital Line Graph (DLG) data, which is estimated to be 98.5 percent. One or more of the following methods were used to test attribute accuracy: manual comparison of the source with hardcopy plots; symbolized display of the DLG on an interactive computer graphic system; selected attributes that could not be visually verified on plots or on screen were interactively queried and verified on screen. In addition, software validated feature types and characteristics against a master set of types and characteristics, checked that combinations of types and characteristics were valid, and that types and characteristics were valid for the delineation of the feature. Feature types, characteristics, and other attributes conform to the Standards for National Hydrography Dataset (USGS, 1999) as of the date they were loaded into the database. All names were validated against a current extract from the Geographic Names Information System (GNIS). The entry and identifier for the names match those in the GNIS. The association of each name to reaches has been interactively checked, however, operator error could in some cases apply a name to a wrong reach.
This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.
Logical_Consistency_Report: Points, nodes, lines, and areas conform to topological rules. Lines intersect only at nodes, and all nodes anchor the ends of lines. Lines do not overshoot or undershoot other lines where they are supposed to meet. There are no duplicate lines. Lines bound areas and lines identify the areas to the left and right of the lines. Gaps and overlaps among areas do not exist. All areas close.
Completeness_Report:
The completeness of the data reflects the content of the sources, which most often are the published USGS topographic quadrangle and/or the USDA Forest Service Primary Base Series (PBS) map. The USGS topographic quadrangle is usually supplemented by Digital Orthophoto Quadrangles (DOQs). Features found on the ground may have been eliminated or generalized on the source map because of scale and legibility constraints. In general, streams longer than one mile (approximately 1.6 kilometers) were collected. Most streams that flow from a lake were collected regardless of their length. Only definite channels were collected so not all swamp/marsh features have stream/rivers delineated through them. Lake/ponds having an area greater than 6 acres were collected. Note, however, that these general rules were applied unevenly among maps during compilation. Reaches codes are defined on all

features of type stream/river, canal/ditch, artificial path, coastline, and connector. Waterbody reach codes are defined on all lake/pond and most reservoir features. Names were applied from the GNIS database. Detailed capture conditions are provided for every feature type in the Standards for National Hydrography Dataset available online through http://mapping.usgs.gov/standards/.

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Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Statements of horizontal positional accuracy are based on accuracy statements made for U.S. Geological Survey topographic quadrangle maps. These maps were compiled to meet National Map Accuracy Standards. For horizontal accuracy, this standard is met if at least 90 percent of points tested are within 0.02 inch (at map scale) of the true position. Additional offsets to positions may have been introduced where feature density is high to improve the legibility of map symbols. In addition, the digitizing of maps is estimated to contain a horizontal positional error of less than or equal to 0.003 inch standard error (at map scale) in the two component directions relative to the source maps. Visual comparison between the map graphic (including digital scans of the graphic) and plots or digital displays of points, lines, and areas, is used as control to assess the positional accuracy of digital data. Digital map elements along the adjoining edges of data sets are aligned if they are within a 0.02 inch tolerance (at map scale). Features with like dimensionality (for example, features that all are delineated with lines), with or without like characteristics, that are within the tolerance are aligned by moving the features equally to a common point. Features outside the tolerance are not moved; instead, a feature of type connector is added to join the features.

This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report:

Statements of vertical positional accuracy for elevation of water surfaces are based on accuracy statements made for U.S. Geological Survey topographic quadrangle maps. These maps were compiled to meet National Map Accuracy Standards. For vertical accuracy, this standard is met if at least 90 percent of well-defined points tested are within one-half contour interval of the correct value. Elevations of water surface printed on the published map meet this standard; the contour intervals of the maps vary. These elevations were transcribed into the digital data; the accuracy of this transcription was checked by visual comparison between the data and the map.

This statement is generally true for the most common sources of NHD data. Other sources and methods may have been used to create or update NHD data. In some cases, additional information may be found in the NHDMetadata table.

Lineage:

Process_Step:

Process_Description: The processes used to create and maintain high-resolution NHD data can be found in the table called "NHDMetadata". Because NHD data can be downloaded using several user-defined areas, the process descriptions can vary for each download. The NHDMetadata table contains a list of all the process descriptions that apply to a particular download. These process descriptions are linked using the DuuID to the NHDFeatureToMetadata table which contains the com_ids of all the features within the download. In addition, another table, the NHDSourceCitation, can also be linked through the DuuID to determine the sources used to create or update NHD data.

Process_Date: Unknown

Process_Step:

Process_Description: Converted NHD data to geodatabase format. Conversion included assignment of FCodes, FDate, and Resolution attribute values; assignment of reach codes to associated features; replacement of branched reaches with linear reaches; merge of area features with identical classification that adjoin or overlap; split of large area features that exceed 100/25 sq. km. (depending on feature type) at subbasin boundaries; reduction of feature classes, feature types, and attribution to simplify data; merge of network flow features at vertical relationship locations; conversion of artificial paths along coastline to coastline feature type; addition of M coordinates and values to network flow features; addition of Z coordinates, but not values, to all feature geometry; addition of value added attributes; switch to primary flow navigation by network features (NHDFlowline, route.drain) in place of reach features; and elimination of metadata boundaries.

Process_Date: 2004

Process_Step:

Process_Description: See dataset specific metadata.

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: G-polygon

Point_and_Vector_Object_Count: 791

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Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.000000
      Longitude_Resolution: 0.000000
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
    Altitude_System_Definition:
      Altitude_Datum_Name: National Geodetic Vertical Datum of 1929
      Altitude_Resolution: 0.000100
      Altitude_Distance_Units: meters
      Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: NHDArea
    Attribute:
      Attribute_Label: OBJECTID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: ComID
    Attribute:
      Attribute_Label: FDate
    Attribute:
      Attribute_Label: Resolution
    Attribute:
      Attribute_Label: GNIS_ID
    Attribute:
      Attribute_Label: GNIS_Name
    Attribute:
      Attribute_Label: AreaSqKm
    Attribute:
      Attribute_Label: Elevation
    Attribute:
      Attribute_Label: FType
    Attribute:
      Attribute_Label: FCode
    Attribute:
      Attribute_Label: Shape_Length
      Attribute_Definition: Length of feature in internal units.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Positive real numbers that are automatically generated.
    Attribute:
```

Attribute_Label: Shape_Area
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Detailed_Description:
Entity_Type:
Entity_Type_Label: NHDAreaToMeta
Overview_Description:
Entity_and_Attribute_Overview: The National Hydrography Dataset is a comprehensive set of digital spatial data that encodes information about naturally occurring and constructed bodies of water, paths through which water flows, and related entities. The information encoded about features includes a feature date, classification by type, other characteristics, a unique common identifier, the feature length or area, and (rarely) elevation of the surface of water pools and a description of the stage of the elevation. For reaches, encoded information includes a reach code. Names and their identifiers in the Geographic Names Information System, are assigned to most feature types. The direction of flow is encoded for networked features. The data also contains relations that encode metadata, and information that supports the exchange of future updates and improvements to the data. The names and definitions of all feature types, characteristics, and values are in the Standards for National Hydrography Dataset: Reston, Virginia, U.S. Geological Survey, 1999. The document is available online through http://mapping.usgs.gov/standards/.
Entity_and_Attribute_Detail_Citation: The names and definitions of all feature types, characteristics, and values are in U.S. Geological Survey, 1999, Standards for National Hydrography Dataset High Resolution: Reston, Virginia, U.S. Geological Survey. The document is available online through http://mapping.usgs.gov/standards/. Information about tables and fields in the data are available from the user documentation for the National Hydrography Dataset at http://nhd.usgs.gov. The National Map - Hydrography Fact Sheet is also available at: http://erg.usgs.gov/isb/pubs/factsheets/fs06002.html.
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Earth Science Information Center, U.S. Geological Survey
Contact_Address:
Address_Type: mailing address
Address: 507 National Center
City: Reston
State_or_Province: VA
Postal_Code: 20192
Country: USA
Contact_Voice_Telephone: 1 888 ASK USGS
Contact_Voice_Telephone: 1 888 275 8747
Contact_Electronic_Mail_Address: ask@usgs.gov
Hours_of_Service: 0800-1600 Eastern Time
Contact_Instructions: In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: http://mapping.usgs.gov/esic/esic_index.html
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: ArcGIS Geodatabase
Format_Version_Number: 8.3
File_Decompression_Technique: tar and uncompress
Metadata_Reference_Information:
Metadata_Date: 20070726
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Earth Science Information Center, U.S. Geological Survey
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type: mailing address
Address: 507 National Center

City: Reston
State_or_Province: VA
Postal_Code: 20192
Country: USA
Contact_Voice_Telephone: 1 888 ASK USGS
Contact_Voice_Telephone: 1 888 275 8747
Contact_Electronic_Mail_Address: nhd@usgs.gov
Hours_of_Service: 0800-1600 Eastern Time
Contact_Instructions: In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at URL: http://mapping.usgs.gov/esic/esic_index.html
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: Indiana Department of Natural Resources
      Publication_Date: Unpublished Material
      Title: instewardc
      Edition: Version 1 (2002)
      Geospatial_Data_Presentation_Form: vector digital data
      Other_Citation_Details: Managed Area Database developed by the IDNR Division of Fish and Wildlife on the IDNR's Geographic Information System, using data supplied by the Division of Nature Preserves and the Data Center at the Indiana State Library.
      Online_Linkage: IN_GAP\steward\cov\instewardc
      Larger_Work_Citation:
        Citation_Information:
          Title: Indiana Gap Analysis Project
  Description:
    Abstract: Managed areas afford different levels of protection for their biological resources. Gap analysis uses a stewardship layer to determine the level biodiversity protection in publically managed and privately managed areas.
    Purpose: This stewardship coverage gives a status level (1-4 with one being the highest level of protection) for the protection of biodiversity in a managed area.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 1997
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None planned
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -88.134684
      East_Bounding_Coordinate: -84.734920
      North_Bounding_Coordinate: 41.773941
      South_Bounding_Coordinate: 37.766615
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: none
      Theme_Keyword: Managed areas
      Theme_Keyword: Gap Analysis Project
      Theme_Keyword: Stewardship
      Theme_Keyword: Protect
      Theme_Keyword: Biodiversity
      Theme_Keyword: Status
    Place:
      Place_Keyword: Indiana
      Place_Keyword: Midwest
    Stratum:
      Stratum_Keyword: Troposphere
    Temporal:
      Temporal_Keyword: Late 20th Century
  Access_Constraints: None
  Use_Constraints: None
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Forest Clark
        Contact_Organization: U.S. Fish and Wildife Service, Bloomington Field Office
      Contact_Position: Project Director of Indiana GAP

Contact_Address:
Address_Type: mailing and physical address
Address:
U.S. Fish and Wildlife Service
620 South Walker Street
City: Bloomington
State_or_Province: Indiana
Postal_Code: 47403
Country: U.S.A.
Contact_Voice_Telephone: (812) 334-4261
Contact_Facsimile_Telephone: (812) 334-4273
Contact_Electronic_Mail_Address: forest_clark@fws.gov
Hours_of_Service: 8 am to 4:30 pm CST
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.2.2.1350
Cross_Reference:
Citation_Information:
Originator: Scott, J.M., F. Davis
Originator: F. Davis
Originator: B. Csuti, R. Noss
Originator: B. Butterfield
Originator: C. Groves
Originator: H. Anderson
Originator: S. Caicco
Originator: F. D'Erchia
Originator: T.C. Edwards, Jr.
Originator: J. Ulliman
Originator: G. Wright
Publication_Date: 1993
Title: Gap analysis: A geographic approach to protection of biological diversity
Geospatial_Data_Presentation_Form: vector digital data
Other_Citation_Details: Wildlife Monographs 123
Cross_Reference:
Citation_Information:
Originator: Indiana Department of Natural Resources
Publication_Date: 1992
Title: Indiana Fish and Wildlife Information System
Other_Citation_Details: Published by the Indiana Department of Natural Resources, Indianapolis, Indiana
Cross_Reference:
Citation_Information:
Originator: Ewick, Jeffrey A.
Publication_Date: 8/26/1992
Title: Naturalist Aide Final Report
Other_Citation_Details: Managed Area Database developed by the IDNR Division of Fish and Wildlife on the IDNR's Geographic Information System, using data supplied by the Division of Nature Preserves and the Data Center at the Indiana State Library.
Data_Quality_Information:
Lineage:
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: C:\DOCUME~1\deleon\LOCALS~1\Temp\xml248.tmp
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: G:\Final_GAP_CD_041103\Verts\Mammals\hyp_grid\INmammal_hyp.xml
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: C:\DOCUME~1\deleon\LOCALS~1\Temp\xml2B1.tmp
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: G:\Final_GAP_CD_041103\Ancillary\cov\inriv\metadata.xml

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 2992
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Label point
      Point_and_Vector_Object_Count: 1855
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
      Point_and_Vector_Object_Count: 1855
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Point
      Point_and_Vector_Object_Count: 4
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Grid_Coordinate_System:
        Grid_Coordinate_System_Name: Universal Transverse Mercator
        Universal_Transverse_Mercator:
          UTM_Zone_Number: 16
          Transverse_Mercator:
            Scale_Factor_at_Central_Meridian: 0.999600
            Longitude_of_Central_Meridian: -87.000000
            Latitude_of_Projection_Origin: 0.000000
            False_Easting: 500000.000000
            False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: meters
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.400000
      Denominator_of_Flattening_Ratio: 294.978698
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: instewardc.pat
      Entity_Type_Definition: Polygon Attribute Table that hold information on the polygons/areas
      Entity_Type_Definition_Source: ESRI
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:

Attribute_Label: AREA
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: PERIMETER
Attribute_Definition: Perimeter of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: INSTEWARDC#
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: INSTEWARDC-ID
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: UNITNAME
Attribute_Definition: Owner/deed-holder of the property
Attribute_Definition_Source: Indiana Department of Natural Resources
Attribute:
Attribute_Label: MANAGER
Attribute_Definition: Status level (1-4), with 1 representing the hightest/best level of biodiversity protection and 4 representing the lowest level or privately owned land
Attribute_Definition_Source: GAP handbook
Attribute:
Attribute_Label: OWNER
Attribute:
Attribute_Label: US_STATUS
Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: DBF
File_Decompression_Technique: No compression applied
Transfer_Size: 1.119
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: \\Ifw3bfo\share\GIS\GAP\mammals\mammalsz.dbf
Access_Instructions: Local area network
Metadata_Reference_Information:
Metadata_Date: 20070711
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Forest Clark
Contact_Organization: U.S. Fish and Wildlife Service
Contact_Position: Fish and Wildlife Biologist, Indiana Gap Project Director

Contact_Address:
Address_Type: mailing and physical address
Address:
U.S. Fish and Wildlife Service
620 South Walker Street
City: Bloomington
State_or_Province: Indiana
Postal_Code: 47403
Country: U.S.A.
Contact_Voice_Telephone: (812) 334-4261
Contact_Facsimile_Telephone: (812) 334-4273
Contact_Electronic_Mail_Address: forest_clark@fws.gov
Hours_of_Service: 8:00 am - 4:30 pm weekdays
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Access_Constraints: None
Metadata_Use_Constraints: None
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: KY Fish & Wildlife Information System (KFWIS)
Publication_Date: 2001
Title: Kentucky GAP Land Stewardship
Edition: First
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Frankfort, Kentucky
Publisher: KY Fish and Wildlife Information System, KY Dept. Fish and Wildlife Resources
Online_Linkage: http://kygeonet.state.ky.us
Description:
Abstract:
This will be the final update of The Kentucky Land Stewardship. This file, KYSTWRD, was created for use with the Kentucky GAP Analysis (KY_GAP) Project in ESRI's ArcView 3.2 GIS shapefile (*.shp) format. The KY_GAP Project is part of a national project to assess biodiversity at state and national levels. Information about the national project can be obtained at the following link (http://www.gap.uidaho.edu/). A vegetation map of Kentucky and predicted terrestrial vertebrate species distribution layers were also developed by the KY_GAP Project. This stewardship layer provides information about the location, ownership, management, and conservation status of public and semi-public lands in Kentucky.
Data were included in the land stewardship layer based on the following; it must: be available digitally, geo-referenced, contain property boundaries, and possess some level of biodiversity management.. An itemization of the collected data follows: 223 distinct parcels were identified and mapped with 17 different land owners and 29 different land managers totaling 1,602,978.83 acres or approximately 6.2% of the total land area in Kentucky. The remaining 93.8% of the land area was considered by default private land with a GAP conservation status 4 because there was no information they contributed to conservation lands.
Purpose: his data layer was created for use with the Kentucky Gap Analysis Project in compliance with the National GAP efforts. This GIS coverage/layer represents four categories of land management information. The layer provides a management status level, owner, and manager code for all lands throughout the state. This data layer was used during overlay anlaysis with the land cover and vertebrate models to assess the likelihood of future threats to biotic community elements. The overlay analysis results or findings are intended to be used in the future to aid/inform public and private landowners towards becoiming more effective stewards of Kentucky's Natural Resources.
Supplemental_Information: None to describe at this time.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2/28/2002
Time_of_Day: 11:28:00
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: None planned
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -89.349346
East_Bounding_Coordinate: -82.242264
North_Bounding_Coordinate: 39.009038
South_Bounding_Coordinate: 36.490979
Keywords:
Theme:
Theme_Keyword_Thesaurus: none
Theme_Keyword: Administative Units
Theme_Keyword: Ownership
Theme_Keyword: Management
Theme_Keyword: Stewardship
Theme_Keyword: Gap Analysis
Theme_Keyword: 100k
Theme_Keyword: 1:100,000 scale

Theme_Keyword: Public land
Theme_Keyword: USFS National Forest
Theme_Keyword: Private Ownership
Theme_Keyword: Military Reservations
Theme_Keyword: US National Park Service
Theme_Keyword: Kentucky State Parks
Theme_Keyword: Kentucky State Park Resorts
Theme_Keyword: Kentucky Department of Fish and Wildlife Resources
Theme_Keyword: US Fish and Wildlife Service
Theme_Keyword: US Fish and Wildlife Refuge System
Theme_Keyword: USFS Forest Service Wilderness Areas
Theme_Keyword: Water
Theme_Keyword: The Nature Conservancy
Theme_Keyword: US Army Corps of Engineers
Theme_Keyword: Kentucky Nature Preserve Commission
Theme_Keyword: Kentucky State Forests
Theme_Keyword: University Lands
Theme_Keyword: University Forests
Theme_Keyword: property code
Theme_Keyword: management status
Place:
Place_Keyword_Thesaurus: Natural Areas
Place_Keyword: Kentucky
Place_Keyword: Nature Preserves
Place_Keyword: Restricted Natural Areas
Place_Keyword: Natural Areas with some use
Place_Keyword: Natural Areas with extractive uses
Place_Keyword: Public & Private Lands, No restrictions
Place_Keyword: Gap Analysis
Stratum:
Stratum_Keyword_Thesaurus: none
Stratum_Keyword: The Knobs
Stratum_Keyword: Mississippi Embayment
Stratum_Keyword: Mississippian Plateau
Stratum_Keyword: Dripping Springs Escarpment
Stratum_Keyword: Fluorspar District
Stratum_Keyword: Bluegrass Region
Stratum_Keyword: Inner Bluegrass Region
Stratum_Keyword: Pottsville Escarpment
Stratum_Keyword: Eastern Kentucky Coalfield
Stratum_Keyword: Western Kentucky Coalfield
Stratum_Keyword: Pennyrile Plateau
Temporal:
Temporal_Keyword_Thesaurus: none
Temporal_Keyword: 2000
Access_Constraints: Access Constraints: See point of contact email. This data is in the public domain, and the recipient may not assert any proprietary rights thereto nor represent it to anyone as other than a data set produced by the Kentucky Fish & Wildlife Information System, KY Dept. of Fish & Wildlife Resources.
Use_Constraints: This database is not intended for site-specific analysis. Interpretations derived from its use are suited for regional and planning purposes only. Any person using the information presented here should fully understand the data collection and compilation procedures, as described in these metadata, before beginning analysis. Acknowledgments of the Kentucky Fish and Wildlife Information System (KFWIS) at the KY Dept. of Fish and Wildlife Resources (KDFWR) and the Kentucky GAP program are appreciated.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Kentucky Fish and Wildlife Information System (KFWIS), KY Dept. Fish & Wildlife Resources
Contact_Person: M. Keith Wethington

Contact_Position: KFWIS Supervisor
Contact_Address:
Address_Type: mailing address
Address: 1 Game Farm Road
Address: Arnold Mitchell Bldg.
Address: Division of Wildlife
City: Frankfort
State_or_Province: KY
Postal_Code: 40601
Country: United States
Contact_Voice_Telephone: 502-564-7109
Contact_Facsimile_Telephone: 502-564-6508
Contact_Electronic_Mail_Address: keith.wethington@mail.state.ky.us
Hours_of_Service: 8am - 4:30 pm
Contact_Instructions: Email requests first.
Data_Set_Credit: Frederick, R.D., and Michael J. Soto of the Kentucky Fish & Wildlife Information System, KY Dept. of Fish & Wildlife Resources for the creation of the geospatial data set.
Security_Information:
Security_Classification_System: None
Security_Classification: Unclassified
Security_Handling_Description: None
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.2.2.1350
Cross_Reference:
Citation_Information:
Originator: KY Fish and Wildlife Information System
Publication_Date: 2/28/2002
Publication_Time: 11:28:00
Title: kymngmt.dbf
Edition: First
Publication_Information:
Publication_Place: Frankfort, KY
Publisher: KY Fish and Wildlife Information System
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Accuracy estimate report not available
Quantitative_Attribute_Accuracy_Assessment:
Attribute_Accuracy_Value: unknown
Attribute_Accuracy_Explanation: None
Logical_Consistency_Report:
Each attribute label was confirmed to be a member of the set of valid values, and each land area has one and only one label.
The degree of completeness associated with available digital datasets vary amongst public agencies. KY-GAP relied almost exclusively on data sets contributed from state and federal agencies. Many city, county, or regional (area development districts) governments within Kentucky do not yet have either GIS, or geo-referenced CAD files. The few entities with GIS have little time and financial means to dedicate efforts to collect or convert property ownership boundaries to digital GIS data. Simple documentation of processing procedures, and standards manuals are rare. The creation of formal metadata documenting digital data (GIS or CAD files) is even a rarer commodity to come by.
Completeness_Report:
All efforts were made to acquire readily available digital GIS data; therefore, existing non-geo-referenced CAD data was not pursued, nor was hardcopy maps for table digitizing. This information should be noted when drawing any conclusions that rely on, or, in part from this Land Stewardship data. Private lands may contain unique and characteristics valuable to biodiversity.
The Commonwealth of Kentucky is composed of approximately 95% private lands. Digital data, whether GIS or CAD files was not sought because of the many constrains (limited time, and available personnel) assoicated with gathering it.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: unknown
Vertical_Positional_Accuracy:
Vertical_Positional_Accuracy_Report: unknown
Lineage:

Source_Information:
  Source_Scale_Denominator: 24000
  Type_of_Source_Media: Arc/Info E00 (export files)
  Source_Citation_Abbreviation: BSFRA
  Source_Contribution:
    Originator: Ron Cornelius,GIS Specialist (606) 248-7850
    Reese Collier, Resource Manager (606) 248-7850
    Publication Date: 1992
    Publication Time: Unknown
    Title: Big South Fork Recreation Area
    Edition: Unknown
    Series Information:
    Series Name: unknown
    Issue Identification: unknown
    Publication Information:
    Publication Place: unknown
    Publisher: unknown
    Other Citation Details: manually digitized, at 1:24000
    Online Linkage: http://www.nps.gov/biso/
    Source Scale Denominator: 24000
    Type of Source Media: Arc/Info E00 (export files)
    Source Time Period of Content:
    Time Period Information:
    Single Date/Time:
    Time of Day: Unknown
    Source Currentness Reference: unknown
    Source Citation Abbreviation: BSFRA
Source_Information:
  Source_Citation_Abbreviation: USDOD_FC
  Source_Contribution:
    Originator: Dept. of Defense
    Melinda Powell (GIS),
    Rick Zimmer (GIS),
    Gene Zirkel (T&E Person)
    US Army Base
    Fort Campbell, KY
    Publication Date: Unknown
    Publication Time: Unknown
    Title: Fort Campbell
    Edition: Unknown
    Series Information:
    Series Name: unknown
    Issue Identification: unknown
    Publication Information:
    Publication Place: unknown
    Publisher: unknown
    Other Citation Details: (270) 798-5742
    zimmerr@emh2.campbell.army.mil
    Type of Source Media: unknown
    Source Time Period of Content:
    Time Period Information:
    Single Date/Time:
    Time of Day: Unknown
    Source Currentness Reference: unknown
    Source Citation Abbreviation: USDOD_FC
Source_Information:
  Source_Scale_Denominator: 24000
  Type_of_Source_Media: Arc/Info E00 (export files)

Source_Citation_Abbreviation: GWJ_NF
Source_Contribution:
Originator: James O'Hear,
George Washington National Forest, and Jefferson National Forest
112 North River Road
Bridgewater,Virginia 22812
Telephone: (540) 828-1500
E-Mail: johear@fs.fed.us
Publication Date: 26-Apr-2000
Publication Time: Unknown
Title: George Washington/Jefferson National Forest
Edition: unknown
Geospatial Data Presentation Form: spatial database
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Bridgewater,Virginia 22812
Publisher: USDA George Washington and Jefferson National Forests
Other Citation Details: downloaded from website
Online Linkage: http://www.fs.fed.us/gwjnf/gisdatadictionary.html
http://www.fs.fed.us/gwjnf/ftp/A_README_1ST.htm
http://www.fs.fed.us/gwjnf/ftp/nfown.htm
Source Scale Denominator: 24000
Type of Source Media: Arc/Info E00 (export files)
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: GWJ_NF
Source_Information:
Type_of_Source_Media: digital GIS data files
Source_Citation_Abbreviation: DB_NF
Source_Contribution:
Originator: Cheryl Johnson (Forest Planning Analyst),
Kevin Lawrence (Supervisor GIS Coordinator)
Bill Luhn (GIS Coordinator)
USDA Daniel Boone National Forest
Supervisor's Office
1700 Bypass Road
Winchester, KY 40391
(606) 745-3100
Publication Date: Unknown
Publication Time: Unknown
Title: Daniel Boone National Forest
Edition: Unknown
Geospatial Data Presentation Form: Arc/Info .E00s file
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Winchester, KY 40391
Publisher: USDA Daniel Boone National Forest
Other Citation Details: State Plane Coordinate System Zone 1602 NAD27 Feet. Ownership (recent),[wildreness, research natural area,wild areas: Pioneer Weapons, Red River Gorge Geologic Area, Natural Arch, (Beaver Creek, Cane Creek, Redbird, Mill Creek Wildlife Areas)TVA ~1989], data files received 08/06/99 199.128.173.130/incoming/r8/danielboone or gis.fs.fed.us/incoming/r8/danielboone (606) 745-3100

Online Linkage: http://www.r8web.com/gis/
Source Scale Denominator: 24000
Type of Source Media: digital GIS data files
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: Unknown
Time of Day: Unknown
Source Currentness Reference: unknown
Source Citation Abbreviation: DB_NF
Source_Information:
Type_of_Source_Media: ArcView shapefiles
Source_Citation_Abbreviation: KY_NP
Source_Contribution:
Originator: Sara Hines, Data Manager
Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, KY 40601

Phone: (502) 573-2886
Fax: (502) 573-2355

email: sara.hines@mail.state.ky.us.
Publication Date: 1999
Publication Time: Unknown
Title: KY Nature Preserves
Edition: unknown
Geospatial Data Presentation Form: GIS files
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Frankfort, KY
Publisher: KY Nature Preserves Commission
Other Citation Details: (502) 573-2886,
Online Linkage: http://www.kynaturepreserves.org/knhp.html
Source Scale Denominator: 24000
Type of Source Media: ArcView shapefiles
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: KY_NP
Source_Information:
Source_Scale_Denominator: 24000
Type_of_Source_Media: digital GIS File
Source_Citation_Abbreviation: KY_RA
Source_Contribution:
Originator: Kentucky River Authority
70 Wilkinson Boulevard
Frankfort, Kentucky 40601

Telephone: (502) 564-2866
Fax: (502) 564-2681
Publication Date: Unknown
Publication Time: Unknown
Title: KY River Authority Land Acquisition

Geospatial Data Presentation Form: spatial database
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Frankfort, KY
Publisher: Kentucky River Authority
Online Linkage: http://www.nr.state.ky.us/nrepc/kra/page1.htm
Source Scale Denominator: 24000
Type of Source Media: digital GIS File
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: KY_RA
Source_Information:
Type_of_Source_Media: Arc/Info E00 (export files)
Source_Citation_Abbreviation: NWR
Source_Contribution:
Originator: Jason Duke (GIS Manager / Computer Specialist)
USDI
U.S. Fish & Wildlife Service
446 Neal Street
Cookeville, TN 38501

931.528.6481
931.528.7075
Publication Date: 1997
Publication Time: Unknown
Title: National Wildlife Refuges
Edition: 1st
Geospatial Data Presentation Form: spatial database
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Cookeville, TN
Publisher: USDI Fish & Wildlife Service
Other Citation Details: Clark's River NWR, Ohio River NWR, Reel Foot NWR
CAD files converted into Arc/Info coverages
Online Linkage: http://cookeville.fws.gov/docs/gis.html
Type of Source Media: Arc/Info E00 (export files)
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: unknown
Source Citation Abbreviation: NWR
Source_Information:
Type_of_Source_Media: Arc/Info E00 files
Source_Citation_Abbreviation: LBL
Source_Contribution:
Originator: Gail O'Neal (GIS /Forester)
Tennesse Valley Authority
Title: Land Between the Lakes
Geospatial Data Presentation Form: spatial database
Series Information:

Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: unknown
Publisher: unknown
Other Citation Details: 04/04/00 acquisition, (270) 924-2071, TN State Plane NAD83
Type of Source Media: Arc/Info E00 files
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: LBL
Source_Information:
Type_of_Source_Media: AutoCAD Files
Source_Citation_Abbreviation: LFUCG
Source_Contribution:
Originator: David Lucas (GIS Manager)
Geographic Information Services
Lexington-Fayette Urban-County Government
200 East Main St
Lexington, KY 40507
Publication Date: 1997
Publication Time: Unknown
Title: LFUCG Parks & Recreation
Edition: revision of 1995
Geospatial Data Presentation Form: Arc/Info E00 files
Publication Information:
Publication Place: Lexington, KY
Publisher: Lexington-Fayette Urban-County Government
Other Citation Details: 08/25/99 (606) 258-3386 davidl@lfucg.com state plane NAD83 north zone feet parks, preserves, sancturary, golf courses
AutoCAD data converted to Arc/Info, revision with aerial photography
Online Linkage: http://www.lfucg.com/GISMaps/
Type of Source Media: AutoCAD Files
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: LFUCG
Source_Information:
Type_of_Source_Media: Jefferson PVA source data converted into GIS coverage with Arc/Info coverage.
Source_Citation_Abbreviation: LOJIC
Source_Contribution:
Originator: Ken Bailey, or Jane M. Poole, or Kurt Byum
(GIS Tech, GIS Products Specialist, GIS Manager, respectively)
Louisville and Jefferson County Information Consortium (LOJIC)
700 West Liberty Street
Louisville, KY 40203
Telephone: (502) 540-6435
Fax: (502) 540-6562
Publication Date: 09/16/99
Publication Time: Unknown
Title: LOJIC Parks& Fork Recreation Area
Edition: Unknown
Publication Information:
Publication Place: Louisville, KY

Publisher: LOJIC
Other Citation Details: Jefferson PVA source data converted into GIS coverage with Arc/Info coverage.
Online Linkage: http://www.lojic.org/index.htm
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Citation Abbreviation: LOJIC
Source_Information:
Source_Citation_Abbreviation: MC_NP
Source_Contribution:
Originator: Teresa Leibfreid (Data Manager)
Mammoth Cave National Park
Mammoth Cave, KY 42259-0007
Phone: (502) 749-2508
Fax: (502) 749-2916
Publication Date: Unknown
Publication Time: Unknown
Title: Mammoth Cave National Park
Edition: unknown
Geospatial Data Presentation Form: Arc/Info E00 (Export files)
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Mammoth Cave, KY
Publisher: USDI Mammoth Cave National Park
Other Citation Details: 08/30/99, (270)749-2508, UTM 16 NAD27 meters core of bio-reserve will send boundary data, may send Bio. Reserve zones (Crista Carroll)
National Park Service
(North Carolina, Kentucky, Tennessee, South Carolina, Georgia, Alabama, Mississippi and Florida)
National Park Service
Science & Natural Resources
100 Alabama St SW, 1924 Building
Atlanta, GA 30303
Phone: (404)562-3113 x528
Fax: (404)562-3201
Online Linkage: http://www.nps.gov/maca/ http://www.nps.gov/gis/contacts.htm#coordinators
Type of Source Media: Arc/Info E00 (export files)
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: unknown
Source Citation Abbreviation: MC_NP
Source_Information:
Source_Scale_Denominator: 24000
Type_of_Source_Media: spatial database
Source_Citation_Abbreviation: MSU
Source_Contribution:
Originator: Tom C. Kind, PH.D., Coordinator
Mid-America Remote sensing Center
Murray State University
Mid-America Remote Sensing Center
P.O. Box 9
Murray, KY 42071-0009
Publication Date: 09/23/99
Publication Time: Unknown

Title: Murphys Pond
Edition: first
Geospatial Data Presentation Form: ArcView Shapefile
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Murray, Kentucky
Publisher: MSU MARC
Other Citation Details: (207) 762-3110
Online Linkage: http://marc.mursuky.edu/
Source Scale Denominator: 24000
Type of Source Media: spatial database
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Citation Abbreviation: MSU
Source_Information:
Type_of_Source_Media: Shapefiles
Source_Citation_Abbreviation: DOD_NGT
Source_Contribution:
Originator: Faith Fiene
KY Military Affairs
Rt. 60
Frankfort, KY 40601
Title: National Guard Training Facilities
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Citation Abbreviation: DOD_NGT
Source_Information:
Source_Citation_Abbreviation: WMAs
Source_Contribution:
Originator: KY Fish & Wildlife Information System (KFWIS)
KY Dept. of Fish & Wildlife Resources (KDFWR)
1 Game Farm Road, Arnold Mitchell Bldg.
Frankfort, KY 40601
Publication Date: Unknown
Publication Time: Unknown
Title: Green River Lake WMA
Geospatial Data Presentation Form: spatial database
Publication Information:
Publication Place: Frankfort, KY
Publisher: KFWIS-KDFWR
Other Citation Details: Un-georefernced COE project land acquisition scanned map images (source below). Parcels were "heads-up" digitized first in ArcView 3.2, the resulting shapefiles were then geo-refernced using the "ShapeWarp" extension[see ESRI ArcScripts); attributes were populated. Individual shapefiles were merged into one shapefile.

Vessels, Barry and Terry Siemsen
US Army Corps of Engineers, Louisville District,
Federal Building
Louisville, KY 40201-0059
Source Scale Denominator: 400
Type of Source Media: Scanned land acquisition map (images)
Source Time Period of Content:
Time Period Information:

Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: WMAs
Source_Information:
Type_of_Source_Media: Digital database file
Source_Citation_Abbreviation: C_SHP
Source_Contribution:
Originator: KY Fish and Wildlife Information System
KY Dept. Fish and Wildlife Resources
1 Game Farm Rd, Arnold Bldg.
Frankfort, KY 40601
Publication Date: July 2001
Publication Time: Unknown
Title: KDFWR-KFWIS (Composite Shapefile)
Edition: first
Geospatial Data Presentation Form: Spatial Database
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Frankfort, KY
Publisher: KY Fish and Wildlife Information System, KY Dept. Fish and Wildlife Resources
Other Citation Details: UTMs Extended Zone 16 NAD27
Online Linkage: http://www.kfwis.state.ky.us/
Type of Source Media: Digital database file
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: Unknown
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: C_SHP
Source_Information:
Type_of_Source_Media: Digital database file
Source_Citation_Abbreviation: CSHP
Source_Contribution:
Originator: KY Fish and Wildlife Information System
KY Dept. Fish and Wildlife Resources
1 Game Farm Rd, Arnold Bldg.
Frankfort, KY 40601
Publication Date: July 2001
Publication Time: Unknown
Title: KDFWR-KFWIS (Composite Shapefile)
Edition: first
Geospatial Data Presentation Form: Spatial Database
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Frankfort, KY
Publisher: KY Fish and Wildlife Information System, KY Dept. Fish and Wildlife Resources
Other Citation Details: UTMs Extended Zone 16 NAD27
Online Linkage: http://www.kfwis.state.ky.us/
Type of Source Media: Digital database file
Source Time Period of Content:
Time Period Information:
Single Date/Time:

Calendar Date: Unknown
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: CSHP
Source_Information:
Type_of_Source_Media: Digital database file
Source_Citation_Abbreviation: KYLNDSTWD_shp
Source_Contribution:
Originator: KY Fish and Wildlife Information System
KY Dept. Fish and Wildlife Resources
1 Game Farm Rd, Arnold Bldg.
Frankfort, KY 40601
Publication Date: 2001
Title: KY Land Stewardship Shapefile
Edition: first
Geospatial Data Presentation Form: spatial database
Series Information:
Series Name: first
Publication Information:
Publication Place: Frankfort, KY
Publisher: KY Fish and Wildlife Information System, KY Dept. Fish and Wildlife Resources
Type of Source Media: Digital database file
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: KYLNDSTWD_shp
Source_Information:
Source_Citation_Abbreviation: KYSTWRD
Source_Contribution:
Originator: KY Fish & Wildlife Information System (KFWIS)
KY Dept. of Fish & Wildlife Resources (KDFWR)
1 Game Farm Road, Arnold Mitchell Bldg.
Frankfort, KY 40601
Publication Date: 2001
Publication Time: Unknown
Title: Kentucky GAP Land Stewardship
Edition: First
Geospatial Data Presentation Form: spatial database
Series Information:
Series Name: unknown
Issue Identification: unknown
Publication Information:
Publication Place: Frankfort, Kentucky
Publisher: KY Fish and Wildlife Information System, KY Dept. Fish and Wildlife Resources
Online Linkage: http://www.kfwis.state.ky.us/
Source Scale Denominator: 250000
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 6/1/2001
Time of Day: Unknown
Source Currentness Reference: publication date
Source Citation Abbreviation: KYSTWRD
Process_Step:
Process_Description: Process Description: Gathered digital data for land stewardship GIS layer
Source_Used_Citation_Abbreviation: BSFRA

Source_Used_Citation_Abbreviation: USDOD_FC
Source_Used_Citation_Abbreviation: GWJ_NF
Source_Used_Citation_Abbreviation: DB_NF
Source_Used_Citation_Abbreviation: KY_RA
Source_Used_Citation_Abbreviation: NWR
Source_Used_Citation_Abbreviation: LBL
Source_Used_Citation_Abbreviation: LFUCG
Source_Used_Citation_Abbreviation: LOJIC
Source_Used_Citation_Abbreviation: MC_NP
Source_Used_Citation_Abbreviation: MSU
Source_Used_Citation_Abbreviation: DOD_NGT
Source_Used_Citation_Abbreviation: WMAs
Process_Date: 2001
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Kentucky Fish and Wildlife Information System (KFWIS), KY Dept. Fish & Wildlife Resources (KDFWR)
Contact_Person: Frederick, R. David and Michael J. Soto
Contact_Position: Geoprocessing Specialists
Contact_Address:
Address_Type: mailing address
Address: # 1 Game Farm Road
Address: Arnold Bldg.
Address: Division of Wildlife-KFWIS
City: Frankfort
State_or_Province: KY
Postal_Code: 40601
Country: United States
Contact_Voice_Telephone: 502-564-7109
Contact_Facsimile_Telephone: 502-564-6508
Contact_Electronic_Mail_Address: david.frederick@mail.state.ky.us
Contact_Electronic_Mail_Address: mike.soto@mail.state.ky.us
Hours_of_Service: 8am - 4:30 pm
Contact_Instructions: Email or snail mail requests, prior to any telephone inquiries.
Process_Step:
Process_Description: Projected GIS data to UTMs Zone 16 NAD27
Source_Used_Citation_Abbreviation: BSFRA
Source_Used_Citation_Abbreviation: USDOD_FC
Source_Used_Citation_Abbreviation: GWJ_NF
Source_Used_Citation_Abbreviation: DB_NF
Source_Used_Citation_Abbreviation: KY_NP
Source_Used_Citation_Abbreviation: KY_RA
Source_Used_Citation_Abbreviation: NWR
Source_Used_Citation_Abbreviation: LBL
Source_Used_Citation_Abbreviation: LFUCG
Source_Used_Citation_Abbreviation: LOJIC
Source_Used_Citation_Abbreviation: MC_NP
Source_Used_Citation_Abbreviation: MSU
Source_Used_Citation_Abbreviation: DOD_NGT
Source_Used_Citation_Abbreviation: WMAs
Process_Date: 2001
Source_Produced_Citation_Abbreviation: CompositeSHP
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Kentucky Fish and Wildlife Information System (KFWIS), KY Dept. Fish & Wildlife Resources (KDFWR)

Contact_Person: Frederick, R. David and Michael J. Soto
Contact_Position: Geoprocessing Specialists
Contact_Address:
Address_Type: mailing address
Address: #1 Game Farm Road
Address: Arnold Bldg.
Address: Division of Wildlife-KFWIS
City: Frankfort
State_or_Province: KY
Postal_Code: 40601
Country: United States
Contact_Voice_Telephone: 502-564-7109
Contact_Facsimile_Telephone: 502-564-6508
Contact_Electronic_Mail_Address: david.frederick@mail.state.ky.us
Contact_Electronic_Mail_Address: mike.soto@mail.state.ky.us
Hours_of_Service: 8am - 4:30 pm
Contact_Instructions: Email or snail mail requests, prior to any telephone inquiries.
Process_Step:
Process_Description: Edited Composite shapefile for overlapping polygon and attribute assignment
Source_Used_Citation_Abbreviation: CompositeSHP
Process_Date: 2001
Source_Produced_Citation_Abbreviation: KYLNDSTWD_shp
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Y Fish and Wildlife Information System, KY Dept. Fish and Wildlife Resources
Contact_Person: R. David Frederick
Contact_Position: Geoprocessing Specialist II
Contact_Address:
Address_Type: mailing address
Address: # 1 Game Farm Rd.
Address: Arnold Bldg.
Address: Wildlife Division
City: Frankfort
State_or_Province: KY
Postal_Code: 40601
Country: United States
Contact_Voice_Telephone: 502-564-7109
Contact_Facsimile_Telephone: 502-564-6508
Contact_Electronic_Mail_Address: dave.frederick@mail.state.ky.us
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 231
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:

Detailed_Description:
Entity_Type:
Entity_Type_Label: KYSTWRD.dbf
Entity_Type_Definition: Lands used for the KY GAP project.
Entity_Type_Definition_Source: National GAP Handbook
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number. Unique Feature Identifier that will be used to join-to the KYMNGNT.dbf
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: ID
Attribute_Definition: organization, agency etc. that manages the land
Attribute_Definition_Source: National GAP handbook
Attribute:
Attribute_Label: MANAGER
Attribute_Definition: rganization who owns the land
Attribute_Definition_Source: National GAP handbook
Attribute:
Attribute_Label: OWNER
Attribute:
Attribute_Label: WILD_REGIO
Attribute_Definition_Source: National GAP handbook
Attribute:
Attribute_Label: DIVISION
Attribute_Definition: smallest partition given a name by entity
Attribute:
Attribute_Label: UNIT
Attribute_Definition: bio-diversity status
Attribute_Definition_Source: National GAP handbook
Attribute_Value_Accuracy_Information:
Attribute_Value_Accuracy: Unknown
Attribute_Value_Accuracy_Explanation: Unknown
Attribute_Measurement_Frequency: Unknown
Attribute:
Attribute_Label: STATUS
Attribute_Definition: same as division name
Attribute:
Attribute_Label: PUBLIC_NAM
Attribute_Definition: data provider
Attribute:
Attribute_Label: SOURCE
Attribute:
Attribute_Label: HISTORY
Attribute:
Attribute_Label: AREA_FT
Attribute:
Attribute_Label: PERIM_FT
Attribute:
Attribute_Label: ACRES
Attribute:

Attribute_Label: HECTARES
Attribute:
Attribute_Label: AREA
Attribute:
Attribute_Label: PERIMETER
Detailed_Description:
Entity_Type:
Entity_Type_Label: kymngmt.dbf
Entity_Type_Definition_Source: National GAP Handbook
Attribute:
Attribute_Label: DIVISION
Attribute:
Attribute_Label: FID_1
Attribute:
Attribute_Label: MANAGER
Attribute:
Attribute_Label: OWNER
Attribute:
Attribute_Label: PUBLIC_NAM
Attribute:
Attribute_Label: STATUS
Attribute:
Attribute_Label: UNIT
Attribute:
Attribute:
Attribute:
Overview_Description:
Entity_and_Attribute_Overview: This entity contains the descriptive information associated with the Kentucky land stewardship coverage. It contains information on the land manager, land owner, number of land divsiions, unit, bio-diversity ranking and public name.
Distribution_Information:
Resource_Description: Downloadable Data
Distribution_Liability:
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:

Format_Name: WinZIP
File_Decompression_Technique: WinZIP
Transfer_Size: 9.237
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: KY Geographic Network
Access_Instructions: http://kygeonet.state.ky.us/
Fees: None
Ordering_Instructions: Download from KY Geographic Network (http://kygeonet.state.ky.us/)
Custom_Order_Process: Not Available.
Metadata_Reference_Information:
Metadata_Date: 20070711
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Kentucky Fish and Wildlife Information System, KY Dept. of Fish and Wildlife Resources
Contact_Person: R. David Frederick
Contact_Position: Geoprocessing Specialist II
Contact_Address:
Address_Type: mailing address
Address: # 1 Game Farm Road
Address: Arnold Bldg.
Address: Division of Wildlife
City: Frankfort
State_or_Province: KY
Postal_Code: 40601
Country: United States
Contact_Voice_Telephone: 502-564-7109
Contact_Facsimile_Telephone: 502-564-6508
Contact_Electronic_Mail_Address: dave.frederick@mail.state.ky.us
Hours_of_Service: 8am - 4:30 pm
Contact_Instructions: Email or snail mail requests, prior to any telephone inquiries.
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: universal time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Louisiana Stewardship AreasLouisiana Stewardship Areas
Metadata also available as - [Parseable text] - [SGML]
Metadata:
  Identification_Information
  Data_Quality_Information
  Spatial_Data_Organization_Information
  Spatial_Reference_Information
  Entity_and_Attribute_Information
  Distribution_Information
  Metadata_Reference_Information

  Identification_Information:
    Citation:
      Citation_Information:
        Originator:
        US Geological Survey, National Wetlands Research Center
        Publication_Date: 2000
        Title: Louisiana Stewardship Areas
        Geospatial_Data_Presentation_Form: Digital Vector database
    Description:
      Abstract:
      This data set consists of the non-legal Property Boundaries of Public and
      Private Conservation Areas in Louisiana.
      Purpose:
      To provide an assessment of the management status for certain elements of
      biodiversity (vegetation communities and animal species) throughout
      Louisiana and to provide land stewards with information on the
      representation of these elements on their land so they can make informed
      decisions about their management practices regarding biodiversity.
      Supplemental_Information:
      The original data set and metadata record can be found at
      <http://www.mapthedelta.org>
    Time_Period_of_Content:
      Time_Period_Information:
        Single_Date/Time:
          Calendar_Date: 19991201
      Currentness_Reference: Publication date
    Status:
      Progress: Complete
      Maintenance_and_Update_Frequency: As needed
    Spatial_Domain:
      Bounding_Coordinates:
        West_Bounding_Coordinate: -94.075
        East_Bounding_Coordinate: -88.619
        North_Bounding_Coordinate: 33.047
        South_Bounding_Coordinate: 28.827
    Keywords:
      Theme:
        Theme_Keyword_Thesaurus: None
        Theme_Keyword: boundaries
        Theme_Keyword: stewardship
        Theme_Keyword: management
        Theme_Keyword: wilderness
        Theme_Keyword: natural area
        Theme_Keyword: GAP

Theme_Keyword: Gap Analysis
Theme_Keyword: management types
Theme_Keyword: land status
Theme_Keyword: conservation
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: Louisiana
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 1999
Access_Constraints:
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Use_Constraints:
Acknowledgement of the National Wetlands Research Center as a data source would be appreciated in products developed from these data, and such acknowledgment as is standard for citation and legal practices for data source is expected by users of this data. Sharing new data layers developed directly from these data would also be appreciated by NWRC staff. Users should be aware that comparison with other data sets for the same area from other time periods may be inaccurate due to inconsistencies resulting from changes in mapping conventions over time. These data are not legal documents and are not to be used as such.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization:
U.S. Geological Survey, National Wetlands Research Center
Contact_Person: Steve Hartley
Contact_Position: GIS Analyst/Senior Geographer
Contact_Address:
Address_Type: Mailing and Physical Address
Address: 700 Cajundome Blvd
City: Lafayette
State_or_Province: LA
Postal_Code: 70506
Contact_Voice_Telephone: 337-266-8543
Contact_Facsimile_Telephone: 337-266-8616

Contact_Electronic_Mail_Address: steve_hartley@usgs.gov
Data_Set_Credit:
The National Wetlands Research Center would like to acknowledge The Nature Conservancy for the use of the Public and Private Conservation Stewardship Areas database to create this data set.
Native_Data_Set_Environment:
The data set for the LA-GAP land management types was derived from the Nature Conservancy's Public and Private Conservation Stewardship Areas database. The information was extracted using ARC/Info. The computer operating system platform was NT.
Cross_Reference:
Citation_Information:
Originator: The National Gap Program
Publication_Date: 19990101
Title: Louisiana Gap Project
Edition: Primary
Geospatial_Data_Presentation_Form:
Written text and digital coverage
Series_Information:
Series_Name: National Gap Program
Issue_Identification: Louisiana Gap Project
Publication_Information:
Publication_Place: Lafayette, Louisiana
Publisher:
U.S. Department of the Interior, United States Geological Survey, The National Wetlands Research Center
Cross_Reference:
Citation_Information:
Originator: The Nature Conservancy
Publication_Date: 19991201
Title: Public and Private Conservation Stewardship Areas
Geospatial_Data_Presentation_Form: Digital Database
Publication_Information:
Publication_Place: Baton Rouge, Louisiana
Publisher: The Nature Conservancy
Online_Linkage:
<http://www.mapthedelta.org>

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
From the original metadata record- Independent assessments were not available for this edition of metadata.
Logical_Consistency_Report:
From the original metadata record- Vector files served by this metadata document share geographical extents, precision, and accuracy. Polygon files are considered topologically clean. Some polygons are tagged with multiple records. Inholdings (out-polygons or islands) are not attributed. Not all sliver polygons may have been removed.
Completeness_Report:
From the original metadata record- This layer covers all parts of LA. Numerous properties wil be added as time allows. This file has been updated yearly since 1992. For the subset data- Processing of digital data follows conventions and standard methodologies for the time period and within limitations of available workstation equipment at the date of data development.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The original data were compared to 30m resolution Landsat TM imagery and/or USGS Public Land Survey section lines.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: The Nature Conservancy
Publication_Date: 19991201
Title:
Public and Private Conservation Stewardship Areas
Geospatial_Data_Presentation_Form:
Vector digital database
Publication_Information:
Publication_Place: Baton Rouge, LA
Publisher: The Nature Conservancy
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1990
Ending_Date: 1999
Source_Currentness_Reference: Publication Date
Source_Citation_Abbreviation: TNC
Source_Contribution:
Spatial and attribute information for the land management types for Louisiana
Source_Information:
Source_Citation:
Citation_Information:
Originator:
US Geological Survey, National Wetlands Research Center
Publication_Date: 19990101
Title: Louisiana State Boundary (digital outline)
Geospatial_Data_Presentation_Form:
Vector digital database
Publication_Information:
Publication_Place: Lafayette, LA
Publisher:
US Geological Survey, National Wetlands Research Center
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 19980101
Source_Currentness_Reference: Publication Date
Source_Citation_Abbreviation: LASTAT
Source_Contribution:
Spatial information for the boundaries of Louisiana
Process_Step:
Process_Description:
Using the Nature Conservancy's original data, the state of Louisiana was clipped according to the Louisiana state boundary data. See original metadata record for the process steps for the original data at <http://www.mapthedelta.org.>
Process_Date:

1998

Spatial_Data_Organization_Information:
Indirect_Spatial_Reference: State of Louisiana
Direct_Spatial_Reference_Method:
Vector

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Grid_Coordinate_System:
Grid_Coordinate_System_Name: Universal Transverse Mercator
Universal_Transverse_Mercator:
UTM_Zone_Number: 15
Transverse_Mercator:
Longitude_of_Central_Meridian: -93
Latitude_of_Projection_Origin: 0
False_Easting: 500000
False_Northing: 0
Scale_Factor_at_Central_Meridian: .9996
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: Coordinate Pair
Coordinate_Representation:
Abscissa_Resolution: 50.8
Ordinate_Resolution: 50.8
Planar_Distance_Units: Meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.4
Denominator_of_Flattening_Ratio:
294.98

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Stewardship categories
Entity_Type_Definition:
Land stewardship map combines attributes of ownership, management, and a measure of intent to maintain biodiversity; legal ownership of a land area does not necessarily equate to the entity charges with managing the resource.
Entity_Type_Definition_Source:
Crist, Patrick J. Mapping and Categorizing Land Stewardship Version 2.1.0. U.S. Geological Survey. National GAP Program. Feb. 2000
Attribute:
Attribute_Label: Name
Attribute_Definition: The name of the land stewardship area
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Unrepresentable_Domain:
The known name of the stewardship area

Attribute:
Attribute_Label: Type
Attribute_Definition: Category of stewardship areas
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: WMA
Enumerated_Domain_Value_Definition:
Wildlife Management Area
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: NWR
Enumerated_Domain_Value_Definition:
National Wildlife Refuge
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: SR
Enumerated_Domain_Value_Definition: Scenic River
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: SCA
Enumerated_Domain_Value_Definition:
State Conservation Area
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: CP
Enumerated_Domain_Value_Definition: City Park
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: SRA
Enumerated_Domain_Value_Definition:
State Recreation Area
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: GFP
Enumerated_Domain_Value_Definition:
Game and Fish Preserve
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: EXP
Enumerated_Domain_Value_Definition:
State Experimental Farm
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: COE
Enumerated_Domain_Value_Definition:
Corps of Engineers
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: SH
Enumerated_Domain_Value_Definition: State Hospital
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: MIL
Enumerated_Domain_Value_Definition: Military Area
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: STATE
Enumerated_Domain_Value_Definition: State Lands
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: WRP
Enumerated_Domain_Value_Definition:
Wetland Reserve Program
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: NF
Enumerated_Domain_Value_Definition:
National Forest
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: NP
Enumerated_Domain_Value_Definition: National Park
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: SP
Enumerated_Domain_Value_Definition: State Park
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: NA
Enumerated_Domain_Value_Definition: Natural Area
Enumerated_Domain_Value_Definition_Source:
The Nature Conservancy
Attribute:

Attribute_Label: Owner
Attribute_Definition:
The name of the owner of the stewardship area
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Unrepresentable_Domain:
Public and Private onwership names.
Attribute:
Attribute_Label: Comments
Attribute_Definition:
Added remarks about the ownership domain
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Unrepresentable_Domain:
Comments about processes, locations, omissions, possible errors, and source material for the ownership names.
Attribute:
Attribute_Label: Year
Attribute_Definition:
4 digit year reference of the latest digitized version of ownership area.
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 0 (Unknown)
Range_Domain_Maximum: 1999
Attribute:
Attribute_Label: Source
Attribute_Definition:
Source reference for the names of ownership area
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Unrepresentable_Domain:
The name of the source for the names of ownership areas. A blank value represents an unknown value.
Attribute:
Attribute_Label: Gap_code
Attribute_Definition:
A four digit scheme to represent land ownership types; includes nine major land ownership types: Federal (1000), Native American Lands (2000), State Lands (3000), Regional Government Lands (4000), Local Government Lands (5000), Non-Governmental Organization Lands (6000), Private Lands (7000), Water (8000),and Unknown (0000). The scheme was developed to allow sufficient flexibility to add land types as needed by state projects.
Attribute_Definition_Source:
Crist, Patrick J. Mapping and Categorizing Land Stewardship Version 2.1.0. (February 2000). A handbook for conducting Gap Analysis. Internet WWW page at URL: <http://www.gap.uidaho.edu/handbook>
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Gap Coding Scheme
Codeset_Source:
Crist, Patrick J. Mapping and Categorizing Land Stewardship Version 2.1.0. (February 2000). A handbook for conducting Gap Analysis. Internet WWW page at URL: <http://www.gap.uidaho.edu/handbook>
Attribute:
Attribute_Label: Scale

Attribute_Definition:
The scale of the digitized paper map source
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 0 (no source)
Range_Domain_Maximum: 158400
Attribute:
Attribute_Label: Gap_rank
Attribute_Definition:
The rank value for management status categories
Attribute_Definition_Source:
Crist, Patrick J. Mapping and Categorizing Land Stewardship Version 2.1.0. (February 2000). A handbook for conducting Gap Analysis. Internet WWW page at URL: <http://www.gap.uidaho.edu/handbook>
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition:
An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.
Enumerated_Domain_Value_Definition_Source:
Crist, Patrick J. Mapping and Categorizing Land Stewardship Version 2.1.0. (February 2000). A handbook for conducting Gap Analysis. Internet WWW page at URL: <http://www.gap.uidaho.edu/handbook>
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition:
An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance.
Enumerated_Domain_Value_Definition_Source:
Crist, Patrick J. Mapping and Categorizing Land Stewardship Version 2.1.0. (February 2000). A handbook for conducting Gap Analysis. Internet WWW page at URL: <http://www.gap.uidaho.edu/handbook>
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition:
An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type (e.g., logging) or localized intense type (e.g., mining). It also confers protection to federally listed endangered and threatened species throughout the area.
Enumerated_Domain_Value_Definition_Source:
Crist, Patrick J. Mapping and Categorizing Land Stewardship Version 2.1.0. (February 2000). A handbook for conducting Gap Analysis. Internet WWW page at URL: <http://www.gap.uidaho.edu/handbook>
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition:

There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout.
Enumerated_Domain_Value_Definition_Source:
Crist, Patrick J. Mapping and Categorizing Land Stewardship Version 2.1.0. (February 2000). A handbook for conducting Gap Analysis. Internet WWW page at URL: <http://www.gap.uidaho.edu/handbook>
Attribute:
Attribute_Label: Newowner
Attribute_Definition:
The name of the new owner for land stewardship areas
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Unrepresentable_Domain:
Public and Private Ownership names
Attribute:
Attribute_Label: Ownerrank
Attribute_Definition:
The ranking of the owners according to Gap_rank and alpha values for each ownership name.
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Unrepresentable_Domain:
The values are assigned according to the acronyms of ownership (e.g., USFWS, LWDF, TNC) and Gap_rank of 1 to 4.
Attribute:
Attribute_Label: Post_date
Attribute_Definition:
The date of ownership attribute (4 digit year and/or 2-digit month)
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1970-11
Range_Domain_Maximum: 1999-02
Attribute:
Attribute_Label: Wrp_year
Attribute_Definition:
The date of wetland reserve program for the associated land stewardship areas. Blank values indicate no association with the Wetland Reserve Program.
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1992
Range_Domain_Maximum: 1998
Attribute:
Attribute_Label: Scenic_code
Attribute_Definition:
Identified scenic rivers according to Louisiana statutes.
Attribute_Definition_Source: The Nature Conservancy
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Scenic River Code
Codeset_Source:
Louisiana Department of Wildlife and Fisheries, Scenic Rivers Program

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization:
U.S. Geological Survey, National Wetlands Research Center
Contact_Person: Steve Hartley
Contact_Position: GIS Anaylst/Senior Geographer
Contact_Address:
Address_Type: Mailing and Physical Address
Address: 700 Cajundome Blvd
City: Lafayette
State_or_Province: LA
Postal_Code: 70506
Country: USA
Contact_Voice_Telephone: 337-266-8543
Contact_Facsimile_Telephone: 337-266-8616
Contact_Electronic_Mail_Address: steve_hartley@usgs.gov
Hours_of_Service: 8am to 4pm CST Monday thru Friday
Resource_Description: Land management for the State of Louisiana
Distribution_Liability:
Although these data have been processed successfully on a computer system at the U.S. Geological Survey, no warranty expressed or implied is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data. It is strongly recommended that these data are directly acquired from a U.S. Geological Survey server, and not indirectly through other sources which may have changed the data in some way. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data. The U.S. Geological Survey shall not be held liable for improper or incorrect use of the data described and/or contained herein.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: ARC e00
Format_Version_Number: 7.1.1
File_Decompression_Technique:
ARC/INFO Export .e00 Compression
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: <http://sdms.nwrc.gov>
Fees: None, if available on-line
Custom_Order_Process:
None

Metadata_Reference_Information:
Metadata_Date: 20000526
Metadata_Contact:
Contact_Information:

Contact_Person_Primary:
Contact_Person: Helena Schaefer
Contact_Organization:
U.S. Geological Survey, National Wetlands Research Center
Contact_Position: Geographer
Contact_Address:
Address_Type: Mailing and Physical Address
Address: 700 Cajumdome Blvd
City: Lafayette
State_or_Province: LA
Postal_Code: 70506
Country: USA
Contact_Voice_Telephone: 337-266-8696
Contact_Facsimile_Telephone: 337-266-8616
Contact_Electronic_Mail_Address: helena_schaefer@usgs.gov
Hours_of_Service: 8am to 4pm CST Monday thru Friday
Metadata_Standard_Name:
Draft Content Standard for National Biological Information Infrastructure
Metadata, National Biological Service
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Access_Constraints: None
Metadata_Use_Constraints:
None
Generated by mp version 2.4.1 on Fri May 26 13:57:11 2000

Generated by mp version 2.5.4 on Wed Jul 19 11:38:39 2000

```
Identification_Information:
  Citation:
    Citation_Information:
      Originator: TJ Earl
      Publication_Date: Unpublished Material
      Title: MDstewardv
      Edition: 1
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\03ftcollins\Graphics\Data_by_state\Maryland\GAP_2003\steward\cov\MDstewardv.shp
  Description:
    Abstract: Boundary file for State of Maryland
    Purpose: To be used by MDN-GAP to clip data from the full project data sets to subsets for Maryland
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 2003
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None planned
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -79.519575
      East_Bounding_Coordinate: -75.047834
      North_Bounding_Coordinate: 39.807625
      South_Bounding_Coordinate: 37.832924
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: MDN-GAP
      Theme_Keyword: Maryland
  Access_Constraints: None
  Use_Constraints: None
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Tracie J. Eart
        Contact_Organization: UMES
      Contact_Position: GIS Coordinator
      Contact_Voice_Telephone: 410,651.6583
      Contact_Electronic_Mail_Address: tjearl@umes.edu
  Data_Set_Credit: Earl, T.J. UMES
  Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.2.2.1350
Data_Quality_Information:
  Lineage:
    Process_Step:
      Process_Description: Dataset copied.
      Source_Used_Citation_Abbreviation: V:\GAPAnalysis\Shapefiles\Statebndy\debndy3
    Process_Step:
      Process_Description: Metadata imported.
      Source_Used_Citation_Abbreviation: F:\data\gapdata\mdn\finalDELIVERABLES\degap\ancillary\destbnd\DEBNDY_SHP.xml
    Process_Step:
      Process_Description: Metadata imported.
      Source_Used_Citation_Abbreviation: F:\data\gapdata\mdn\finalDELIVERABLES\degap\ancillary\destbnd\DEBNDY.shp.xml
Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
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      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 2334
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Grid_Coordinate_System:
        Grid_Coordinate_System_Name: Universal Transverse Mercator
        Universal_Transverse_Mercator:
          UTM_Zone_Number: 18
          Transverse_Mercator:
            Scale_Factor_at_Central_Meridian: 0.999600
            Longitude_of_Central_Meridian: -75.000000
            Latitude_of_Projection_Origin: 0.000000
            False_Easting: 500000.000000
            False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: meters
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: MDstewardv
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: ACRES
    Attribute:
      Attribute_Label: GAP_STATUS
    Attribute:
      Attribute_Label: MANAGER
    Attribute:
      Attribute_Label: OWNER
    Attribute:
      Attribute_Label: DIVISION
    Attribute:
      Attribute_Label: UNIT
    Attribute:
      Attribute_Label: LAST_EDIT
    Attribute:
      Attribute_Label: HECTARES
```

Attribute:
Attribute_Label: Type
Attribute:
Attribute_Label: DataSource
Attribute:
Attribute_Label: Area
Attribute:
Attribute_Label: Perimeter
Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 5.812
Metadata_Reference_Information:
Metadata_Date: 20070711
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: REQUIRED: The organization responsible for the metadata information.
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type: REQUIRED: The mailing and/or physical address for the organization or individual.
City: REQUIRED: The city of the address.
State_or_Province: REQUIRED: The state or province of the address.
Postal_Code: REQUIRED: The ZIP or other postal code of the address.
Contact_Voice_Telephone: REQUIRED: The telephone number by which individuals can speak to the organization or individual.
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
  Citation:
    Citation_Information:
      Originator: MD DNR and UMES
      Publication_Date: 2002
      Title: DEstewardv
      Edition: 2.0
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\03ftcollins\Graphics\Data_by_state\Delaware\GAP_2003\steward\cov\DEstewardv.shp
  Description:
    Abstract: This data set contains land ownership and management informaiton for the state of Delaware. Primary attribute fielda include Owner, Manager, Gap Status Code, Division, and Unit.
    Purpose: The primary purpose of this data set was to provide a preliminary indication of the management and amount of protection available to biodiversity elements analyzed by the MDN GAP. Gap categorized land into 4 different management status classes which reglect different long term commitments to biodiversity protection.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: unknown
    Currentness_Reference: circa 1999
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: Annually
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -75.791069
      East_Bounding_Coordinate: -75.049121
      North_Bounding_Coordinate: 39.840286
      South_Bounding_Coordinate: 38.448565
  Keywords:
    Theme:
      Theme_Keyword: gap
      Theme_Keyword: land management
      Theme_Keyword: gap stewardship
      Theme_Keyword: management status
    Place:
      Place_Keyword: Maryland
      Place_Keyword: Delaware
      Place_Keyword: New Jersey
  Access_Constraints: None
  Use_Constraints: This data set was produced with an intended application at the state or landscape level, geographic areas from several hundred thousand to millions of hectares in size. The data provide a coarse filter approach to analyses. This data set can be used appropriately for coarse scale applications, or to provide context for finer scale maps or applicaitons. Appropriate uses include: 1. statewide biodiversity planning, 1. regional and large area resource planning, 3. coarse filter evaluation of potential imapcts or benefits of major projects/initiatives on biodiversity such as utility or transportation corridors, wilderness proposals, open space or recreation proposals, 4. environmental impact assessment for large projects such as military activities, 5. education at all levels for both students and citizens. Inappropriate used of these data include: 1. generating specific measurements from the data finer than the implied scale, 2. establishing exact boundaries for regulation or acquisition, 3. establishing definite presence or absence of any element, 4. determining abundance, health, or condition of any element, 5. establishing a measure of accuracy of any other data by comparison with this data set, 6. combining these data with any other data finer than the implied scale for analysis, 7. use of tese data to map small areas typically requiring mapping resolutions at larger scales, 8. altering the data in any way and redistributing it as a GAP product.
  Point_of_Contact:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: Tracie J. Earl
        Contact_Organization: UMES

Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing address
Address: UMES GIS Lab
City: Princess Anne
State_or_Province: Maryland
Postal_Code: 21853
Country: USA
Contact_Voice_Telephone: 410.651.6283
Contact_Electronic_Mail_Address: tjhedrick@mail.umes.edu
Hours_of_Service: 8:00 to 4:00 est Monday through Friday
Browse_Graphic:
Browse_Graphic_File_Name: desteward.jpg
Browse_Graphic_File_Description: Graphic of the distribution of stewarship lands in Maryland, Delaware, and New Jersey
Browse_Graphic_File_Type: JPEG
Data_Set_Credit: Earl, T.J., T.A. Palmer, D.L. Limpert and D.A. Rasberry. UMES and MD DNR.
Security_Information:
Security_Classification: Unclassified
Native_Data_Set_Environment: Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.2.2.1350
Cross_Reference:
Citation_Information:
Originator: MDN Gap
Publication_Date: 2002
Title: Gap Land Cover of Maryland, Delaware and New Jersey
Edition: 2.5
Geospatial_Data_Presentation_Form: raster digital data
Cross_Reference:
Citation_Information:
Originator: MDN GAP
Publication_Date: 2002
Title: Land Ownership and Management Status for Maryland
Edition: 2.0
Geospatial_Data_Presentation_Form: vector digital data
Cross_Reference:
Citation_Information:
Originator: MDN GAP
Publication_Date: 2002
Title: Land Ownership and Management Status for Delaware
Edition: 2.0
Geospatial_Data_Presentation_Form: vector digital data
Cross_Reference:
Citation_Information:
Originator: MDN GAP
Publication_Date: 2002
Title: Land Ownership and Management Status for New Jersey
Edition: 2.0
Geospatial_Data_Presentation_Form: vector digital data
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: No formal accuracy assessment has been conducted of the land ownership and administration in this data base. An informal verification was performed by contacting government agencies and organizations and requesting digital boundaries and management plans or other documentation of management intent. Anthropogenic disturbances were determinged by overlaying boundaries on digital imagery and using the GIS to calculate area.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: Not developed
Lineage:
Source_Information:

Source_Citation:
Citation_Information:
Originator: MD DNR
Publication_Date: 2001
Title: Maryland Stewardship Properties
Geospatial_Data_Presentation_Form: vector digital data
Source_Scale_Denominator: 24000
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: MDStew
Source_Information:
Source_Citation:
Citation_Information:
Originator: NJ DEP
Publication_Date: Unknown
Title: New Jersey Stewardship Lands
Geospatial_Data_Presentation_Form: vector digital data
Source_Scale_Denominator: 24000
Type_of_Source_Media: disc
Source_Time_Period_of_Content:
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: NJStew
Source_Information:
Source_Citation:
Citation_Information:
Originator: USFWS DBEP
Publication_Date: Unknown
Title: Delaware Stewardhip Lands
Geospatial_Data_Presentation_Form: vector digital data
Source_Scale_Denominator: 24000
Type_of_Source_Media: disc
Source_Time_Period_of_Content:
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: DEStew
Process_Step:
Process_Description: Information on ownership was derived from digital land ownership files provided by the Maryland Department of Natural Resources. MISSING INFO
Source_Used_Citation_Abbreviation: MDStew; NJStew; DEStew
Process_Date: 2002
Process_Step:
Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation: F:\data\gapdata\mdn\finalDELIVERABLES\DEGAP\METAMASTER\DESTEWARDV_SHP.XML
Spatial_Data_Organization_Information:
Indirect_Spatial_Reference: Maryland, Delaware, and New Jersey
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 3014
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Grid_Coordinate_System:
Grid_Coordinate_System_Name: Universal Transverse Mercator
Universal_Transverse_Mercator:
UTM_Zone_Number: 18

```
        Transverse_Mercator:
          Scale_Factor_at_Central_Meridian: 0.999600
          Longitude_of_Central_Meridian: -75.000000
          Latitude_of_Projection_Origin: 0.000000
          False_Easting: 500000.000000
          False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.000000
          Ordinate_Resolution: 0.000000
        Planar_Distance_Units: meters
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: DEstewardv
      Entity_Type_Definition: Land ownership and management status
      Entity_Type_Definition_Source: USGS GAP; MDN GAP
    Attribute:
      Attribute_Label: FID
      Attribute_Definition: Internal feature number.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
    Attribute:
      Attribute_Label: Shape
      Attribute_Definition: Feature geometry.
      Attribute_Definition_Source: ESRI
      Attribute_Domain_Values:
        Unrepresentable_Domain: Coordinates defining the features.
    Attribute:
      Attribute_Label: AREA
    Attribute:
      Attribute_Label: Owner
      Attribute_Definition: Owner of the parcel
      Attribute_Definition_Source: USGS GAP
      Attribute_Domain_Values:
        Enumerated_Domain:
          Enumerated_Domain_Value: 1000
          Enumerated_Domain_Value_Definition: Federal Lands
          Enumerated_Domain_Value_Definition_Source: MDN GAP
        Enumerated_Domain:
          Enumerated_Domain_Value: 1300
          Enumerated_Domain_Value_Definition: Fish and Wildlife Service Lands
          Enumerated_Domain_Value_Definition_Source: MDN GAP
        Enumerated_Domain:
          Enumerated_Domain_Value: 3000
          Enumerated_Domain_Value_Definition: State Lands
          Enumerated_Domain_Value_Definition_Source: MDN GAP
        Enumerated_Domain:
          Enumerated_Domain_Value: 3100
          Enumerated_Domain_Value_Definition: Forest Service, Delaware State Department of Agriculture
          Enumerated_Domain_Value_Definition_Source: MDN GAP
```

Enumerated_Domain:
Enumerated_Domain_Value: 3300
Enumerated_Domain_Value_Definition: DNREC - State Parks
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 5000
Enumerated_Domain_Value_Definition: Local Government Parks
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 6000
Enumerated_Domain_Value_Definition: NGO Lands
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 6300
Enumerated_Domain_Value_Definition: The Nature Conservancy
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7000
Enumerated_Domain_Value_Definition: Private Lands
Enumerated_Domain_Value_Definition_Source: USGS
Enumerated_Domain:
Enumerated_Domain_Value: 7100
Enumerated_Domain_Value_Definition: Private Conservation Easement/Conservation Deed Restriction
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7300
Enumerated_Domain_Value_Definition: Private Lands
Enumerated_Domain_Value_Definition_Source: USGS; MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3200
Enumerated_Domain_Value_Definition: Fish and Wildlife Areas
Enumerated_Domain_Value_Definition_Source: MDN GAP
Attribute:
Attribute_Label: MANAGER
Attribute_Definition: Managing entity of the polygon
Attribute_Definition_Source: USGS GAP
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1301
Enumerated_Domain_Value_Definition: National Wildlife Refuge
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3100
Enumerated_Domain_Value_Definition: Forest and Park Service Misc. Land
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3101
Enumerated_Domain_Value_Definition: State Forest
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3102
Enumerated_Domain_Value_Definition: Nature Preserve/State Forest
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3201
Enumerated_Domain_Value_Definition: Wildlife Area
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:

Enumerated_Domain_Value: 3202
Enumerated_Domain_Value_Definition: Nature Preserve/Wildlife Area
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3301
Enumerated_Domain_Value_Definition: State Park
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3302
Enumerated_Domain_Value_Definition: Nature Preserve/State Park
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 5000
Enumerated_Domain_Value_Definition: Local Parks
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 6300
Enumerated_Domain_Value_Definition: The Nature Conservancy Lands
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7100
Enumerated_Domain_Value_Definition: Private Conservation Easement/Conservation Deed Restriction
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7101
Enumerated_Domain_Value_Definition: Delaware Nature Society (DNS)
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7102
Enumerated_Domain_Value_Definition: Brandywinde Consevancy (BC)
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7103
Enumerated_Domain_Value_Definition: Delaware Department of Natural Resources and Environmental Protection (DNREC)
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7104
Enumerated_Domain_Value_Definition: DNREC Fish and Wildlife Service (F&W)
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7105
Enumerated_Domain_Value_Definition: USFWS
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7106
Enumerated_Domain_Value_Definition: North American Land Trust (NALT)
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7107
Enumerated_Domain_Value_Definition: (PD)
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7108
Enumerated_Domain_Value_Definition: (NRWC)
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7109
Enumerated_Domain_Value_Definition: Delaware Wildlands (DW)

Enumerated_Domain_Value_Definition_Source: MDN GAP
Attribute:
Attribute_Label: OWNER
Attribute:
Attribute_Label: GAP_STATUS
Attribute_Definition: Level of protection for biological diversity
Attribute_Definition_Source: USGS GAP
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: An area having permanent protection from conversion of natural land cover and a mandated plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.
Enumerated_Domain_Value_Definition_Source: USGS BRD GAP
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a promarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance.
Enumerated_Domain_Value_Definition_Source: USGS BRD GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low intensity type (e.g. logging) or localized intense type (e.g. mining). It also confers protection to federally listed endangered and threatened species throughout the area.
Enumerated_Domain_Value_Definition_Source: USGS BRD GAP
Enumerated_Domain:
Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition: An area with no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout.
Enumerated_Domain_Value_Definition_Source: USGS BRD GAP
Attribute:
Attribute_Label: UNIT
Attribute_Definition: Name given to the management unit
Attribute_Definition_Source: MDN GAP
Attribute:
Attribute_Label: DIVISION
Attribute_Definition: Name given by the Managing entity
Attribute_Definition_Source: MDN Gap
Attribute:
Attribute_Label: ACRES
Attribute_Definition: Acres
Attribute:
Attribute_Label: LAST_EDIT
Attribute_Definition: Date of last edit to polygon or attribute
Attribute_Definition_Source: MDN GAP
Attribute:
Attribute_Label: HECTARES
Attribute:
Attribute_Label: Type
Attribute_Definition: General type of owner entity
Attribute_Definition_Source: MDN GAP
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Federal
Enumerated_Domain_Value_Definition: Federally owned lands
Enumerated_Domain_Value_Definition_Source: MDN GAP

Enumerated_Domain:
Enumerated_Domain_Value: State
Enumerated_Domain_Value_Definition: State owned lands
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: Local
Enumerated_Domain_Value_Definition: Local government owned lands
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: Private Conservation
Enumerated_Domain_Value_Definition: Lands owned by NGOs
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: Other
Enumerated_Domain_Value_Definition: Privately owned lands
Enumerated_Domain_Value_Definition_Source: MDN GAP
Attribute:
Attribute_Label: DataSource
Attribute_Definition: Original data layer type
Attribute_Definition_Source: MDN GAP
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Federal
Enumerated_Domain_Value_Definition: Data layer named 'federal'
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: State
Enumerated_Domain_Value_Definition: Data layer named 'state'
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: Local
Enumerated_Domain_Value_Definition: Data layer named 'local'
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: Private Conservation
Enumerated_Domain_Value_Definition: Data layer named 'private conservation'
Enumerated_Domain_Value_Definition_Source: MDN GAP
Enumerated_Domain:
Enumerated_Domain_Value: Other
Enumerated_Domain_Value_Definition: Remainder of the state layer not previously classified
Enumerated_Domain_Value_Definition_Source: MDN GAP
Attribute:
Attribute_Label: Perimeter
Overview_Description:
Entity_and_Attribute_Overview: The polygon attribute table contains the following major attributes for GAP: owner, manager, division, unit and gap status. Attributes are typically based on common property names or the trackjing system identification numbers used by the various management agencies.
Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 2.354
Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Ann Rasberry

Contact_Organization: UMES
Contact_Position: Research Associate
Contact_Voice_Telephone: 410.651.6069
Contact_Facsimile_Telephone: 410.651.7662
Contact_Electronic_Mail_Address: darasberry@umes.edu
Hours_of_Service: 8:00 - 4:00 est Monday - Friday
Resource_Description: Downloadable Data
Distribution_Liability: The distributor shall not be held liable for improper or incorrect use of these data, based on the description of appropriate/inappropriate uses discribed in this metadata document. It is strongly recommended that these data be directly acquired from the distributor described above or from a U.S.G.S. Biological Resource Division server and not indirectly through other sources which may have changed the data in some way. These data were developed and are meant to be used a the scale of 1:100,000 for the purposes of assesing the conservation status of biodiversity elements over large geographic regions. The distributor makes no claims as to the data's suitability for other purposes.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 8.855
Fees: none
Ordering_Instructions: email for instructions
Custom_Order_Process: email for instructions
Metadata_Reference_Information:
Metadata_Date: 20070711
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: REQUIRED: The organization responsible for the metadata information.
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type: REQUIRED: The mailing and/or physical address for the organization or individual.
City: REQUIRED: The city of the address.
State_or_Province: REQUIRED: The state or province of the address.
Postal_Code: REQUIRED: The ZIP or other postal code of the address.
Contact_Voice_Telephone: REQUIRED: The telephone number by which individuals can speak to the organization or individual.
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Access_Constraints: none
Metadata_Use_Constraints: none
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

Identification_Information:
Citation:
Citation_Information:
Originator: W.B. Krohn
Originator: R.B. Boone
Originator: S.A. Sader
Originator: J.A. Hepinstall
Originator: S.M Schaefor
Originator: S.L. Painton
Publication_Date: 1998
Title: Maine Conservation and Public Lands Database, Arc/Info Vector Coverage
Publication_Information:
Publication_Place: Orono, Maine
Publisher: U.S. Geological Survey, Biological Resources Division
Other_Citation_Details:

The vector geographic data layer described by this document is documented more fully in "A conservation and public lands database for Maine: project history and database documentation" by Krohn and Kelly, 1997. The final reports produced from Maine Gap Analysis, which use this GIS layer among others to conduct the analysis, provide more information. To learn more about the data layers and the ME-GAP project as a whole, refer to:

Krohn, W.B., R.B. Boone, S.A. Sader, J. Hepinstall, S. Painton, and S. Schaefer. 1998. Maine Gap Analysis Project. Final Report. Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono, Maine, USA. 123 pp. + appendices.

Boone, R.B. and W.B. Krohn. 1998a. Maine gap analysis vertebrate data - part I: distribution, habitat relations, and status of amphibians, reptiles, and mammals in Maine. Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono, Maine, USA. 175 pp. + appendices.

Boone, R.B. and W.B. Krohn. 1998b. Maine gap analysis vertebrate data - part II: distribution, habitat relations, and status of breeding birds in Maine. Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono, Maine, USA. 367 pp. + appendices.

Hepinstall, J.A., S.A. Sader, W.B. Krohn, R.B. Boone, and R. Bartlett 1999. Development and testing of a habitat and land cover map of Maine. Maine Agricultural and Forest Experiment Station, Technical Bulletin 173. 104 pp.
Online_Linkage: <URL:http://www.gap.uidaho.edu/gap/>, <URL:http://wlm13.umenfa.maine.edu/progs/unit/gap/>
Description:
Abstract:
In 1993, the Maine Cooperative Fish and Wildlife Research Unit (CFWRU) started a Gap Analysis project in Maine (ME-GAP). Gap analysis is a GIS analysis that identifies potential geographic gaps in biodiversity conservation, and relies heavily on a conservation lands database in digital form. As ME-GAP progressed, attempts to use the 1989 compilation of state and federal conservation lands in Maine (R.D. Kelly, Maine State Planning Office) failed as teh database was found to be out-of-data and, more importantly, compiled at the wrong scale for ME-GAP (1:250,000

instead of 1:100,000 used in ME-GAP).
Purpose:
To build a conservation lands database suitable for statewide use at a 1:100,000 scale. The Maine State Planning Office (SPO) and CFWRU agreed in 1996 to revise and digitize the 1993 Kelly maps and to construct an attribute database characterizing each polygon on the map. In general, SPO was responsible for contacting agencies and organizations to obtain information on the locations of conservation and public lands, and to do the cartographic work to turn this information into hard copy maps. The CFWRU was responsible for digitizing the maps and building the attribute database. For the purpose of ME-GAP, a GIS vector coverage from the J.W. Sewall Company, Old Town, Maine, showing the outline of industrial and non-industrial forestland owners was incorporated into the conservation lands database.
Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 19981231
Ending_Date: 20031231
Currentness_Reference:
The range specified indicates the date of release of spatial database described, and a likely soonest date to update the layer. Updates may not be made.
Status:
Progress: Complete
Maintenance_and_Update_Frequency: Unknown. Updates are not scheduled.
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -72.0
East_Bounding_Coordinate: -66.0
North_Bounding_Coordinate: 47.5
South_Bounding_Coordinate: 42.0
Keywords:
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: Conservation lands
Theme_Keyword: Land stewardship
Theme_Keyword: Land ownership
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: Maine
Place_Keyword: ME
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 1997
Temporal_Keyword: 1993-1997

Access_Constraints: none
Use_Constraints: These data may not be appropriate at map scales finer than 1:100,000 scale.
Point_of_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: William B. Krohn
Contact_Organization: USGS Biological Resources Division
Contact_Address:
Address_Type: mailing address
Address:
Maine Cooperative Fish and Wildlife Research Unit

5755 Nutting Hall, Room 210
University of Maine
City: Orono
State_or_Province: ME
Postal_Code: 04469-5755
Country: USA
Contact_Voice_Telephone: (207) 581-2870
Contact_Facsimile_Telephone: (207) 581-2858
Contact_Electronic_Mail_Address: wkrohn@umenfa.maine.edu
Data_Set_Credit: Maine Cooperative Fish and Wildlife Research Unit, Maine Gap Analysis
Security_Information:
Security_Classification_System: None
Security_Classification: None
Security_Handling_Description: None
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
It is known that not all conservation lands are present in this database.
In addition, changes in ownership and the creation of new conservation
easements and the like are constantly changing the conservation status
of many parcels.
Logical_Consistency_Report:
Completeness_Report:
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
In general, the accuracy matches that of the USGS
1:100,000 scale quadrangles.
Vertical_Positional_Accuracy:
Vertical_Positional_Accuracy_Report: These data do not include a vertical component.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator:

Publication_Date 1997
Title:
A conservation and public lands database for Maine:
Project history and database documentation
Series_Information:
Series_Name:
Issue_Identification:
Type_of_Source_Media: paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1997
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: Krohn and Kelly 1997
Source_Contribution: Conservation and Public Lands Database Documentation
Process_Step:
Process_Description:
Public lands and conservation lands of Maine were digitized based on
the state and federal conservation lands database put together by
the Maine State Planning Office and the Maine Cooperative Fish and Wildlife
Research Unit based on 1:100,000 scale data.
Process_Date: 1997

```
    Source_Produced_Citation_Abbreviation: Krohn and Kelly (1997)
    Source_Produced_Citation_Abbreviation:
    Process_Contact:
      Contact_Information:
        Contact_Person_Primary:
          Contact_Person: Jeffrey A. Hepinstall
        Contact_Address:
          Address_Type: mailing address
          Address:
            5755 Nutting Hall
            Department of Wildlife Ecology
            University of Maine
          City: Orono
          State_or_Province: ME
          Postal_Code: 04469-5755
          Country: USA
        Contact_Voice_Telephone: (207) 581-1340
        Contact_Facsimile_Telephone: (207) 581-2858
        Contact_Electronic_Mail_Address: jeff@zeus.umenfa.maine.edu

Spatial_Data_Organization_Information:
  Indirect_Spatial_Reference:
  Direct_Spatial_Reference_Method: Point_and_Vector_Object_Information SDTS_Terms_Description
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: UTM
      Grid_Coordinate_System:
        Grid_Coordinate_System_Name: Universal Transverse Mercator
        Universal_Transverse_Mercator:
          UTM_Zone_Number: 19
          Transverse_Mercator:
            Scale_Factor_at_Central_Meridian: 0.9996
            Longitude_of_Central_Meridian: -69.0
            Latitude_of_Projection_Origin: 0.0
            False_Easting: 0.0
            False_Northing: 0.0
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method:
        Planar_Distance_Units: Meters
    Geodetic_Model:
      Horizontal_Datum_Name: NAD 1923
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.4
      Denominator_of_Flattening_Ratio: 1.003402
    Vertical_Coordinate_System_Definition:
      Altitude_System_Definition:
        Altitude_Datum_Name:
        Altitude_Resolution:
        Altitude_Distance_Units:
        Altitude_Encoding_Method:
      Depth_System_Definition:
        Depth_Datum_Name:
        Depth_Resolution:
        Depth_Distance_Units:
        Depth_Encoding_Method:
```

Entity_and_Attribute_Information:
Overview_Description:
Entity_and_Attribute_Overview:
Detailed_Description:
Entity_Type:
Entity_Type_Label:
Entity_Type_Definition:
Entity_Type_Definition_Source:
Attribute:
Attribute_Label: parcelname
Attribute_Definition: Names of parcels.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands database for Maine: Project history and database documentation. (Unpublished). Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: conser_land
Attribute_Definition: Conservation land.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands database for Maine: Project history and database documentation. (Unpublished). Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: No
Range_Domain_Maximum: Yes
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: quad250
Attribute_Definition: Name of USGS 250k quad parcel falls in.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands database for Maine: Project history and database documentation. (Unpublished). Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: quad100
Attribute_Definition: Name of USGS 100k quad parcel falls in.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands

database for Maine: Project history and database documentation.
(Unpublished). Maine Cooperative Fish and Wildlife Research Unit,
University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: primaryown
Attribute_Definition: Primary ownership category.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands
database for Maine: Project history and database documentation.
(Unpublished). Maine Cooperative Fish and Wildlife Research Unit,
University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
F Federal
I Indian
M Municipality
P Private
S State

Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none
Attribute:
Attribute_Label: secondown
Attribute_Definition: Secondary ownership category.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands
database for Maine: Project history and database documentation.
(Unpublished). Maine Cooperative Fish and Wildlife Research Unit,
University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: thirdown
Attribute_Definition: Tertiary ownership.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands
database for Maine: Project history and database documentation.
(Unpublished). Maine Cooperative Fish and Wildlife Research Unit,
University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: fee_status
Attribute_Definition: Identify fee status of the parcel.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands database for Maine: Project history and database documentation. (Unpublished). Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
F Fee title ownership;
E Managment through easement with fee title owner;
L Lease from fee title owner;
T Indian lands held in trus by the federal government;
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: point_data
Attribute_Definition: To identify point data versus polygon.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands database for Maine: Project history and database documentation. (Unpublished). Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Yes point data;
No polygon data;
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: isl_reg_no
Attribute_Definition:
A stardard numbering system used to identify islands and ledges along the Maine coast. If not a coastal island, no number listed.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands database for Maine: Project history and database documentation. (Unpublished). Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: kellycode
Attribute_Definition: Codes as in Kelly (1993).
Attribute_Definition_Source:

Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands
database for Maine: Project history and database documentation.
(Unpublished). Maine Cooperative Fish and Wildlife Research Unit,
University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: kellyacres
Attribute_Definition: Total acres as listed in Kelly (1993) rounded to the acre.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands
database for Maine: Project history and database documentation.
(Unpublished). Maine Cooperative Fish and Wildlife Research Unit,
University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: polycode_incl
Attribute_Definition: A polygon code used to identify each land parcel for each 100k quad.
Attribute_Definition_Source:
Krohn, W.A. and R.D. Kelly, Jr. 1997. A conservation and public lands
database for Maine: Project history and database documentation.
(Unpublished). Maine Cooperative Fish and Wildlife Research Unit,
University of Maine, Orono. 16 pp plus 1 appendix.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum:
Range_Domain_Maximum:
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
Attribute_Label: owner
Attribute_Definition: Primary land ownership.
Attribute_Definition_Source:
Attribute_Domain_Values:
1000 Federal;
2000 Indian;
3000 State;
5000 Municipal;
6000 NGO private;
7000 Private;
Range_Domain:
Range_Domain_Minimum: 1000
Range_Domain_Maximum: 7000
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
  Attribute_Label: manager
  Attribute_Definition: Primary land manager.
  Attribute_Definition_Source:
  Attribute_Domain_Values:
    1000 Federal lands (Includes USGS, USCG, USVA, and GSA lands);
    1300 US Fish and Wildlife Service;
    1400 USDA Forest Service;
    1500 US DoD (Air Force or Navy);
    1600 National Park Service;
    2000 Indian lands;
    3000 State;
    5000 Municipal;
    6200 NGO conservation lands and land trusts/easements;
    6300 The Nature Conservancy;
    7200 Industrial and non-industrial forestlands, College Lands;
    7300 Non-conservation private lands;
  Range_Domain:
    Range_Domain_Minimum: 1000
    Range_Domain_Maximum: 7300
  Attribute_Units_of_Measure: categorical
  Attribute_Measurement_Resolution: none

Attribute:
  Attribute_Label: status
  Attribute_Definition: Land management status.
  Attribute_Definition_Source:
  Attribute_Domain_Values:
    1,
    2,
    3a,
    3b,
    4
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
  Attribute_Label: division
  Attribute_Definition: Attribute_Definition_Source Empty variable
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum:
      Range_Domain_Maximum:
  Attribute_Units_of_Measure: categorical
  Attribute_Measurement_Resolution: none

Attribute:
  Attribute_Label: unit
  Attribute_Definition: Land management unit.
  Attribute_Definition_Source:
  Attribute_Domain_Values: Empty Variable
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Attribute:
  Attribute_Label: recode
  Attribute_Definition: Number recode value for categorical status value .

Attribute_Definition_Source:
Attribute_Domain_Values: 10, 20, 31, 32, 40
Attribute_Units_of_Measure: categorical
Attribute_Measurement_Resolution: none

Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: William B. Krohn
Contact_Address:
Address_Type: mailing address
Address:
Maine Cooperative Fish and Wildlife Research Unit
5755 Nutting Hall, Room 210
University of Maine
City: Orono
State_or_Province: ME
Postal_Code: 04469-5755
Country: USA
Contact_Voice_Telephone: (207) 581-2870
Contact_Facsimile_Telephone: (207) 581-2858
Contact_Electronic_Mail_Address: wkrohn@umenfa.maine.edu
Resource_Description:
NOTE: The distributor cited above will be aware as to how to acquire these data. However, while the Maine Cooperative Fish and Wildlife Research Unit and the Maine Image Analysis Laboratory were contracted by the USGS's Biological Resources Division (BRD) to create and test the ME-GAP data, they have neither the funds nor personnel to distribute these data. However, these data will be available on CD-ROMs to be produced by the national Gap Analysis Program (GAP), USGS/BRD. There will be a modest handling and shipping fee for the CDs. For information on where to obtain the disks, see ME-GAP under national GAP's home page at: <http://www.gap.uidaho.edu/gap/>
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: Arc/Info 7.1.2 Vector Coverage
Format_Information_Content:
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: <URL:http://www.gap.uidaho.edu/gap/>
Network_Resource_Name: <URL:http://wlm13.umenfa.maine.edu/progs/unit/gap/>
Online_Computer_and_Operating_System:
IBM Risc 25T running AIX
version 4.2 (UNIX)
Fees: None, or small fees for media and processing.
Ordering_Instructions: Follow links to ME-GAP through <URL:http://www.gap.uidaho.edu/gap/>
Technical_Prerequisites: A geographic information system is useful for manipulating the image.
Metadata_Reference_Information:
Metadata_Date: 19981205
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Randall B. Boone
Contact_Address:
Address_Type: mailing address
Address:
A215 NESB
Natural Resource Ecology Laboratory
Colorado State University
City: Fort Collins
State_or_Province: CO
Postal_Code: 80523-1499
Country: USA
Contact_Voice_Telephone: (970) 491-1964
Contact_Facsimile_Telephone: (970) 491-1965
Contact_Electronic_Mail_Address: rboone@nrel.colostate.edu
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Use_Constraints:
None. Note: These metadata were created, without errors,
using configuration files (i.e., NBII.EXT and NBIINW.CFG) written by
Peter N. Schweitzer (USGS, Reston, VA) for use with his MP.EXE software, the
"Metadata Parser."

Mississippi StewardshipMississippi Stewardship
Metadata also available as
Metadata:
  Identification_Information
  Data_Quality_Information
  Spatial_Data_Organization_Information
  Spatial_Reference_Information
  Entity_and_Attribute_Information
  Distribution_Information
  Metadata_Reference_Information

  Identification_Information:
    Citation:
      Citation_Information:
        Originator:
        Mississippi Cooperative FIsh and Wildlife Research Unit, Mississippi
        State University
        Publication_Date: 10/20/2003
        Title: Mississippi Stewardship
        Geospatial_Data_Presentation_Form: vector data
        Online_Linkage: \\Beaver\i\MSGAP\Steward\msstewardv
    Description:
      Abstract:
      These data designates the general level of protection to biodiversity that
      an area has depending on the landuse practices and management strategies
      overseeing landuse. The data are a combination of digitized data from
      1:100,000 quadrangle sheets and boundaries mapped with global positioning
      systems (GPS).
      Purpose:
      These data were developed as part of the Mississippi Gap Analysis Project
      to understand the distribution of protective lands for biodiversity.
    Time_Period_of_Content:
      Time_Period_Information:
        Single_Date/Time:
          Calendar_Date: 2001
      Currentness_Reference: publication date
    Status:
      Progress: Complete
      Maintenance_and_Update_Frequency: None planned
    Spatial_Domain:
      Bounding_Coordinates:
        West_Bounding_Coordinate: -91.886145
        East_Bounding_Coordinate: -87.941924
        North_Bounding_Coordinate: 35.144322
        South_Bounding_Coordinate: 30.046904
    Keywords:
      Theme:
        Theme_Keyword_Thesaurus: None
        Theme_Keyword: Stewardship
        Theme_Keyword: Mississippi
        Theme_Keyword: Gap Status
        Theme_Keyword: Conservation
      Place:
        Place_Keyword_Thesaurus: None
        Place_Keyword: Mississippi

Place_Keyword: United States
Place_Keyword: Southern United States
Access_Constraints: None
Use_Constraints: None
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Mississippi State University
Contact_Person: Richard Minnis
Contact_Position: Asst. Research Professor
Contact_Address:
Address_Type: mailing address
Address: Box 9690, Department of Wildlife and Fisheries
Address: Mississippi State University
City: Mississippi State
State_or_Province: Mississippi
Postal_Code: 39762
Country: USA
Contact_Voice_Telephone: 662-325-3158
Contact_Facsimile_Telephone: 662-325-8726
Contact_Electronic_Mail_Address: rminnis@cfr.msstate.edu
Native_Data_Set_Environment:
Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 1; ESRI ArcCatalog 8.2.0.700

Data_Quality_Information:
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
These data are accurate at the time of publication, however, boundaries to parks, management areas, etc. do change.
Lineage:
Process_Step:
Process_Description: Stewardship shapefile converted to coverage.

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 1144
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Label point
Point_and_Vector_Object_Count: 725
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
Point_and_Vector_Object_Count: 725
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Point
Point_and_Vector_Object_Count: 4

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Transverse Mercator
Transverse_Mercator:
Scale_Factor_at_Central_Meridian: 0.999834
Longitude_of_Central_Meridian: -89.750000
Latitude_of_Projection_Origin: 32.500000
False_Easting: 500000.000000
False_Northing: 1300000.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.001247
Ordinate_Resolution: 0.001247
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: mssteward.aat
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FNODE#
Attribute_Definition: Internal node number for the beginning of an arc (from-node).
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: TNODE#
Attribute_Definition: Internal node number for the end of an arc (to-node).
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:

Attribute_Label: LPOLY#
Attribute_Definition: Internal node number for the left polygon.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: RPOLY#
Attribute_Definition: Internal node number for the right polygon.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: LENGTH
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: MSSTEWARD#
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: MSSTEWARD-ID
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Detailed_Description:
Entity_Type:
Entity_Type_Label: mssteward.pat
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: AREA
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: PERIMETER
Attribute_Definition: Perimeter of feature in internal units.
Attribute_Definition_Source: ESRI

Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: MSSTEWARD#
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: MSSTEWARD-ID
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Attribute:
Attribute_Label: OWNERSHIP
Attribute_Definition: Name of entity owning land parcel
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Private
Enumerated_Domain_Value_Definition: Areas of private ownership
Enumerated_Domain_Value_Definition_Source: National Gap Program
Enumerated_Domain:
Enumerated_Domain_Value: NPS
Enumerated_Domain_Value_Definition: National Park Service lands.
Enumerated_Domain_Value_Definition_Source: National Gap Program
Enumerated_Domain:
Enumerated_Domain_Value: MDWFP
Enumerated_Domain_Value_Definition:
Mississippi Department of Wildlife, Fisheries and Parks land holdings.
Enumerated_Domain_Value_Definition_Source: National Gap Program
Enumerated_Domain:
Enumerated_Domain_Value: NWR
Enumerated_Domain_Value_Definition: National Wildlife Refuge lands.
Enumerated_Domain_Value_Definition_Source: National Gap Program
Enumerated_Domain:
Enumerated_Domain_Value: USDA
Enumerated_Domain_Value_Definition: United States Department of Agriculture lands.
Enumerated_Domain_Value_Definition_Source: National Gap Program
Enumerated_Domain:
Enumerated_Domain_Value: USFS
Enumerated_Domain_Value_Definition: United States Forest Service lands.
Enumerated_Domain_Value_Definition_Source: National Gap Program
Attribute:
Attribute_Label: STEWARDLEV
Attribute_Definition: Gap Status Codes
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition:
An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.

Enumerated_Domain_Value_Definition_Source: Gap Analysis Handbook
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition:
An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance.
Enumerated_Domain_Value_Definition_Source: Gap Analysis Handbook
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition:
An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type (e.g., logging) or localized intense type (e.g., mining). It also confers protection to federally listed endangered and threatened species throughout the area.
Enumerated_Domain_Value_Definition_Source: Gap Analysis Handbook
Enumerated_Domain:
Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition:
There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout.
Enumerated_Domain_Value_Definition_Source: Gap Analysis Handbook
Attribute:
Attribute_Label: HECTARES
Attribute_Definition: Total area of lands held by the given owner in hectares.
Attribute_Definition_Source: National Gap Program

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Mississippi State University
Contact_Person: Richard Minnis
Contact_Position: Asst. Research Professor
Contact_Address:
Address_Type: mailing address
Address: Box 9690, Department of Wildlife and Fisheries
Address: Mississippi State University
City: Mississippi State
State_or_Province: Mississippi
Postal_Code: 39762
Country: USA
Contact_Voice_Telephone: 662-325-3158
Contact_Facsimile_Telephone: 662-325-8726
Contact_Electronic_Mail_Address: rminnis@cfr.msstate.edu
Resource_Description: Downloadable Data
Distribution_Liability:
Although these data have been processed successfully on a computer system at the U.S. Geological Survey, no warranty expressed or implied is made

regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data. It is strongly recommended that these data are directly acquired from a U.S. Geological Survey server, and not indirectly through other sources which may have changed the data in some way. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data. The U.S. Geological Survey shall not be held liable for improper or incorrect use of the data described and/or contained herein.
Standard_Order_Process:
  Digital_Form:
    Digital_Transfer_Information:
      Format_Name: ARC/INFO, ArcView
      Transfer_Size: 7.791
    Digital_Transfer_Option:
      Online_Option:
        Computer_Contact_Information:
          Network_Address:
            Network_Resource_Name: <http://www.gap.uidaho.edu/gap>
      Offline_Option:
        Offline_Media: CD-ROM
        Recording_Format: ISO
  Fees: none

Metadata_Reference_Information:
  Metadata_Date: 20031126
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: Mississippi State University
        Contact_Person: Richard Minnis
      Contact_Position: Asst. Research Professor
      Contact_Address:
        Address_Type: mailing address
        Address: Box 9690, Department of Wildlife and Fisheries
        Address: Mississippi State University
        City: Mississippi State
        State_or_Province: Mississippi
        Postal_Code: 39762
        Country: USA
      Contact_Voice_Telephone: 662-325-3158
      Contact_Facsimile_Telephone: 662-325-8726
      Contact_Electronic_Mail_Address: rminnis@cfr.msstate.edu
  Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
  Metadata_Time_Convention: local time
  Metadata_Extensions:
    Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
    Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Tue Feb 10 13:15:21 2004

Identification_Information:
 Citation:
  Citation_Information:
   Originator: NC Center for Geographic Information and Analysis
   Publication_Date: 20020228
   Title: onemap_test.SDEADMIN.lmcos
   Geospatial_Data_Presentation_Form: vector digital data
   Publication_Information:
    Publication_Place: Raleigh, North Carolina
    Publisher: NC Center for Geographic Information and Analysis
   Other_Citation_Details: NCCGIA distributes this dataset
   Online_Linkage: Server=cgiapdb; Service=5151; Database=onemap_prod; User=sdeadmin; Version=sde.DEFAULT
 Description:
  Abstract:
   This GIS data layer consists of lands managed for conservation
   and open space based on multiple source layers.
   This is a composite inventory that integrates digital depictions of
   lands from multiple sources and resolves boundary discrepancies among
   sources. Partners in the creation of this data layer included the
   Department of Environment and Natural Resources (the Division of Parks
   and Recreation, the Wildlife Resources Commission, the Division of
   Coastal Management, and the Conservation Tax Credit program), the
   State Property Office, the Land Trust for North Carolina and its
   associated land trusts, the Department of Agriculture and Consumer
   Services, the Clean Water Management Trust Fund, the Conservation
   Fund, the Nature Conservancy, the US Forest Service, the US Fish and
   Wildlife Service, the NC GAP Analysis program, and the Triangle J
   Council of Governments and its associated local governments.
   The source layers are:
   >From the NC Corporate Geographic Database:
   > State-owned complexes (soc) selected for the following use codes and
   > descriptions:
   >   1 (Arboretums/Botanical Gardens)
   >   5 (Boat Access Sites)
   >   12 (Estuarine Sanctuary)
   >   19 (Forestry)
   >   21 (Game lands)
   >   29 (Historic Sites)
   >   35 (Wildlife Management Areas)
   >   39 (Natural/Historic Preserves)
   >   41 (Nursery)
   >   43 (Parks/Recreational Areas)
   >   46 (Public Beach Access)
   >   54 (Submerged Lands)
   >   61 (Zoo)
   >   62 (OTHER: Div-Name = "ENR PARKS AND RECREATION")
   > State Parks (stprk)
   > Recreation Projects - Land and Water Conservation Fund (rplwcf)
   > Game Lands - Wildlife Resources Commission (gmlwrc) selected for
   >   ownership = public
   > Conservation Tax Credit Properties (ctcp)
   > Land Trust Conservation Properties (ltcp)
   > Coastal Reserves (cresb)
   >From project files:
   > Preserved Farmland - mapped by CGIA from files of the Piedmont
   >   Land Conservancy, the Triangle Land Conservancy, and the Land
   >   Trust for Central Carolina

> Triangle Open Space - compiled by the Triangle J Council of
> Governments for properties and easements held by local governments
> and non-profit organizations
> US Fish and Wildlife Service Wildlife Refuges - mapped by CGIA from
> the files of FWS
> Clean Water Management Trust Fund Projects - mapped by CGIA from the
> files of CWMTF Managed Areas - compiled and mapped by the Division
> of Parks and Recreation, including updates to Federal Land Ownership
> (flo) from the NC Corporate Geographic Database

Definitions:
"Lands Managed for Conservation and Open Space" are a combination of lands that are permanently protected open space and farmland and other lands that are managed as "open space" as defined by North Carolina General Statue §160A-407 (see below). For example, a wildlife conservation area that is owned by a public or non-profit land managing organization would count as permanently protected open space. Farmland that is preserved under the state's Farmland Preservation Trust Fund would count as permanently protected land. Permanently protected lands purchased or brought under an easement beginning in January 1999 count toward the state's goal of protecting one million acres of open space by 2009-the Million Acre Initiative. In addition, the Lands Managed for Conservation and Open Space database includes state-owned property that is used for recreational open space including areas reserved for boating access.

160A-407. Definitions.
(a) For the purpose of this Part an "open space" or "open area" is any space or area (i) characterized by great natural scenic beauty or (ii) whose existing openness, natural condition, or present state of use, if retained, would enhance the present or potential value of abutting or surrounding urban development, or would maintain or enhance the conservation of natural or scenic resources.
(b) For the purposes of this Part "open space" or "open area" and the "public use and enjoyment" of interests or rights in real property shall also include open space land and open space uses. The term "open space land" means any undeveloped or predominantly undeveloped land in an urban area that has value for one or more of the following purposes: (i) park and recreational purposes, (ii) conservation of land and other natural resources, or (iii) historic or scenic purposes. The term "open space uses" means any use of open space land for (i) park and recreational purposes, (ii) conservation of land and other natural resources, or (iii) historic or scenic purposes. (1963, c. 1129, s. 7; 1969, c. 35, s. 1; 1971, c. 698, s. 1.)

Lands Managed for Conservation and Open Space encompass many land categories and purposes: including but not limited to:
>Parks and Greenways
>Natural Hazard Mitigation ("buy-out" properties)
>Watershed Protection
>Farmland Preservation
>Cultural and Historic Lands
>State Park
>State Recreation Area
>State Natural Area
>State Nature Preserve
>State Lake
>State Historic Site

>State Gamelands
>State Coastal Reserve
>>Submerged Lands
>>Public Beach & Coastal Water Access
>NC Wetlands Restoration Program
>Conservation Reserve Enhancement Program
>National Wildlife Refuge
>National Forest, National Park
>NRCS Wetlands Reserve
>Other Nature Preserves
>
>Exclusions:
Not all land that has recreational, historic, scenic and natural resource value is defined as "open space and preserved farmland" for this project. The Lands Managed for Conservation and Open Space database does NOT include privately owned green spaces, homeowner association green spaces, public leases of private land, school yards, university and college campus land, athletic fields, golf courses, utility-owned land, privately owned forests, prison property, university campuses, research farms or military bases. Private land that is leased or managed by the state for gameland reserves is not included in the database and does not count toward the Million Acre goal. These types of property all have value as areas that are free of buildings and parking lots, but they lack the permanency and purposes required for this project's working definitions.

Purpose:
These data were created for the Farmland Preservation Trust Fund and the Million Acre Initiative to establish an inventory of protected lands, open space, and preserved farmland. The goal was to create a database and GIS layer for consistency and completeness. The intended users of these data are state and federal agencies, local governments, land trusts, and other private entities that have an interest in land conservation, open space and farmland preservation. Planners, land managers, and trust funds, in particular, are in need of comprehensive data for decision-making.

Supplemental_Information:
>system filename : lmcos file size = 10.28 mb
>
>Revisions and updates to this layer include:
>2) filename: lmcos202 The 2/28/02 version update:
>A) Addition of the Lampe-Woodard Tract (Pamlico County easement
>managed by Piedmont Land Conservancy).
>B) Addition of the Duncan Hunt Club Tract (Hyde County easement
>managed by Land Trust for Central NC).
>C) Boundary correction for Lake Waccamaw National Wildlife Refuge.
>1) filename: lmcos801 The 8/30/01 version was the first verion
>of this data.

Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: REQUIRED: The year (and optionally month, or month and day) for which the data set corresponds to the ground.
Range_of_Dates/Times:
Beginning_Date: 199307
Ending_Date: 20020228

Currentness_Reference: Data creation and revision dates

Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed

Spatial_Domain:
  Bounding_Coordinates:
    West_Bounding_Coordinate: -84.387547
    East_Bounding_Coordinate: -75.417011
    North_Bounding_Coordinate: 36.596910
    South_Bounding_Coordinate: 33.731783
Keywords:
  Theme:
    Theme_Keyword_Thesaurus: None
    Theme_Keyword: North Carolina
    Theme_Keyword: conservation
    Theme_Keyword: lands
    Theme_Keyword: open space
    Theme_Keyword: easement
    Theme_Keyword: fee simple
    Theme_Keyword: river basin
    Theme_Keyword: county
    Theme_Keyword: acres
    Theme_Keyword: steward
    Theme_Keyword: manager
    Theme_Keyword: million acres
    Theme_Keyword: DENR region
    Theme_Keyword: COG region
    Theme_Keyword: farmland preservation
    Theme_Keyword: state park
    Theme_Keyword: gamelands
    Theme_Keyword: wildlife refuge
    Theme_Keyword: coastal reserve
    Theme_Keyword: land trust
    Theme_Keyword: quadrangle
    Theme_Keyword: national forest
    Theme_Keyword: national park
  Place:
    Place_Keyword_Thesaurus:
      William S. Powell, The North Carolina GAZETTEER, A
      Dictionary of Tar Heel Places, (Chapel Hill: University
      of North Carolina Press), August 1984.
    Place_Keyword: North Carolina
Access_Constraints: None
Use_Constraints:
  Acknowledgement of products derived from this data set should cite
  the following: The boundaries of polygons in this data layer may not
  be consistent with the source data layers, particularly where multiple
  sources depicted the same property from different primary or secondary
  sources. Efforts have been made and will continue to be made to
  improve the boundaries in areas where multiple sources differ. Sources
  of the Lands for Conservation and Open Space data include data layers
  in the North Carolina Corporate Geographic Database. Earlier versions
  of source data sets may exist. The user must be sure to use the
  appropriate data set for the time period of interest. While efforts
  have been made to ensure that these data are accurate and reliable within
  the state of the art, CGIA cannot assume liability for any damages or
  misrepresentation caused by any inaccuracies in the data or as a result
  of changes to the data caused by system transfers.
Point_of_Contact:
  Contact_Information:
    Contact_Person_Primary:
      Contact_Person: Jeffrey Brown

Contact_Organization: NC Center for Geographic Information and Analysis
Contact_Address:
Address_Type: Mailing and physical address
Address: 301 North Wilmington Street, Suite 700
City: Raleigh
State_or_Province: North Carolina
Postal_Code: 27601
Country: U.S.A.
Contact_Voice_Telephone: (919)733-2090
Contact_Facsimile_Telephone: (919)715-0725
Contact_Electronic_Mail_Address: jeff@cgia.state.nc.us
Hours_of_Service: 8:30 am to 5:30 pm
Contact_Instructions: Preferred contact is by Electronic_Mail
Data_Set_Credit:
>Project funding provided through the North Carolina Department
>of Agriculture and Consumer Services.
>Technical assistance provided by the North Carolina Department
>of Environment and Natural Resources and project partners
>listed below:
>
>North Carolina Center for Geographic Information and Analysis
>301 North Wilmington Street, Suite 700
>Raleigh, NC 27601-2825
>
>Project Partners:
>The following agencies directly participated in the design,
>creation, and review of this data layer:
>NC Department of Environment and Natural Resources
> Division of Parks and Recreation
> Division of Coastal Management
> Wildlife Resources Commission
> Clean Water Management Trust Fund
>NC Department of Administration
> State Property Office
>Center for Geographic Information and Analysis
>NC Department of Agriculture and Consumer Services
>NC GAP Analysis, NC State University
>Conservation Trust for North Carolina
>Triangle J Council of Governments
>US Fish and Wildlife Service
Native_Data_Set_Environment: Microsoft Windows 2000 Version 5.2 (Build 3790) Service Pack 1; ESRI ArcCatalog 9.1.0.722
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
This composite data layer relies on the attribute accuracy of the source
files. Attributes were checked for spelling consistency (e.g., managing
agency name). Five locational attributes (quad name, county, river basin,
DENR region, COG region) were computed by the GIS based on the centroid of
each polygon (one-to-one relationship). Acres were computed by the GIS
and converted to hectares.
All polygons have a unique "land_id" computed by the GIS from the metric
state plane coordinates (x,y) of the center point (centroid) of the
polygon. Land_id is 12-character string made up of alternating digits
from each of six non-decimal x and y characters (with leading zero in y
string if necessary to fill six places).
Logical_Consistency_Report:
Using ESRI's ARC/INFO GIS software, the data set was built for arc and
polygon topology using the "build" command. The data set was then cleaned

with a fuzzy tolerance of (1 meter.) Topology has not been edited since the last build or clean.

Completeness_Report:

Polygons identified as "in-holdings"-privately held property that is not protected for conservation but is surrounded by protected land-are not included in the final data layer, nor are water areas within protected areas. Some public lands are not included as open space: military bases and facilities, state university campuses, research farms, and highway corridors.

Nearly all of the state-owned lands managed for conservation and open space are included in this dataset. A few properties may have been missed because of coding anomalies in the state-owned complexes file (i.e., this project selected properties based on complex use code and would have missed properties that were not coded as one of the selected code values). For the most part, the state properties are accurate, up-to-date, and complete. Federal lands are mostly complete in this dataset, including recently mapped properties that have permanent wildlife refuge easements. Recent boundary changes may not have been included in this dataset. Note that, like state properties, a selected set of federal properties was consistent with the definition of lands managed for conservation and open space.

The Local government lands managed for conservation and open space are most complete in the Triangle region where the Triangle J Council of Governments has an active "green space" mapping program. In other parts of the state, local government recreation projects and greenways may have been missed in the absence of an intensive local data collection effort.

Private lands are incomplete owing to inconsistent mapping capability among private organizations, though the majority of properties are included in this inventory with credit to the Conservation Fund and the Land Trust for North Carolina.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Boundaries in source files were created at a scale of 1:24,000 in most cases. Local government properties in the Triangle J region were derived from larger scale parcel boundaries in many instances. State property boundaries were created at a scale of 1:24,000 or from multiple sources on a base of 1:24,000.

In some cases, state properties were mapped at a scale of 1:100,000 and not yet edited for a base of 1:24,000. Federal properties vary in scale, from the wildlife refuge areas (1:24,000) to some of the national forest boundaries that were mapped at a scale of 1:100,000 or smaller.

Some land trust and Fish and Wildlife Service property boundaries were hand-drawn on USGS 1:24,000 scale quadrangles and then manually digitized. Easements funded by the Farmland Preservation Trust fund and Conservation Tax Credit properties were generated from deed descriptions and/or survey plats. Unique land identification numbers were created for each property and data attributes were managed in a Microsoft Access database to take advantage of relational database features and accommodate one-to-many relationships. For example, a single property may have multiple funding sources and multiple land categories. Attributes were related to the spatial data by the unique land_id.

Lineage:

Source_Information:

Source_Citation:
Citation_Information:
Originator: US Geological Survey
Publication_Date: Unknown
Title: USGS 7.5 Minute series paper maps
Geospatial_Data_Presentation_Form: Map
Publication_Information:
Publication_Place: Reston, Virginia
Publisher: US Geological Survey
Other_Citation_Details: Published map series
Source_Scale_Denominator: 24000
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1949
Ending_Date: 1993
Source_Currentness_Reference: Publication dates of quadrangles
Source_Citation_Abbreviation: None
Source_Contribution: In some cases, paper maps were used to delineate land trust boundaries
Process_Step:
Process_Description:
CGIA created digital spatial data for properties funded by the Farmland Preservation Trust Fund, and for Wildlife Refuge Area easements based on source materials including manually digitized the paper 1:24,000 USGS quadrangles creating digital files. Processing of these files included: editing linework, edgematching, map-joining, labeling, attributing, running checkplots, submitting questions to source agencies, correcting discrepancies, and creating metadata.
The integration of these new sources and existing sources followed the following procedure:
Using the 13 source files noted above, analysts integrated the polygon coverages into a single coverage, while retaining the original attributes of the sources with source ids retained in the integrated coverage. In many cases, a single property was included in multiple sources owing to multiple funding sources, management that differs from ownership, and different purposes among sources. Where a property was depicted by multiple sources, analysts selected the most reliable polygon to represent the property based on a rule set that reflected the scale and methods used for mapping each of the sources. In some cases, analysts created additional polygons or deleted small portions of polygons to resolve discrepancies between sources. In many cases, slivers representing the difference between sources were eliminated.
The integrated coverage represented each property once with source ids to which source attributes could be joined.
More detail on the process is available from CGIA. The integrated coverage is not fully consistent with any one source, but it represents a composite of the various sources.
Process_Date: 2001
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Jeffrey Brown
Contact_Organization: NC Center for Geographic Information and Analysis
Contact_Position: Project Manager
Contact_Address:
Address_Type: Mailing and physical address
Address: 301 North Wilmington Street, Suite 700

```
          City: Raleigh
          State_or_Province: North Carolina
          Postal_Code: 27601
          Country: U.S.A.
        Contact_Voice_Telephone: (919) 733-2090
        Contact_Facsimile_Telephone: (919)715-0725
        Contact_Electronic_Mail_Address: jeff@cgia.state.nc.us
        Hours_of_Service: 8:30AM - 5:30PM
        Contact_Instructions: Phone or electronic mail
    Process_Step:
      Process_Description: Metadata imported.
      Source_Used_Citation_Abbreviation: C:\DOCUME~1\david\LOCALS~1\Temp\xml49E.tmp
    Process_Step:
      Process_Description: Dataset copied.
      Source_Used_Citation_Abbreviation: Server=cgiatdb; Service=5151; Database=onemap_test; User=sdeadmin;
Version=sde.DEFAULT
Spatial_Data_Organization_Information:
  Indirect_Spatial_Reference: None
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: G-polygon
      Point_and_Vector_Object_Count: 4844
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
      Point_and_Vector_Object_Count: 4845
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Node, planar graph
      Point_and_Vector_Object_Count: 6096
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Area point
      Point_and_Vector_Object_Count: 4844
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Grid_Coordinate_System:
        Grid_Coordinate_System_Name: State Plane Coordinate System 1983
        State_Plane_Coordinate_System:
          SPCS_Zone_Identifier: 3200
          Lambert_Conformal_Conic:
            Standard_Parallel: 34.333333
            Standard_Parallel: 36.166667
            Longitude_of_Central_Meridian: -79.000000
            Latitude_of_Projection_Origin: 33.750000
            False_Easting: 609601.220000
            False_Northing: 0.000000
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: coordinate pair
        Coordinate_Representation:
          Abscissa_Resolution: 0.001871
          Ordinate_Resolution: 0.001871
        Planar_Distance_Units: meters
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137.000000
      Denominator_of_Flattening_Ratio: 298.257222
  Vertical_Coordinate_System_Definition:
```

Altitude_System_Definition:
Altitude_Resolution: 1.000000
Altitude_Encoding_Method: Explicit elevation coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: onemap_test.SDEADMIN.lmcos
Entity_Type_Definition:
Land parcel boundaries for properties managed for conservation and open space purposes by federal, state, local and private organizations in North Carolina
Entity_Type_Definition_Source: NCCGIA
Attribute:
Attribute_Label: OBJECTID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: DENR_REG
Attribute_Definition:
Regions in North Carolina used by the Department of Environment and Natural Resources for management and operations, based on counties
Attribute_Definition_Source: The State of North Carolina
Attribute_Domain_Values:
Unrepresentable_Domain: Region name varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: PERIMETER
Attribute_Definition: Total perimeter in coverage units
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 2.744
Range_Domain_Maximum: 19,085,040.000
Attribute_Units_of_Measure: meters
Attribute_Measurement_Resolution: 0.001
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: SPOPL
Attribute_Definition: ID from State Property Preserved Lands Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not incorporated from the State Property Preserved Lands Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: STPRK
Attribute_Definition: ID from NC State Parks Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not incorporated from the NC State Parks Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: COASTAL

Attribute_Definition: ID from CAMA Coastal Reserves Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the CAMA Coastal Reserves Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: WRCGMLF
Attribute_Definition: ID from Federally Owned Lands in the WRC Gamelands Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the Federally Owned Lands in the WRC Gamelands Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: PRSVFARM
Attribute_Definition: ID from Preserved Farmlands Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the Preserved Farmlands Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: LWCFREC
Attribute_Definition: ID from Land & Water Conservation Fund Recreation Projects Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the Land & Water Conservation Fund Recreation Projects Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: TJCOGLOC
Attribute_Definition: ID from Triangle J COG Local Government Open Space coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the Triangle J COG Local Government Open Space coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: TJCOGPRV
Attribute_Definition: ID from Triangle J COG Private Organizations Open Space Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the Triangle J COG Private Organizations Open Space Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: LNDTRUST
Attribute_Definition: ID from CGIA's Land Trust Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:

ID's vary (0 indicates that polygon was not
incorporated from the CGIA's Land Trust Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: TAXCRED
Attribute_Definition: ID from CGIA's Tax Credits Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the CGIA's Tax Credits Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: CWMTF
Attribute_Definition: ID from CGIA's Clean Water Management Trust Fund Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the CGIA's Clean Water Management Trust Fund Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: FWSEASE
Attribute_Definition: ID from Fish & Wildlife Service Easements Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the Fish & Wildlife Service Easements Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: FMA
Attribute_Definition: ID from Federally Managed Lands Coverage
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Unrepresentable_Domain:
ID's vary (0 indicates that polygon was not
incorporated from the Federally Managed Lands Coverage)
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: POLY_SOURC
Attribute_Definition:
The abbreviated name of the coverage that the polygon actually came from
and whether the boundary was adjusted or not. Ex: 'PRSVFARM', 'PRSVFARM-ADJUSTED'.
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Polygon source varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: HOLE
Attribute_Definition: Identifier of hole and water polygons
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: H
Enumerated_Domain_Value_Definition: Hole polygons
Enumerated_Domain_Value_Definition_Source: NCCGIA
Enumerated_Domain:

Enumerated_Domain_Value: W
Enumerated_Domain_Value_Definition: Water polygons
Enumerated_Domain_Value_Definition_Source: NCCGIA
Enumerated_Domain:
Enumerated_Domain_Value: (blank)
Enumerated_Domain_Value_Definition: All other polygons
Enumerated_Domain_Value_Definition_Source: NCCGIA
Attribute_Measurement_Frequency: As needed
Attribute:
Attribute_Label: LAND_ID
Attribute_Definition:
Unique identifier for each property, generated from alternating digits
of the state plane coordinates (meters) of the centroid of the property
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Land ID varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: MANAGEMENT
Attribute_Definition:
The organization that manages the land for conservation and open space
purposes, not necessarily the property owner
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Management organization varies in number of words.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: MA_CONTACT
Attribute_Definition: Contact person for the managing organization
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Management contact varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: MA_TYPE
Attribute_Definition:
Type of managing organization: federal, state, county , municipal,
city/county, other public, land trust, conservation group, or other non-profit
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Management type varies in number of words.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: MA_PHONE
Attribute_Definition: Managing organization phone number
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Management phone number varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: MA_EMAIL
Attribute_Definition: Managing organization contact email
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Management email varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: OWNER

Attribute_Definition:
Owner name, the organization that owns the property or is responsible for the conservation easement of a privately held property
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Owner name varies in number of words.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: OWNER_TYPE
Attribute_Definition:
Type of owner: federal, state, county , municipal, city/county, other public, land trust, conservation group, or other non-profit
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Owner type varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: TRANS_TYPE
Attribute_Definition:
Transaction type that brought the property into public ownership or responsibility: permanent easement, fee simple purchase, donation or not sure (many public properties have been held by the public for many years and would require research to determine the transaction type)
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Transaction type varies in number of words.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: AREA_NAME
Attribute_Definition:
The common name for the property such as "Lake Logan" or "WRC Sandhills Gameland" or simply "Farm"
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Area name varies in number of words.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: MAP_SCALE
Attribute_Definition: Base scale used for creating polygons, or the scale of the map source(s)
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Map scale varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: MAP_SOURCE
Attribute_Definition: Source materials or source agency for polygons
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Map source varies in number of words.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: TRANS_YR
Attribute_Definition: Year of transaction
Attribute_Definition_Source: NCCGIA
Attribute_Domain_Values:
Unrepresentable_Domain: Year varies in number of characters.
Attribute_Measurement_Frequency: None planned

Attribute:
  Attribute_Label: MILLION_AC
  Attribute_Definition:
    Qualifies toward the goal of one million acres of additional open
    space 1999-2009 - Determined by the year of transaction (starting
    in January 1999)
  Attribute_Definition_Source: NCCGIA
  Attribute_Domain_Values:
    Unrepresentable_Domain: Qualifier varies in number of words.
  Attribute_Measurement_Frequency: None planned
Attribute:
  Attribute_Label: PUB_ACCESS
  Attribute_Definition: Public access to the property: yes, no or conditional
  Attribute_Definition_Source: NCCGIA
  Attribute_Domain_Values:
    Unrepresentable_Domain: Public access in number of characters.
  Attribute_Measurement_Frequency: None planned
Attribute:
  Attribute_Label: ACRES
  Attribute_Definition:
    Acres per polygon (this is recalculated after the file
    is changed)
  Attribute_Definition_Source: Software computed
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum: 0.003491
      Range_Domain_Maximum: 279,766.281250
  Attribute_Measurement_Frequency: As needed
Attribute:
  Attribute_Label: COUNTY
  Attribute_Definition: Name of county containing the center point of the land parcel
  Attribute_Definition_Source: The State of North Carolina
  Attribute_Domain_Values:
    Unrepresentable_Domain: County name varies in number of characters.
  Attribute_Measurement_Frequency: None planned
Attribute:
  Attribute_Label: HECTARES
  Attribute_Definition:
    Hectares per polygon (this is recalculated after the file
    is changed)
  Attribute_Definition_Source: Software computed
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum: 0.001413
      Range_Domain_Maximum: 113,217.859375
  Attribute_Measurement_Frequency: As needed
Attribute:
  Attribute_Label: RIV_BASIN
  Attribute_Definition: Name of the major river basin containing the center point of the parcel
  Attribute_Definition_Source: NC DENR-Div of Water Quality, Water Quality Planning Section
  Attribute_Domain_Values:
    Unrepresentable_Domain: River basin names vary in length and number of words.
  Attribute_Measurement_Frequency: None planned
Attribute:
  Attribute_Label: COG
  Attribute_Definition:
    Regions defined by lead regional organizations (Councils of Government)
    in North Carolina, based on counties (regions have letter designations,

L, J, B, etc
Attribute_Definition_Source: The State of North Carolina
Attribute_Domain_Values:
Unrepresentable_Domain: COG region varies in number of characters.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: USGS_QUAD
Attribute_Definition: Name of the 1:24,000-scale quad containing the center point of the parcel
Attribute_Definition_Source: USGS
Attribute_Domain_Values:
Unrepresentable_Domain: Quad names vary in length and number of words.
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: onemap_test.SDEADMIN.lmcos.AREA
Attribute:
Attribute_Label: LMCOS_
Attribute:
Attribute_Label: LMCOS_ID
Attribute:
Attribute_Label: SHAPE
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: SHAPE.area
Attribute:
Attribute_Label: SHAPE.len
Detailed_Description:
Entity_Type:
Entity_Type_Label: Lands Managed for Conservation and Open Space
Entity_Type_Definition: Land parcel boundaries for properties managed for conservation and open space
Entity_Type_Definition_Source: NCCGIA
Attribute:
Attribute_Label: FNODE#
Attribute_Definition: From-node identifier of linear feature
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: 6,096
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: TNODE#
Attribute_Definition: To-node identifier of linear feature
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: 6,096
Attribute_Measurement_Frequency: None planned
Attribute:
Attribute_Label: LPOLY#
Attribute_Definition: Internal number of poly to left of arc
Attribute_Definition_Source: Software computed
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1

```
      Range_Domain_Maximum: 4,845
    Attribute_Measurement_Frequency: None planned
  Attribute:
    Attribute_Label: RPOLY#
    Attribute_Definition: Internal number of poly to right of arc
    Attribute_Definition_Source: Software computed
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: 4,845
    Attribute_Measurement_Frequency: None planned
  Attribute:
    Attribute_Label: LENGTH
    Attribute_Definition: Length of arc in coverage units
    Attribute_Definition_Source: Software computed
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 0.789
        Range_Domain_Maximum: 153,307.937
        Attribute_Units_of_Measure: meters
        Attribute_Measurement_Resolution: 10.0
    Attribute_Measurement_Frequency: As needed
  Attribute:
    Attribute_Label: LMCOS#
    Attribute_Definition: Internal feature number
    Attribute_Definition_Source: Software computed
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: 7,527
    Attribute_Measurement_Frequency: As needed
  Attribute:
    Attribute_Label: LMCOS-ID
    Attribute_Definition: Internal identification number
    Attribute_Definition_Source: Software computed
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: 7,527
    Attribute_Measurement_Frequency: As needed
Overview_Description:
  Entity_and_Attribute_Overview:
    One coverage, with a polygon attribute table (PAT) and an arc attribute
    table (AAT), depicting lands managed for conservation and open space. The
    coverage has the attributes listed in the following two tables.

    >LMCOS.PAT  Arc Attribute Table
    >COLUMN   ITEM NAME       WIDTH OUTPUT  TYPE N.DEC  DESCRIPTION
    >1    AREA              4    12     F      3   Total area in meters
    >5    PERIMETER         4    12     F      3   Total perimeter in meters
    >9    LMCOS#            4     5     B      -   Poly internal id number
    >13   LMCOS-ID          4     5     B      -   Poly user id number
    >17   SPOPL             4     4     B      -   ID from State Property Preserved
    >Lands Coverage
    >21   STPRK             4     4     B      -   ID from NC State Parks Coverage
    >25   COASTAL           4     4     B      -   ID from CAMA Coastal Reserves
    >Coverage
    >29   WRCGMLF           4     4     B      -   ID from Federally Owned Lands
```

```
    >in the WRC Gamelands Coverage
    >33   PRSVFARM          4    4    B     -   ID from Preserved Farmlands
    >Coverage
    >37   LWCFREC           4    4    B     -   ID from Land & Water
    >Conservation Fund Recreation Projects Coverage
    >41   TJCOGLOC          4    4    B     -   ID from Triangle J COG
    >Local Government Open Space coverage
    >45   TJCOGPRV          4    4    B     -   ID from Triangle J COG
    >Private Organizations Open Space Coverage
    >49   LNDTRUST          4    4    B     -   ID from CGIA's Land Trust
    >Coverage
    >53   TAXCRED           4    4    B     -   ID from CGIA's Tax Credits
    >Coverage
    >57   CWMTF             4    4    B     -   ID from CGIA's Clean Water
    >Management Trust Fund Coverage
    >61   FWSEASE           4    4    B     -   ID from Fish & Wildlife Service
    >Easements Coverage
    >65   FMA               4    4    B     -   ID from Federally Managed Lands
    >Coverage
    >69   POLY_SOURC        50   50   C     -   Polygon source
    >119  HOLE              1    1    C     -   Identifier of hole and water
    >polygons
    >120  LAND_ID           12   12   C     -   Unique identifier for each property
    >132  MANAGEMENT        75   75   C     -   Management organization
    >207  MA_CONTACT        25   25   C     -   Management contact
    >232  MA_TYPE           30   30   C     -   Management type
    >262  MA_PHONE          30   30   C     -   Management phone
    >292  MA_EMAIL          50   50   C     -   Management email
    >342  OWNER             75   75   C     -   Owner name
    >417  OWNER_TYPE        30   30   C     -   Owner type
    >447  TRANS_TYPE        20   20   C     -   Transaction type
    >467  AREA_NAME         50   50   C     -   Area name
    >517  MAP_SCALE         80   80   C     -   Map scale
    >597  MAP_SOURCE        35   35   C     -   Map source
    >632  TRANS_YR          8    8    C     -   Year of transaction
    >640  MILLION_AC        50   50   C     -   Million acre qualifier
    >690  PUB_ACCESS        15   15   C     -   Public access
    >705  ACRES             8    16   F     6   Acres per polygon
    >713  COUNTY            50   50   C     -   County name
    >763  HECTARES          8    16   F     6   Hectares per polygon
    >771  RIV_BASIN         50   50   C     -   River basin name
    >821  DENR_REG          50   50   C     -   DENR region
    >871  COG               50   50   C     -   Council of Governments region
    >921  USGS_QUAD         80   80   C     -   USGS 1:24,000-scale quad name
    >
    >MILACRE.AAT  Arc Attribute Table
    >COLUMN  ITEM NAME   WIDTH OUTPUT TYPE  DEC  DESCRIPTION
    >1    FNODE#     4    5    B    -   From-node id of linear feature
    >5    TNODE#     4    5    B    -   To-node id of linear feature
    >9    LPOLY#     4    5    B    -   Left-side polygon id of linear feature
    >13   RPOLY#     4    5    B    -   Right-side polygon id of linear feature
    >17   LENGTH     4    12   F    3   Length of linear feature in meters
    >21   LMCOS#     4    5    B    -   Internal id number
    >25   LMCOS-ID   4    5    B    -   Internal id number
   Entity_and_Attribute_Detail_Citation: None
Distribution_Information:
  Distributor:
   Contact_Information:
```

Contact_Organization_Primary:
Contact_Organization: NC Center for Geographic Information and Analysis
Contact_Position: Production Services
Contact_Address:
Address_Type: Mailing and physical address
Address: 301 North Wilmington Street, Suite 700
City: Raleigh
State_or_Province: North Carolina
Postal_Code: 27601-2825
Country: USA
Contact_Voice_Telephone: (919) 733-2090
Contact_Facsimile_Telephone: (919) 715-0725
Contact_Electronic_Mail_Address: dataq@cgia.state.nc.us
Hours_of_Service: 8:30AM - 5:30PM
Contact_Instructions:
Phone and electronic mail preferred
For current price information use a web browser:
COST INFORMATION - http://www.cgia.state.nc.us/cost.html
Resource_Description: Lands Managed for Conservation and Open Space
Distribution_Liability:
NCCGIA is charged with the development and maintenance of the State's corporate geographic database and, in cooperation with other mapping organizations, is committed to offering its users accurate, useful, and current information about the state. Although every effort has been made to ensure the accuracy of information, errors and conditions originating from physical sources used to develop the corporate database may be reflected in the data supplied. The client must be aware of data conditions and bear responsibility for the appropriate use of the information with respect to possible errors, original map scale, collection methodology, currency of data, and other conditions specific to certain data. NCCGIA does not support secondary distribution of this data. The use of trade names or commercial products does not constitute their endorsement by the NCCGIA or North Carolina State Government.
Standard_Order_Process:
Non-digital_Form:
FOR DIGITAL OR NON-DIGITAL DATA, Contact NC CGIA, Data Distribution to order data, Phone 919.733.2090 ... Email dataq@cgia.state.nc.us ... Web Page order form http://www.cgia.state.nc.us/cgdb/index.html
Fees:
For current FORMAT/MEDIA INFORMATION, use a web browser: http://www.cgia.state.nc.us/cost.html or phone NC CGIA Data Distribution 919.733.2090
Custom_Order_Process:
Data creation and large data analysis jobs contact Database Administration P:(919)733-2090. All data is available through standard ordering procedures on a cost recovery basis.
Technical_Prerequisites:
All formats supplied are created using ARC/INFO GIS software on Unix workstations. Other formats are available. Format compatibility is the user's responsibility. For more information on formats and media, use a web browser: FORMAT/MEDIA INFORMATION - http://www.cgia.state.nc.us/cost.html

Available_Time_Period:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 199208
Ending_Date: Present
Metadata_Reference_Information:
Metadata_Date: 20060214
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: North Carolina Center for Geographic Information and Analysis
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Position: Database Management
Contact_Address:
Address_Type: Mailing and physical address
Address: 301 North Wilmington Street, Suite 700
City: Raleigh
State_or_Province: North Carolina
Postal_Code: 27601-2825
Country: USA
Contact_Voice_Telephone: (919) 733-2090
Contact_Facsimile_Telephone: (919) 715-0725
Contact_Electronic_Mail_Address: dataq@cgia.state.nc.us
Hours_of_Service: 8:30AM - 5:30PM
Contact_Instructions: Phone and electronic mail preferred
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Access_Constraints: None
Metadata_Use_Constraints:
This metadata file is to accompany the data set identified
and received from NCCGIA. NCCGIA does not support secondary
distribution. If this data file was received from anyone
besides NCCGIA, this metadata file and the data set it
describes may contain discrepancies.
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

New York State Gap Analysis Land Stewardship Map 8.6 Data Presentation Form: MapNew
York State Gap Analysis Land Stewardship Map 8.6 Data Presentation Form: Map
Metadata also available as - [Parseable text] - [SGML]
Metadata:
  Identification_Information
  Data_Quality_Information
  Spatial_Data_Organization_Information
  Spatial_Reference_Information
  Entity_and_Attribute_Information
  Distribution_Information
  Distribution_Information
  Metadata_Reference_Information

  Identification_Information:
    Citation:
      Citation_Information:
        Originator:
        New York State Gap Analysis Project
        NY Cooperative Fish and Wildlife Research Unit (Department of Natural
        Resources, Cornell University), Cornell Institute for Resource
        Information Systems (Center for the Environment, Cornell University)
        Publication_Date: 2000
        Title:
        New York State Gap Analysis Land Stewardship Map
        8.6 Data Presentation Form: Map
        Publication_Information:
          Publication_Place: Ithaca, New York
          Publisher:
          New York Cooperative Fish and Wildlife Research Unit
          (Department of Natural Resources, Cornell University), Cornell
          Institute for Resource Information Systems (Center for the
          Environment, Cornell University)
    Description:
      Abstract:
      A statewide land-stewardship map was completed in November 1999. The
      land-stewardship database from which this map was created contains
      boundary layers obtained from cooperators or developed by NY Gap between
      1993 and 1999. The map contains 50 public land designations, which can be
      aggregated into the following general types: 7 federal government, 33
      state government, 3 local government, 1 non-governmental organization, 5
      private and 1 water type. Each property boundary is attributed with a
      Manager, Owner and GAP (management conservation) Status. In addition, all
      properties with a GAP Status of 1 or 2 have a Division and Unit attribute.

      Purpose:
      The initial goal of the GAP project is to identify literal gaps in current

      management of land areas containing high biological diversity. The land
      stewardship map contains boundaries for federal, state, and some municipal
      properties and was created to allow comparison of biologically diverse
      areas and public lands to identify the gaps. A significant gap would be
      any area containing high biodiversity that is not currently being managed
      for biodiversity conservation. Public lands are classified into four
      categories, based on current stewardship practices, to facilitate
      identification of gaps on public lands.

The process of gap analysis depends substantially upon the technology of geographic information systems. A geographic information system (GIS) is a combination of computer hardware and software used to store, manipulate, analyze, compare, summarize, and display spatially referenced information. Spatially referenced information is any kind of information that can be related to points, lines, or polygons on a map, so that a coordinate system (e.g. latitude-longitude, Universal Transverse Mercator) can be used to define those points, lines, or polygons. The hardware components of a typical GIS include a computer or workstation and associated input and output devices.
The Gap Analysis Program (GAP) is a nationwide effort under the direction of the Biological Resources Division of the U.S. Geological Survey of the U.S. Department of the Interior. It is the first time in the history of the United States that a comprehensive effort has been made to inventory and computerize the kinds and geographic distributions of species of plants and animals that contribute to our national diversity. GAP is being done on a state-by-state basis and currently is underway in all 50 states. Seven states, all west of the Mississippi River, have completed gap analysis projects. Using the methods of GIS, maps of distributions of butterflies, amphibians, reptiles, birds, mammals and threatened, endangered, or sensitive species and their habitats, typically are overlaid upon maps of public lands. Those geographic areas where there are high varieties of species not occurring on such lands are considered "gaps" in a total system of land ownership that can be assumed to be in place to provide for long-term conservation of biological diversity, among other purposes.
Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1993
Ending_Date: 1999
Currentness_Reference:
The coverage is as current as the components with which it was made. Categories follow:
US Fish and Wildlife Service 1999
US Forest Service 1998
US Dept. of Defence 1999
US National Park Service 1999
New York State (NYS) Office of Parks, Recreation and Historic Preservation 1999
NYS Dept. of Environmental Conservation 1999
NYS Dept. of Military and Naval Affairs 1998
City of New York (NY) Parks and Recreation 1998
NY City Dept of Environmental Preservation 1998
The Nature Conservancy Preserves 1999
Private land conservation easements 1998
Private institutions 1999
Status:
Progress: Complete
Maintenance_and_Update_Frequency:
There are no current plans for updating the land stewardship data.
1.5 Geographic Extent:
Spatial_Domain:
Description_of_Geographic_Extent: New York State
Bounding_Coordinates:
West_Bounding_Coordinate: -79.7489
East_Bounding_Coordinate: -71.6202

North_Bounding_Coordinate: 45.5175
South_Bounding_Coordinate: 40.1831
Keywords:
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: Land stewardship
Theme_Keyword: Land use
Theme_Keyword: Land ownership
Theme_Keyword: Management status
Theme_Keyword: Gap analysis
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: New York
Place_Keyword: United States
Place_Keyword: Northeastern United States
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 1990's
Temporal_Keyword: Late 20th century
Taxonomy:
Keywords/Taxon:
Taxonomic_Keywords:
Federal, New York State, local government, non-governmental
organization, private, water, management status, status levels
1-2-3-3a-4.
1.7.2 Taxonomic Coverage:
General_Taxonomic_Coverage:
Land units were identified to legal owner and legal manager, and were
associated with the GAP management status level based on current
proportion of natural cover on the land unit, and available current legal
written mandates providing for long term protection of natural cover on
the land unit.
Access_Constraints: None
Use_Constraints: See www.gap.uidaho.edu
Point_of_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Charles R. Smith
Contact_Organization:
NY State Gap Analysis Project
NY Cooperative Fish and Wildlife Research Unit (Department of Natural
Resources, Cornell University)
Contact_Position: Principal Investigator
Contact_Address:
Address_Type: Mailing and Physical Address
Address: 206C Fernow Hall, Cornell University
City: Ithaca
State_or_Province: NY
Postal_Code: 14853
Country: USA
Contact_Voice_Telephone: (607) 255-3219
Contact_Facsimile_Telephone: (607) 255-1895
Contact_Electronic_Mail_Address: crs6@cornell.edu
Hours_of_Service: Monday - Friday, 9a.m. - 5p.m.
Data_Set_Credit:
Charles R. Smith, Milo E. Richmond, Stephen D. DeGloria, Shari K. Gregory,
Magdeline Laba , Joseph T. Weber, Stephen D. Smith, Jeffrey J. Fiore,
Elizabeth A. Hill, Danielle E. Ogurcak, Jennie L. Braden, Eric H. Fegraus.

Native_Data_Set_Environment: UNIX-ARC/INFO (v 7.1.2)
Analytical_Tool:
Analytical_Tool_Description: ARC/INFO
Tool_Access_Information:
Tool_Access_Instructions:
N/A
1.16.2.3 Tool Computer & Operating System: Solaris 2.8
Tool_Contact:

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A formal accuracy assessment was not conducted for the stewardship coverage and thus attribute accuracy is unknown. An informal review was conducted by state agency personnel, and no corrections were advised.
Quantitative_Attribute_Accuracy_Assessment:
Attribute_Accuracy_Value: Unknown
Attribute_Accuracy_Explanation: see above
Logical_Consistency_Report:
All polygons are closed. Each polygon has one and only one attribute.
Completeness_Report:
This map includes all currently available coverages for public and private lands. We are aware that some state and federal lands are not included due to lack of available digital boundaries, or lack of maps that could be used to create accurate digital boundaries. Numerous county and town managed public lands are not included; most of these data are not available in digital boundaries at this time. Private conservation organization lands are also incomplete but we included all TNC preserves that had digital boundaries. GAP Management status was determined for each land type in consulatation with owners and managers when ever possible. Some interpretation was required for designations; management status is as complete as possible using the information available to us during preparation of the data (1993-1999).
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
Almost all boundaries digitized by NY-GAP were registered with a RMS error of 0.003 or less. These include most wildlife management areas, Seneca Army Depot, and West Point MA.
Lineage:
Methodology:
Methodology_Type: Lab
Methodology_Identifier:
Methodology_Keyword_Thesaurus: None
Methodology_Keyword: ARC/INFO
Methodology_Keyword: Digitizer
Methodology_Keyword: GIS
Methodology_Description:
a) Create or obtain digital maps of all public and private conservation lands.
b) Incorporate ownership and stewardship for all lands on the map.
c) Determine GAP Status code that best defined each land unit.
Methodology_Citation:
Citation_Information:
Originator:
National Gap Analysis Program, United States

Geological Survey
Publication_Date: 6/5/98
Title: A Handbook for Conducting Gap Analysis
Other_Citation_Details:
<http://www.gap.uidaho.edu/gap/AboutGAP/Handbook/Index.htm>
Source_Information:
Source_Citation:
Citation_Information:
Originator: NYSDEC Bureau of Public Lands
Publication_Date: Unpublished Material
Title: State lands and private conservation lands
Series_Information:
Series_Name:
Issue_Identification:
Publication_Information:
Publication_Place: data provided from department contact
Publisher:
Type_of_Source_Media: CD
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1997
Ending_Date: 1999
Source_Currentness_Reference: Observed
Source_Contribution:
source of boundaries of all types of state lands, some private
easements, private conservation lands, and non-governmental organization
lands.
Source_Citation:
Citation_Information:
Originator: National Park Service
Publication_Date: Unpublished Material
Title: National Park Service lands
Series_Information:
Series_Name:
Issue_Identification:
Publication_Information:
Publication_Place:
Publisher:
Type_of_Source_Media: floppy disk, electronic files
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1998
Ending_Date: 1999
Source_Currentness_Reference: Observed
Source_Contribution:
boundaries of National Park Service lands
Source_Citation:
Citation_Information:
Originator: Kate Hubbs, The Nature Conservancy
Publication_Date: unpublished material
Title: The Nature Conservancy lands
Series_Information:
Series_Name:
Issue_Identification:
Publication_Information:
Publication_Place:

Publisher:
Type_of_Source_Media: electronic files
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1999
Ending_Date: 1999
Source_Currentness_Reference:
Source_Contribution: boundaries of TNC preserves
Source_Citation:
Citation_Information:
Originator: Region 5, US Fish and Wildlife Service
Publication_Date: 1999
Title: US Fish and Wildlife Service refuges
Series_Information:
Series_Name:
Issue_Identification:
Publication_Information:
Publication_Place: unknown
Publisher: unknown
Type_of_Source_Media: web, electronic files
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1999
Ending_Date: 1999
Source_Currentness_Reference: Observed
Source_Contribution:
boundaries of current USFWS refuges.
Source_Citation:
Citation_Information:
Originator: Cornell Institute for Resource Information Systems
Publication_Date: unpublished material
Title: USDA Forest Service lands
Series_Information:
Series_Name:
Issue_Identification:
Publication_Information:
Publication_Place: unpublished material
Publisher: none
Type_of_Source_Media: digitized files
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1997
Ending_Date: 1998
Source_Currentness_Reference: Observed
Source_Contribution:
boundaries of USDA Forest Service lands in NYS (Finger Lakes National Forest).
Process_Step:
Process_Description:
Assigning attribute ownership and management authority. Ownership was almost always consistent with management authority, but in a few cases two parties were concerned. Information used to assign codes came from data sources, agencies, organizations, and maps.
Process_Date: 1999
Process_Contact:

Contact_Information:
Contact_Person_Primary:
Contact_Person: Shari Gregory
Contact_Organization: NY State Gap Analysis Project
Contact_Position: Research Support Specialist
Contact_Address:
Address_Type: Mailing and Physical Address
Address:
Fernow Hall, Department of Natural Resources,
Cornell University
City: Ithaca
State_or_Province: NY
Postal_Code: 14853
Country: USA
Contact_Voice_Telephone: (607) 255-6578
Contact_Facsimile_Telephone: (607) 255-1895
Contact_Electronic_Mail_Address: skg5@cornell.edu
Process_Step:
Process_Description:
Determine the appropriate GAP Status code (1-4) for each land unit. To attempt to apply GAP Status Codes consistently to all parcels legal documents were researched, agency personnel and officials from other managing organizations were contacted, and GAP manuals were consulted. Some decisions were applied to all units managed by a particular agency (such as the Fish and Wildlife Service Refuges) while other decisions were made for each unit managed by an agency branch (such as NYS DEC Wildlife Management Areas).
Process_Date: 1999
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Shari Gregory
Contact_Organization: NY State Gap Analysis Project
Contact_Position: Research Support Specialist
Contact_Address:
Address_Type: Mailing and Physical Address
Address:
Fernow Hall, Department of Natural Resources,
Cornell University
City: Ithaca
State_or_Province: NY
Postal_Code: 14853
Country: USA
Contact_Voice_Telephone: (607) 255-6578
Contact_Facsimile_Telephone: (607) 255-1895
Contact_Electronic_Mail_Address: skg5@cornell.edu

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Raster
Raster_Object_Information:
Raster_Object_Type: Grid cell
Row_Count: 16795
Column_Count: 21949

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Map_Projection:
        Map_Projection_Name: Transverse Mercator
        Map_Projection_Parameters:
          Longitude_of_Central_Meridian: -75
          Latitude_of_Projection_Origin: 0
          False_Easting: 500000
          False_Northing: 0
          Scale_Factor_at_Equator: 0.9996
      Grid_Coordinate_System:
        Grid_Coordinate_System_Name: Universal Transverse Mercator
        Universal_Transverse_Mercator:
          UTM_Zone_Number: 18
      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: Coordinate pair
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983
      Ellipsoid_Name: GRS 1980

Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: Public land
      Entity_Type_Definition: Land which is not privately owned.
      Entity_Type_Definition_Source: Federal Gap Analysis Project
    Attribute:
      Attribute_Label: Owner
      Attribute_Definition:
      A 2 digit numeric code (followed by 2 zeros) for the legal owner of the
      land unit. It is a usually an agency or organization (such as 1000 =
      Federal; 1600 = USDI National Park Service).
      Attribute_Definition_Source: NY-GAP
      Attribute_Domain_Values:
        Range_Domain:
          Range_Domain_Minimum: 1000
          Range_Domain_Maximum: 8000
        Codeset_Domain:
          Codeset_Name:
          Codeset_Source:
          Verbal descriptors are in NYstewardship_lookup.dbf
    Attribute:
      Attribute_Label: Manager
      Attribute_Definition:
      A more specific numeric code that is associated with the specific agency
      and the type of land within that agency jurisdiction (such as 1617 =
      National Park Service Wilderness Area).
      Attribute_Definition_Source: NY-GAP
      Attribute_Domain_Values:
        Range_Domain:
          Range_Domain_Minimum: 1000
          Range_Domain_Maximum: 8000
        Codeset_Domain:
          Codeset_Name:
          Codeset_Source:

Verbal descriptors are in NYstewardship_lookup.dbf
Attribute:
Attribute_Label: Division
Attribute_Definition:
The primary unit comprised of the internal management units of the managing entity. NY-GAP used agency regions for this category.
Attribute_Definition_Source: NY-GAP
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Agency divisions
Enumerated_Domain:
Enumerated_Domain_Value:
Definition: Names of agency divisions
Enumerated_Domain:
Enumerated_Domain_Value:
Source: The various agencies represented in the public lands coverage
Attribute:
Attribute_Label: Unit
Attribute_Definition:
The name or code the managing entity uses to identify the land unit or internal management unit.
Attribute_Definition_Source:
Attribute_Domain_Values:
Unrepresentable_Domain:
Parcel names â€“ most parcels have unique names.
Attribute:
Attribute_Label: Gap Status
Attribute_Definition:
Manager Status category, from 1 to 4. Status 1 and 2 lands have permanent protection from conversion of natural land cover for 90-95% of the area; Status 3 lands have permanent protection for the majority of the area; Status 4 lands have no known or legally recognized mandates to prevent conversion of natural land cover to anthropogenic habitat types.

Attribute_Definition_Source: Federal Gap Analysis Project, NY-GAP
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: 4
Codeset_Domain:
Codeset_Name:
Codeset_Source:
Verbal descriptors are in statuscode_descriptions.dbf
Attribute:
Attribute_Label: Alt name
Attribute_Definition:
An alternate name used within agencies for the land unit.
Attribute_Definition_Source:
Agencies represented in the public lands coverage
Attribute_Domain_Values:
Unrepresentable_Domain:
Alt names â€“ most parcels have unique names.

Distribution_Information:

Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person:
Charles R. Smith
10.1.2 Contact Orgnaization: NY State Gap Analysis Project, NY
Cooperative Fish and Wildlife Research Unit (Department of
Natural Resources, Cornell University)
Contact_Position: Principal Investigator
Contact_Address:
Address_Type: Mailing and Physical Address
Address: 206C Fernow Hall, Cornell University
City: Ithaca
State_or_Province: NY
Postal_Code:
14850
10.4.6 County: USA
Contact_Voice_Telephone: (607) 255-3219
Contact_Facsimile_Telephone: (607) 255-1895
Contact_Electronic_Mail_Address: crs6@cornell.edu
Hours_of_Service: Monday - Friday, 9a.m. - 5p.m.
Distribution_Liability: NA
Standard_Order_Process:
Non-digital_Form: ?
Digital_Form:
Digital_Transfer_Information:
Digital_Transfer_Option:
Fees: None

Distribution_Information:
Distributor:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Ree Brannon
Contact_Organization: National GAP Analysis Program
Contact_Position: Senior GIS Analyst
Contact_Address:
Address_Type: mailing and physical address
Address: 530 S. Asbury St., Suite 1
City: Moscow
State_or_Province: ID
Postal_Code: 83843
Country: USA
Contact_Voice_Telephone: 208-885-3720
Contact_Facsimile_Telephone: 208-885-3618
Contact_Electronic_Mail_Address: abrannon@uidaho.edu
Hours_of_Service: 8:00 a.m. to 4:00 p.m. Monday Through Frid
Distribution_Liability:
Although these data have been processed successfully on a computer system at
the U.S. Geological Survey, no warranty expressed or implied is made
regarding the accuracy or utility of the data on any other system or for
general or scientific purposes, nor shall the act of distribution constitute
any such warranty. This disclaimer applies both to individual use of the
data and aggregate use with other data. It is strongly recommended that
these data are directly acquired from a U.S. Geological Survey server, and
not indirectly through other sources which may have changed the data in some

way. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data. The U.S. Geological Survey shall not be held liable for improper or incorrect use of the data described and/or contained herein.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: ARC/INFO
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: http:/www.gap.uidaho.edu/gap
Offline_Option:
Offline_Media: CD-ROM
Recording_Format: ISO
Fees:
none

Metadata_Reference_Information:
Metadata_Date: XX January, 2000
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Charles R. Smith
Contact_Organization:
NY State Gap Analysis Project, NY
Cooperative Fish and Wildlife Research Unit, (Department of Natural Resources, Cornell University)
Contact_Position: Principal Investigator
Contact_Address:
Address_Type: Mailing and Physical Address
Address: 206C Fernow Hall, Cornell University
City: Ithaca
State_or_Province: NY
Postal_Code: 14853
Country: USA
Contact_Voice_Telephone: (607) 255-3219
Contact_Facsimile_Telephone: (607) 255-1895
Contact_Electronic_Mail_Address: crs6@cornell.edu
Hours_of_Service: Monday - Friday, 9a.m. - 5p.m.
Metadata_Standard_Name:
FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.4.38 on Thu Jan 18 09:06:43 2001

Pennsylvania Conservation StewardshipPennsylvania Conservation Stewardship
Metadata also available as - [Parseable text] - [SGML]
Metadata:
  Identification_Information
  Data_Quality_Information
  Spatial_Data_Organization_Information
  Spatial_Reference_Information
  Entity_and_Attribute_Information
  Distribution_Information
  Metadata_Reference_Information

  Identification_Information:
    Citation:
      Citation_Information:
        Originator: Joseph A. Bishop
        Publication_Date: 1998
        Title: Pennsylvania Conservation Stewardship
        Publication_Information:
          Publication_Place: University Park, Pa
          Publisher:
          Pennsylvania Gap Analysis Project, Environmental Resources Research
          Institute
        Online_Linkage:
        <ftp://www.pasda.psu.edu/pub/pasda/gap/steward/pasteward.zip>
        Larger_Work_Citation:
          Citation_Information:
            Originator: Environmental Resource Research Institute
            Publication_Date: 199807
            Title: Pennsylvania Gap Analysis Project
            Publication_Information:
              Publication_Place: University Park, Pa
              Publisher:
              Environmental Resource Research Institute
    Description:
      Abstract:
      Coverage showing stewardship of managed conservation lands throughout the
      Commonwealth. Includes federal, state, county and privately owned lands
      including National and State Parks, Wildlife Refuges and Forests, county
      parks, and private conservancy lands
      Purpose:
      Part of the Pennsylvania Gap Analysis progression, this dataset was
      designed to facilitate the interpretation of Pennsylvania's surface
      vegetation and habitat models for vertebrate species in the Commonwealth.
      Supplemental_Information: For use at 1:24,000 or smaller scale.
      Supplemental_Information:
      Further information about the Pennsylvania Gap Analysis Project at:
      <http://www.erri.psu.edu/web/projects/gappage.htm>
    Time_Period_of_Content:
      Time_Period_Information:
        Single_Date/Time:
          Calendar_Date:
          1998
      Currentness_Reference: ground condition
    Status:
      Progress: Complete

Maintenance_and_Update_Frequency: continually
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -80.99976768
East_Bounding_Coordinate: -74.26650027
North_Bounding_Coordinate: 42.74693603
South_Bounding_Coordinate:
38.91875493
Keywords:
Theme:
Theme_Keyword_Thesaurus: none
Theme_Keyword: state parks
Theme_Keyword: state gamelands
Theme_Keyword: state forests
Theme_Keyword: administrative units
Theme_Keyword: local parks
Theme_Keyword: county parks
Theme_Keyword: conservancy lands
Theme_Keyword: national battlefields
Theme_Keyword: national experimental forests
Theme_Keyword: national forest scenic areas
Theme_Keyword: national forest wilderness areas
Theme_Keyword: national historic parks
Theme_Keyword: national heritage sites
Theme_Keyword: national memorials
Theme_Keyword: national military parks
Theme_Keyword: national natural landmarks
Theme_Keyword: national recreation areas
Theme_Keyword: national wildlife refuges
Theme_Keyword: state forest natural areas
Theme_Keyword: state forest wilderness areas
Theme_Keyword: state parks natural area
Theme_Keyword: Nature Conservancy
Theme_Keyword: Western Pennsylvania Conservancy
Place:
Place_Keyword_Thesaurus: GNIS
Place_Keyword:
Pennsylvania
Access_Constraints:
none
Use_Constraints:
For educational/demonstration purposes only. The Originator, Publisher and Distributor exclude any and all implied warranties and make no warranty or representation with respect to the data files or accompanying documentation, including quality, performance, merchantability or fitness for a particular purpose. These data files and documentation are provided 'as is' and the User assumes the entire risk as to their quality and performance.
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Point_of_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Joseph A. Bishop
Contact_Organization: Environmental Resources Research Institute

Contact_Address:
Address_Type: mailing address
Address:
Environmental Resources Research Institute, The Pennsylvania State
University, Land and Water Building
City: University Park
State_or_Province: Pennsylvania
Postal_Code: 16802
Country: United States
Contact_Voice_Telephone: 814-863-0291
Contact_Electronic_Mail_Address:
jab190@psu.edu

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Confirmed visually by review and through use.
Quantitative_Attribute_Accuracy_Assessment:
Attribute_Accuracy_Value: unknown
Attribute_Accuracy_Explanation:
N/A
Logical_Consistency_Report: Polygon topology exists.
Completeness_Report: Complete within the borders of Pennsylvania
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
Compiled from sources meeting National Map Accuracy Standards for
1:24,000 scale data. Boundaries check and corrected through matching of
adjoining stewardship areas and roads from from the various sources used
in derivation.
Quantitative_Horizontal_Positional_Accuracy_Assessment:
Horizontal_Positional_Accuracy_Value: 25
Horizontal_Positional_Accuracy_Explanation:
Estimate (meters) based on accuracy of source materials and
corrections made through aligning boundaries of adjacent conservation
lands.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: Environmental Resources Research Institute
Publication_Date: 1998
Title: State parks in Pennsylvania
Publication_Information:
Publication_Place: Harrisburg, PA
Publisher: Pennsylvania Department of Environmental Protection
Online_Linkage:
<ftp://penne.deasy.psu.edu/pub/pasda/compendium/sparks.zip>
Larger_Work_Citation:
Citation_Information:
Originator: Pennsylvania Department of Environmental Protection
Publication_Date: 199605
Title: Pennsylvania GIS Compendium
Publication_Information:
Publication_Place: Harrisburg, PA
Publisher: Pennsylvania Department of Environmental Protection

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        Online_Linkage:
        <ftp://www.pasda.psu.edu/pub/pasda/compendium>
  Type_of_Source_Media: online
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date:
        1996
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: sparks
  Source_Contribution: Base data referenced for source data for current
  set.
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Environmental Resources Research Institute
      Publication_Date: 1996
      Title: State gamelands in Pennsylvania
      Publication_Information:
        Publication_Place: Harrisburg, PA
        Publisher: Pennsylvania Department of Environmental Protection
      Online_Linkage:
      <ftp://penne.deasy.psu.edu/pub/pasda/compendium/sgamlnds.zip>
      Larger_Work_Citation:
        Citation_Information:
          Originator: Pennsylvania Department of Environmental Protection
          Publication_Date: 199605
          Title: Pennsylvania GIS Compendium
          Publication_Information:
            Publication_Place: Harrisburg, PA
            Publisher: Pennsylvania Department of Environmental Protection

          Online_Linkage:
          <ftp://www.pasda.psu.edu/pub/pasda/compendium>
  Type_of_Source_Media: online
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date:
        1996
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: sgamlnds
  Source_Contribution: Based data referenced for source data for current
  set.
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Environmental Resources Research Institute
      Publication_Date: 1996
      Title: State forests in Pennsylvania
      Publication_Information:
        Publication_Place: Harrisburg, PA
        Publisher: Pennsylvania Department of Environmental Protection
      Online_Linkage:
      <ftp://penne.deasy.psu.edu/pub/pasda/compendium/sforest.zip>
      Larger_Work_Citation:
        Citation_Information:
          Originator: Pennsylvania Department of Environmental Protection
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        Publication_Date: 199605
        Title: Pennsylvania GIS Compendium
        Publication_Information:
          Publication_Place: Harrisburg, PA
          Publisher: Pennsylvania Department of Environmental Protection

        Online_Linkage:
        <ftp://www.pasda.psu.edu/pub/pasda/compendium>
  Type_of_Source_Media: online
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date:
        1996
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: sforest
  Source_Contribution: Based data referenced for source data for current
  set.
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Environmental Resources Research Institute
      Publication_Date: 1996
      Title: National Forests in Pennsylvania
      Geospatial_Data_Presentation_Form: vector digital data
      Publication_Information:
        Publication_Place: Harrisburg, PA
        Publisher: Pennsylvania Dept. of Environmental Protection
      Online_Linkage:
      <http://www.pasda.psu.edu>
  Source_Scale_Denominator: 24000
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  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date:
        1992
    Source_Currentness_Reference: publication date
  Source_Citation_Abbreviation: nforest
  Source_Contribution: National Forest boundaries
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Environmental Resources Research Institute
      Publication_Date: 1996
      Title: County Park Boundaries
      Geospatial_Data_Presentation_Form: vector digital data
      Publication_Information:
        Publication_Place: Harrisburg, PA
        Publisher: Pennsylvania Dept. of Environmental Protection
      Online_Linkage: <http://www.pasda.psu.edu>
      Larger_Work_Citation:
        Citation_Information:
          Originator: Pennsylvania Department of Environmental Protection
          Publication_Date: 199605
          Title: Pennsylvania GIS Compendium
          Publication_Information:
            Publication_Place: Harrisburg, PA
```

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          Publisher: Pennsylvania Department of Environmental Protection

        Online_Linkage:
        <ftp://www.pasda.psu.edu/pub/pasda/compendium>
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  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
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        Unknown
    Source_Currentness_Reference: ground condition
  Source_Citation_Abbreviation: cparks
  Source_Contribution: Base data referenced for source data for current
  set.
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Environmental Resources Research Institute
      Publication_Date: 1996
      Title: National Landmarks in Pennsylvania
      Geospatial_Data_Presentation_Form: vector digital data
      Publication_Information:
        Publication_Place: Harrisburg, PA
        Publisher: Pennsylvania Dept. of Environmental Protection
      Online_Linkage: <http://www.pasda.psu.edu>
      Larger_Work_Citation:
        Citation_Information:
          Originator: Pennsylvania Department of Environmental Protection
          Publication_Date: 199605
          Title: Pennsylvania GIS Compendium
          Publication_Information:
            Publication_Place: Harrisburg, PA
            Publisher: Pennsylvania Department of Environmental Protection

        Online_Linkage:
        <ftp://www.pasda.psu.edu/pub/pasda/compendium>
  Source_Scale_Denominator: 24000
  Type_of_Source_Media: online
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    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date:
        1996
    Source_Currentness_Reference: ground condition
  Source_Citation_Abbreviation: nlndmrk
  Source_Contribution: Base data referenced for source data for current
  set.
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Environmental Resources Research Institute
      Publication_Date: 1996
      Title: National Parks in Pennsylvania
      Geospatial_Data_Presentation_Form: vector digital data
      Publication_Information:
        Publication_Place: Harrisburg, PA
        Publisher: Pennsylvania Dept. of Environmental Protection
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      Online_Linkage: <http://www.pasda.psu.edu>
      Larger_Work_Citation:
        Citation_Information:
          Originator: Pennsylvania Department of Environmental Protection
          Publication_Date: 199605
          Title: Pennsylvania GIS Compendium
          Publication_Information:
            Publication_Place: Harrisburg, PA
            Publisher: Pennsylvania Department of Environmental Protection

          Online_Linkage:
          <ftp://www.pasda.psu.edu/pub/pasda/compendium>
  Source_Scale_Denominator: 24000
  Type_of_Source_Media: online
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date:
        1996
    Source_Currentness_Reference: ground condition
  Source_Citation_Abbreviation: npark
  Source_Contribution: Base data referenced for source data for current
  set.
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Environmental Resources Research Institute
      Publication_Date: 1996
      Title: National Wildlife Preserves in Pennsylvania
      Geospatial_Data_Presentation_Form: vector digital data
      Publication_Information:
        Publication_Place: Harrisburg, PA
        Publisher: Pennsylvania Dept. of Environmental Protection
      Online_Linkage: <http://www.pasda.psu.edu>
      Larger_Work_Citation:
        Citation_Information:
          Originator: Pennsylvania Department of Environmental Protection
          Publication_Date: 199605
          Title: Pennsylvania GIS Compendium
          Publication_Information:
            Publication_Place: Harrisburg, PA
            Publisher: Pennsylvania Department of Environmental Protection

          Online_Linkage:
          <ftp://www.pasda.psu.edu/pub/pasda/compendium>
  Source_Scale_Denominator: 24000
  Type_of_Source_Media: online
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date:
        1996
    Source_Currentness_Reference: ground condition
  Source_Citation_Abbreviation: nwildpr
  Source_Contribution: Base data referenced for source data for current
  set.
Source_Information:
  Source_Citation:
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Citation_Information:
Originator: Environmental Resources Research Institute
Publication_Date: 1996
Title: Pennsylvania major roads
Publication_Information:
Publication_Place: Harrisburg, PA
Publisher: Pennsylvania Department of Environmental Protection
Online_Linkage:
<http://www.pasda.psu.edu/documents.cgi/compendium/majrrds.xml>
Larger_Work_Citation:
Citation_Information:
Originator: Pennsylvania Department of Environmental Protection
Publication_Date: 199605
Title: Pennsylvania GIS Compendium
Publication_Information:
Publication_Place: Harrisburg, PA
Publisher: Pennsylvania Department of Environmental Protection

Online_Linkage:
<ftp://www.pasda.psu.edu/pub/pasda/compendium>
Source_Scale_Denominator: 24000
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
1995
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: roads
Source_Contribution:
Data used for locating and aligning boundaries of adjacent properties
Process_Step:
Process_Description:
Source coverages were combined into a single coverage and boundaries
were corrected in accordance to Department of Conservation of Natural
Resources and Game Commission maps showing locations of privately owned
and other conservation lands not included in source coverages.
Source_Used_Citation_Abbreviation: sparks
Source_Used_Citation_Abbreviation: sgamlnds
Source_Used_Citation_Abbreviation: sforest
Source_Used_Citation_Abbreviation: nforest
Source_Used_Citation_Abbreviation: cparks
Source_Used_Citation_Abbreviation: nlndmrk
Source_Used_Citation_Abbreviation: npark
Source_Used_Citation_Abbreviation: nwildpr
Process_Date: 1998
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Joseph A. Bishop
Contact_Organization: Environmental Resources Research Institute
Contact_Address:
Address_Type: mailing address
Address:
Environmental Resources Research Institute, The Pennsylvania State
University, Land and Water Building
City: University Park
State_or_Province: Pennsylvania

Postal_Code: 16802
Country: United States
Contact_Voice_Telephone: 814-863-0291
Contact_Electronic_Mail_Address:
jab190@psu.edu

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count:
2666

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Lambert Conformal Conic
Lambert_Conformal_Conic:
Standard_Parallel: 33
Standard_Parallel: 45
Longitude_of_Central_Meridian: -96
Latitude_of_Projection_Origin: 39
False_Easting: 0
False_Northing:
0
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: Coordinate Pair
Coordinate_Representation:
Abscissa_Resolution: .000256
Ordinate_Resolution: .000256
Planar_Distance_Units:
meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206
Denominator_of_Flattening_Ratio:
294.9786982

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: Managed land area
Entity_Type_Definition:
Areas of public or private land maintained as conservation areas
Attribute:
Attribute_Label: FID
Attribute_Definition: System record identifier
Attribute_Definition_Source: ESRI
Attribute:

Attribute_Label: Shape
Attribute_Definition: Internal system generated geometry
Attribute_Definition_Source: ESRI
Attribute:
Attribute_Label: AREA
Attribute_Definition: Area of polygon in coverage units
Attribute_Definition_Source: calculated
Attribute:
Attribute_Label: PERIMETER
Attribute_Definition: perimeter of polygon in coverage units
Attribute_Definition_Source: calculated
Attribute:
Attribute_Label: MGDL2_
Attribute_Definition: Internal sequential polygon ID
Attribute_Definition_Source: ESRI
Attribute:
Attribute_Label: MGDL2_ID
Attribute_Definition: User-defined polygon ID number
Attribute_Definition_Source: PA GAP
Attribute:
Attribute_Label: MANAGER
Attribute_Definition: National Gap Analysis Project code for land manager type
Attribute_Definition_Source: National Gap Analysis Program
Attribute:
Attribute_Label: OWNER
Attribute_Definition: National Gap Analysis Program coding for type of land owner
Attribute_Definition_Source: National Gap Analysis Program
Attribute:
Attribute_Label: STATUS
Attribute_Definition: Land Management Status Code
Attribute_Definition_Source: National Gap Analysis Program
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition:
Human disturbance of habitat legally prohibited (excepting managed access and/or interpretation) and non-human disturbance is not controlled unless it threatens human life or property.
Enumerated_Domain_Value_Definition_Source: National Gap Analysis Program
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition:
Naturalistic areas with a legal mandate prohibiting conversion to humanistic/cultural development.
Enumerated_Domain_Value_Definition_Source: National Gap Analysis Program
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition:
Any additional permanent conversion of lands to humanistic/cultural development uses is restricted by legal mandates.
Enumerated_Domain_Value_Definition_Source: National Gap Analysis Program
Enumerated_Domain:
Enumerated_Domain_Value: 4

Enumerated_Domain_Value_Definition:
No legal restriction on additional permanent conversion of lands.
Enumerated_Domain_Value_Definition_Source: National Gap Analysis Program
Enumerated_Domain:
Enumerated_Domain_Value: 8
Enumerated_Domain_Value_Definition:
Private lands
Attribute:
Attribute_Label: DIVISION
Attribute_Definition: Name of the steward agency, or "private"
Attribute:
Attribute_Label: UNIT
Attribute_Definition: Name of conservation land unit
Attribute:
Attribute_Label: PA_MGMT_CODE
Attribute_Definition:
Two digit code assigned by Pennsylvania Gap Analysis project. First digit corresponds to GAP-MGMT_CODE definition, see the description of domain values for definitions of this digit. Second digit further classifies land management criteria according to the definitions included here.
Attribute_Definition_Source: Pennsylvania Gap Analysis Project
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1.1
Enumerated_Domain_Value_Definition: Hunting not permitted by management plan
Enumerated_Domain:
Enumerated_Domain_Value: 1.2
Enumerated_Domain_Value_Definition: Hunting permitted by management plan
Enumerated_Domain:
Enumerated_Domain_Value: 2.1
Enumerated_Domain_Value_Definition:
A management plan exists which either emphasizes the protection of habitat or deemphasizes timber production. The plan also restricts surface mining
Enumerated_Domain:
Enumerated_Domain_Value: 2.2
Enumerated_Domain_Value_Definition:
A management plan exists which emphasizes timber production and/or suface mining is not restricted
Enumerated_Domain:
Enumerated_Domain_Value: 3.1
Enumerated_Domain_Value_Definition: Naturalistic landscapes
Enumerated_Domain:
Enumerated_Domain_Value: 3.2
Enumerated_Domain_Value_Definition:
Mixture of naturalistic and/or humanistic/cultural development landscapes
Enumerated_Domain:
Enumerated_Domain_Value: 4.1
Enumerated_Domain_Value_Definition: Areas with a stewardship or management plan
Enumerated_Domain:
Enumerated_Domain_Value: 4.2
Enumerated_Domain_Value_Definition:

Areas lacking a stewardship or management plan
Attribute:
Attribute_Label: GAP-MGMT_CODE
Attribute_Definition: National Gap Analysis Project Land Management Status Code
Attribute_Definition_Source: Naitonal Gap Analysis Project
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition:
Human disturbance of habitat legally prohibited (excepting managed access and/or interpretation) and non-human disturbance is not controlled unless it threatens human life or property
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition:
Naturalistic areas with a legal mandate prohipiting conversion to humanistic/cultural development
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition:
Any additional permanent conversion of lands to humanistic/cultural development uses is restricted by legal mandates
Enumerated_Domain:
Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition:
No legal restrictions on additional permanent conversion of lands.
Enumerated_Domain:
Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition:
Private lands
Attribute:
Attribute_Label: UNIQUE_ID
Attribute_Definition: Parcel identifier if any
Attribute_Definition_Source: County agencies
Attribute:
Attribute_Label: COLOR
Attribute_Definition: Color id, keyed from LCODE value, for use with legend files
Attribute_Definition_Source: PA GAP
Attribute:
Attribute_Label: LCODE
Attribute_Definition: Alphabetic code indicating type of stewardship
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: CL
Enumerated_Domain_Value_Definition: County and Local Parks
Enumerated_Domain:
Enumerated_Domain_Value: NB
Enumerated_Domain_Value_Definition: National Battlefield
Enumerated_Domain:
Enumerated_Domain_Value: NFEF
Enumerated_Domain_Value_Definition: National Experimental Forest
Enumerated_Domain:
Enumerated_Domain_Value: NFSA
Enumerated_Domain_Value_Definition: National Forest Scenic Area
Enumerated_Domain:
Enumerated_Domain_Value: NFWA

Enumerated_Domain_Value_Definition: National Forest Wilderness Area
Enumerated_Domain:
Enumerated_Domain_Value: NHP
Enumerated_Domain_Value_Definition: National Historic Park
Enumerated_Domain:
Enumerated_Domain_Value: NHS
Enumerated_Domain_Value_Definition: National Heritage Site
Enumerated_Domain:
Enumerated_Domain_Value: NM
Enumerated_Domain_Value_Definition: National Memorial
Enumerated_Domain:
Enumerated_Domain_Value: NMP
Enumerated_Domain_Value_Definition: National Military Park
Enumerated_Domain:
Enumerated_Domain_Value: NNL
Enumerated_Domain_Value_Definition: National Natural Landmark
Enumerated_Domain:
Enumerated_Domain_Value: NRA
Enumerated_Domain_Value_Definition: National Recreation Area
Enumerated_Domain:
Enumerated_Domain_Value: NWR
Enumerated_Domain_Value_Definition: National Wildlife Refuge
Enumerated_Domain:
Enumerated_Domain_Value: OPC
Enumerated_Domain:
Enumerated_Domain_Value: P
Enumerated_Domain_Value_Definition: Privately owned conservancy
Enumerated_Domain:
Enumerated_Domain_Value: PANC
Enumerated_Domain_Value_Definition: Pennsylvania Chapter of the
Nature Conservancy
Enumerated_Domain:
Enumerated_Domain_Value: PI
Enumerated_Domain_Value_Definition: Private Inholding
Enumerated_Domain:
Enumerated_Domain_Value: SFNA
Enumerated_Domain_Value_Definition: State Forest Natural Area
Enumerated_Domain:
Enumerated_Domain_Value: SFOR
Enumerated_Domain_Value_Definition: State Forest
Enumerated_Domain:
Enumerated_Domain_Value: SFWA
Enumerated_Domain_Value_Definition: State Forest Wilderness Area
Enumerated_Domain:
Enumerated_Domain_Value: SGL
Enumerated_Domain_Value_Definition: State Game Land
Enumerated_Domain:
Enumerated_Domain_Value: SPK
Enumerated_Domain_Value_Definition: State Park
Enumerated_Domain:
Enumerated_Domain_Value: SPNA
Enumerated_Domain_Value_Definition: State Parks Natural Area
Enumerated_Domain:
Enumerated_Domain_Value: WPAC
Enumerated_Domain_Value_Definition:
Western Pennsylvania Conservancy
Attribute:
Attribute_Label: ACODE

Attribute_Definition: Alternate stewardship code
Attribute_Definition_Source: See description of "LCODE" Attribute
Attribute:
Attribute_Label: AKA
Attribute_Definition: Alternative name for conservation land area
Attribute_Definition_Source: PA GAP
Attribute:
Attribute_Label: ANALGROUP
Attribute_Definition: Reclassification of steward type for analysis
Attribute_Definition_Source: PA GAP
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: CONSERVANCY
Enumerated_Domain_Value_Definition: Private conservancy lands
Enumerated_Domain_Value_Definition_Source: PA GAP
Enumerated_Domain:
Enumerated_Domain_Value: LOCAL
Enumerated_Domain_Value_Definition: Local or county government holdings
Enumerated_Domain_Value_Definition_Source: PA GAP
Enumerated_Domain:
Enumerated_Domain_Value: NPS
Enumerated_Domain_Value_Definition: National Park Service holdings
Enumerated_Domain_Value_Definition_Source: PA GAP
Enumerated_Domain:
Enumerated_Domain_Value: PA_SF
Enumerated_Domain_Value_Definition: Pennsylvania State Forest
Enumerated_Domain_Value_Definition_Source: PA GAP
Enumerated_Domain:
Enumerated_Domain_Value: PA_SGL
Enumerated_Domain_Value_Definition: Pennsylvania State Game Lands
Enumerated_Domain_Value_Definition_Source: PA GAP
Enumerated_Domain:
Enumerated_Domain_Value: PA_SP
Enumerated_Domain_Value_Definition: Pennsylvania State Park
Enumerated_Domain_Value_Definition_Source: PA GAP
Enumerated_Domain:
Enumerated_Domain_Value: PRI_INHOLD
Enumerated_Domain_Value_Definition: Privately held hands
Enumerated_Domain_Value_Definition_Source: PA GAP
Enumerated_Domain:
Enumerated_Domain_Value: USFS
Enumerated_Domain_Value_Definition: United States Forest Service
Enumerated_Domain_Value_Definition_Source: PA GAP
Enumerated_Domain:
Enumerated_Domain_Value: USFWS
Enumerated_Domain_Value_Definition: United States Fish and Wildlife Service
Enumerated_Domain_Value_Definition_Source: PA GAP

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Pennsylvania Spatial Data Access (PASDA)

Contact_Address:
Address_Type: mailing address
Address: Land and Water Building
City: University Park
State_or_Province: PA
Postal_Code: 16802
Country: USA
Contact_Electronic_Mail_Address:
pasda@psu.edu
Resource_Description:
<ftp://www.pasda.psu.edu/pub/pasda/gap/steward/pasteward.zip>
Distribution_Liability:
The USER shall indemnify, save harmless, and, if requested, defend those parties involved with the development and distribution of this data, their officers, agents, and employees from and against any suits, claims, or actions for injury, death, or property damage arising out of the use of or any defect in the FILES or any accompanying documentation. Those parties involved with the development and distribution excluded any and all implied warranties, including warranties or merchantability and fitness for a particular purpose and makes no warranty or representation, either express or implied, with respect to the FILES or accompanying documentation, including its quality, performance, merchantability, or fitness for a particular purpose. The FILES and documentation are provided "as is" and the USER assumes the entire risk as to its quality and performance. Those parties involved with the development and distribution of this data will not be liable for any direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the FILES or any accompanying documentation.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: ArcView Shapefile
Format_Version_Number: 3.x
File_Decompression_Technique: Zip compression
Digital_Transfer_Option:
Online_Option:
Access_Instructions:
<http://www.pasda.psu.edu>
Fees:
none

Metadata_Reference_Information:
Metadata_Date: 20000220
Metadata_Review_Date:
20000329
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Pennsylvania Spatial Data Access (PASDA)
Contact_Person: Christopher Pfeiffer
Contact_Position: Metadata Coordinator
Contact_Address:
Address_Type: mailing address
Address: 141 Land and Water Building
City: University Park
State_or_Province: PA

Postal_Code: 16802
Country: USA
Contact_Voice_Telephone: 814-865-8792
Contact_Facsimile_Telephone: 814-865-3378
Contact_Electronic_Mail_Address:
cxp7@psu.edu
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998

Generated by mp version 2.5.2 on Thu Dec 21 13:50:37 2000

Identification_Information:
  Citation:
    Citation_Information:
      Originator: Tennessee Wildlife Resources Agency
      Publication_Date: 1997
      Title: Land Stewardship of Tennessee
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: \\03ftcollins\Graphics\data_by_state\tennessee\gap\stewardship\tnsteward
  Description:
    Abstract: The land stewardship coverage includes all federally and state owned land, as well as local and privately owned lands that are managed for conservation. To obtain an estimate of the protection afforded biodiversity, land ownership was assigned a land management status category. A subcommittee formed to categorize the lands as to their management status developed five categories for Tennessee. The Land Management Status Categories range from Management Status 1, for those lands with a management plan for providing the greatest amount of protection to biodiversity, to Management Status 4b, for those lands not identified as functioning to conserve biodiversity.
    Purpose: The land stewardship map was developed for the purpose of describing the management status of elements of biodiversity and identifying potential gaps in habitat. It is part of a larger dataset which includes predicted animal distribution and detailed landcover. The stewardship map, when combined with the other layers, can quantitatively show how much of each landcover type or species distribution is managed primarily for conservation purposes. This helps natural resource planners make more informed decisions about land managment. The idea is to keep common species common through conservation management. The stewardship map is intended to be used at a resolution of 100,000 or greater.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 1997
    Currentness_Reference: publication date
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None planned
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -90.381064
      East_Bounding_Coordinate: -81.646783
      North_Bounding_Coordinate: 36.732349
      South_Bounding_Coordinate: 34.878462
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: none
      Theme_Keyword: Land Stewardship
      Theme_Keyword: Land ownership
      Theme_Keyword: Conservation
      Theme_Keyword: Gap Analysis
      Theme_Keyword: Biodiversity
    Place:
      Place_Keyword_Thesaurus: none
      Place_Keyword: Kentucky
      Place_Keyword: United States
  Access_Constraints: None
  Use_Constraints: None
  Point_of_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: Tennessee Wildlife Resources Agency
        Contact_Person: Jeanette Jones
      Contact_Position: GIS/Image Processing Specialist
      Contact_Address:
        Address_Type: mailing and physical address

Address: Tennessee Wildlife Resources Agency
Address: P. O. Box 40747
City: Nashville
State_or_Province: TN
Postal_Code: 37204
Country: USA
Contact_Voice_Telephone: (615) 781-6534
Contact_Facsimile_Telephone: (615) 781-6683
Contact_Electronic_Mail_Address: Jeanette.Jones@state.tn.us
Native_Data_Set_Environment:
The was created in and stored as a polygon coverage in ARC/INFO 7.1 software for the UNIX environment on a SUN Ultra-1 station using the Solaris 5.5.1 operating system.
Data_Quality_Information:
Lineage:
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 9209
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Label point
Point_and_Vector_Object_Count: 1270
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
Point_and_Vector_Object_Count: 1268
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Point
Point_and_Vector_Object_Count: 2160
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Label point
Point_and_Vector_Object_Count: 350
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: tnstwrd.pat
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:

Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: AREA
Attribute_Definition: Area in meters squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: PERIMETER
Attribute_Definition: Perimeter in meters.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: TNSTWRD#
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: TNSTWRD-ID
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Attribute:
Attribute_Label: NAME
Attribute_Definition: Name of the land parcel.
Attribute:
Attribute_Label: MANAGEMENT
Attribute_Definition: Name or acronym of the entity managing the parcel of land.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain:
Enumerated_Domain_Value: BSA
Enumerated_Domain_Value_Definition: Boy Scouts of America
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: CITY
Enumerated_Domain_Value_Definition: City
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: CORPS
Enumerated_Domain_Value_Definition: U.S. Army Marine Corps
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: COUNTY
Enumerated_Domain_Value_Definition: County
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: FWS
Enumerated_Domain_Value_Definition: U.S. Fish and Wildlife Service
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: LOCAL
Enumerated_Domain_Value_Definition: Local
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: METRO
Enumerated_Domain_Value_Definition: Nashville/Davidson County Metropolitan Government

Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: MTSU
Enumerated_Domain_Value_Definition: Middle Tennessee Sate University
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: NHR
Enumerated_Domain_Value_Definition: National Historic Register
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: NPS
Enumerated_Domain_Value_Definition: National Park Service
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: ORNL/TWRA
Enumerated_Domain_Value_Definition: Oak Ridge National Lab/Tennessee Wildlife Resources Agency
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: PRIVATE
Enumerated_Domain_Value_Definition: Private
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: SEWANEE UNIV.
Enumerated_Domain_Value_Definition: University of the South
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: STATE
Enumerated_Domain_Value_Definition: Various State Universities
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: TDA
Enumerated_Domain_Value_Definition: Tennessee Department of Agriculture
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: TDA/TWRA
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: TDEC
Enumerated_Domain_Value_Definition: Tennessee Department of Environment and Conservation
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: TDEC/TWRA
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: TDOC
Enumerated_Domain_Value_Definition: Tennessee Department of Corrections
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: TVA
Enumerated_Domain_Value_Definition: Tennessee Valley Authority
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: TWRA
Enumerated_Domain_Value_Definition: Tennessee Wildlife Resources Agency
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: U.S. ARMY
Enumerated_Domain_Value_Definition: U.S. Army

Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: USAF/TWRA
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: USFS
Enumerated_Domain_Value_Definition: U.S. Forest Service
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: USFS/TWRA
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: UT
Enumerated_Domain_Value_Definition: University of Tennessee
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Attribute:
Attribute_Label: CONAME
Attribute_Definition: Name of the county in which the land resides.
Attribute:
Attribute_Label: OWNERSHIP
Attribute_Definition: Owner of the land parcel.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: Private / Inholding
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition: Local / City / County / Municipal
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: 10
Enumerated_Domain_Value_Definition: Federal Government
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: 20
Enumerated_Domain_Value_Definition: State Government
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Attribute:
Attribute_Label: STATUS
Attribute_Definition: Gap Status Code
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: Areas with a plan or institutional mandate for the active management or preservation of its natural features.
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition: Areas that are generally managed for its natural features, but which may receive limited use that degrades the quality of those features.
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition: Public lands without special designations mandating preservation or management of natural features, but with legal mandates preventing permanent conversion to anthropogenic habitat types and conferring protection to populations of Federally listed endangered, threatened, or candidate species.
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project

Enumerated_Domain:
Enumerated_Domain_Value: 4a
Enumerated_Domain_Value_Definition: Public and private lands without a legal mandate preventing conversion to anthropogenic habitat types, but which function to maintain landscape biodiversity, at least in the short term.
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Enumerated_Domain:
Enumerated_Domain_Value: 4b
Enumerated_Domain_Value_Definition: All other private and public land which are not identified as functioning to conserve biodiversity including land which is managed primarily for intensive human activity.
Enumerated_Domain_Value_Definition_Source: Tennessee Gap Project
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Tennessee Wildlife Resources Agency
Contact_Person: Jeanette Jones
Contact_Position: GIS/Image Processing Specialist
Contact_Address:
Address_Type: mailing and physical address
Address: Tennessee Wildlife Resources Agency
Address: P. O. Box 40747
City: Nashville
State_or_Province: TN
Postal_Code: 37204
Country: USA
Contact_Voice_Telephone: (615) 781-6534
Contact_Facsimile_Telephone: (615) 781-6683
Contact_Electronic_Mail_Address: Jeanette.Jones@state.tn.us
Resource_Description: Downloadable Data
Distribution_Liability:
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 9.177
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: http:www.gap.uidaho.edu/gap
Offline_Option:
Offline_Media: CD-ROM
Recording_Format: ISO
Fees: None
Metadata_Reference_Information:
Metadata_Date: 20030814
Metadata_Contact:
Contact_Information:

Contact_Organization_Primary:
Contact_Organization: Tennessee Wildlife Resources Agency
Contact_Person: Jeanette Jones
Contact_Position: GIS/Image Processing Specialist
Contact_Address:
Address_Type: mailing and physical address
Address: Tennessee Wildlife Resources Agency
Address: P. O. Box 40747
City: Nashville
State_or_Province: TN
Postal_Code: 37204
Country: USA
Contact_Voice_Telephone: (615) 781-6534
Contact_Facsimile_Telephone: (615) 781-6683
Contact_Electronic_Mail_Address: Jeanette.Jones@state.tn.us
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Access_Constraints: None
Metadata_Use_Constraints: None
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile
Metadata_Extensions:
Online_Linkage: http://www.esri.com/metadata/esriprof80.html
Profile_Name: ESRI Metadata Profile

VAGAPStewardship (Gap Status Raster)

Metadata:

Identification_Information

Data_Quality_Information

Spatial_Data_Organization_Information

Spatial_Reference_Information

Entity_and_Attribute_Information

Distribution_Information

Metadata_Reference_Information

Identification_Information:

Citation:

Citation_Information:

Originator: Conservation Management Institute

Publication_Date: 2000

Title:

VAGAPStewardship (Gap Status Raster)

Online_Linkage: http://fwie.fw.vt.edu

Description:

Abstract:

This is a raster format of VAGAP stewardship with the gap status code in each grid cell. It is derived from the VAGAP stewardship vector.

Purpose:

This raster was used in calculation programs to complete the gap analysis for Virginia.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1999

Currentness_Reference:

ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None planned

Keywords:

Theme:

Theme_Keyword: stewardship

Theme_Keyword: gap status

Access_Constraints: none

Use_Constraints:

none

Point_of_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Conservation Management Institute

Contact_Person: Scott Klopfer

Contact_Position: GIS & Remote Sensing Division LEader

Contact_Address:

Address_Type: mailing and physical address

Address:

CMI

2903 West Roanoke Street

City: Blacksburg

State_or_Province: Virginia

Postal_Code: 24061

Country: USA

Contact_Voice_Telephone: (540) 231-7348

Contact_TDD/TTY_Telephone: none

Contact_Facsimile_Telephone: (540) 231-7019

Contact_Electronic_Mail_Address: sklopfer@vt.edu

Hours_of_Service: 8-5 M-F est

Contact Instructions:

email preferred

Data_Set_Credit:

conservation Management Institute

Security_Information:

Security_Classification: Unclassified

Native_Data_Set_Environment:

Windows NT 4.0

Cross_Reference:

Citation_Information:

Originator: Conservation Management INstitute

Publication_Date: Unpublished Material

Title:

VAGAP Final Report

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Data_Quality_Information:

Completeness_Report:

This dataset is considered complete for VA

Lineage:

Source_Information:

Source_Scale_Denominator: unknown

Source_Citation_Abbreviation:

VAGAP Stewardship Vector

Source_Contribution:

Provided the attribute information for assigning cell values to tis

raster.

Source_Information:

Source_Citation_Abbreviation:

VAGAP Land cover raster

Source_Contribution:

Provided the cell and raster attributes for converting the stewardship

gap status field to a raster

Process_Step:

Process_Description:

This raster was created directly from Arc View using Spatial analyst

"convert to grid" tool. The value for gap stewardship was written tto

each corresponding grid cell.

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Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Raster

Raster_Object_Information:

Raster_Object_Type: Grid Cell

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Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geodetic_Model:

Horizontal_Datum_Name: NAD 27

Ellipsoid_Name: Clark 1866

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Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: Value

Entity_Type_Definition:

VAGAP assigned gap stewardship value

Attribute:

Attribute_Label: Gap Status

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition:

Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity) are allowed to proceed without interference or are mimicked through management.

Enumerated_Domain:

Enumerated_Domain_Value: 2

Enumerated_Domain_Value_Definition:

Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive use or management practices that degrade the quality of existing natural communities.

Enumerated_Domain:

Enumerated_Domain_Value: 3

Enumerated_Domain_Value_Definition:

Status 3: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type or localized intense type. It also confers protection to federally listed endangered and threatened species throughout the area.

Enumerated_Domain:

Enumerated_Domain_Value: 4

Enumerated_Domain_Value_Definition:

Status 4: Lack of irrevocable easement or mandate to prevent conversion of natural habitat types to anthropogenic habitat types. Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.

Overview_Description:

Entity_and_Attribute_Overview:

There are 4 gap classifciations assigned to parcels in theis dataset

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Distribution_Information:

Distributor:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Ree Brannon

Contact_Organization: National Gap Analysis PRogram

Contact_Position: Senior GIS Analyst

Contact_Address:

Address_Type: mailing and physical address

Address:

530 Asbury Street

City: Moscow

State_or_Province: Idaho

Postal_Code: 83843

Country: USA

Contact_Voice_Telephone: 208 885 3720

Contact_TDD/TTY_Telephone: n/a

Contact_Facsimile_Telephone: 208 885 3618

Contact_Electronic_Mail_Address: abrannon@uidaho.edu

Hours_of_Service: 8-5 M-F est

Contact Instructions:

email preferred

Resource_Description: VAGAP stewardship gap status raster

Distribution_Liability:

User assumes all liability. This data not designed for legal property

delineation or management.

Standard_Order_Process:

Non-digital_Form:

not dorectly available for download

Fees: none

Ordering_Instructions:

contact CM

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Metadata_Reference_Information:

Metadata_Date: 20000904

Metadata_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Scott Klopfer

Contact_Organization: CMI

Contact_Address:

Address_Type: mailing and physical address

Address:

CMI

203 West Roanoke Street

City: Blacksburg

State_or_Province: Virginia

Postal_Code: 24061

Country: USA

Contact_Voice_Telephone: (540) 231-7348

Contact_TDD/TTY_Telephone: n/a

Contact_Facsimile_Telephone: (540) 231-7019

Contact_Electronic_Mail_Address: sklopfer@vt.edu

Hours_of_Service: 8-5 M-F est

Contact Instructions:

email preferred

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wvstewardvwvstewardv
Metadata:
  Identification_Information
  Data_Quality_Information
  Spatial_Data_Organization_Information
  Spatial_Reference_Information
  Entity_and_Attribute_Information
  Distribution_Information
  Metadata_Reference_Information

  Identification_Information:
    Citation:
      Citation_Information:
        Originator: Jacquelyn M. Strager
        Originator: Charles B. Yuill
        Originator: Petra Bohall Wood
        Publication_Date: 2000
        Title: wvstewardv
        Geospatial_Data_Presentation_Form: vector digital data
        Publication_Information:
          Publication_Place: Morgantown WV
          Publisher:
          Natural Resource Analysis Center and West Virginia Cooperative Fish
          and Wildlife Research Unit, West Virginia University
    Description:
      Abstract:
      A key goal of the West Virginia Gap Analysis Project is to compare the
      distribution of mapped biodiversity elements with current land management
      or stewardship status. To aid in this goal, land stewardship parcels in
      this digital dataset are labeled with the agency or other entity managing
      the land and its resources, as well as a management status code indicating
      level of biodiversity protection.
      Purpose:
      Developed in support of the WV Gap Analysis Project to provide information
      regarding land stewardship (management responsibility) and biodiversity
      management status.
      Supplemental_Information: Please refer to the WV-GAP final report.
    Time_Period_of_Content:
      Time_Period_Information:
        Multiple_Dates/Times:
          Single_Date/Time:
            Calendar_Date: 1992
          Single_Date/Time:
            Calendar_Date: 2000
      Currentness_Reference: Last updated January 2000
    Status:
      Progress: Complete
      Maintenance_and_Update_Frequency: Updates may or may not be performed.
    Spatial_Domain:
      Bounding_Coordinates:
        West_Bounding_Coordinate: -82.703678
        East_Bounding_Coordinate: -77.658338
        North_Bounding_Coordinate: 40.640305
        South_Bounding_Coordinate: 37.160609
    Keywords:

Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: Conservation lands
Theme_Keyword: Land stewardship
Place:
Place_Keyword_Thesaurus: West Virginia
Place_Keyword: West Virginia
Place_Keyword: WV
Access_Constraints: None
Use_Constraints:
These data may not be appropriate at map scales finer than 1:100,000 scale.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Natural Resource Analysis Center
Contact_Person: Jacquelyn Strager
Contact_Position: Research Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: P.O. Box 6108
City: Morgantown
State_or_Province: WV
Postal_Code: 26506-6108
Country: USA
Contact_Voice_Telephone: 304-293-4832 ext.4456
Contact_Facsimile_Telephone: 304-293-3752
Contact_Electronic_Mail_Address: jrowe@wvu.edu
Data_Set_Credit:
Natural Resource Analysis Center, West Virginia University, West Virginia Gap Analysis
Native_Data_Set_Environment:
Microsoft Windows NT Version 4.0 (Build 1381) Service Pack 6; ESRI ArcCatalog 8.1.1.649

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
Changes in ownership, changes in stewardship, creation of new conservation easements, and purchase of lands may change the mapped extent and/or conservation status of many parcels.
Logical_Consistency_Report:
Gap Analysis management status assigned consistent with standards set forth in Gap Analysis handbook (<http://www.gap.uidaho.edu>)
Completeness_Report:
This database is assumed accurate and complete as of 2000. However, there may be some conservation lands that are not present in this database.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: Based on USGS 1:100,000 scale quadrangle maps.
Vertical_Positional_Accuracy:
Vertical_Positional_Accuracy_Report: N/A
Lineage:
Source_Information:
Source_Citation:
Citation_Information:

```
        Originator: US Geological Survey
        Publication_Date: varies
        Title: USGS Topographic Maps
        Geospatial_Data_Presentation_Form: map
        Series_Information:
          Series_Name: 30 x 60 minute series
          Issue_Identification: Unknown
        Publication_Information:
          Publication_Place: Reston, VA
          Publisher: US Geological Survey
      Source_Scale_Denominator: 100000
      Type_of_Source_Media: paper
      Source_Time_Period_of_Content:
        Time_Period_Information:
          Single_Date/Time:
            Calendar_Date: varies
      Source_Citation_Abbreviation: USGS Topographic Map, 30 by 60 minute
      series
      Source_Contribution: land stewardship polygon outlines and names
    Process_Step:
      Process_Description:
      Digitized boundaries of state parks, wildlife management areas, and
      other entities from paper 1:100,000 and 1:24,000 scale USGS quadrangle
      maps.
      Process_Date: 1999
      Process_Contact:
        Contact_Information:
          Contact_Organization_Primary:
            Contact_Organization: Natural Resource Analysis Center
            Contact_Person: Jacquelyn Strager
          Contact_Position: Research Coordinator
          Contact_Address:
            Address_Type: mailing and physical address
            Address: P.O. Box 6108
            City: Morgantown
            State_or_Province: WV
            Postal_Code: 26506-6108
            Country: USA
          Contact_Voice_Telephone: 304-293-4832 ext.4456
          Contact_Facsimile_Telephone: 304-293-3752
          Contact_Electronic_Mail_Address: jrowe@wvu.edu


Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 2933
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Label point
      Point_and_Vector_Object_Count: 1397
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
      Point_and_Vector_Object_Count: 1397
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Point
```

Point_and_Vector_Object_Count: 4

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Grid_Coordinate_System:
Grid_Coordinate_System_Name: Universal Transverse Mercator
Universal_Transverse_Mercator:
UTM_Zone_Number: 17
Transverse_Mercator:
Scale_Factor_at_Central_Meridian: 0.999600
Longitude_of_Central_Meridian: -81.000000
Latitude_of_Projection_Origin: 0.000000
False_Easting: 500000.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000221
Ordinate_Resolution: 0.000221
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wvstewardv.aat
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measurement:
hectares
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FNODE#
Attribute_Definition: Internal node number for the beginning of an arc
(from-node).
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:

Attribute_Label: TNODE#
Attribute_Definition: Internal node number for the end of an arc (to-node).
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: categorical
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: LPOLY#
Attribute_Definition: Internal node number for the left polygon.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: categorical
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: RPOLY#
Attribute_Definition: Internal node number for the right polygon.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: categorical
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: LENGTH
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: n/a
Unrepresentable_Domain: Positive real numbers that are automatically
generated.
Attribute:
Attribute_Label: WVSTEWARDV#
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: n/a
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: WVSTEWARDV-ID
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: categorical
Attribute:
Attribute_Label: stew_name
Attribute_Definition: parcel steward name
Attribute_Definition_Source: original data source (varies)

Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: n/a
Attribute:
Attribute_Label: owner_name
Attribute_Definition: name of primary owner
Attribute_Definition_Source: original data source (varies)
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: n/a
Attribute:
Attribute_Label: year_estab
Attribute_Definition: year division established (same for all units)
Attribute_Definition_Source: original data documentation
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: calendar year
Attribute:
Attribute_Label: src_date
Attribute_Definition: date data acquired by WV-GAP
Attribute_Definition_Source: WV-GAP
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: month and year
Attribute:
Attribute_Label: src_scale
Attribute_Definition: map scale of original source data (if known)
Attribute_Definition_Source: WV-GAP
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: scale denominator
Attribute:
Attribute_Label: src_info
Attribute_Definition: information on original data source
Attribute_Definition_Source: WV-GAP
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: n/a
Attribute:
Attribute_Label: wv_gap
Attribute_Definition: internal code used by WV-GAP
Attribute_Definition_Source: WV-GAP
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: categorical
Attribute:
Attribute_Label: stew_id
Attribute_Definition: unique polygon ID code (sequential)
Attribute_Definition_Source: WV-GAP
Attribute_Domain_Values:
Range_Domain:

Attribute_Units_of_Measure:
ment: n/a
Attribute:
Attribute_Label: manager
Attribute_Definition: land parcel managing entity, SEE CODES IN OWNER
Attribute_Definition_Source: Gap Handbook, Stewardship Chapter (P.Crist
2000)
Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: categorical
Attribute:
Attribute_Label: owner
Attribute_Definition: legal parcel owner, if known
Attribute_Definition_Source: WV-GAP
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1000
Enumerated_Domain_Value_Definition: Federal Government
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1301
Enumerated_Domain_Value_Definition: US Fish and Wildlife Service
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1400
Enumerated_Domain_Value_Definition: USDA
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1408
Enumerated_Domain_Value_Definition: National Forest National Recreation
Area
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1409
Enumerated_Domain_Value_Definition: National Forest Scenic Area
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1412
Enumerated_Domain_Value_Definition: National Forest Wilderness Area
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1500
Enumerated_Domain_Value_Definition: Department of Defense
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1550
Enumerated_Domain_Value_Definition: Army Corps of Engineers
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1600
Enumerated_Domain_Value_Definition: National Park Service (NPS)
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1605
Enumerated_Domain_Value_Definition: NPS National Historic Park
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:

Enumerated_Domain_Value: 1613
Enumerated_Domain_Value_Definition: NPS National Recreation Area
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 1615
Enumerated_Domain_Value_Definition: NPS National Scenic River
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3000
Enumerated_Domain_Value_Definition: State of WV
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3100
Enumerated_Domain_Value_Definition: WV Division of Natural Resources
State Park or State Forest
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3200
Enumerated_Domain_Value_Definition: West Virginia University
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 3300
Enumerated_Domain_Value_Definition: WV Division of Natural Resources
Wildlife Management Area
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 5100
Enumerated_Domain_Value_Definition: City Park
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 6000
Enumerated_Domain_Value_Definition: Non profit, research
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 6300
Enumerated_Domain_Value_Definition: The Nature Conservancy
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 6301
Enumerated_Domain_Value_Definition: The Nature Conservancy (easement)
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 6302
Enumerated_Domain_Value_Definition: The Nature Conservancy (preserve)
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 7000
Enumerated_Domain_Value_Definition: Private
Enumerated_Domain_Value_Definition_Source: WV-GAP
Enumerated_Domain:
Enumerated_Domain_Value: 8000
Enumerated_Domain_Value_Definition: Water
Enumerated_Domain_Value_Definition_Source: WV-GAP
Attribute:
Attribute_Label: owner_alt
Attribute_Definition: alternate (secondary owner) if known, SEE CODES IN
OWNER
Attribute_Definition_Source: WV-GAP

Attribute_Domain_Values:
Range_Domain:
Attribute_Units_of_Measure:
ment: categorical
Attribute:
Attribute_Label: status2
Attribute_Definition: Gap Analysis management status
Attribute_Definition_Source: WV-GAP and National Gap standards
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: Status 1 lands, highest degree of biodiversity protection
Enumerated_Domain_Value_Definition_Source:
Gap Analysis Handbook <http://www.gap.uidaho.edu/handbook/default.htm>
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition:
Status 2 lands, high degree of biodiversity protection, limited conversion from natural state
Enumerated_Domain_Value_Definition_Source:
Gap Analysis Handbook <http://www.gap.uidaho.edu/handbook/default.htm>
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition: Status 3 lands, moderate biodiversity protection
Enumerated_Domain_Value_Definition_Source:
Gap Analysis Handbook <http://www.gap.uidaho.edu/handbook/default.htm>
Enumerated_Domain:
Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition: Status 4 lands, lesser degree of biodiversity protection
Enumerated_Domain_Value_Definition_Source:
Gap Analysis Handbook <http://www.gap.uidaho.edu/handbook/default.htm>
AND WV-GAP Final Report
Enumerated_Domain:
Enumerated_Domain_Value: 4a
Enumerated_Domain_Value_Definition:
Status 4a lands, lesser degree of biodiversity protection, WITHIN proclamation for National Forest or National Wildlife Refuge
Enumerated_Domain_Value_Definition_Source:
Gap Analysis Handbook <http://www.gap.uidaho.edu/handbook/default.htm>
AND WV-GAP Final Report
Enumerated_Domain:
Enumerated_Domain_Value: 4b
Enumerated_Domain_Value_Definition:
Status 4b lands, lesser degree of biodiversity protection, private lands NOT within proclamation boundaries
Enumerated_Domain_Value_Definition_Source:
Gap Analysis Handbook <http://www.gap.uidaho.edu/handbook/default.htm>
AND WV-GAP Final Report

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:

Contact_Organization: Natural Resource Analysis Center
Contact_Person: Jacquelyn Strager
Contact_Position: Research Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: P.O. Box 6108
City: Morgantown
State_or_Province: WV
Postal_Code: 26506-6108
Country: USA
Contact_Voice_Telephone: 304-293-4832 ext.4456
Contact_Facsimile_Telephone: 304-293-3752
Contact_Electronic_Mail_Address: jrowe@wvu.edu
Distribution_Liability:
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: ARC/INFO
Format_Version_Number: 8.0.2
Transfer_Size: 1.841
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: <http://www.nrac.wvu.edu>
Network_Resource_Name: <http://www.gap.uidaho.edu>
Offline_Option:
Offline_Media: CD-ROM
Recording_Format: ISO 9660
Fees: None, or small fees for media and processing
Technical_Prerequisites: Use of Geographic Information System software.

Metadata_Reference_Information:
Metadata_Date: 20020220
Metadata_Contact:

Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Natural Resource Analysis Center
Contact_Person: Jacquelyn Strager
Contact_Position: Research Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: P.O. Box 6108
City: Morgantown
State_or_Province: WV
Postal_Code: 26506-6108
Country: USA
Contact_Voice_Telephone: 304-293-4832 ext.4456
Contact_Facsimile_Telephone: 304-293-3752
Contact_Electronic_Mail_Address: jrowe@wvu.edu
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Access_Constraints: None
Metadata_Use_Constraints: None
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.3 on Wed Feb 20 11:50:18 2002