USFWS Monthly Update of FAA Wind Turbine Data - Basic Instructions and General Information:
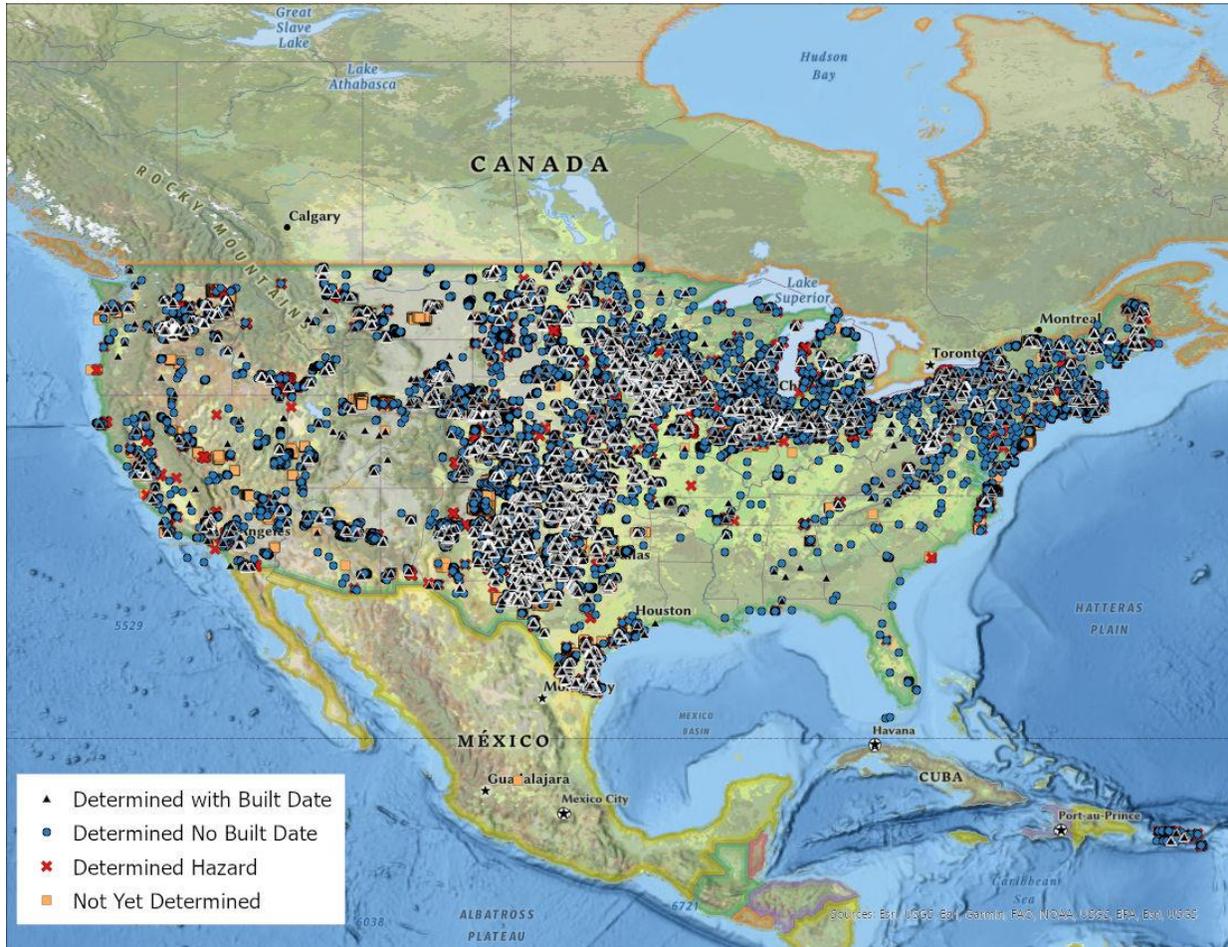

General Information:

Description:
ESRI point feature classes derived from the FAA's Obstruction Analysis - Airport   Airspace Analysis (OE-AAA) database and representing wind turbines and MET towers from 2008 through the first update of the current month. Four separate feature classes depict sites classified by FWS staff as 'Determined with a Built Date', 'Determined with no Built Date', 'Not Yet Determined' and 'Determined Hazard'.

These categories are defined as follows:

Determined with Built Date - Wind turbines that have been determined by the FAA to pose no hazard to air navigation and have a built date in the FAA database. This category includes records in the database where STATUS = Determined – No Hazard and DTBUILT is not NULL.

Determined no Built Date - Wind turbines that have been determined by the FAA to pose no hazard to air navigation but do not yet have a built date in the FAA database (e.g. are not yet operational). This category includes records in the database where STATUS = Determined – No Hazard and DTBUILT is NULL.

Determined Hazard - Wind turbines that have been determined by the FAA to pose a hazard to air navigation. This category includes records where STATUS = Determined - Hazard.

Not Yet Determined - Wind turbine projects that have applied to the FAA for a determination of hazard or no hazard. FAA is in the process of performing an aeronautical study to determine whether or not the turbines poses a hazard to air navigation. This category in records where STATUS is not Determined – No Hazard or Determined - Hazard.

Purpose:
To provide basic information on the status and location of wind turbines and met towers throughout the US based on available FAA data.

Access_Constraints:
none – public data

Use_Constraints:
See data source for any constraints: https://oeaaa.faa.gov/oeaaa/oe3a/main/#/home

General USFWS disclaimer:
USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or ompleteness of these data. In addition, the USFWS shall not be held liable for improper or incorrect use of the data described and/or contained herein.

Point_of_Contact for Data served from FWS:

    Michael Dick - Biologist
    US Fish and Wildlife Service
    Division of Ecological Services, Southwest Region
    Email: mike_dick@fws.gov
    Hours_of_Service: 8am - 4pm (Mtn)

Source:
Raw data (csv format) obtained from Federal Aviation Administration Obstruction Evaluation / Airport Airspace Analysis (OE-AAA) database –
https://oeaaa.faa.gov/oeaaa/oe3a/main/#/download

Data used was for "Off Airport Cases" for Regions WTW and WTE from 2008-present.

GIS data - US Fish and Wildlife Service

Online Availability:

Update Frequency:
Monthly - FAA updates their database every Saturday. This data will be updated ASAP   after the first Saturday of each month.

Description of file types:

- KML (keyhole markup language) – This file is used in Google Earth.
  To use, start Google Earth, click File, then click Open and navigate to the location of the kml (or kmz) file.
- KMZ – a zipped KML file. Open same as above.

- Geodatabase(File) – ESRI data storage format. These geodatabases were created using ArcGIS 10. In Windows explorer, this file will appear as folder with a .gdb file extension. In ESRI ArcCatalog, it will appear as a gray container. The geodatabase for a particular region contains the following four feature classes, based on the FWS_Status attribute:

    DETERMIED with Built Date
    DETERMINED with no Built Date
    DETERMINED Hazard
    Not Yet Determined

    - Excel – The raw data is provided in two Microsoft Excel formats. The database as a whole is provided in .xlsx format.

Symbology Google Earth (.kmz) files:

- Determined with Built Date: black triangle
- Determined with no Built Date: blue dot
- Determined Hazard: red x
- Not Yet Determined: orange square

Spatial Reference Information for feature classes:
Coordinate System: WGS 1984
Units: Decimal degrees
Horizontal Datum: D WGS 1984
Spheroid: WGS 1984

Entity_and_Attribute_Information:
See FAA User Guide for more information and attribute descriptions.

Attribute:
 Attribute_Label: OBJECTID
 Attribute_Definition: OBJECTID.
 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: InUpd
 Attribute_Definition: N=Record no longer in FAA Database;Not Updated=Record prior to
  2008 and not updated;Null=Record in current update
 Attribute_Definition_Source: USFWS
Attribute:
 Attribute_Label: ASN
 Attribute_Definition: Study Number
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: PASN
 Attribute_Definition: Prior Study Number
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: STATUS
 Attribute_Definition: Status
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: DETERMINATION
 Attribute_Definition: Determination
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: EntDate
 Attribute_Definition: Entered Date
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: RecDate
 Attribute_Definition: Received Date

Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: CompDate
 Attribute_Definition: Completion Date
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: ExpDate
 Attribute_Definition: Expiration Date
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: LATITUDE
 Attribute_Definition: Latitude
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: LONGITUTDE
 Attribute_Definition: Longitude
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: SurvAccy
 Attribute_Definition: Survey Accuracy
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: MLtype
 Attribute_Definition: Marking Lighting Type
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: MLtype2
 Attribute_Definition: Marking Lighting Type Other
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: StrName
 Attribute_Definition: Structure Name
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: StrCity
 Attribute_Definition: Structure City
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: StrCnty
 Attribute_Definition: Structure County
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: StrCntyID
 Attribute_Definition: Structure County ID number

Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: StrST
 Attribute_Definition: Structure State
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: NrAirprt
 Attribute_Definition: Nearest Airport
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: Dist2Aipt
 Attribute_Definition: Distance From Airport
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: Dir2Airpt
 Attribute_Definition: Direction From Airport
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: OnAirprt
 Attribute_Definition: On Airport
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: ProposalDesc
 Attribute_Definition: Proposal Description
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: LocDesc
 Attribute_Definition: Location Description
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: NoticeOf
 Attribute_Definition: Notice Of
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: Duration
 Attribute_Definition: Duration
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: DurDays
 Attribute_Definition: Duration Days
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: DurMnths
 Attribute_Definition: Duration Months

Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: WsBegDt
 Attribute_Definition: Work Schedule Beginning Data
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: WsEndDt
 Attribute_Definition: Work Schedule End Date
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: DtBuilt
 Attribute_Definition: Date Built
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: FCCnum
 Attribute_Definition: FCC Number
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: StrType
 Attribute_Definition: Structure Type
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: AglDet
 Attribute_Definition: AGL Height Det
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: AglDne
 Attribute_Definition: AGL Height DNE
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: AglProposed
 Attribute_Definition: AGL Height Proposed
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: Elev
 Attribute_Definition: Elevation
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: AmslDet
 Attribute_Definition: AMSL Height Det
 Attribute_Definition_Source: FAA
Attribute:
 Attribute_Label: AmslDne
 Attribute_Definition: AMSL Height DNE

Attribute_Definition_Source: FAA
Attribute:
Attribute_Label: AmslProposed
Attribute_Definition: AMSL Height Proposed
Attribute_Definition_Source: FAA
Attribute:
Attribute_Label: RepName
Attribute_Definition: Representative Name
Attribute_Definition_Source: FAA
Attribute:
Attribute_Label: SprName
Attribute_Definition: Sponsor Name
Attribute_Definition_Source: FAA
Attribute:
Attribute_Label: SCN
Attribute_Definition: Signature Control Number
Attribute_Definition_Source: FAA
Attribute:
Attribute_Label: FWSRegion
Attribute_Definition: USFWS Region (number)
Attribute_Definition_Source: USFWS
Attribute:
Attribute_Label: FWSStatus
Attribute_Definition: Status as classified by FWS Staff
Attribute_Definition_Source: USFWS

<u>Basic Data Processing Steps:</u>

These are the basic steps to create the Excel, KMZ and GIS files:

1) Download WTE and WTW files (2008 – present) then cut/paste to new update file.

2) Check data for misalignment issues and fix.

4) Populate FWSRegion via lookup table.

5) Populate FWSStatus using the following Excel formulas:

Determined with Date Built given:
=IF(AND(C2="Determined – No Hazard",AD2<>""),"DETERMINED - With Built Date","")

Determined, but no Date Built given:
=IF(AND(C2="Determined – No Hazard",AD2=""),"DETERMINED - No Built Date","")

Determined as Hazard:
= IF(C2="Determined - Hazard","DETERMINED - Hazard","")

Not Yet Determined:
= IF(OR(C2="Determined - No Hazard",C2="Determined - Hazard"),"","Not Yet Determined")

6) Open previous month's master file and 'save as' with current month and update with records from the new update.

8) Using various tools in ESRI ArcPro, create feature classes from the Excel data then convert the feature classes to kmz files.