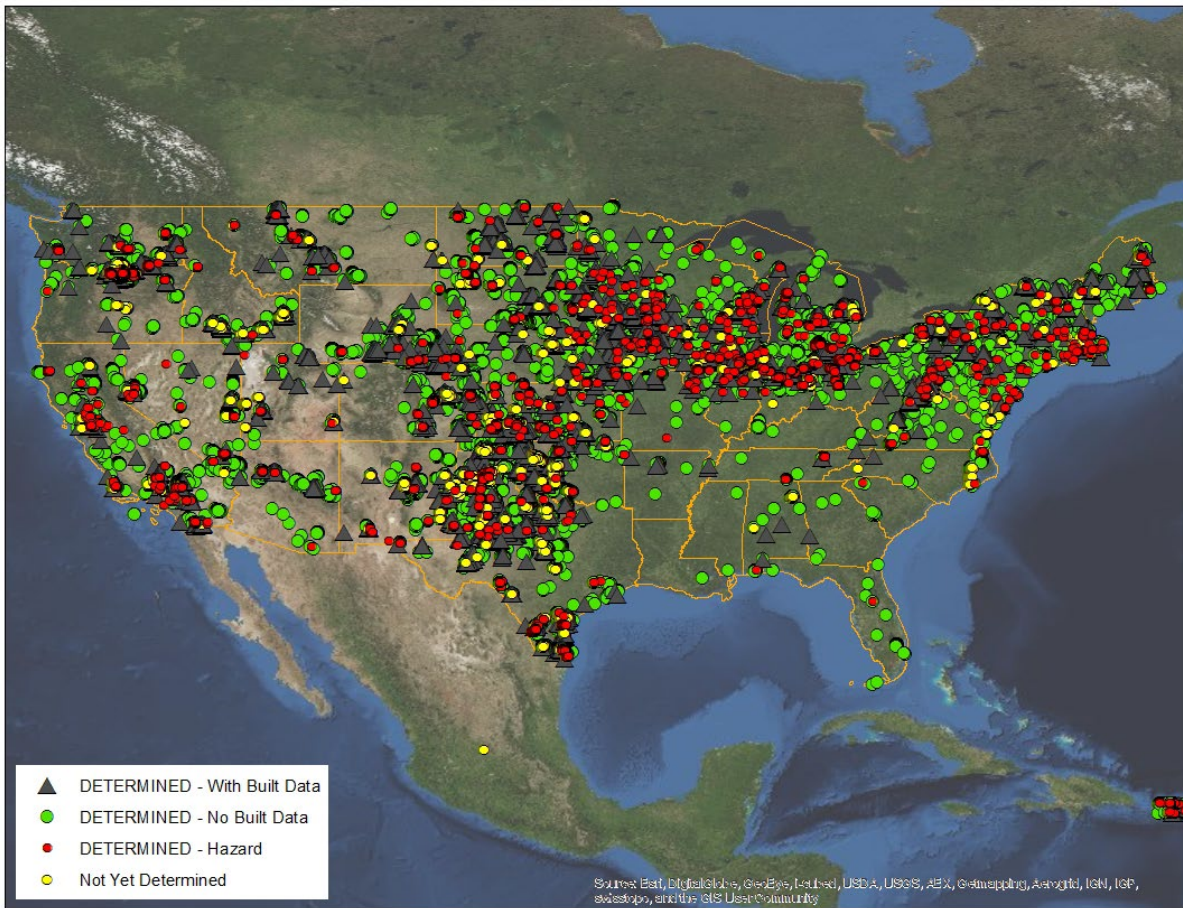


USFWS Monthly Update of FAA Wind Turbine Data - Basic Instructions and General Information:



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 1995 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 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 and DTBUILT is NULL and DETERMINATION = NULL, No Hazard, Extention, Extention Denied, Feasibility Study, M&L or M&L Denied.

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 and DETERMINATION = Hazard or Presumed 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 = Accepted, Add Letter, Work in Progress, Interim or Circularization.

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/external/portal.jsp>

The link below relates more specifically to the positional accuracy of the data:

<https://oeaaa.faa.gov/oeaaa/external/content/surveyAccuracy.jsp>

General USFWS disclaimer:

USFWS gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness 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 (IT)
US Fish and Wildlife Service
Division of Ecological Services, Southwest Region
Email: mike_dick@fws.gov
Hours_of_Service: 8am - 5pm

Source:

Raw data (csv format) obtained from Federal Aviation Administration Obstruction Evaluation / Airport Airspace Analysis (OE-AAA) database (<https://oeaaa.faa.gov/oeaaa/external/public/publicAction.jsp?action=showCaseDownloadForm>). 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.
- LYR – ESRI ArcGIS layer file. There is one of these associated with each feature class. The .lyr file contains only the symbology for its corresponding feature class. To Use, start ArcMAP, click Add Data and navigate to the desired .lyr file.

NOTE: Because of the way the .lyr files were created, when you add them to ArcMap, they may appear with a red exclamation point next to them in the Table of Contents. This means that the link to their source data has been lost. Right-click on the layer name, scroll down to Data and select Repair Data Source, navigate to where the associated feature classes now reside, select the appropriate feature class and click add. This should fix the links for all layer files within that same folder.

- 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:

DETERMINED 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. There is also an older .xls format provided where data for each region is provided on separate tabs within the worksheet.

Symbology for layer (.lyr) and Google Earth (.kmz) files:

- Determined with Built Date: black triangle
- Determined with no Built Date: large green dot
- Determined Hazard: small red dot
- Not Yet Determined: medium yellow dot

Spatial Reference Information:

Coordinate System: Geographic

Units: Decimal degrees

Horizontal Datum: North American Datum of 1983

Ellipsoid_Name: Geodetic Reference System 80

Entity and Attribute Information:

See [FAA User Guide](#) for more information and attribute descriptions.

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: 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: DETERM
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: DATUM
Attribute_Definition: Horizontal Datum
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: 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: PropDes
Attribute_Definition: Proposal Description
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: LocDes
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: NACGnum
Attribute_Definition: NACG Number
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: StrType
Attribute_Definition: Structure Type
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: StrType2
Attribute_Definition: Structure Type Other
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: AglProp
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: AmslProp
Attribute_Definition: AMSL Height Proposed
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepAttn
Attribute_Definition: Representative Attn Of
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepCity
Attribute_Definition: Representative City
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepCntry
Attribute_Definition: Representative Country
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepEmail
Attribute_Definition: Representative Email
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepName
Attribute_Definition: Representative Name
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepFax
Attribute_Definition: Representative Fax
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepPH
Attribute_Definition: Representative Primary Phone
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepPHx
Attribute_Definition: Representative Primary Phone Ext
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepST
Attribute_Definition: Representative State
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepAddr1
Attribute_Definition: Representative Address 1
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepAddr2
Attribute_Definition: Representative Address 2
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: RepZip
Attribute_Definition: Representative Postal Code
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprAttn
Attribute_Definition: Sponsor Attn Of
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprCity
Attribute_Definition: Sponsor City
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprCntry
Attribute_Definition: Sponsor Country
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprEmail
Attribute_Definition: Sponsor Email
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprName
Attribute_Definition: Sponsor Name
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprFax
Attribute_Definition: Sponsor Fax
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprPH
Attribute_Definition: Sponsor Primary Phone
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprPHx
Attribute_Definition: Sponsor Primary Phone Ext
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprST
Attribute_Definition: Sponsor State
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprAddr1
Attribute_Definition: Sponsor Address 1
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprAddr2
Attribute_Definition: Sponsor Address 2
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SprZip
Attribute_Definition: Sponsor Postal Code
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: SigCtrlNum
Attribute_Definition: Signature Control Number
Attribute_Definition_Source: FAA

Attribute:

Attribute_Label: LatDD
Attribute_Definition: Latitude (decimal degrees)
Attribute_Definition_Source: USFWS

Attribute:

Attribute_Label: LonDD
Attribute_Definition: Longitude (decimal degrees)
Attribute_Definition_Source: USFWS

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

Data Processing Steps:

These are the basic steps to create the Excel database , 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.
- 3) Convert lat/longs from dms to dd for use in ESRI ArcGIS software and populate LatDD and LonDD
- 4) Populate FWSRegion via lookup table.
- 5) Populate FWSStatus using the following Excel formulas:

Determined with Date Built given:

```
=IF(AND(C2="Determined",AD2<>""),"DETERMINED - With Built Date", "")
```

Determined, but no Date Built given:

```
=IF(AND(C2="Determined",AD2="",OR(D2="",D2="No Hazard",D2="Extension",  
D2="Extension Denied", D2="Feasibility Study", D2="M&L",D2="M&L  
Denied",D2="M&L Change")), "DETERMINED - No Built Date", "")
```

Determined as Hazard:

```
=IF(OR(C2="Circularization",C2="Interim", (AND(C2="Interim",D2="Presumed  
Hazard")), (AND(C2="Determined",AD2="",OR(D2="Hazard",D2="Presumed  
Hazard")))), "DETERMINED - Hazard", "")
```

Not Yet Determined:

```
=IF(OR(C2="Accepted",C2="Add Letter", C2="Work In Progress"),"Not Yet  
Determined", "")
```

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

7) In Master, add 4GIS, NAD83 and NAD27

8) In Master, copy AllData to 4GIS and modify for use in GIS

9) In Master (4GIS tab), sort records by datum (for records with no datum, populate with NAD83), then copy/paste into their respective tabs (with headers). In the NAD27 and NAD83 tabs, copy all data for the appropriate Datum.

10) Using ESRI ArcGIS 10.8.1 modelbuilder models, create feature classes, symbolized layer files and kmz files.