

EPA Brownfield Sites (RE-Powering America's Land)



Summary

The federal- and state-tracked sites included in this screening represent a subset of nationwide contaminated lands, landfills, and mine sites. RE-Powering screened sites currently tracked through EPA remediation and grant programs, as well as sites tracked by some state agencies. Snapshots of the following states' data are included in this 2018 update: California, Colorado, Connecticut, Florida, Hawai'i, Illinois, Maryland, Massachusetts, Minnesota, Missouri, New Jersey, New York, Oregon, Pennsylvania, Texas, Virginia, and West Virginia.

Description

The U.S. Environmental Protection Agency (EPA) Office of Land and Emergency Management (OLEM), Office of Partnerships, Communication and Analysis (OCPA) created the RE-Powering America's Land Initiative to demonstrate the enormous potential that contaminated lands, landfills, and mine sites provide for developing renewable energy in the United States. To that end, the Initiative developed the RE-Powering Mapper tool. The tool is a publicly available spatial database of more than 130,000 sites that have been evaluated for renewable energy potential. This document details the screening process and data underlying the Mapper.

EPA developed national-level site screening criteria in partnership with the U.S. Department of Energy (DOE) National Renewable Energy Laboratory (NREL). The most recent screening occurred in August 2018. Described in this document, the screening criteria demonstrate the potential to reuse contaminated land for solar, wind, biomass, and geothermal energy production based on resource availability, acreage, and distance to transmission lines and roads. Although these sites have been preliminarily screened for renewable energy potential based on a number of technical considerations, many other factors should be considered in order to determine a project's ultimate feasibility. Renewable energy developers and/or relevant stakeholders usually conduct rigorous site-specific analyses to verify both technical and economic feasibility.

For the purposes of this screening, site status in terms of clean-up or potential contamination status has not been considered. Sites may or may not have been assessed and/or remediated. The Mapper database includes a link from each site to a source with more information about the site's environmental conditions.

The federal- and state-tracked sites included in this screening represent a subset of nationwide contaminated lands, landfills, and mine sites. The inventory includes sites that are tracked at the national level through EPA remediation and grant programs, as well as datasets provided from 17 state partners. Many additional sites are tracked at the state and local level, but have not been screened as part of this effort. State brownfield and response programs can be found in the 2017 State Brownfields and Voluntary Response Programs report.

Credits

U.S. Environmental Protection Agency. Spreadsheet downloaded from <https://www.epa.gov/re-powering/how-identify-sites#looking> on 8/18/21. Spreadsheet was last updated September 2018.

Use limitations

There are no access and use limitations for this item.

Extent

West -176.750000 **East** -64.703198
North 71.274721 **South** 17.706000

Scale Range

Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:150,000,000

ArcGIS Metadata

Topics and Keywords

* CONTENT TYPE Downloadable Data

Citation

TITLE EPA Brownfield Sites (RE-Powering America's Land)

PRESENTATION FORMATS * digital map

Resource Details

DATASET LANGUAGES * English (UNITED STATES)

SPATIAL REPRESENTATION TYPE * vector

* PROCESSING ENVIRONMENT Version 6.2 (Build 9200) ; Esri ArcGIS 10.8.1.14362

CREDITS

U.S. Environmental Protection Agency. Spreadsheet downloaded from <https://www.epa.gov/re-powering/how-identify-sites#looking> on 8/18/21. Spreadsheet was last updated September 2018.

ARCGIS ITEM PROPERTIES

* NAME

* LOCATION

* ACCESS PROTOCOL Local Area Network

Extents

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

* WEST LONGITUDE -176.750000

* EAST LONGITUDE -64.703198

* NORTH LATITUDE 71.274721

* SOUTH LATITUDE 17.706000

* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE -19675719.997711

* EAST LONGITUDE -7202727.020661

* SOUTH LATITUDE 2003164.866682

* NORTH LATITUDE 11496866.317470

* EXTENT CONTAINS THE RESOURCE Yes

Spatial Reference

ARCGIS COORDINATE SYSTEM

* TYPE Projected

* GEOGRAPHIC COORDINATE REFERENCE GCS_WGS_1984

* PROJECTION WGS_1984_Web_Mercator_Auxiliary_Sphere

* COORDINATE REFERENCE DETAILS

PROJECTED COORDINATE SYSTEM

WELL-KNOWN IDENTIFIER 102100

X ORIGIN -22041257.77387803

Y ORIGIN -30241100
XY SCALE 144148035.89861274
Z ORIGIN -100000
Z SCALE 10000
M ORIGIN -100000
M SCALE 10000
XY TOLERANCE 0.001
Z TOLERANCE 0.001
M TOLERANCE 0.001
HIGH PRECISION true
LATEST WELL-KNOWN IDENTIFIER 3857
WELL-KNOWN TEXT PROJCS["WGS_1984_Web_Mercator_Auxiliary_Sphere",GEOGCS
["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID
["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT
["Degree",0.0174532925199433]],PROJECTION["Mercator_Auxiliary_Sphere"],PARAMETER
["False_Easting",0.0],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",0.0],PARAMETER
["Standard_Parallel_1",0.0],PARAMETER["Auxiliary_Sphere_Type",0.0],UNIT["Meter",1.0],AUTHORITY
["EPSG",3857]]

REFERENCE SYSTEM IDENTIFIER

* VALUE 3857
* CODESPACE EPSG
* VERSION 8.8(9.3.1.2)

Spatial Data Properties

VECTOR

* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME epa_renewable_energy_site_v4
* OBJECT TYPE point
* OBJECT COUNT 133388

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME epa_renewable_energy_site_v4
* FEATURE TYPE Simple
* GEOMETRY TYPE Point
* HAS TOPOLOGY FALSE
* FEATURE COUNT 133388
* SPATIAL INDEX TRUE
* LINEAR REFERENCING FALSE

Distribution

DISTRIBUTION FORMAT

* NAME File Geodatabase Feature Class

Fields

DETAILS FOR OBJECT epa_renewable_energy_site_v4

* TYPE Feature Class
* ROW COUNT 133388

FIELD OBJECTID

* ALIAS Object ID
* DATA TYPE OID
* WIDTH 4
* PRECISION 0
* SCALE 0
* FIELD DESCRIPTION
Internal feature number.

* DESCRIPTION SOURCE
Esri

* DESCRIPTION OF VALUES

Sequential unique whole numbers that are automatically generated.

FIELD Cross_Reference_Number

- * ALIAS Cross-Reference Number
- * DATA TYPE Integer
- * WIDTH 4
- * PRECISION 0
- * SCALE 0

FIELD EPA_Region

- * ALIAS EPA Region
- * DATA TYPE Integer
- * WIDTH 4
- * PRECISION 0
- * SCALE 0

FIELD State

- * ALIAS State
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Program

- * ALIAS EPA Program
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Site_Status

- * ALIAS Site Status
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Site_ID

- * ALIAS Site ID
- * DATA TYPE Integer
- * WIDTH 4
- * PRECISION 0
- * SCALE 0

FIELD RE_Powering_Profile

- * ALIAS RE-Powering Profile
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Site_Name

- * ALIAS Site Name
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Address

- * ALIAS Address
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD City

- * ALIAS City
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD County

- * ALIAS County
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Zip

- * ALIAS Zip Code
- * DATA TYPE Integer
- * WIDTH 4
- * PRECISION 0
- * SCALE 0

FIELD Acres

- * ALIAS Acres
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Known_Landfill

- * ALIAS Known Landfill
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Estimated_PV_Capacity

- * ALIAS Estimated PV Capacity
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Max_DNI

- * ALIAS Max DNI in kilowatt hour per meter squared per day
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Large_Utility_Scale_PV

- * ALIAS Large Utility Scale PV
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Utility_Scale_PV

- * ALIAS Utility Scale PV
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Small_Utility_Scale_PV

- * ALIAS Small Utility Scale PV
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Large_Distributed_Scale_PV

- * ALIAS Large Distributed Scale PV
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Off_grid_PV

- * ALIAS Off-grid PV
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD No_Acreage_PV

- * ALIAS No Acreage PV
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Estimated_Wind_Energy_Capacity_Potential

- * ALIAS Estimated Wind Energy Capacity Potential
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Wind_speed_60m

- * ALIAS Wind Speed at 60 m (m per sec)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0

FIELD Wind_speed_80m

- * ALIAS Wind Speed 80 m (m per sec)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Wind_speed_120m

- * ALIAS Wind Speed 120 m (m per sec)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD [Wind_speed_140m](#)

- * ALIAS Wind Speed 140 m (m per sec)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD [Large_Utility_Scale_Wind](#)

- * ALIAS Large Utility Scale Wind
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD [Utility_Scale_Wind](#)

- * ALIAS Utility Scale Wind
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD [Small_Utility_Scale_Wind](#)

- * ALIAS Small Utility Scale Wind
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD [Large_Distributed_Scale_Wind](#)

- * ALIAS Large Distributed Scale Wind
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD [F1_2_Turbines_Wind](#)

- * ALIAS 1-2 Turbines Wind
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD [Off_grid_Wind](#)

- * ALIAS Off-Grid Wind
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD [No_Acreage_Wind](#)

- * ALIAS No Acreage Wind
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD [Cumulative_Biopower_Resources](#)

- * ALIAS Cumulative Biopower Resources (metric tons per yr)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Cumulative_Biorefinery_Residues

- * ALIAS Cumulative Biorefinery Residues (metric tons per yr)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Crops

- * ALIAS Crop Residues (dry metric tons per yr)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Forest

- * ALIAS Forest Residues (dry metric tons per yr)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Primary_Mill

- * ALIAS Primary Mill Residues (dry metric tons per yr)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Secondary_Mill

- * ALIAS Secondary Mill Residues (dry metric tons per yr)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Urban_Waste_Wood

- * ALIAS Urban Wood Residues (dry metric tons per yr)
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Landfill_Status

- * ALIAS Landfill Status
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Yr_Landfill_Closed

- * ALIAS Year Landfill Closed
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Landfill_Owner

- * ALIAS Landfill Owner
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0

* SCALE 0

FIELD Landfill_Owner_Type

* ALIAS Landfill Owner Type
* DATA TYPE String
* WIDTH 8000
* PRECISION 0
* SCALE 0

FIELD Landfill_Current_Area

* ALIAS Landfill Current Area
* DATA TYPE String
* WIDTH 8000
* PRECISION 0
* SCALE 0

FIELD Landfill_total_Area

* ALIAS Landfill_total_Area
* DATA TYPE String
* WIDTH 8000
* PRECISION 0
* SCALE 0

FIELD Landfill_Gas_Operational

* ALIAS Landfill Gas Operational
* DATA TYPE String
* WIDTH 8000
* PRECISION 0
* SCALE 0

FIELD Biopower_Facility_Potential

* ALIAS Biopower Facility Potential
* DATA TYPE String
* WIDTH 8000
* PRECISION 0
* SCALE 0

FIELD Biorefinery_Facility_Potential

* ALIAS Biorefinery Facility Potential
* DATA TYPE String
* WIDTH 8000
* PRECISION 0
* SCALE 0

FIELD Surface_Temperature

* ALIAS Surface Temperature
* DATA TYPE Integer
* WIDTH 4
* PRECISION 0
* SCALE 0

FIELD Geothermal_Heat_Pump_Potential

* ALIAS Geothermal Heat Pump Potential
* DATA TYPE String
* WIDTH 8000
* PRECISION 0
* SCALE 0

FIELD Substation_Voltage

- * ALIAS Substation Voltage
- * DATA TYPE Integer
- * WIDTH 4
- * PRECISION 0
- * SCALE 0

FIELD Distance_to_Substation

- * ALIAS Distance to Substation
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Transmission_Line_Status

- * ALIAS Transmission Line Status
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Transmission_Line_kV

- * ALIAS Transmission Line kV
- * DATA TYPE Integer
- * WIDTH 4
- * PRECISION 0
- * SCALE 0

FIELD Distance_to_Transmission

- * ALIAS Distance to Transmission
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Distance_to_Road

- * ALIAS Distance to Road
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Distance_to_Rail

- * ALIAS Distance to Rail
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD Urban_Area

- * ALIAS Urban Area
- * DATA TYPE String
- * WIDTH 8000
- * PRECISION 0
- * SCALE 0

FIELD Urban_Area_Population

- * ALIAS Urban Area Population
- * DATA TYPE Integer
- * WIDTH 4
- * PRECISION 0
- * SCALE 0

FIELD **Distance_to_Urban_Area**

- * ALIAS Distance to Urban Area
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **Latitude**

- * ALIAS Latitude
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **Longitude**

- * ALIAS Longitude
- * DATA TYPE Double
- * WIDTH 8
- * PRECISION 0
- * SCALE 0

FIELD **Shape**

- * ALIAS Shape
- * DATA TYPE Geometry
- * WIDTH 0
- * PRECISION 0
- * SCALE 0
- * FIELD DESCRIPTION
Feature geometry.
- * DESCRIPTION SOURCE
Esri
- * DESCRIPTION OF VALUES
Coordinates defining the features.

Metadata Details

- * METADATA LANGUAGE English (UNITED STATES)
- * METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA * dataset
SCOPE NAME * dataset

* LAST UPDATE 2021-08-18

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0
METADATA STYLE FGDC CSDGM Metadata
STANDARD OR PROFILE USED TO EDIT METADATA FGDC

CREATED IN ARCGIS FOR THE ITEM 2021-08-18 12:05:21
LAST MODIFIED IN ARCGIS FOR THE ITEM 2021-08-18 13:15:07

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes
LAST UPDATE 2021-08-18 13:12:51