

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
AND
BUREAU OF OCEAN ENERGY MANAGEMENT**

JOINT NTL No. 2023-N03

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NOTICE TO LESSEES, GRANTEES, AND OPERATORS OF
FEDERAL RENEWABLE ENERGY LEASES,
RIGHT-OF-WAY GRANTS, RIGHT-OF-USE AND EASEMENT GRANTS, AND
ALTERNATE USE RIGHT-OF-USE AND EASEMENT GRANTS ON
THE OUTER CONTINENTAL SHELF

**Guidelines for Submission of Geospatial Data for Offshore
Renewable Energy Development**

Guidance Disclaimer

Except to the extent that the contents of this document derive from requirements established by statute, regulation, lease, contract, or other binding legal authority, the contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding legal requirements, related agency policies, and technical issues.

Cancellation

This guidance document cancels and supersedes the previous guidance entitled, “Guidelines for Submission of Spatial Data for Atlantic Offshore Renewable Energy Development Site Characterization Surveys,” dated May 27, 2020, and will remain in effect until cancelled.

Purpose

This notice to lessees (NTL) provides guidance for submitting geospatial data to the Bureau of Safety and Environmental Enforcement (BSEE) under 30 CFR part 285 regulations and to the Bureau of Ocean Energy Management (BOEM; together, the Bureaus) under 30 CFR parts 585 and 586 regulations.

Background and Legal Authority

In the Energy Policy Act of 2005 (EPAAct), Congress authorized the Secretary of the Interior (Secretary) to establish an Outer Continental Shelf (OCS) renewable energy program and implementing regulations. Specifically, the EPAAct amended the OCS Lands Act (OCSLA) to add subsection 8(p) (43 U.S.C. 1337(p)). Subsection 8(p) grants the Secretary the authority to issue leases, easements, and rights-of-way on the OCS for activities that produce or support

the production, transportation, storage, or transmission of energy from sources other than oil and gas, or that use existing OCS facilities for energy- or marine-related purposes that are not otherwise authorized by OCSLA or other laws. The Department of the Interior (DOI) promulgated final regulations implementing these authorities on April 29, 2009 (74 FR 19638) and recodified those regulations in 30 CFR part 585 on October 18, 2011 (76 FR 64432).

On January 31, 2023, DOI published a final rule in the *Federal Register* (88 FR 6376) that reorganized 30 CFR part 585. That rule is consistent with Secretary's Order 3299 and the subsequent December 2020 determination by the Principal Deputy Assistant Secretary for Land and Minerals Management acting with the authority of the Assistant Secretary that the Department's offshore renewable energy program had sufficiently matured to permit reorganization of its implementing regulations under the order. Specifically, the final rule reassigned regulations governing OCS renewable energy safety and environmental enforcement from BOEM's oversight in 30 CFR part 585 to BSEE's oversight in 30 CFR part 285. The rule also moved the regulations governing rights-of-use and easement for the alternate use of existing OCS facilities to 30 CFR part 285 and a new part, 30 CFR part 586.

Pursuant to these regulations, operators are required to submit certain plans and reports that contain geospatial data. This includes the plan requirements for site assessment plans (SAPs) (30 CFR 585.605 – 585.619), general activities plans (GAPs) (30 CFR 585.640 – 585.657), and construction and operations plans (COPs) (30 CFR 585.620 – 585.639). It also includes report requirements for Facility Design Reports (FDRs) (30 CFR 285.701) and Fabrication and Installation Reports (FIRs) (30 CFR 285.702).

Collection of Data

The collection of geospatial data related to site characterization, planned activities, and finalized reports includes geological, geotechnical, shallow hazards, archaeological, benthic habitat, meteorological, oceanographic conditions, and biological surveys. Most of these data collection procedures are covered in topic-specific guidance documents and NTLs found at <https://www.boem.gov/about-boem/regulations-guidance/guidance-portal> and <https://www.bsee.gov/guidance-and-regulations/guidance/notice-to-lessees>. Some of these topic-specific guidance documents are additionally referenced in section E of this NTL for your convenience.

You should submit geospatial data to the Bureaus following this NTL's guidance unless other topic-specific NTLs or other guidance documents specify otherwise.

When possible, the Bureaus prefer to receive one complete dataset to minimize duplication and redundancy. Any questions about these guidelines may be addressed during meetings with the Bureaus before surveys and before submission of plans and reports.

Digital Map Format and Geospatial Database Specifications

You should submit geospatial data using the following guidelines unless other topic-specific NTLs or other guidance specify otherwise. Digitally captured geospatial data should be packaged and submitted in a GIS format, preferably an Esri® file geodatabase (“gdb”) when applicable to the type of data. Within the Esri® file gdb, please include the vector feature class, relationship feature classes, mosaic or referenced mosaic datasets (preferred), and relevant nonspatial tables.

If applicable, the Bureaus recommend that you include the Esri® toolboxes. Images should be organized and stored outside of the Esri® file gdb with provided documentation indicating which files within the gdb have been used to create the images. If using additional Esri® proprietary formats, such as parcel fabric and terrains, you should include the source data. The Bureaus also recommend that you include the coordinate history and projections, and transformation history. Other spatial or GIS formats are also acceptable, provided they are [Open Geospatial Consortium \(OGC\)](#)-approved and interoperable with industry standard software. Equivalent data organization methods to those identified for the Esri® file gdb should be attempted when possible.

All electronic files submitted in the Esri® file gdb should be referenced to the correct datum. The correct datum for projected layers within the contiguous United States, Alaska, Puerto Rico, and the U.S. Virgin Islands is (NAD83, 1986) (WKID=4269). The correct datum is WGS84 (WKID=4326) for Hawaii and other areas not directly connected to the North American continent. You should specify the coordinate system within the metadata, projection file, or supplemental documentation. You also should include projection, datum, reference frame, WKID, and unit type. The Bureaus provide their preferred geodatabase schema structures for a project’s proposed infrastructure files as a template with instructions in sec. 2 of this document. The Bureaus encourage applicants to provide the results of the overall site characterization following the specifications below:

1) Digital Map Format

You should submit digital maps created with data from site characterization surveys (i.e., avian, geological, geophysical, hazards, archaeological, benthic habitat, marine mammals, and fish surveys) in a consistent format that contain similar graphical elements. Listed below are important elements that the digital maps should contain:

- a) A legend that includes symbols used to depict any non-intuitive map characteristics, such as, but not limited to:
 1. Infrastructure, including cables, pipelines, and existing structures;
 2. Biological features, including live bottoms, topographic features, chemosynthetic communities, and bird, mammal, and fish habitats;
 3. Geophysical characteristics, such as shallow hazards, sediments, and faults; and
 4. Other features, such as unidentified magnetic anomalies, side scan sonar targets, buried channels, and shipwrecks;

- b) Basemap and marginalia elements, including:
1. project area;
 2. map scale;
 3. map title;
 4. company names;
 5. personnel names, activity dates, file and job numbers, map numbers (e.g., map 1 of 2);
 6. map borders;
 7. north arrow;
 8. OCS area name(s) and block number(s);
 9. lease numbers;
 10. Federal/State offshore and coastal boundaries;
 11. latitude and longitude graticules; and
 12. tic marks used to delineate state plane or UTM coordinates.
- c) Digital images, such as a pdf, jpg, png, or tif file, that show all the elements included in your GIS and maps.

2) Geospatial Database Specifications

These specifications serve as a general guideline to develop the structure of the geospatial database, i.e., geodatabase (“gdb”), that you submit to the Bureaus. The .gdb should contain all relevant features in the appropriate digital format (point, line, polygon, or raster). All spatial features should be attributed and contain logically named attribute fields. You should include an attribute key as an addendum to the .gdb or in the attribute section of the metadata.

You should establish and enforce topological rules, when applicable. Units of measure should be indicated on maps and within attribute fields. Note that when you submit an ArcPro or ArcMap geospatial project file or map package (i.e. *.aprx or *.mpkx), you should also submit the subsequent referenced files, along with the project files, without which the projects will not completely open. For instance: If your .aprx file references a gdb, a portion of the files in a gdb, files from more than one gdb, or other differently formatted file types, all the gdb's and other files should be included in your submission. If you use any other geospatial software project file types, you should also include all relevant files needed to fully open the project.

In addition to datasets covered in topic-specific guidance documents, geospatial datasets and features submitted with a plan or report (GAP, SAP, COP, FDR, FIR) should include at minimum:

Transportation and infrastructure geospatial dataset. This dataset contains locations of existing and proposed transportation corridors and infrastructure. A distinction should be made between existing infrastructure and proposed infrastructure related to your renewable energy development.

1. Existing transportation and infrastructure geospatial features include, but are not limited to:
 - transmission cables;

- pipelines;
- anchorage areas;
- fairways;
- traffic separation schemes;
- precautionary and caution areas;
- known artificial reefs or reef planning areas;
- existing or planned aquaculture areas in the U.S. exclusive economic zone
- removed structures; and
- existing energy facilities (liquefied natural gas, wind, tidal, wave, etc.).

2. Proposed transportation and infrastructure geospatial features include, but are not limited to:

- wind turbine locations;
- wind turbine cable array;
- substation(s);
- export cable line(s);
- export cable corridor;
- onshore landing site(s);
- project build area(s);
- points of interconnection with existing grid; and
- data collection facility location(s).

The Bureaus understand that you may not always follow a particular industry standard when deriving geospatial layers. As a result, BOEM has created a [template gdb and instructional spreadsheet](#) to promote consistency in attributed content and formatting for proposed infrastructure layers.

3) Metadata

You should include metadata for each spatial layer, in accordance with the Federal Geographic Data Committee’s (FGDC) “Content Standard for Digital Geospatial Metadata” (available at <https://www.fgdc.gov/metadata/csdgm-standard>) or the International Standardization Organization’s (ISO) 19115-2 metadata format (available to purchase at <https://www.iso.org/standard/67039.html>).

Baseline Data Resources

Several baseline data resources are available at no cost. These resources contain datasets that can be used to assist in developing context as part of an initial desktop study to include with data submitted to the Bureaus for their review of a plan.

- MarineCadastre.gov is an integrated marine information system that provides ocean data, offshore planning tools, and technical support to the offshore renewable energy community. The project was designed specifically to support renewable energy siting on the U.S. OCS but is also being used for other ocean-related efforts. MarineCadastre.gov has three primary focus areas: web map viewers and ocean

planning tools; spatial data registry; and technical support and regional capacity building. www.marinecadastre.gov

- Ocean Reports is a reporting tool that uses many of the data layers available from MarineCadastre.gov to generate specialized reports for your specific area of interest. Ocean Reports also contains some layers that are not currently available within MarineCadastre.gov. Most of these layers are within the oceanographic and geophysical section of the Ocean Reports. These layers are downloadable and available as map services. <https://www.marinecadastre.gov/oceanreports>
- OBIS (Ocean Biogeographic Information System)–USA is a program of the United States Geological Survey (USGS) It is the United States national OBIS node. OBIS-USA is meant to serve research and natural resource management needs. It brings together marine biological occurrence data in a standard format with metadata, web-based discovery and download, and web service access for users and applications. https://www.usgs.gov/core_science_systems/sas/obis-usa
- OBIS SEAMAP - As a thematic node of OBIS, OBIS-SEAMAP, is a spatially, temporally interactive online database for marine mammal, sea turtle, seabird, ray, and shark data. This service is made possible by data sharing from [contributors](#) worldwide. <https://seamap.env.duke.edu/>
- The U.S. Integrated Ocean Observing System (IOOS) is an integrated and expedited access system to ocean observation data for improved decision making. The data management and communication subsystem of U.S. IOOS serves as a central mechanism for integrating all existing and projected data sources. Data from U.S. IOOS partners, including the 11 IOOS regional associations and 16 Federal agency partners, are integrated and available through the U.S. IOOS data catalog and asset viewer. <https://ioos.noaa.gov/>

Regional Ocean Planning Geospatial Data Portals:

- Mid-Atlantic Regional Council on the Ocean - Mid-Atlantic Ocean Data Portal <http://portal.midatlanticocean.org/portal/>
- Northeast Regional Ocean Council Northeast Ocean Data <http://northeastoceandata.org>
- West Coast Governors Alliance on Ocean Health [West Coast Ocean Data Portal](#) <http://portal.westcoastoceans.org/>
- Oregon Offshore Wind Mapping Tool (OROWindMap)- <https://offshorewind.westcoastoceans.org/>
- Gulf of Mexico AquaMapper - <https://www.arcgis.com/apps/webappviewer/index.html?id=889b16ac2f4e4637b73e4579831b806d>
- Gulf of Mexico Data Atlas - <https://www.ncei.noaa.gov/maps/gulf-data-atlas/atlas.htm>
- Gulf of Mexico Open Data Platform - <https://gmod-portal-gomalliance.hub.arcgis.com/>

Data Standard References

The FGDC is the lead entity in the executive branch of the Federal Government for the development, implementation, and review of policies, practices, and standards relating to geospatial data. Federal Government entities are required to follow these standards. While these standards do not apply to the private sector, following them may make it easier for the Bureaus to use and review the data, including the compilation of multiple disparate sources of similar data for analysis. Some of the Bureaus' guidance documents may prefer a particular FGDC standard for a data type being provided. The current list of FGDC-approved geospatial standards can be found at: <https://fgdc.gov/standards/list#>

You may find the following FGDC standard most useful:

- [Standard Ocean Mapping Protocol](#)
- [Content Standard for Digital Geospatial Metadata](#)
- [INCITS 453-2009\[R2014\], Information Technology - North American Profile of ISO 19115:2003 - Geographic Information - Metadata \(NAP - Metadata\)](#)
- [Content Standard for Digital Geospatial Metadata: Part 1, Biological Data Profile, FGDC-STD-001.1-1999](#)
- [Content Standard for Digital Geospatial Metadata: Extensions for Remote Sensing Metadata, FGDC-STD-012-2002](#)
- [Content Standard for Remote Sensing Swath Data, FGDC-STD-009-1999](#)
- [Geographic information Framework Data Standard Part 3, Elevation, FGDC-STD-014.3-2008](#)
- [Coastal and Marine Ecological Classification Standard \(CMECS\), FGDC-STD-018-2012](#)
- [\[OGC 10-126r3\] OGC® WaterML 2.0: Part 1- Time series](#)

BOEM Guidance

BOEM has provided topic-specific guidance regarding the collection and reporting of geospatial information in the following documents:

1. *Guidelines for Providing Avian Survey Information for Renewable Energy Development on the Outer Continental Shelf Pursuant to 30 CFR Part 585*, available at: <https://www.boem.gov/sites/default/files/documents/newsroom/Avian%20Survey%20Guidelines.pdf>
2. *Guidelines for Providing Geophysical, Geotechnical, and Geohazard Information Pursuant to 30 CFR Part 585*, available at: <https://www.boem.gov/sites/default/files/documents/about-boem/GandG%20Guidelines.pdf>
3. *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585*, available at: <https://www.boem.gov/sites/default/files/documents/about-boem/Archaeology%20and%20Historic%20Property%20Guidelines.pdf>

4. *Guidelines for Information Requirements for a Renewable Energy Site Assessment Plan (SAP)*, available at:
<https://www.boem.gov/sites/default/files/renewable-energy-program/BOEM-Renewable-SAP-Guidelines.pdf>
5. *Information Guidelines for a Renewable Energy Construction and Operations Plan (COP)*, available at:
<https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines.pdf>
6. *Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585*, available at:
<https://www.boem.gov/sites/default/files/renewable-energy-program/BOEM-Fishery-Guidelines.pdf>
7. *Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585*, available at:
<https://www.boem.gov/sites/default/files/renewable-energy-program/Regulatory-Information/BOEM-Renewable-Benthic-Habitat-Guidelines.pdf>
8. *Guidelines for Providing Information on Marine Mammals and Sea Turtles for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585*, available at:
<https://www.boem.gov/sites/default/files/renewable-energy-program/Regulatory-Information/BOEM-Marine-Mammals-and-Sea-Turtles-Guidelines.pdf>

BOEM will continue to review and update its guidance documents, as applicable, at <https://www.boem.gov/guidance>. BOEM will notify you in a note to stakeholders when guidance is updated.

Protection of Information

Lessees, grantees, and operators of OCS renewable energy leases and grants should identify any potentially privileged or confidential information in their plans, reports, documents, or other materials submitted to the Bureaus. The Bureaus will protect confidential commercial or proprietary information in accordance with OCSLA, the Freedom of Information Act (5 U.S.C. 552), and the associated implementing regulations.

Guidance Document Statement

BOEM and BSEE issue NTLs and other guidance documents to clarify certain regulatory requirements and to outline the recommended information that various submittals should include.

This NTL is intended to provide clarity to lessees, grantees, operators, and the public regarding existing regulatory requirements and processes related to the Bureau's administration of OCS renewable energy and alternate use activities. Applicable statutes, regulations, lease provisions, and terms and conditions of approvals set forth enforceable legal requirements.

Paperwork Reduction Act of 1995 Statement

The Office of Management and Budget (OMB) approved the information collection requirements contained in 30 CFR parts 285, 585, and 586 under OMB Control Numbers 1014-0034 and 1010-0176. This NTL does not impose additional information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq*).

Contacts

If you have questions regarding this NTL, please contact:

BSEE: Michaela Noble, 1849 C Street NW, Office 5419, Washington, DC 20240; or email: <mailto:bseeofficeofrenewableenergy@bsee.gov>; or

BOEM: Wright Frank, BOEM Office of Renewable Energy Programs, 45600 Woodland Road, VAM-OREP, Sterling, VA 20166; or email: Wright.Frank@boem.gov.

Signatures

Michaela Noble
Director, Renewable Energy and Regulatory Compliance Program
Bureau of Safety and Environmental Enforcement

Karen Baker
Chief, Office of Renewable Energy Programs
Bureau of Ocean Energy Management