



OCEAN SPATIAL DATA STANDARD



Haceta Head Light House

Document Revisions

Revision	Date	Author	Description	Affected Pages
1.1	03/10/2017	Kyler Diershaw	Updated contact information for State Data Steward, GIS Technical Lead, State Data Administrator, State Records Administrator. Added Document Revision Table.	Section 1.1, 2.5, 2.6, 4.0, Appendix This page
1.1	03/15/2017	Kyler Diershaw	Added hyperlinked TOC Updated BLM_ORG_CD Updated Records Retention Schedule Updated Shoreline attribute and domain	TOC A2 1.3 7.5, A.3
1.2	6/21/2017	Eric Hiebenthal	Added missing SHORELINE attribute to Section 4. Updated domain example values for dom_ORGANIZATION. Added subtitle to front page graphic. Cleaned up formatting. Added BLM Shield to front page. Corrected spelling.	All.

Table of Contents

Document Revisions	2
1. GENERAL INFORMATION	5
1.1 ROLES AND RESPONSIBILITIES	5
1.2 FOIA CATEGORY	5
1.3 RECORDS RETENTION SCHEDULE.....	6
1.4 SECURITY/ACCESS/SENSITIVITY	6
1.5 KEYWORDS.....	6
1.6 SUBJECT FUNCTION CODES	6
2. DATASET OVERVIEW	7
2.1 DESCRIPTION.....	7
2.2 USAGE	7
2.3 SPONSOR/AFFECTED PARTIES	7
2.4 RELATIONSHIP TO OTHER DATASETS.....	7
2.5 DATA CATEGORY/ARCHITECTURE LINK.....	7
2.6 RELATIONSHIP TO THE DEPARTMENT OF THE INTERIOR ENTERPRISE ARCHITECTURE - DATA RESOURCE MODEL.....	8
2.7 OCEAN DATA ORGANIZATION / STRUCTURE.....	10
3. DATA MANAGEMENT PROTOCOLS	11
3.1 ACCURACY REQUIREMENTS	11
3.2 COLLECTION, INPUT, AND MAINTENANCE PROTOCOLS	11
3.3 UPDATE FREQUENCY AND ARCHIVAL PROTOCOLS	11
3.4 STATEWIDE MONITORING.....	11
4. OCEAN SCHEMA (simplified)	12
4.1 OCEAN_POLY (OCEAN polygons)	12
4.2 OCEAN_ARC (OCEAN Lines)	12
5. PROJECTION AND SPATIAL EXTENT	12
6. SPATIAL ENTITY CHARACTERISTICS	13
7. ATTRIBUTE CHARACTERISTICS AND DEFINITION.....	13
7.1 ACCURACY_FT.....	13
7.2 COORD_SRC	14
7.4 ORGANIZATION	14
7.5 SHORELINE	14
7.6 SOURCE_LYR.....	15
7.7 VERSION_NAME	15

8. LAYER FILES (PUBLICATION VIEWS)..... 16

8.1 GENERAL..... 16

8.2 SPECIFIC TO THIS DATASET..... 16

9. EDITING PROCEDURES 16

9.1 MANAGING OVERLAP (General Guidance) 16

9.2 EDITING AND QUALITY CONTROL GUIDELINES 17

9.3 SNAPPING GUIDELINES 18

10. OREGON DATA FRAMEWORK OVERVIEW 19

11. ABBREVIATIONS AND ACRONYMS USED..... 20

APPENDIX: DOMAINS (VALID VALUES) 21

A.1 COORD_SRC 21

A.2 ORGANIZATION 21

A.3 SHORELINE 22

1. GENERAL INFORMATION

Dataset (Theme) Name: Ocean Boundary

Dataset (Feature Class): OCEAN_POLY, OCEAN_ARC

1.1 ROLES AND RESPONSIBILITIES

Roles	Responsibilities
State Data Stewards	The State Data Steward, Corey Plank, at 503-808-6145, is responsible for approving data standards and business rules, developing Quality Assurance/Quality Control procedures, identifying potential privacy issues and ensuring that data is managed as a corporate resource. The state data steward coordinates with field office data stewards, the state data administrator, Geographic Information System (GIS) coordinators, and national data stewards. The state data steward also reviews geospatial metadata for completeness and quality.
GIS Technical Lead	The GIS Technical Lead, Corey Plank, at 503-808-6145, works with data stewards to convert business needs into GIS applications and derive data requirements and participates in the development of data standards. The GIS technical lead coordinates with system administrators and GIS coordinators to manage the GIS databases. The GIS technical lead works with data editors to make sure data is being input into the Spatial Data Engine (SDE) consistently and in accordance with the established data standard. The GIS technical lead is also a resource for the editors when they have questions or when they are new to editing a particular data set, and can help answer questions about how to query and display the data set for mapping and analysis.
State Data Administrator	The State Data Administrator, Eric Hiebenthal, at 503-808-6565, provides information management leadership, data modeling expertise, and custodianship of the state data models. The state data administrator ensures that defined processes for development of data standards and metadata are followed, and that they are consistent and complete. The state data administrator is responsible for making data standards and metadata accessible to all users. The state data administrator also coordinates with data stewards and GIS coordinators to respond to national spatial data requests.
State Records Administrator	The State Records Administrator, Tamara Yingling, at 503-808-6450, assists the state data steward to identify any privacy issues related to spatial data. The state records administrator provides direction and guidance on data release and fees. The state records administrator also ensures that data has been classified under the proper records retention schedule and determines appropriate Freedom of Information Act category.

Table 1. Role and Responsibilities

1.2 FOIA CATEGORY

Public

1.3 RECORDS RETENTION SCHEDULE

The DRS/GRS/BLM Combined Records Schedule under Schedule 20/52a3 (Electronic Records/Geographic Information Systems) lists Ocean as one of the system-centric themes that are significant for Bureau of Land Management's (BLM) mission that must be permanently retained.

"PERMANENT. Cutoff at the end of each Fiscal Year (FY) or when significant changes and additions have been made, before and after the change. Use BLM 20/52a. Transfer to the National Archives every three years after cutoff. Under the instruction in 36 CFR 1235.44-50 or whichever guidance is in place at the time of the transfer. Submissions are full datasets and are in addition to, not replacements, of earlier submissions."

According to the DRS/GRS/BLM Records Schedules, Schedule 20 Item 52a3, the NOC is responsible for transfer to NARA.

Oregon/Washington (OR/WA) BLM Guidebook for Management of Geospatial Data (v1) Section 15.2 - Corporate Data Online Archives prescribes:

"Vector annual archives are retained online for 12 years. Each year, data that has reached 12 years old is copied offline to be retained until no longer needed (determined by data stewards and program leads) with format and readability maintained in a five (5) year "tech refresh" update cycle."

1.4 SECURITY/ACCESS/SENSITIVITY

The Ocean Boundary (OCEAN) set of themes do not require any additional security other than that provided by the General Support System (the hardware/software infrastructure of the OR/WA BLM).

This data is not sensitive and there are no restrictions on access to this data, either from within the BLM or external to the BLM.

There are no privacy issues or concerns associated with these data themes.

1.5 KEYWORDS

Keywords that can be used to locate this dataset include Ocean, 3-Mile, Boundary, coastline.

1.6 SUBJECT FUNCTION CODES

BLM Subject Function codes that can be used to describe this dataset include:

- 1283 - Data Administration
- 9160 - Mapping Sciences

2. DATASET OVERVIEW

2.1 DESCRIPTION

The OCEAN data standard contains requirements for the GIS representation of the Pacific Ocean, its coastline with Oregon and Washington (land/ocean interface) and near-shore islands. The polygon representing the ocean is squared off at an arbitrary distance in the ocean. At some time in the future, the coastline and islands may be included in a broader hydrography theme or themes. In particular, the National Hydrography Dataset (NHD) and the Watershed Boundaries (WBD) datasets have shoreline components. As those datasets mature, they should become the source for the coastline data. The OCEAN data set may not be needed when that occurs and will be archived, if that is the case.

2.2 USAGE

The OCEAN feature classes are used for display on maps and for GIS analysis. A known use for the coastline arcs will be to create a “land only” Resource Area Boundary (RAB) (described in a separate data standard) for the westernmost districts of OR/WA BLM. This boundary may be used in a wide range of applications including Resource Management Plans (RMP). In addition, the ocean islands, or a selection of them, may be used for analysis and planning. Some have BLM surface jurisdiction and many provide special wildlife habitat. Coastline arcs may also be used to delineate Hydrologic Unit (HU) (watershed) boundaries.

2.3 SPONSOR/AFFECTED PARTIES

The sponsor for this data set is the Deputy State Director, Division of Resources, Lands, Minerals, and Fire. Since the coastline and islands fall into the broader hydrography data group, affected parties include the US Fish and Wildlife Service, US Geological Survey, and US Forest Service, as well as State agencies for Oregon and Washington with responsibilities for water resources. It is expected that OR/WA BLM will coordinate with these agencies and use the accepted interagency standards where they exist.

2.4 RELATIONSHIP TO OTHER DATASETS

The Ocean data set is used in conjunction with the RAB data set to show the legal limit of jurisdiction (3 miles into the ocean).

There is no relationship to any other database.

2.5 DATA CATEGORY/ARCHITECTURE LINK

These data themes are a portion of the Oregon Data Framework (ODF). The ODF utilizes the concept of inheritance to define specific instances of data. All OR/WA resource-related data are divided into three general categories:

- Activities
- Resources, and
- Boundaries.

These general categories are broken into subcategories that inherit spatial characteristics and attributes from their parent category. These subcategories may be further broken into more specific groups until a basic data set cannot be further subdivided. Those basic data sets inherit all characteristics of all groups/categories above them. The basic data sets are where physical data gets populated (those groups/categories above them do not contain actual data but set parameters that all data of that type must follow). See the ODF Overview (Figure 2) for a simplified schematic of the entire ODF showing the overall organization and entity inheritance. The OCEAN entities are highlighted. For additional information about the ODF, contact:

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OR/WA State Data Administrator
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208
503-808-6565

For OCEAN, the categories/groups that the data set is part of are:

BLM OCEAN POLYGONS:

Oregon Data Framework

Resources

Water

Ocean

OCEAN_POLY

BLM OCEAN LINE:

Oregon Data Framework

Resources

Water

Ocean

OCEAN_ARC

2.6 RELATIONSHIP TO THE DEPARTMENT OF THE INTERIOR ENTERPRISE ARCHITECTURE - DATA RESOURCE MODEL

The DOI's Enterprise Architecture contains a component called the Data Resource Model. This model addresses the concepts of data sharing, data description, and data context. This data standard provides information needed to address each of those areas. Data sharing is addressed through complete documentation and simple data structures which make sharing easier. Data description is addressed through the section on Attribute Descriptions. Data context is addressed through the data organization and structure portions of this document. In addition, the DOI Data Resource Model categorizes data by use of standardized Data Subject Areas and Information Classes. For this data set, the Data Subject Area and Information Class are:

- Data Subject Area: Geospatial
- Information Class: Location

For a complete list of all DOI Data Subject Areas and Information Classes, contact:

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(The remainder of this page intentionally left blank)

2.7 OCEAN DATA ORGANIZATION/STRUCTURE

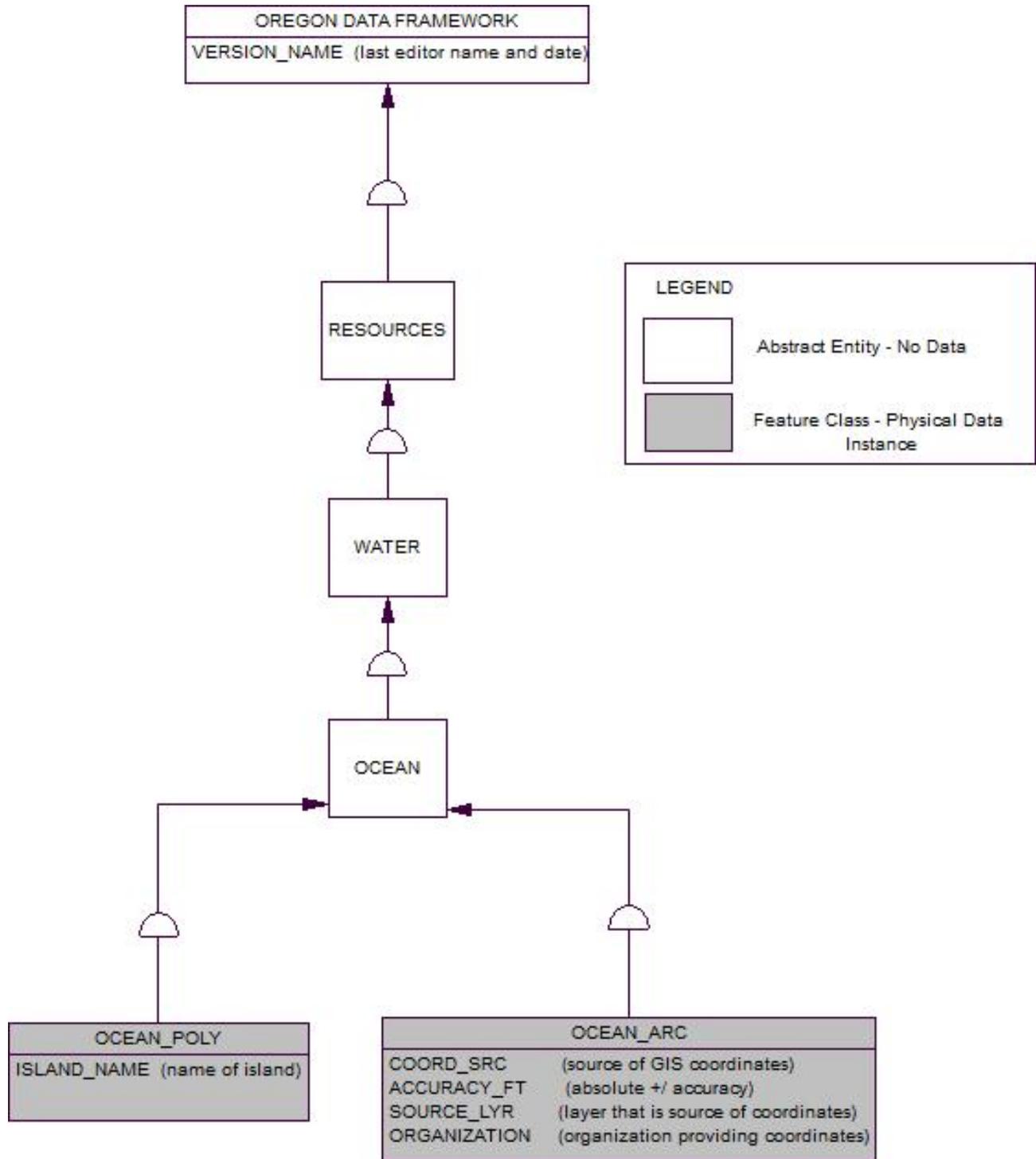


Figure 1. Data Organization Structure

3. DATA MANAGEMENT PROTOCOLS

3.1 ACCURACY REQUIREMENTS

The coastline arcs represent the mean high tide of the ocean. At a minimum, this data is to meet national map accuracy requirements at 1:24,000 scale (the accuracy of the paper source). Island minimum size is approximately 60 feet along the shortest axis.

3.2 COLLECTION, INPUT, AND MAINTENANCE PROTOCOLS

The best GIS data from all available sources was combined to create an initial shoreline dataset. The definition used for coastline includes jetties with a closure line from endpoint to endpoint. The coastline will be coincident with hydrologic unit boundaries from the National Hydrologic Dataset once those are rectified. Future updates will take place as feature representations are refined to higher accuracy.

Once the theme has been created, it is the responsibility of the state data steward to ensure that the theme remains current. It is the responsibility of district data stewards and GIS coordinators to keep the state data steward apprised of improvements to the GIS source data and to assist with updates. Proposed changes will be provided to the state data steward who will coordinate with the appropriate interagency data steward(s) for approval of the change. Changes may also originate from outside of OR/WA BLM and it is the responsibility of the state data steward to oversee these changes. Finally, it is the responsibility of the state data steward to notify the district data stewards and GIS coordinators when there is an update.

3.3 UPDATE FREQUENCY AND ARCHIVAL PROTOCOLS

The unit of processing for updating the OCEAN theme is the State. Editors at the OR/WA State Office will initiate transactions by "checking-out" the OCEAN theme features. They will then add, delete or modify the features prior to "check-in".

Updates to OCEAN should be very infrequent because there is no ongoing data collection effort related to coastline or island perimeters. Changes are discouraged because of the need for interagency approval and the significant impact on planning boundaries.

It is also the responsibility of the data steward to ensure that any database external to the Corporate GIS remains current. There are no known databases associated with OCEAN, but if the coastline was used in a planning area boundary and the coastline arcs are modified, a plan amendment may be required to document a change in acres.

3.4 STATEWIDE MONITORING

The state data steward, in conjunction with the GIS technical lead and district data stewards, are responsible for reviewing the OCEAN theme across the state at least once per year. An interagency review is preferred. Coincidence of OCEAN arcs with dependent themes (see Spatial Entity Characteristics section) is also checked.

4. OCEAN SCHEMA (simplified)

Attributes are listed in the order in which they appear in the geodatabase feature class. The order is indicative of the importance of the attribute for theme definition and use. In general, core, required attributes are listed first, but non-core may be listed adjacent to related attributes to avoid confusion in the GIS tables. Attributes are listed alphabetically and are more fully described in the Attribute Data Dictionary, starting on page 12. There are no aliases, unless specifically noted. Domains used in this data standard can be found in the Appendix. These are the domains at the time the data standard was approved. Domains can be changed without reissue of the data standard, so those shown in the Appendix may not be current. Contact the OR/WA state data administrator for the current lists.

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4.1 OCEAN_POLY (OCEAN polygons)

Attribute Name	Data Type	Length	Default Value	Required?	Domain
ISLAND_NAME	String	50		No	
VERSION_NAME	String	50	InitialLoad	Yes*	

*Automatically generated.

4.2 OCEAN_ARC (OCEAN Lines)

Attribute Name	Data Type	Length	Default Value	Required?	Domain
SHORELINE	String	50		No	dom_SHORELINE
COORD_SRC	String	7	UNK	Yes	dom_COORD_SRC
SOURCE_LYR	String	15		Yes	
ACCURACY_FT	Short Integer			No	
ORGANIZATION	String	15		No	dom_ORGANIZATION
VERSION_NAME	String	50	InitialLoad	Yes*	

*Automatically generated.

5. PROJECTION AND SPATIAL EXTENT

All feature classes and feature datasets are in Geographic, NAD83. Units are decimal degrees. Spatial extent (area of coverage) is the coastline for Oregon and Washington, extending into British Columbia and California and an arbitrary distance well past the 3-mile coastal waters boundary. See the metadata for this data set for more precise description of the extent.

6. SPATIAL ENTITY CHARACTERISTICS

OCEAN POLYGON (OCEAN_POLY)

Description: Instance of Resources Water Ocean group.

Geometry: Polygons that form a continuous “wall-to-wall” cover with no gaps or overlaps.

Topology: Yes. OCEAN_POLY lines are coincident with OCEAN_ARC lines and together make the feature dataset, OCEAN.

Integration Requirements: Polygon features are used with Resource Area and District boundaries to create publication layers.

OCEAN LINE (OCEAN_ARC)

Description: Instance of Resources Water Ocean group.

Geometry: Simple, non-overlapping lines that are split between endpoints as needed.

Topology: Yes. OCEAN_POLY lines are coincident with OCEAN_ARC lines and together make the feature dataset, OCEAN.

Integration Requirements: Arcs must remain coincident with other GIS themes as indicated by COORD_SRC (for example with HU when COORD_SRC is SOURCEL and SOURCE_LYR is HU) and with Boundary group themes that have arc segments defined by ocean coastline or islands.

7. ATTRIBUTE CHARACTERISTICS AND DEFINITION

(In alphabetical order)

7.1 ACCURACY_FT

Geodatabase Name	ACCURACY_FT
BLM Structured Name	Accuracy_Feet_Measure
Inheritance	Inherited from entity POLITICAL ADMIN SMA LINE
Feature Class Use	OCEAN_ARC
Definition	How close, in feet, the spatial GIS depiction is to the actual location on the ground. There are several factors to consider in GIS error: scale and accuracy of map-based sources, accuracy of Global Positioning System (GPS) equipment, and the skill level of the data manipulators. A value of “0” indicates no entry was made. This is the correct value when the COORD_SRC is another GIS theme (Digital Line Graph, Cadastral National Spatial Data Infrastructure and Digital Elevation Model (DEM)) because the accuracy is determined by that theme. However, if COORD_SRC is MAP (digitized from a paper map) or GPS, a value of “0” indicates a missing value that should be filled in either with a non-zero number or “-1.” A value of “-1” indicates that the accuracy is unknown and no reliable estimate can be made.
Required/Optional	Optional
Domain (Valid Values)	No domain. Examples: 3 (for high accuracy GPS), 40 (best possible for United States Geological Survey (USGS) 24K topo map), 200
Data Type	Short Integer

7.2 COORD_SRC

Geodatabase Name	COORD_SRC
BLM Structured Name	Coordinate_Source_Code
Inheritance	Inherited from entity POLITICAL ADMIN SMA LINE
Feature Class Use	OCEAN_ARC
Definition	The actual source of the GIS coordinates for the polylines. If the line is copied from another theme, and already has COORD_SRC, it should be reviewed and may need to be changed for use in this dataset.
Required/Optional	Required
Domain (Valid Values)	dom_COORD_SRC
Data Type	Variable Characters (7)

7.3 ISLAND_NAME

Geodatabase Name	ISLAND_NAME
BLM Structured Name	Defining_Feature_Code
Inheritance	Not inherited
Feature Class Use	OCEAN_POLY
Definition	The official name of the island, as listed in the U.S. Geographic Names Information System (GNIS) or the British Columbia GNIS (BCGNIS). If the island is not named, fill with <null> and if the polygon represents the ocean fill with "Pacific Ocean".
Required/Optional	Optional
Domain (Valid Values)	None. Examples: "Bowen Island" "Tunnel Island"
Data Type	Variable characters (50)

7.4 ORGANIZATION

Geodatabase Name	ORGANIZATION
BLM Structured Name	Organization_Code
Inheritance	Not inherited
Feature Class Use	OCEAN_ARC
Definition	The name of the organization that supplied the spatial feature.
Required/Optional	Optional
Domain (Valid Values)	dom_ORGANIZATION
Data Type	

7.5 SHORELINE

Geodatabase Name	SHORELINE
BLM Structured Name	Shoreline_Type
Inheritance	Not inherited

Feature Class Use	OCEAN_ARC
Definition	The type of shoreline for cartographic representation
Required/Optional	Optional
Domain (Valid Values)	"U.S. MAINLAND", "CANADA MAINLAND", "U.S. LARGE ISLAND", "CANADA LARGE ISLAND", "CANADA SMALL ISLAND", "U.S. SMALL ISLAND"
Data Type	Variable characters (50)

7.6 SOURCE_LYR

Geodatabase Name	SOURCE_LYR
BLM Structured Name	Source_Layer_Name
Inheritance	Not inherited
Feature Class Use	OCEAN_ARC
Definition	The name of the feature class from which features are duplicated. Required if COOR_SOURCE is SOURCEC. Otherwise field is blank.
Required/Optional	Required (if applicable)
Domain (Valid Values)	No domain.
Data Type	Variable Characters (15)

7.7 VERSION_NAME

Geodatabase Name	VERSION_NAME
BLM Structured Name	Geodatabase_Version_Text
Inheritance	Inherited from Entity OREGON DATA FRAMEWORK
Feature Class Use	OCEAN_POLY, OCEAN_ARC
Definition	<p>Name of the corporate geodatabase version previously used to edit the record.</p> <p>InitialLoad = feature has not been edited in ArcSDE.</p> <p>Format: username.XXX-mmddyy-hhmmss = version name of last edit (hours might be a single digit; leading zeros are trimmed for hours only). XXX=theme abbreviation.</p> <p>Example: ehiebenthal.OCEAN-121210-111034</p> <p>Only appears in the transactional (edit) version. Public version (which is also the version used internally for mapping or analysis) does not contain this attribute.</p>
Required/Optional	Required (automatically generated)
Domain (Valid Values)	No domain
Data Type	Variable Characters (50)

8. LAYER FILES (PUBLICATION VIEWS)

8.1 GENERAL

Master corporate feature classes/datasets maintained in the edit database (currently ORSOEDIT) are “published” to the user database (currently ORSOVCTR) in several ways:

- Copied completely with no changes (replicated).
- Copied with no changes except to omit one or more feature classes from a feature dataset.
- Minor changes made (e.g., clip, dissolve, union with ownership) in order to make the data easier to use. These “Publication feature classes” are indicated by “PUB” in their name.

Publication feature classes are created through scripts that can be automatically executed and are easily rebuilt from the master (ORSOEDIT) data whenever necessary.

Layer files are not new data requiring storage and maintenance but, rather, point to existing data. They have appropriate selection and symbolization for correct use and display of the data. They provide the guidance for data published on the web. Layer files are created by simple, documented processes, and can be deleted and recreated at any time.

8.2 SPECIFIC TO THIS DATASET

The ocean polygons can be intersected with District and Resource Area boundaries to create those portions occurring on land only. Please see the data standard for RAB for details on the layer files and publication feature classes that OCEAN is a component.

9. EDITING PROCEDURES

9.1 MANAGING OVERLAP (General Guidance)

“Overlap” means there is potentially more than one feature in the same feature class that occupies the same space (“stacked” polygons). **Depending on the query, acres will be double-counted.**

The POLY/ARC feature dataset means that there is a polygon feature class with an arc feature class that represents the perimeter of the polygon, and must be kept coincident with the polyline.

In this discussion, a polygon feature may consist of more than one polygon, and an arc feature may consist of more than one arc. The feature would have multiple records in the spatial table (with identical attributes). Multi-part features are not allowed. Multi-part features are easily created inadvertently and not always easy to identify. If they are not consciously and consistently avoided, feature classes will end up with a mixture of single and multi-part features. Multi-part features can be more difficult to edit, query, and select and can adversely impact overall performance.

Overlap is only allowed in the ODF in limited and controlled scenarios. In each case, the cause of the overlap (what attribute changes will “kick off” a new feature which may overlap an existing feature) is carefully defined and controlled. In other words, in feature classes that permit overlap, a change in spatial extent always creates a new feature which may overlap an existing feature. In addition, there are certain attribute(s) that will result in a new feature, even if there is no spatial change. The feature classes that allow overlap and the attributes that lead to a new, possibly overlapping feature, are described below:

- Overlapping Polygons where polygons are part of a POLY/ARC feature dataset. Topology rules apply only to the POLY/ARC relationship. (Polylines in the POLY feature class are covered by arcs in the ARC feature class and vice versa; arcs must not have dangles, intersect, self-overlap, or overlap adjacent arcs.)
In the ODF this occurs only in AVY_PLAN, where any number of projects or plans might overlap, or in proposed boundary datasets (like ACEC_P). Where a portion of a new activity plan or a proposed boundary is the same as another, the same line segment(s) are used for both polygons; in other words, one line, not duplicate lines on top of each other. In AVY_PLAN, a new PLANID creates a new polygon which may overlap an existing activity plan. In proposed boundary datasets, different alternatives might create polygons that overlap each other.
- Overlapping Polygons, where polygons are a stand-alone feature class. There are no topology rules for this situation. Exmaples from the ODF include:
 - Species Occurrence Group: These are distinct sites defined by species and time. A different species create a new polygon which may overlap another site in whole or part. A change in time (new visit date) will create a new polygon if it is desired that the old spatial extent and date is retained (as historic). Additionally, for wildlife, a different season/type of use (e.g., winter range vs. spring breeding) will create new polygon that may overlap others.
 - Survey Group: Within each feature class a new survey is created only for a new date. This group might also include proposed surveys in separate feature classes.
 - Treatment Activity Group: Within each feature class, an overlapping treatment area is always created for a new date. If it is not possible to SPLIT the treatment area by method and it is important to capture more than one method applied to the same area on the same day, then an overlapping treatment area is created. This group also includes proposed treatments which could overlap existing treatments and have additional overlap created by different treatment alternatives.
 - Land Status Encumbrances Group: A new polygon is created for a change in case file number even if it is the same area.
- Overlapping Arcs where arcs are a stand-alone feature class. There are no topology rules for this situation. In the ODF, this only occurs in feature class ESMTROW_ARC.
- Overlapping Points. Not generally a problem because they have no spatial extent, but still should be checked and duplicate points deleted.

9.2 EDITING AND QUALITY CONTROL GUIDELINES

Checking for undesired duplicates is critical. Polygons or arcs that are 100 percent duplicate can easily be found by searching for identical attributes, along with identical Shape_Area and/or Shape_Length.

Searching for partially overlapping arcs or polygons is difficult, and each case must be inspected to determine if the overlap is desired or not.

Where polygons are created with the buffer tool, the correct option must be selected. The default option is “None” which means overlap will be retained. Sometimes, the overlap should be dissolved and the option changed to “All.”

If the dissolve tool is used on polygons or arcs, the “Create multipart features” should be unchecked.

9.3 SNAPPING GUIDELINES

Where line segments with different COORD_SRC meet, the most accurate or important, in terms of legal boundary representation, are kept unaltered and other lines snapped to them. In general, the hierarchy of importance is Landlines Layer (CADNSDI points/lines) first, with DLG or other SOURCE next, then DEM and MAP last.

When snapping to the data indicated in COORD_SRC (as opposed to duplicating with copy/paste), be sure there are exactly the same number of vertices in the target and source theme arcs. Tracing arc or polygon segments automatically reproduces all vertices.

When the DEF_FEATURE is “SUBDIVISION,” trace arc or polygon segments or snap the line segment to CADNSDI points; make sure there are the same number of vertices in the line as CADNSDI points.

On themes with ACCURACY_FT, but no COORD_SRC or DEF_FEATURE, the line with better ACCURACY_FT is kept unaltered.

11. ABBREVIATIONS AND ACRONYMS USED

(Does not include abbreviations/acronyms used as codes for particular data attributes)

Abbreviations	Descriptions
BLM	Bureau of Land Management
CADNSDI	Cadastral National Spatial Data Infrastructure
DEM	Digital Elevation Model
DLG	Digital Line Graphs
DOB	BLM District Office Boundary
FOIA	Freedom of Information Act
GIS	Geographic Information System
GNIS	Geographic Names Information System
IDP	Interdisciplinary
NAD	North American Datum
NARA	National Archives and Records Administration
ODF	Oregon Data Framework
OR/WA	Oregon /Washington
RA	Resource Area
RMP	Resource Management Plan
SDE	Spatial Data Engine
SMA	Special Management Area
USFS	United States Forest Service
USGS	United States Geological Survey

Table 2. Abbreviations/Acronyms Used

APPENDIX: DOMAINS (VALID VALUES)

The domains listed below are those that were in effect at the time the data standard was approved and may not be current. Contact the state data administrator for current lists:

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A.1 COORD_SRC

Coordinate Source Code. The source of the geographic coordinates (lines, points, polygons).

CADNSDI	CADNSDI – Lines from or snapped to the CADNSDI dataset
CFF	CFF – Lines duplicated or buffered from Cartographic Feature Files
DEM	DEM – Digital Elevation Model (30m or better accuracy) used for creation of contours
DLG	DLG – Lines duplicated or buffered from (24K scale accuracy) USGS Digital Line Graphs Typical Accuracies: 40 feet
DIS	DIS – Lines generated to connect discontinuous features
DLG	DLG – Lines duplicated or buffered from USGS Digital Line Graphs
DOQ	DOQ – Screen digitized linework over Digital Orthoquad backdrop
DRG	DRG – Screen digitized linework over Digital Raster Graphic (USGS) backdrop
GCD	GCD – Lines snapped to Geographic Coordinate Database Points
GPS	GPS – Lines obtained from a Global Positioning System device
IMG	IMG – Linework derived from interpretation of non-photographic imagery
MAP	MAP – Digitized line work from hardcopy map
MTP	MTP – Lines duplicated from Digital Master Title Plat
SOURCEL	SOURCEL – Source layer from BLM GIS
SRV	SRV – Survey methods were used to create the linework
TIGER	TIGER – Tiger data
TRS	TRS – Coordinates only given as a legal description (township, range, section)
UNK	UNK – Unknown coordinate source
WOD	WOD – WODDB (Western Oregon Digital Database) Photogrammetric

A.2 ORGANIZATION

Organization Code. Names of organizations that are the source of the data. Includes non-BLM organizations.

ST_WA_DNR	Department of Natural Resources, State of Washington
BLM_OR_OS	Oregon State Office, BLM

A.3 SHORELINE**SHORELINE.** The type of shoreline for cartographic representation.

U.S. MAINLAND	Shoreline of the US mainland
CANADA MAINLAND	Shoreline of the Canadian mainland
U.S. LARGE ISLAND	Shorelines of large US islands
CANADA LARGE ISLAND	Shorelines of large Canadian islands
CANADA SMALL ISLAND	Shorelines of small Canadian islands
U.S. SMALL ISLAND	Shorelines of small US islands