

December 18, 2008

## ***Western Governors' Association***

### **Western Renewable Energy Zones Project “WILDLIFE DATA REQUEST”**

The Western Governors' Association (WGA) is soliciting wildlife data from the 11 state wildlife agencies and two provinces in the Western Interconnection<sup>1</sup>, relevant federal agencies, the private sector, and other relevant sources. This wildlife data will be compiled and analyzed by WGA as a part of its Western Renewable Energy Zones project (WREZ), in order to characterize wildlife and habitats on a coarse scale within proposed Renewable Energy Zones (REZ).

Wildlife data will be reviewed initially only within the “Candidate Study Areas” (CSAs) that are under consideration for REZ designation. However, data submitted in response to this request may either be limited to the areas contained in the CSAs, or may represent statewide coverage. More information on the WREZ project, including maps of the CSAs is available on the WREZ web site: <http://www.westgov.org/wga/initiatives/wrez/>. To download shapefiles for the CSAs contact Donna Heimiller at the National Renewable Energy Lab ([Donna.Heimiller@nrel.gov](mailto:Donna.Heimiller@nrel.gov)).

For this request, the term “wildlife” is being used broadly to encompass individual species (including plants, aquatic and terrestrial animals), species assemblages and their habitats, ecosystems, and biological communities. Because the WREZ project will primarily focus on development of utility-scale wind, solar or geothermal energy<sup>2</sup>, wildlife considerations should primarily focus on impacts related to wind, solar or geothermal development correspondingly. The initial planning effort to establish REZs will provide information regarding transmission and cost of distributing renewable energy throughout the Western Interconnection.

Although this Data Request is being sent primarily to state and provincial fish and wildlife agencies, relevant data from federal agencies, NGOs, industry and others is also being requested.

Please note, we are not requesting data associated with wildlife on lands that are excluded from development by statute or regulation. Regulatory or statutorily protected lands are addressed in a separate document and process under the WREZ project. To view the list of excluded lands that has been compiled, please visit the WREZ web site at:

<http://www.westgov.org/wga/initiatives/wrez/enviro/index.htm>.

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<sup>1</sup> Alberta, British Columbia, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. This also includes an area in Mexico in the state of Baja California.

<sup>2</sup> The WREZ project may assess impacts from other renewable energy sources, e.g., hydropower and biomass, if such renewable energy sources fall into a REZ (e.g. hydropower installations in British Columbia). The resources located in preliminary REZs will be available for viewing in January 2009.

In addition, state agency data submitted to WGA as a part of the WGA Wildlife Corridors Initiative request in December 2007 do not need to be re-sent, except for those data that have been revised.

Please see **Attachment B** for a table of those data types. For state agencies who would like to apply 2007 data to this request please specify which data sources from **Attachment B** should be applied.

**NOTES TO ALL DATA CONTRIBUTORS:**

Data submitted in response to this data request will only be used for the Western Renewable Energy Zones project, as described above. The data are solely for the internal use by WGA and its contractors on this project and will not be distributed to other agencies, organizations, companies or individuals without prior written consent by the data provider. External data products will be created at a scale that will not compromise any imperiled species, ecosystems or other sensitive locations.

To assist in the accuracy of the data being used in this analysis, precise locational data is preferred. If this is not possible because of data sensitivity concerns, we recommend that data be generalized to one square mile, or be submitted without any identifying information (but assigned to one of the data categories below).

**Data submitted in response to this request should be sent to the relevant state representative(s) listed in Attachment A.** Each state will compile the data relevant to their state, and determine which data will be integrated into the state wildlife maps. Also, categorization of the wildlife maps will be ultimately determined by the state wildlife agency.

States shall forward selected data to WGA and NatureServe (see **Attachment A**).

***The deadline for submission is the close of business on Friday, January 30, 2009.***

Thank you for participation in this process and for assisting in the proactive analysis of wildlife in renewable energy development.

## List of Data Requests

### Crucial Wildlife Habitat:

As adopted by the Western Governors in June 2008:

- Crucial Habitats are places containing the resources, including food, water, cover, shelter, and “important wildlife corridors” that contribute to survival and reproduction of wildlife, are necessary to prevent unacceptable declines, or facilitate future recovery of wildlife populations.
- Important Wildlife Corridors are crucial habitats that provide connectivity over different time scales (including seasonal or longer), among areas used by animal and plant species. Wildlife corridors can exist within unfragmented landscapes or join naturally or artificially fragmented habitats, and serve to maintain or increase essential genetic and demographic connection of populations.

NOTE: For species that have not had crucial or core habitats mapped please provide occurrences but not both. Species Occurrences are known locations of individual species populations, subpopulations, nest sites, etc. These will be used when crucial habitat for the species has not been mapped.

Data Type	Notes and Examples
<b>Species Crucial Habitat</b>	<b>Species crucial or core habitat fitting definition above</b>
<ul style="list-style-type: none"> <li>Species crucial areas</li> </ul>	Examples: Crucial areas for populations of sage grouse, mule deer, elk, pronghorn, mountain goat, bighorn sheep, moose, black bear, grizzly bear, mountain lion, north and mountain caribou.
<ul style="list-style-type: none"> <li>Wildlife concentration areas</li> </ul>	Examples: Winter range (multi-species or single species), breeding range (multi-species or single species), bird roosting areas, bat concentration areas, migratory bird stopover areas, prairie dog towns.
<b>Important Wildlife Corridors</b>	<b>When mapped distinctly from crucial habitat</b>
<ul style="list-style-type: none"> <li>Wide-ranging species corridors</li> </ul>	Examples: Migration corridors for mule deer, elk
<ul style="list-style-type: none"> <li>Mixed-species landscape linkages</li> </ul>	Example: Oregon Wildlife Movement Areas, 2007-2008
<ul style="list-style-type: none"> <li>Migratory flyways</li> </ul>	Examples: raptor flyways, waterfowl flyways, important bat areas

<b>Species Occurrences</b>	<b>Provide when crucial habitat not mapped</b>
<ul style="list-style-type: none"> <li>Federal and state listed, proposed and candidate species – plants and animals</li> </ul>	Data locations masked by some states Example: Washington ground-squirrel burrow complexes
<ul style="list-style-type: none"> <li>State and global priority species – plants and animals</li> </ul>	Species ranked Global or State Critically Imperiled and Imperiled by NatureServe and State NHPs (G1, G2, S1, S2). Data locations masked by some states.
<ul style="list-style-type: none"> <li>Species of greatest conservation need (for states where priority habitats have not been mapped as part of the Wildlife Action Plan) – plant and animals</li> </ul>	State, provincial and federal agencies. (May be the same as federal and state listed species in some states)
<ul style="list-style-type: none"> <li>Buffered lek sites</li> </ul>	
<ul style="list-style-type: none"> <li>Raptor nesting areas</li> </ul>	State, provincial and federal agencies

#### **State Wildlife Action Plans:**

This category includes data types found within State Wildlife Action Plans.

<b>Example Data Type</b>	<b>Notes &amp; Examples</b>
<b>Ecosystems of Concern</b>	
<ul style="list-style-type: none"> <li>Priority areas</li> </ul>	
<ul style="list-style-type: none"> <li>Focus areas</li> </ul>	
<ul style="list-style-type: none"> <li>Landscapes</li> </ul>	

#### **Other Conservation Areas:**

Examples: Contiguous, unfragmented habitat; water-dependent ecosystems; playa lakes and wetlands; areas of low conservation value – areas with lower sensitivity attributes or areas where there is a demonstrated absence of impacted species; demonstrated absence of impacted species (plants and animals); low ecological integrity area (e.g., areas of noxious weeds and invasive species, cultivated cropland).

#### **NGO and Multi-Stakeholder Priority Areas:**

<b>Example Data Type</b>	<b>Notes &amp; Examples</b>
<ul style="list-style-type: none"> <li>Important Biodiversity Areas</li> </ul>	Examples: State NHP Potential Conservation Areas;; Utah Wildlife Action Plan-Conservation Action Planning (WAP-CAP) Areas and WAP-10 Priority

Example Data Type	Notes & Examples
	Habitats; Playa Lake Joint Venture Areas
• Ecoregional Portfolio Areas	The Nature Conservancy, Nature Conservancy of Canada
• Spine of the Continent	Wildlands Project
• Important Herpetological Areas	Important Herpetological Areas are under development by Partners for Amphibian and Reptile Conservation.
• Important bird areas	Audubon Society/Birdlife International; Joint Ventures

### **Critical Data Gaps:**

We understand that many states may not have enough data available to adequately respond to all categories within this data request. State agencies may provide additional information on critical data gaps, related to wildlife and renewable energy development, including guidance for the necessary timeline and funding required to collect the data. For the purposes of this effort, please limit the reporting of data gaps to those applicable within the boundaries of CSAs.

Data gaps can be submitted through the metadata, please see Metadata Guidelines in **Attachment C** for specific instructions.

**ATTACHMENT A**  
***Data Submission***

**Data submitted in response to this request should be submitted to the relevant state representative listed below.**

Each state will compile the data relevant to their state or province, and determine which data will be integrated into the state wildlife maps. Also, categorization of the wildlife maps will be ultimately determined by the state wildlife agency or provincial agency. If you have an ongoing connectivity effort in your state, please coordinate your response with the appropriate agency representative.

<b>State/Province</b>	<b>Name</b>	<b>Email</b>
Alberta	Hilary Faulkner	<a href="mailto:hilary.faulkner@enr.gov.ab.ca">hilary.faulkner@enr.gov.ab.ca</a>
Arizona	Laura Canaca	<a href="mailto:LCanaca@azgfd.gov">LCanaca@azgfd.gov</a>
British Columbia	Sue Bonnyman	<a href="mailto:Sue.bonnyman@gov.bc.ca">Sue.bonnyman@gov.bc.ca</a>
California	Scott Flint	<a href="mailto:SFlint@dfg.ca.gov">SFlint@dfg.ca.gov</a>
Colorado	Celia Greenman	<a href="mailto:Celia.Greenman@state.co.us">Celia.Greenman@state.co.us</a>
Idaho	Gregg Servheen	<a href="mailto:gserveheen@idfg.idaho.gov">gserveheen@idfg.idaho.gov</a>
Montana	Janet Hess-Herbert	<a href="mailto:jhessherbert@mt.gov">jhessherbert@mt.gov</a>
New Mexico	Rachel Jankowitz	<a href="mailto:rachel.jankowitz@state.nm.us">rachel.jankowitz@state.nm.us</a>
Oregon	Dr. Audrey Hatch	<a href="mailto:audrey.c.hatch@state.or.us">audrey.c.hatch@state.or.us</a>
Utah	Craig McLaughlin	<a href="mailto:CRAIGMCLAUGHLIN@utah.gov">CRAIGMCLAUGHLIN@utah.gov</a>
Washington	John Pierce	<a href="mailto:john.pierce@dfw.wa.gov">john.pierce@dfw.wa.gov</a>
Wyoming	Kirk Nordyke	<a href="mailto:Kirk.Nordyke@wgf.state.wy.us">Kirk.Nordyke@wgf.state.wy.us</a>
Nevada	Dave Pulliam	<a href="mailto:dpulliam@ndow.org">dpulliam@ndow.org</a>

**States should forward the data, once reviewed, to the following:**

**Data submission contacts:** Madeleine West

Western Governors' Association  
1600 Broadway, Ste. 1700  
Denver, CO 80202  
303-623-9378  
[mwest@westgov.org](mailto:mwest@westgov.org)

Lynn Kutner, Conservation Data Analyst  
NatureServe  
4001 Discovery Drive, Suite 2110  
Boulder, CO (80303)  
[lynn\\_kutner@natureserve.org](mailto:lynn_kutner@natureserve.org) | 703-797-4804

**Instructions for data submission including instructions on e-mailing or transferring GIS data, data formats, and metadata guidelines are in Attachment C.**

Required data fields are:

Data citation – Title, Originator, Publisher, Publication place, Publication date

Abstract

Purpose

Data Currentness – Date and Currentness Reference

Data Status – Progress and Maintenance and Update Frequency

Keywords – Theme and Place

Access Constraints

Use Constraints

Data point of contact

Data Quality – Attribute Accuracy, Logical Consistency, and Completeness

Process Description, Date and Contact – How the data was created, when, and by whom

Spatial Data Organization Information

Spatial Reference Information

Entity and Attribute Information – all Field names and definitions

Distribution Contact (distributor) and Distribution Liability

Technical Prerequisites for the data

Metadata Information – Date, Contact, Standard Name

**ATTACHMENT B**  
***WGA Wildlife Corridors Initiative (December 2007):***  
***Partial List of Data Provided***

**COLORADO**

CDOW Key Habitats  
SWReGAP CO KeyHabitats(GRID)  
SWReGAP CO KeyHabitats(Polys)  
co\_keyhabs  
PLJV\_ProbablePlayas\_CO  
BighornMigration  
BighornProduction  
BighornSevereWinter  
BighornWinterConcentration  
BTPrairieDogActiveColonies  
DeerCriticalWinter  
ElkMigration  
ElkProduction  
ElkWinterConcentration  
GrSageGrouseLekSites  
GrSageGrouseProductionAreas  
GunnPrairieDogActiveColonies  
GunnSageGrouseLekSites  
GunnSageGrouseProductionAreas  
MuleDeerMigration  
PronghornMigrationCorridors  
PronghornWinterConcentrationArea  
WTPrairieDogActiveColonies

**MONTANA**

AntelopeDist  
BHSheepDist  
BLACKTAILED PDEOS  
BLACKTAILED PDPRED  
BlkBearDist  
BlueRedStreams  
BullTroutRestoration  
BURROWOWLEOS  
BURROWOWLPRED  
CFWCSAQUATICFOCUSALL  
CFWCSTERRESTRIALCOMM  
CFWCSTERRESTRIALFOCUSALL  
ElkDist  
FishDistLakes  
FishDistStreams

HOARYMARMEOS  
HOARYMARMPRED  
LionDist  
LONGBILLED CUREOS  
LONGBILLED CURPRED  
MountainLionDist  
MuleDeerDist  
NORTHLEPFROGEOS  
NORTHLEPFROGPRED  
NWPPC\_ProtectedAreas  
SageGrouseHabitat  
SageGrouseLekAreas2006  
TNC PRIORITY CONCAREAS  
WestSlopeCons  
WHITETAILED PDEOS  
WHITETAILED PRED  
YELLOWBELLIED MARMPRED

**NEW MEXICO**

bighorn\_sheep  
blackbear  
bt\_prairiedog  
corridor  
elk  
lb\_curlew  
leopard\_frogs  
marmots  
mtn\_lion  
muledeer  
nmdatagrid  
owl  
owl\_bhsheep  
pronghorn

**UTAH**

3001\_unhp\_masked\_pts  
blbe20060701  
cabhs20060701  
dbhs20060701  
mude20071212  
mude20071213



prho20060701  
rmbhs20060701  
rmelk20071212  
sg\_brood20071214  
sg\_winter20071213  
WAP\_FocusAreas\_20070926.mdb  
Aspen\_  
Grassland\_  
Lentic\_  
Lotic\_  
LowLandRiparian\_  
MountainRiparian\_  
MountainShrub\_  
Sagebrush\_  
Wetlands\_  
WetMeadows\_

#### **WASHINGTON**

Biodiversity\_Opportunity\_Areas.mdb

#### **WYOMING**

BlueRibbonStreams  
CriticalStreamCorridors  
List of ecosystems.xls  
VegCommunities  
Aquatic\_Priority\_Habitats  
NongameKeyHabitatAreas\_Riparian  
NongameKeyHabitatAreas\_Upland  
Terrestrial\_Priority\_Habitats

BighornSheep\_Crucial  
BlackTailedPrairieDogComplexes\_Crucial  
BurrowingOwl\_Crucial  
Elk\_Crucial  
Landowner\_Crucial\_Clip  
LandOwner\_CrucialPronghorn\_Clip  
LongBilledCurlew\_Crucial  
MuleDeer\_Crucial  
Pronghorn\_Crucial  
Pronghorn\_Crucial\_Clip3  
Protect\_Pronghorn\_Crucial  
SageGrouse\_Crucial  
WhiteTailedPrairieDogComplexes\_Crucial

#### **PRONGHORN:**

Pronghorn\_Berger

#### **WOLVERINE:**

m1mar28\_07  
m1mar28\_07wcr  
M423\_\_B  
M8\_zone11  
WCS\_Yellowstone1  
Wolverines for WGA.xls

#### **WOLVES:**

radio\_wolves  
wolves98

## **ATTACHMENT C**

### ***Instructions for providing GIS data for the WGA Renewable Energy Zones project***

#### ***Please follow these steps to provide GIS data for the WREZ project***

In order to properly make use of spatial data you provide for the project, the dataset must include a Federal Geographic Data Committee (FGDC) metadata document which includes the minimum completed information per the instructions below. Please follow these steps to provide GIS data for the WREZ project. If you have any questions about the format, please contact:

Lynn Kutner  
Conservation Data Analyst, NatureServe, Boulder, CO.  
[lynn\\_kutner@natureserve.org](mailto:lynn_kutner@natureserve.org)  
703-797-4804

If you would like us to use the data your agency submitted for the WGA Wildlife Corridors initiative data request in 2007, please notify the relevant state representative listed in

#### **Attachment A.**

- 1) We can accept any of the following GIS data formats: \*.shp, \*.e00
- 2) Please confirm that the GIS data includes a metadata document which includes the minimum required FGDC compliant elements. These elements are listed and described for you [in this document below](#). Metadata can be created using ArcCatalog or the metadata editor of your choice.
- 3) Please include the projection file (\*.prj) for your data layer(s).
- 4) To ensure we know how to properly treat your data, please arrange data directories according to the categories in the tables above. For previously submitted data, please provide a list with your file name(s) assigned to the categories in the tables above.
- 5) If additional clarification is needed about how your data should be used in the analyses, including data security limitations, please provide this information in a single readme file and reference the individual data file name(s).
- 6) If, due to data sensitivity concerns, your data have been generalized in any way, please include a description of the process used and a list of the data types or layers that have been processed in this manner.
- 7) We are interested in learning about major data gaps. For the CSA areas in your state or province:

Gaps by Data Type (according to the categories in the tables above and/or taxonomic groups)	Priority to fill this data gap (high / medium / low)	Estimate of funding needed to fill this data gap

Geographic Data Gaps (e.g. military, tribal, private lands)	General location in state/province	Size (ha)	Reason (needs inventory, data sensitivity, etc.)	Priority to fill this data gap (high / medium / low)	Estimate of funding needed to fill this data gap

- 8) Please ZIP your data, metadata, and supporting documentation for convenient upload/download.

### ***WGA Renewable Energy Zones: Metadata Guidelines***

Our experience with “minimally compliant” metadata is that it is minimally useful. The bare minimum mandatory metadata elements of the FGDC metadata standard do not include key pieces of information that are critical to ensure that we can correctly use and interpret your data, such as: projection information and field (attribute) definitions.

This document includes (in **UPPER CASE BLUE BOLD**) all of the FGDC metadata elements that are a minimum requirement to submit data to the WGA Renewable Energy Zones project. Please feel free to go beyond this and populate all other metadata elements that you feel are relevant to your data.

For detailed definitions of the FGDC Content Standard for Digital Geospatial Metadata (CSDGM), please see the CSDGM Workbook:

[http://www.fgdc.gov/metadata/documents/workbook\\_0501\\_bmk.pdf](http://www.fgdc.gov/metadata/documents/workbook_0501_bmk.pdf)

For help navigating the FGDC metadata standard, and particularly identifying which portions are “mandatory”, “mandatory if applicable”, or “optional”, please see the Graphical Representation:

<http://www.fgdc.gov/csdgmgraphical/index.html>

If you have any metadata questions, please feel free to contact Lynn Kutner ([lynn\\_kutner@natureserve.org](mailto:lynn_kutner@natureserve.org) or 703-797-4804).

FGDC Metadata Section / Element	Definition (from FGDC) [COMMENTS IN SQUARE BRACKETS]
<b>Identification Information:</b>	
Citation:	
Citation Information:	
<b>ORIGINATOR:</b>	The name of an organization or individual that developed the data set. If the name of editors or compilers are provided, the name must be followed by "(ed.)" or "(comp.)" respectively.
<b>PUBLICATION DATE:</b>	Date when the data set is published or otherwise made available for release.
<b>TITLE:</b>	The name by which the data set is known.
Publication Information:	
<b>PUBLICATION PLACE:</b>	The name of the city (and state or province, and country, if needed to identify the city) where the data set was published or released.
<b>PUBLISHER:</b>	The name of the individual or organization that published the data set.
Online Linkage:	(AS RELEVANT) The name of an online computer resource that contains the data set. Entries should follow the Uniform Resource Locator [URL] convention of the Internet.
Larger Work Citation:	The information identifying a larger work in which the data set is included.
Description:	A characterization of the data set, including its intended use and limitations.
<b>ABSTRACT:</b>	A brief narrative summary of the data set. The "Abstract" briefly describes the "what" aspects of the data set (For example, what information is in the data set? What area is covered?).
<b>PURPOSE:</b>	A summary of the intentions with which the data set was developed. The "Purpose" describes the "why" aspects of the data set (For example, why was the data set created?).
Time Period of Content:	
Time Period Information:	
<b>SINGLE DATE/TIME:</b>	
<b>CALENDAR DATE:</b>	The year that the dataset was created (and optionally month, or month and day)
<b>CURRENTNESS REFERENCE:</b>	The basis on which the time period of content information is determined.
Status:	The state of and maintenance information for the data set.
<b>PROGRESS:</b>	The state of the data set: "Complete", "In work", "Planned".
<b>MAINTENANCE AND UPDATE FREQUENCY:</b>	The frequency with which changes and additions are made to the data set after the initial data set is completed: "Continually", "Daily", "Weekly", "Monthly", "Annually", "Unknown", "As needed", "Irregular", "None planned".
Spatial Domain:	
Bounding Coordinates:	
West Bounding Coordinate:	Western-most coordinate of the limit of coverage expressed in longitude.
East Bounding Coordinate:	Eastern-most coordinate of the limit of coverage expressed in longitude.
North Bounding Coordinate:	Northern-most coordinate of the limit of coverage expressed in latitude.
South Bounding Coordinate:	Southern-most coordinate of the limit of coverage expressed in latitude.
Keywords:	A keyword is a word or phrase that signifies the meaning or main ideas of a data set. They often are used as an index to the contents of a data set.
Theme:	Subjects covered by the data set.

<b>FGDC Metadata Section / Element</b>	<b>Definition (from FGDC) [COMMENTS IN SQUARE BRACKETS]</b>
<b>THEME KEYWORD THESAURUS:</b>	Reference to a formally registered thesaurus or a similar authoritative source of theme keywords. [IF NO THESAURUS USED, PLEASE ENTER "NONE".]
<b>THEME KEYWORD:</b>	Common-use word or phrase used to describe the subject of the data set. Repeat as needed.
Place:	Geographic locations characterized by the data set. Repeat as needed.
<b>PLACE KEYWORD THESAURUS:</b>	Reference to a formally registered thesaurus or a similar authoritative source of place keywords. [IF NO THESAURUS USED, PLEASE ENTER "NONE".]
<b>PLACE KEYWORD:</b>	The geographic name of a location covered by a data set. Repeat as needed.
<b>ACCESS CONSTRAINTS:</b>	Restrictions and legal prerequisites for accessing the data set. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the data set.
<b>USE CONSTRAINTS:</b>	Restrictions and legal prerequisites for using the data set after access is granted. These include any use constraints applied to assure the protection of privacy or intellectual property, & any special restrictions/limitations on using the data set
<b>POINT OF CONTACT:</b>	[SEE "CONTACT INFORMATION" SECTION AT THE END OF THIS DOCUMENT.]
<b>Data Quality Information:</b>	
Attribute Accuracy:	
<b>ATTRIBUTE ACCURACY REPORT:</b>	An explanation of the accuracy of the identification of the entities and assignments of values in the data set and a description of the tests used.
<b>LOGICAL CONSISTENCY REPORT:</b>	An explanation of the fidelity of relationships in the data set and tests used.
<b>COMPLETENESS REPORT:</b>	Information about omissions, selection criteria, generalization, definitions used, and other rules used to derive the data set. [AS RELEVANT – PLEASE INCLUDE INFORMATION ABOUT MAJOR DATA GAPS.]
Lineage:	Information about the events, parameters, and source data which constructed the data set, and information about the responsible parties. Repeat as needed.
Process Step:	
<b>PROCESS DESCRIPTION:</b>	An explanation of the event and related parameters or tolerances [WHERE POSSIBLE - PLEASE INCLUDE SOME INFORMATION ABOUT HOW THIS DATA LAYER WAS CREATED, OR REFER THE READER TO OTHER DOCUMENTS / INFORMATION ON YOUR WEBSITE. IF RELEVANT, PLEASE INCLUDE INFORMATION ABOUT DATA GENERALIZATION.]
<b>PROCESS DATE:</b>	The date when the event was completed.
<b>PROCESS CONTACT:</b>	The party responsible for the processing step information. [CONTACT PERSON FOR MORE INFORMATION ABOUT HOW THE DATA LAYER WAS CREATED OR GENERALIZED.]
<b>Spatial Data Organization Information: REQUIRED</b>	
<b>INDIRECT SPATIAL REFERENCE:</b>	Name of types of geographic features, addressing schemes, or other means through which locations are referenced in the data set.
<b>DIRECT SPATIAL REFERENCE METHOD:</b>	The system of objects used to represent space in the data set: Point, Vector, Raster.

FGDC Metadata Section / Element	Definition (from FGDC) [COMMENTS IN SQUARE BRACKETS]
<b>Spatial Reference Information: REQUIRED</b>	
<b>HORIZONTAL COORDINATE SYSTEM DEFINITION:</b>	The reference frame or system from which linear or angular quantities are measured and assigned to the position that a point occupies - will be "geographic", "planar" (map projection or grid coordinate system), or "local".
<b>Entity and Attribute Information: REQUIRED</b>	
Detailed Description:	
Entity Type:	
<b>ENTITY TYPE LABEL:</b>	The name of the entity type.
<b>ENTITY TYPE DEFINITION:</b>	The description of the entity type.
<b>ENTITY TYPE DEFINITION SOURCE:</b>	The authority of the definition.
Attribute:	
<b>ATTRIBUTE LABEL:</b>	The name of the attribute. [FIELD NAME]
<b>ATTRIBUTE DEFINITION:</b>	The description of the attribute. [FIELD DEFINITION]
<b>ATTRIBUTE DEFINITION SOURCE:</b>	The authority of the definition. [SOURCE FOR THE FIELD NAME & DEFINITION]
Attribute Domain Values:	
<b>[ONE OF THE FOLLOWING:]</b>	
<b>ENUMERATED DOMAIN</b>	Use this for values based on a domain table / pick list.
<b>RANGE DOMAIN</b>	Use this for numerical data that have min & max values.
<b>CODESET DOMAIN</b>	Use this for established codes, such as USGS Quads, HUC-8, county FIPS codes
<b>UNREPRESENTABLE DOMAIN</b>	Use this for text comment fields, scientific names, names of people, record ID codes, etc.
<b>Distribution Information:</b>	
<b>DISTRIBUTOR:</b>	The party from whom the data set may be obtained. [SEE "CONTACT INFORMATION" SECTION AT THE END OF THIS DOCUMENT.]
<b>DISTRIBUTION LIABILITY:</b>	Statement of the liability assumed by the distributor.
Standard Order Process:	
Digital Form:	
Digital Transfer Information:	
Format Name:	The name of the data transfer format
Digital Transfer Option:	
Online Option:	
Computer Contact Information:	
Network Address - Network Resource Name:	[AS RELEVANT] The name of the file or service from which the data set can be obtained. [Such as: URL where someone can download the data.]
Fees:	The fees and terms for retrieving the data set. [Can be "none".]
Custom Order Process:	Description of custom distribution services available, and the terms and conditions for obtaining these services.
<b>TECHNICAL PREREQUISITES:</b>	Description of any technical capabilities that the consumer must have to use the data set in the form(s) provided by the distributor (such as software requirements for GIS files).
<b>Metadata Reference Information:</b>	
<b>METADATA DATE:</b>	The date that the metadata were created or last updated.
<b>METADATA CONTACT:</b>	The party responsible for the metadata information. [SEE "CONTACT INFORMATION" SECTION AT THE END OF THIS DOCUMENT.]

FGDC Metadata Section / Element	Definition (from FGDC) [COMMENTS IN SQUARE BRACKETS]
<b>METADATA STANDARD NAME:</b>	The name of the metadata standard used to document the data set: CONTENT STANDARD FOR DIGITAL GEOSPATIAL METADATA (CSDGM)
<b>METADATA STANDARD VERSION:</b>	Identification of the version of the metadata standard used to document the data set: VERSION 2 ( <a href="#">FGDC-STD-001-1998</a> )
<b>CONTACT INFORMATION:</b>	
Contact Information:	
Contact Person Primary:	
<b>CONTACT PERSON:</b>	The name of the individual.
<b>CONTACT ORGANIZATION:</b>	The name of the organization.
<b>CONTACT POSITION:</b>	The title of individual.
Contact Address:	
<b>ADDRESS TYPE:</b>	Options: "mailing" "physical" "mailing and physical".
<b>ADDRESS:</b>	
<b>CITY:</b>	
<b>STATE OR PROVINCE:</b>	
<b>POSTAL CODE:</b>	The ZIP or other postal code of the address.
<b>COUNTRY:</b>	
<b>CONTACT VOICE TELEPHONE:</b>	
Contact Facsimile Telephone:	
<b>CONTACT ELECTRONIC MAIL ADDRESS:</b>	