



# Tutorial for generating Spotted Owl reports in the BIOS 5 “CNDDDB & Spotted Owl Data Viewer”



California Department of Fish and Wildlife  
California Natural Diversity Database  
January 2020

The [CNDDDB & Spotted Owl Data Viewer](#) is a key way to access the Spotted Owl Observations Database and view the records spatially without the need to have GIS software installed on your computer. Additionally, the CNDDDB & Spotted Owl Data Viewer is the only place where you can generate the reports for spotted owl activity centers and observations as described in the tutorial below. The spotted owl observations are also available as GIS shapefiles to CNDDDB subscribers from the Monthly Data Updates section of the [CNDDDB Maps and Data](#) webpage. You must be a CNDDDB Subscriber to access the Spotted Owl Database and use the report generator. Subscription information can be found on the [CNDDDB Subscription](#) webpage.

The BIOS 5 map and data viewer includes an updated interface complete with base maps and aerial imagery. Please see the [BIOS User Guide](#) and the [BIOS Frequently Asked Questions](#) documents for further details on the tools in BIOS. These help documents are also available by clicking the “Help” button in the upper right corner of the map viewer. For additional information regarding the Spotted Owl Database please refer to the CNDDDB’s [Spotted Owl Observations Database Information](#) webpage.

## Spotted Owl Report Tool

This tool runs a custom query and generates reports based on selected Sections. Sections are 1 mile square subdivisions of a Township and Range of the Public Land Survey System (PLSS; often referred to as Meridian, Township, Range, Section [MTRS] or TRS). To run this custom query on the Spotted Owl Observations layer, Section features must first be selected from the PLSS Section layer.

## Step 1: Select features (Sections) from the PLSS layer

- **Open the [CNDDDB & Spotted Owl Data Viewer](#)** that corresponds to your subscription – Government or Commercial. You will need to turn the CNDDDB layer off by unchecking the box next to the layer name.



- **Navigate to area of interest:** There are several ways to navigate around the Viewer. See the [BIOS User Guide](#) for more information.
  - Zoom in or out using the scroll wheel on your mouse; use the map scale drop-down menu at the upper right corner of the map; use the zoom slider bar on the right side of the map; or hold the Shift key down and use your mouse to draw a box around the area that you would like to zoom to.
  - Pan by clicking and dragging the cursor.
  - Specify your area of interest using the **GeoFind** tool under **Advanced Tools**. You can search for a variety of location types as listed under **Locate By:**

**GeoFind**

**Locate By:**

- Coordinates
- Address
- Township & Range**
- Geographic Name
- USGS Quad
- City
- County
- CDFW Facilities
- CDFW Owned Lands
- WBD HUC8
- Ecoregions

**Township & Range (PLSS)**

Meridian:

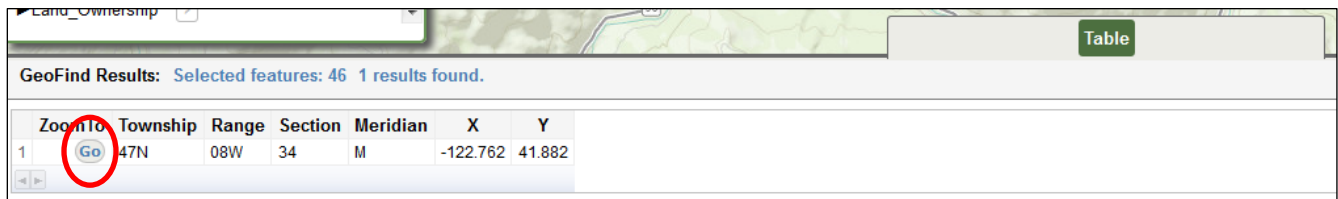
Township:

Range:

Section:

[Help](#)

- Go to your selected PLSS location by clicking Go in the **GeoFind Results** table. You may then need to zoom in further if necessary.

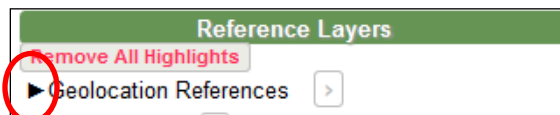


GeoFind Results: Selected features: 46 1 results found.

Zoom To	Township	Range	Section	Meridian	X	Y
1 <b>Go</b>	47N	08W	34	M	-122.762	41.882

- **Select Sections:**

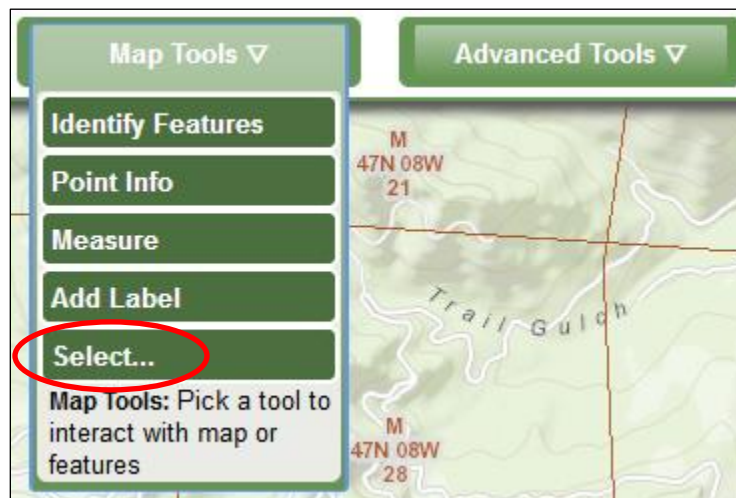
- Under **Reference Layers** in the table of contents, expand **Geolocation References** by clicking the caret to the left of the name.



- Click the **PLSS Sections** layer name to turn the layer on and make it the **Active Layer** (active when highlighted pink). The sections will now be visible on the map.



- Select the Sections from the map view that you are interested in by using the BIOS Select tool. Expand the **Map Tools** menu and click **"Select..."**



- Click on **Rectangle (drag-a-box)** from the pop-up window to the right to select the tool. Then click and drag across the PLSS Sections that you want to select. The selected Sections will be outlined in yellow and filled with red.

*Tip: drag the rectangle within the boundary of the sections you want to query on. The rectangle will select all sections that it touches.*

**Select features from**  
PLSS Sections

**By...**

**Method**

**Rectangle (drag a box)**

Polygon

Point Buffer (click on map)

• Buffer Radius:  Miles

*To make a graphic selection, click on a Method above.*

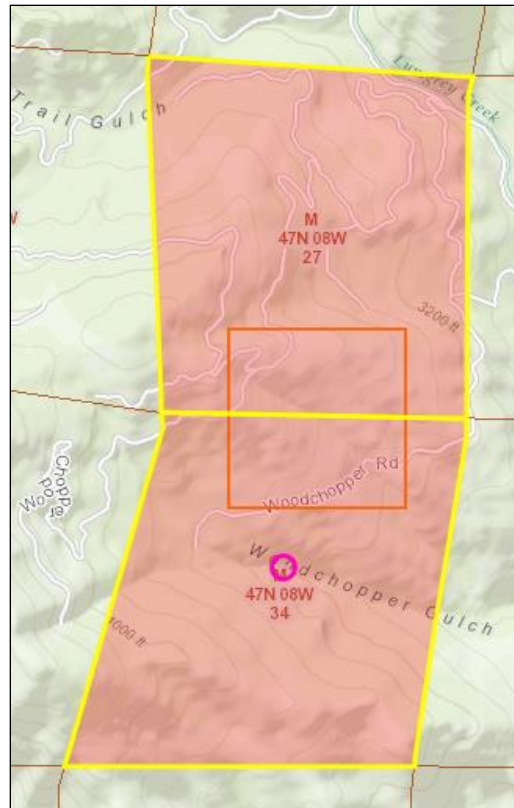
(Select None)

---

**Operation**

**New Selection**

Select from Set (within Selection)



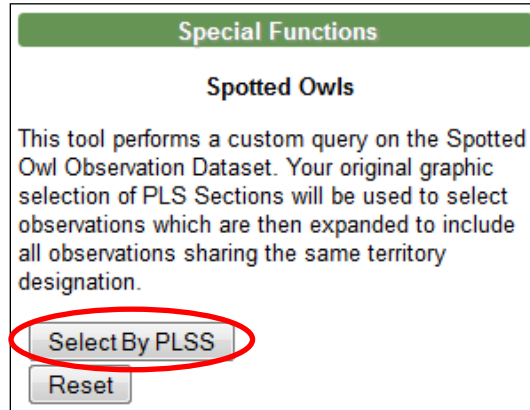
## Step 2: Run the Analysis

- Under **BIOS Layers** and **Spotted Owl Observations [ds704]** click on the **Additional Options “+”** tool below the layer name. This will turn the layer on and enable you to access the Special Functions Window.

*Note: after you click on the plus sign your select will automatically get turned off. You do not need to re-select your area of interest.*



- Click on the **Select By PLSS** button on the Special Functions pop-up window to the right.

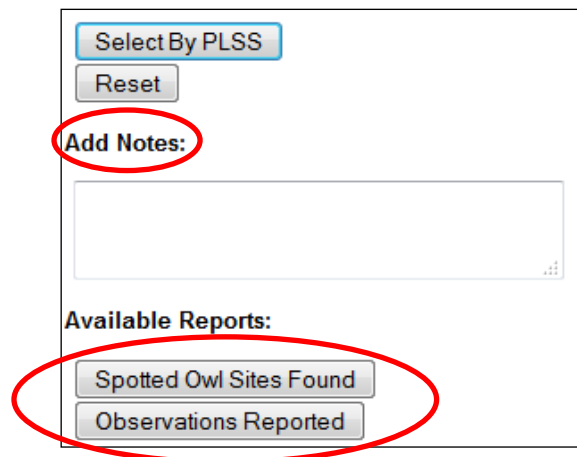


If you select an area that contains no observations then you will get the following pop-up: "No activity center associated owl observations exist within the selected section." Click ok and you will be able to proceed with your report generation.

- After clicking on **Select By PLSS** an **Add Notes** text box and 2 additional buttons will appear in the **Special Functions** window. You can add any notes, comments, location descriptions in the text box and they will appear on the cover page of both reports. Or you can leave the notes field blank.

### Step 3: View the Reports


- Click on the buttons under **Available Reports** on the **Special Functions** window to generate each report. Depending on your browser and its settings you will be prompted to open, save or show your download(s).




## Report Descriptions

Each report has a cover page that lists data version and report production dates, the sections that were searched, and notes if any were entered in the **Special Functions** window. The data pulled from the spotted owl observations layer will be listed starting on page 2 of each report.

**Spotted Owl Sites Found:** Displays the Sections that were selected and the Masterowl number for each Activity Center associated with observations found in the selected area.

Data Version Date: 10/26/2016	<b>Report #1 - Spotted Owl Sites Found</b> Known Spotted Owl sites having observations within the search area.	
Report Generation Date: 11/14/2016	Meridian, Township, Range, Section (MTRS) searched: M_47N_08W Sections(27,34);	
NOTES: Report Generator Tutorial		

**Observations Reported:** Displays the Sections that were selected and detailed lists of all the observations made in the selected area. The observations are sorted by the Masterowl number.

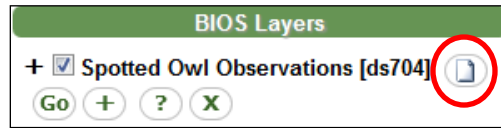
Data Version Date: 10/26/2016	<b>Report #2 - Observations Reported</b> List of observations reported by site.	
Report Generation Date: 11/14/2016	Meridian, Township, Range, Section (MTRS) searched: M_47N_08W Sections(27,34);	
NOTES: Report Generator Tutorial		

*Note: Observations outside of the selected area that share a Masterowl number with observations within the selected area are also included in the Observations report.*



## Metadata

To find additional information on the Spotted Owl Observations layer, such as background information for the layer and explanations of each field, click on the **Metadata** button next to the layer name in the BIOS viewer table of contents. A summary window will appear on the right.



Scroll to the bottom of the abstract and click **Complete metadata**. A pop-up containing the metadata will appear.

v6.83.12 Fx Help

### Spotted Owl Observations [ds704]

Summary

The dataset was designed to track spotted owl detections, surveys, and site histories in California. It was designed to be used for project review where site specific information and history could be evaluated to determine potential project impacts and mitigation. Also, the dataset tracks the known owl distribution and site occupancy. It is used legitimately by agencies, biologists, regulators, consultants, and land owners and managers for project evaluation and mitigation, for species and land management planning, and for research.

Last Updated in BIOS On:

11/01/2019

Contact Information

Name: Kate Keiser

Organization: California Department of Fish and Wildlife (CDFW)

Division: Data and Technology Division - Biogeographic Data Branch

Phone: (916) 445-5006

Email: owlobs@wildlife.ca.gov

Complete metadata Download data

Spotted Owl Observations [ds704] SDE Feature Class

Open this dataset in BIOS

Tags

north coast forest, Sierra Nevada foothills, Klamath Mountains, trend, Modoc Plateau, inventory, coastal mountains, sample, northern California coast, activity centers, bird, northern California coast ranges, environment, biota, reproduction, management, distribution, monitoring, mid-elevation forest, Strix occidentalis caurina, owl, southern California coast ranges, northern spotted owl, coastal forests, special species status, abundance, observations, regulatory, Strix occidentalis occidentalis, southern Cascades, California, Sierra Nevada, California spotted owl, east-side forest, high-elevation forest, planning

Summary

The dataset was designed to track spotted owl detections, surveys, and site histories in California. It was designed to be used for project review where site specific information and history could be evaluated to determine potential project impacts and mitigation. Also, the dataset tracks the known owl distribution and site occupancy. It is used legitimately by agencies, biologists, regulators, consultants, and land owners and managers for project evaluation and mitigation, for species and land management planning, and for research.

Description

This dataset is a new and improved version of the original Spotted Owl Territories [ds97] dataset. The original dataset represented spotted owl territories as activity center observation points with thousands of additional owl observations available in a separate table but not spatially enabled. In this new dataset, the additional owl observations (both positive and negative sightings) have been spatially enabled as points and are now displayed along with the activity center points. See the attribute "TYPEOBS" for a determination of whether an observation is positive (POS), negative (NEG) or an activity center (AC). Many of the observation locations were approximated by plotting them to a grid of the Public Land Survey System (PLSS) based on PLSS references in their record descriptions.

This dataset combines information on the location and status of Northern Spotted Owls, California Spotted Owls in the Sierra Nevada, and California Spotted Owls in southern California. Almost all records have been gathered since the early 1970s. Some observations from early 20th century literature also are included. The vast majority of data were collected in the field by biologists and technicians mainly working for US Forest Service, Bureau of Land Management, California Department of Fish and Wildlife, consultants, National Park Service, industrial timber companies, universities conducting surveys and doing research, and the local birding community. Most observations were obtained using standard survey protocols ("Protocol for surveying proposed management activities that may impact northern spotted owls." US Fish and Wildlife Service. 2011). The protocols are available at <https://www.wildlife.ca.gov/Conservation/Survey-Protocols>

What is an activity center? "Activity Center: Spotted owls have been characterized as central-place foragers, where individuals forage over a wide area and subsequently return to a nest or roost location that is often centrally located within the home range (Rosenberg and McKelvey 1999). Activity centers are location or point within the core use area that represent this central location. Nest sites are typically used to identify activity centers, or in cases where nests have not been identified, breeding season roost sites or areas of concentrated nighttime detections may be used to identify activity centers." U.S. Fish and Wildlife Service. 2011. Revised Recovery Plan for the Northern Spotted Owl (Strix occidentalis caurina). U.S. Fish and Wildlife Service, Portland, Oregon. xvi + 258 pp. A copy of the Revised Recovery Plan and other related materials can be found at: <https://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/main.asp>. The database only maps one activity center per site; however, multiple activity centers may exist on the landscape.

An additional dataset (Spotted Owl Observations Spider Diagram [ds705]) is available that shows lines representing relationships between activity centers and observations in this dataset. The spider diagram dataset is meant to accompany this observations dataset to assist with site visualizations and dataset review efforts.

OTHER THINGS TO KNOW: