

# Creating a CNDDDB Record Search

## A Step-by-Step Guide

Off-Highway Motor Vehicle Recreation Division  
Grants and Cooperative Agreements Program

2024



# Purpose of this Guide

- To provide Off-Highway Motor Vehicle Recreation (OHMVR) Division Grant Applicants with step-by-step instructions on how to use the California Department of Fish and Wildlife's (CDFW) Biogeographic Information & Observation System (BIOS) 6 Public Viewer to conduct a California Natural Diversity Database (CNDDDB) Record Search.

# Why do a CNDDDB search?

- Is one of the standardized methods recommended by CDFW for searching proposed project areas for listed and/or sensitive species
  - Allows for assessment of any potential risk factors to special status species or sensitive habitats from proposed project activities.
- Provides valuable information for answering questions within a OHMVR Division Grant Application:
  - Habitat Management Plans (HMP)
    - HMP Part 1
      - Question #2
      - ITEM #2 Justifications
    - Environmental Review Data Sheets (ERDS)
- Helps identify which sensitive resources (Wildlife, Plants, Habitats, etc.) have been documented and confirmed in or near a proposed project area.

# Before You Start

- CNDDDB's BIOS 6 Public Viewer is **completely free** to use and **does not** require a CNDDDB Subscription or a CDFW Login.
- Is a great resources management tool for understanding what sensitive species and/or resources have been known to occur within or near a proposed project area.
- Google Chrome and Mozilla Firefox are the preferred web browsers for using BIOS 6 for CNDDDB searches.
- This guide will use colored boxes, arrows, and lettered steps to help direct you to where on the screen a specific step applies and in what order.

- For Example:

(A) Click here to Zoom in to the selected features



(B) Click here to download your species table

# Step 1 (A,B): Access the BIOS 6 Public Viewer

(A) You can access CDFW's BIOS Web Page by either clicking on this link or typing in your web browser's address bar:

<https://wildlife.ca.gov/data/BIOS>

You can also type "BIOS 6" into your internet search browser and it should be the first link that pops up in your search results.

(B) Once there, click on the blue "BIOS 6 Viewer (Public & Secure)" button located here on the page.

The screenshot shows the BIOS 6 Public Viewer page. At the top, there is a navigation bar with the CDFW logo and links for Home, Fishing, Hunting, Licensing, Conservation, and Learning. Below this is a breadcrumb trail: Home > Data > BIOS. The main heading is "Biogeographic Information and Observation System (BIOS)". A descriptive paragraph follows, explaining the system's purpose and providing links to user guides and contact information. A note specifies that Edge or Chrome should be used for best performance. The "BIOS 6 Viewers" section contains three buttons: "BIOS 6 Viewer (Public & Secure)", "CNDDB\_GOV / Spotted Owl Viewer", and "CNDDB\_COM / Spotted Owl Viewer". The "Public & Secure" button is highlighted with a red box and an arrow. To its right, text indicates it is the primary viewer and that a password is required for staff and subscribers. A sidebar on the right lists various BIOS resources like "About BIOS", "Data", and "Partners".

# Step 1 (C,D): Access the BIOS 6 Public Viewer

(C) A new window/tab to the *BIOS 6 Viewer* should open

You can also access the BIOS 6 viewer directly using this link:

<https://apps.wildlife.ca.gov/bios6/>

(D) Once the window is opened a BIOS pop-up will appear. Either “Accept” the **Conditions of Use** for the *BIOS 6 Viewer* or close out the pop-up by clicking the “X” in the top right corner. Click whichever one you want as it does not matter which one you choose.

The screenshot displays the BIOS 6 Viewer interface. A pop-up window is overlaid on the map, featuring the California Department of Fish and Wildlife logo and the text "Biogeographic Information Observation System" and "CDFW BIOS Viewer". Below this, a paragraph describes BIOS as the state's repository of biogeographic spatial data. At the bottom of the pop-up, there is a line of text: "I agree to the data and privacy policy of this site - Conditions of Use" followed by a red-bordered "Accept" button. A red arrow points from the "Accept" button in the pop-up to the "Accept" button in the text box on the right. Another red arrow points from the "X" close button in the top right corner of the pop-up to the text box on the right. The background shows a map of California with various geographical features and a sidebar with "Contents" and "Layers" sections.

# Step 1 (E): Access the BIOS 6 Public Viewer

The screenshot displays the BIOS 6 Public Viewer interface. At the top left is the BIOS logo. To the right are links for Register, Login, Contents, BIOS Data, and Tools. A left sidebar contains a Contents panel with expandable sections: Graphics Layers, External Layers, BIOS Layers, and Reference Layers. The Reference Layers section is expanded, showing Geolocation References, Hydrography, and Natural Resources. A search bar is located above the map with the text "Find address or place". The map shows a topographic view of the western United States, including Oregon, Idaho, and parts of California, Arizona, and New Mexico. A blue notification bar is overlaid on the map, containing a warning icon and the text "Please activate a layer and/or choose a tool to start using the viewer". A red arrow points to an "X" button in the top right corner of this bar. Below the notification bar is a checkbox labeled "Hide this message in the future". At the bottom of the map, there is a scale bar showing 200 km and 100 mi, and a page number "6". The bottom of the interface includes copyright information: "Esri, USGS | Mono County, California State Parks, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS" and "Powered by Esri".

Register Login Contents + BIOS Data Tools

Contents

Active Layer: None

Graphics Layers

External Layers

BIOS Layers

Reference Layers

Geolocation References ...

Hydrography ...

Natural Resources ...

Find address or place

+

-

Home

Location

Please activate a layer and/or choose a tool to start using the viewer

Hide this message in the future

6 1: 9,244,648 200 km 100 mi

Esri, USGS | Mono County, California State Parks, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS

Powered by Esri

(E) After removing the pop-up a blue notification bar will appear. Remove this blue notification bar by clicking the "X" in the top corner of the bar.



# Step 2 (A,B): Adding a CNDDDB Layer to the Map

Note: Think of the term “Layer” as adding an overlay of information on top of the map. Adding a CNDDDB Layer to the map will allow us to lay sensitive species data over the map of California, which we will use to locate sensitive resources.

(A) Click on the drop-down arrow for the “BIOS Layers” Tab

(B) From the drop-down menu click on the gray “+ Add BIOS Layers” button.

The screenshot displays the BIOS web application interface. On the left, a 'Contents' panel is open, showing a list of layers. The 'BIOS Layers' section is expanded, and a red box highlights the 'BIOS Layers' header. A red arrow points from the text box (A) to this header. Below it, a green box highlights the '+ Add BIOS Layers' button, with a green arrow pointing from the text box (B) to it. The main map area shows a topographic view of California and the surrounding region, with various geographical features and cities labeled. The top right corner of the interface includes navigation and utility icons for Register, Login, Contents, BIOS Data, and Tools. At the bottom, there is a scale bar and a copyright notice: 'Esri, USGS | Mono County, California State Parks, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS'.



# Step 2 (C,D): Adding a CNDDDB Layer to the Map

The screenshot displays the BIOS web application interface. On the left, there is a 'Contents' panel with a search bar and a list of layer categories: Graphics Layers, External Layers, BIOS Layers, and Reference Layers. The 'BIOS Layers' category is expanded, showing a '+ Add BIOS Layers' button. A red box highlights this button. In the center, a map of Mono County, California, is visible. On the right, a pop-up menu titled '+ Add BIOS Layers' is open. It contains a search bar with the text 'Search BIOS Catalog for layers to add, such as 'vernal pool' or 'fish pass''. A green box highlights this search bar. Below the search bar, there are two checkboxes: 'Exclude ACE ∞ layers' and 'Exclude CWHR ∞ Range and Predicted Habitat'. A red arrow points from the search bar to the right, and a green arrow points from the search bar down to the search box in the text block below.

(C) A pop out menu labeled “+ Add BIOS Layers” should appear on the right-hand side of your screen

(D) In the search box for this pop out menu type in “CNDDDB” and either press enter or click on the magnifying glass icon to the right of the bar.

# Step 2 (E,F,G): Adding a CNDDDB Layer to the Map

(E) Once you type in "CNDDDB" and click on the magnifying glass. A list of results should pop up below.

(F) From the list find the one labeled "CNDDDB-tracked Elements by Quad". It is usually 2<sup>nd</sup> on the list.

(G) Click on the "+" button to the left of it to add it to the map.

Add	DSID	Dataset Name	Pub	Feature Type
1	2852	CNDDDB-tracked Elements by County [ds2852]	⊕	polygon
2	2853	CNDDDB-tracked Elements by Quad [ds2853]	⊕	polygon
3	1023	Acorn Woodpecker Habitat Model for NSNF Connectivity - CDFW [ds1023]	⊕	raster

**Note:** Be sure to select the **BY QUAD** option as this is the most accurate way to map find resources within or adjacent to your project area. The other option "By County" will give you every sensitive resource found within the county where your project occurs and possibly some adjacent counties depending on your search/project area.

# Step 2 (H,I): Adding a CNDDDB Layer to the Map

(H) A new tab should have appeared under the drop-down menu on the left-hand side of the screen labeled “CNDDDB-tracked Elements by Quad [ds2853]”.

(I) You can now close the “Add Bios Layers” pop-out menu by clicking the white “X” near the top of the menu.

The screenshot displays the BIOS web application interface. On the left, the 'Contents' panel is visible, showing a list of layers under 'BIOS Layers'. A red box highlights the layer 'CNDDDB-tracked Elements by Quad [ds2853]'. A red arrow points from this layer to the map area. On the right, the 'Add BIOS Layers' pop-out menu is open, showing a search for 'CNDDDB' with 46 results. A green box highlights the white 'X' button at the top right of the menu, with a green arrow pointing to it. The map area shows a satellite view of a coastal region. The bottom of the screen displays a scale bar and map data.

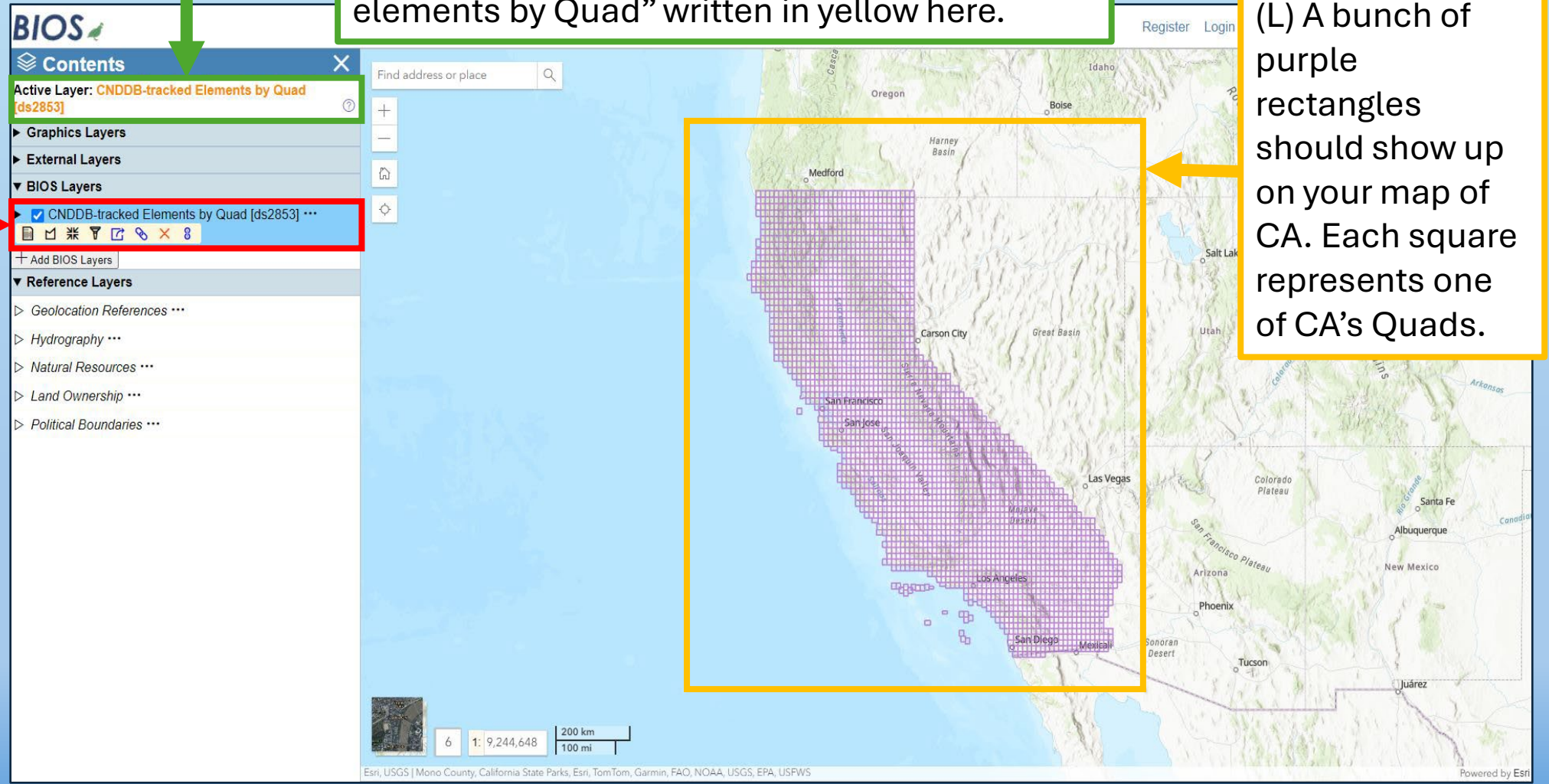
Add	DSID	Dataset Name	Pub	Feature Type
1	+	2852	CNDDDB-tracked Elements by County [ds2852]	☉ polygon
2	✓	2853	CNDDDB-tracked Elements by Quad [ds2853]	☉ polygon
3	+	1023	Acorn Woodpecker Habitat Model for NSNF Connectivity - CDFW [ds1023]	☉ raster
4	+	1231	Amargosa River Pupfish Range - FSSC [ds1231]	☉ polygon
5	+	1024	Arboreal Salamander Habitat Model for NSNF Connectivity - CDFW [ds1024]	☉ raster
6	+	2937	Bald Eagle Observations Generalized [ds2937]	☉ polygon
7	+	1008	Black Bear Habitat Model for NSNF Connectivity - CDFW [ds1008]	☉ polygon
8	+	1031	Black-tailed Jackrabbit Habitat Model for NSNF Connectivity - CDFW [ds1031]	☉ polygon
9	+	3079	Bumble Bee Watch Observations - California - CABBA [ds3079]	☉ polygon
10	+	1036	California Kangaroo Rat Habitat Model for NSNF Connectivity - CDFW [ds1036]	☉ polygon
11	+	1032	California Quail Habitat Model for NSNF Connectivity - CDFW [ds1032]	☉ polygon
12	+	1033	California Thrasher Habitat Model for NSNF Connectivity - CDFW [ds1033]	☉ polygon
13	+	1035	Coast Horned Lizard Habitat Model for NSNF Connectivity - CDFW [ds1035]	☉ polygon

# Step 2 (J,K,L): Adding a CNDDDB Layer to the Map

(J) Click on the “CNDDDB-tracked Elements by Quad [ds2853]” on the tab to the left. **MAKE SURE IT TURNS BLUE!!!** This means it is the “Active Layer”.

(K) You will know you were successful when you see the Active Layer read “CNDDDB-tracked elements by Quad” written in yellow here.

(L) A bunch of purple rectangles should show up on your map of CA. Each square represents one of CA’s Quads.



# Step 3 (A): Mapping the Project Area

The screenshot displays the BIOS web application interface. On the left, the 'Contents' panel is visible, showing a list of layers. The layer 'CNDDDB-tracked Elements by Quad [ds2853]' is selected and has a checkmark icon next to it. A red arrow points from this checkmark to a red box on the map. The map shows a topographic view of the western United States, with a red box highlighting a specific area in the Great Basin region, including parts of Oregon, Idaho, and Utah. The map includes labels for various cities, mountains, and basins. At the bottom of the map, there is a scale bar and a coordinate display.

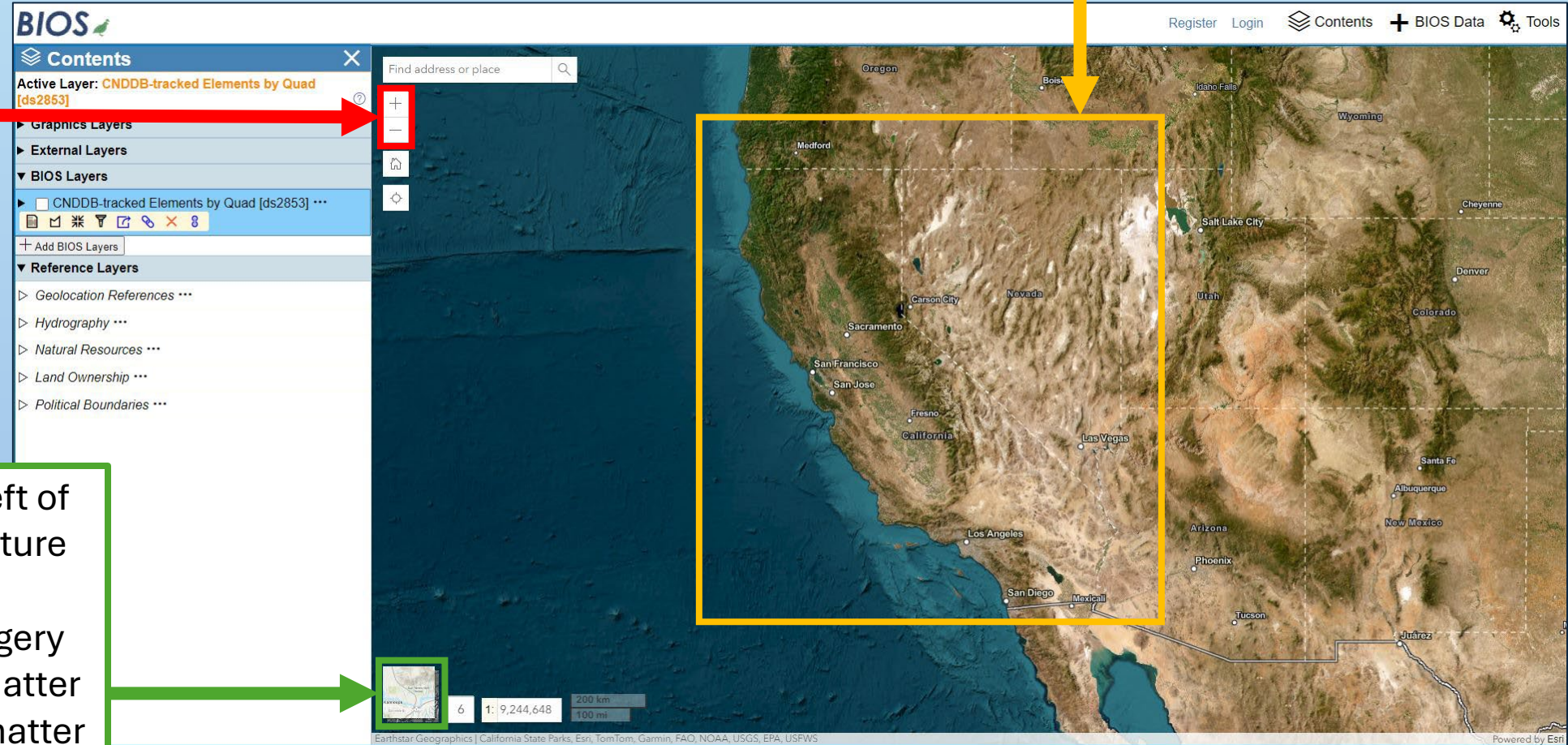
(A) If the Quads (Purple Squares) on the map become too distracting you can toggle them on and off by clicking the check box. They do not need to be on to run a search.

# Step 3 (B,C,D): Mapping the Project Area

(B) Zoom in and out using either your mouse wheel or the plus and minus buttons in the top left corner of the map.

(D) You can grab the map and move it by clicking and dragging using your mouse cursor.

(C) Click the bottom left of the map where the picture is to switch between a topographic or an imagery basemap. It doesn't matter which is used, just a matter of preference.



# Step 3 (E,F): Mapping the Project Area

(E) Zoom in to your proposed Project Area using the tools in the top left corner and/or your computer mouse.

(F) Once fully zoomed in select the “Tools” tab in the top right corner of the screen.



# Step 3 (G,H): Mapping the Project Area

(G) This will open up the “Tool List” Menu.

The screenshot displays a mapping application interface. On the left is the 'Contents' panel with a search bar and a list of layers including 'Active Layer: CNDDB tracked Elements by Quad [ds2853]', 'Graphics Layers', 'External Layers', 'BIOS Layers', and 'Reference Layers'. The central map shows an aerial view of a project area with roads like Larkin Rd and Afterbay Dr, and a 'Clay Pit State Vehicular Recreation Area'. On the right is the 'Tool List' menu, which is highlighted with a red border. A red arrow points from the text box above to the 'Tool List' menu. A green arrow points from the text box below to the 'Select by Location' option in the menu.

**Contents**

Find address or place

Active Layer: **CNDDB tracked Elements by Quad [ds2853]**

- ▶ Graphics Layers
- ▶ External Layers
- ▼ BIOS Layers
  - ▶  CNDDB-tracked Elements by Quad [ds2853] ...
- + Add BIOS Layers
- ▼ Reference Layers
  - ▷ Cultural
  - ▷ Geopolitical
  - ▷ Hydrography
  - ▷ Land Ownership
  - ▷ Maps
  - ▷ Natural Resources

**NOTE:** Recent updates to Reference Layers have reorganized the layers in new thematic groups. Please toggle open each group to find the layer you are looking for.

**Tool List**

- Help
- Basemap Gallery
- + Add BIOS Layers
- + Add External Data
- BIOS Bookmarks
- CNDDB QuickView
- GeoFind Location
- Identify Features
- Layer Display
- Legend
- Map Notes
- Measurement
- Metadata Brief
- Quick Print
- Select By Attributes
- Select By Location**
- Result Table
- Waypoints (CSV)
- About Viewer

(H) From the “Tool List” menu click on the “Select by Location” option.



# Step 4 (A,B,C): Generating a CNDDDB Search

(A) Clicking this will open the “Select By Graphics” menu.

(B) First toggle the “Apply Buffer” so that it is on. You will know it is on when the box is blue with a white checkmark.

(C) Next select the size of the buffer area for your search. A buffer allows you to account for any species that can potentially enter your proposed Project area. The standard for CNDDDB searches is 5 miles.

The screenshot shows the BIOS web application interface. On the left is a 'Contents' sidebar with a tree view of layers including 'CNDDDB-tracked Elements by Quad [ds2853]'. The main area is a satellite map of an airport area with labels like 'Oroville Municipal Airport' and 'Clay Pitt State Vehicular Recreation Area'. On the right, the 'Select By Graphics' dialog box is open. It has a title bar with a close button. Below the title bar are icons for drawing shapes (rectangle, circle, polygon, etc.) and a 'Select by Shape' button. There is a section for 'Or Enter Coordinates' with a text input field containing '35.44,-119.65' and a 'Select By Location' button. Below that is a section for 'Add Optional Buffer' with a text input field containing '5' and a dropdown menu set to 'miles'. At the bottom of this section is a checked checkbox labeled 'Apply Buffer'. At the very bottom of the dialog are two buttons: 'Clear Graphics' and 'Clear Selection'. A red arrow points from the 'Contents' sidebar to the 'Select By Graphics' dialog. A green arrow points from the 'Apply Buffer' checkbox to the text box (B). A yellow arrow points from the '5 miles' input field to the text box (C).

**Note:** A five-mile buffer is the recommended minimum distance to give your project area for CNDDDB searches. This buffer size allows you to cast a wider net and account for highly mobile species (e.g., birds, large mammals, etc.) that may potentially occur or come into your proposed project area.

# Step 4 (D): Generating a CNDDDB Search

(D) There are a number of options for mapping your proposed Project Area. Select whichever one you think would be best suited to map your proposed project area. The options are as follows:

The screenshot shows the BIOS web application interface. On the left is a 'Contents' panel with layers like 'CNDDDB-tracked Elements by Quad [ds2853]'. The main area is a map of an airport area. On the right, the 'Select By Graphics' tool is open, showing four shape options: Point (green), Polyline (yellow), Polygon (purple), and Square/Circle (cyan). A red box highlights the tool's title bar and the shape selection area. A green box highlights the Point option. A yellow box highlights the Polyline option. A purple box highlights the Polygon option. A cyan box highlights the Square and Circle options. Arrows point from these boxes to the descriptive text on the right.

**Option 1:** Point – Drops a single point at a single location. (Not recommended)

**Option 2:** Polyline – allows you to draw a single line with multiple points. (Recommended for trails)

**Option 3:** Polygon – allows you draw any shape (Recommended for large nonlinear project areas).

**Option 4:** Square and Circle – Allows you to drop a large square or circle on the map (Not recommended).

**Note:**

**Options 2 & 3** are the most useful for this search. Both these options allow you to drop multiple points on the map and better define your project area and can help you avoid over mapping your project area compared to **Options 1 & 4**.

Additionally, **only one Option can be used at a time**. You will no be able to draw multiple polygons for a single search or do both a polygon and polyline. Each will need to be drawn and searched separately from the other. If you have an application with multiple different project areas it is best to run individual CNDDDB searches for each different proposed project area and combine the results.

# Step 4 (E,F,G): Generating a CNDDDB Search

(E) Draw or trace your project area.

For this guide, our Proposed Project Area is a 220-acre open ride OHV park in Oroville, CA called Clay Pit SVRA. We will use the “*Polygon*” option to map this area as it is non-linear, and the Proposed Project will occur in or around all 220-acres.

The screenshot displays the BIOS web application interface. On the left, a sidebar shows the active layer as 'CNDDDB-tracked Elements by Quad [ds2853]' and lists various reference layers. The main map area shows an aerial view of the Clay Pit State Vehicular Recreation Area with a dashed black polygon drawn over it. On the right, the 'Select By Graphics' panel is open, showing options to draw a shape (with a red arrow pointing to the 'Polygon' icon) or enter coordinates. Below this, there are input fields for coordinates and a buffer size, along with a 'Clear Graphics' button highlighted in yellow.

(G) If for any reason you accidentally double click or want to remap the area you can click on the “*Clear Graphics*” button to start over.

(F) After you select your shape to draw, click on the map to drop a point for the polyline or polygon. Use your mouse to click and drop multiple points until you feel your proposed Project has been adequately mapped. When you're done double-click your mouse to drop the last point.

# Step 4 (H): Generating a CNDDDB Search

(H) Once you drop your last point BIOS 6 will then automatically run a CNDDDB Search based on your project area and buffer region.

A table will pop-up at the bottom of your screen. This table includes all of the recorded occurrences of sensitive resources within your proposed project area and buffer region.

The screenshot displays the BIOS web application interface. On the left, a sidebar contains a 'Contents' menu with sections for 'Active Layer', 'Graphics Layers', 'External Layers', 'BIOS Layers', and 'Reference Layers'. The main area shows a map with a purple-shaded polygon representing a project area and a buffer region. A 'Select By Graphics' panel is open on the right, with options to 'Draw a shape to select by', 'Or Enter Coordinates', and 'Add Optional Buffer'. Below the map, a table titled 'CNDDDB-tracked Elements by Quad [ds2853]' is displayed, showing 148 related records for 4 features. The table includes columns for OBJECTID, QUADCODE, QUADNAME, ElmType, SciName, CommonName, ElmCode, FedStatus, CalStatus, CDFWStatus, RPlantRank, QuadCode, QuadName, DataStatus, and TaxonSort.

OBJECTID	QUADCODE	QUADNAME	ElmType	SciName	CommonName	ElmCode	FedStatus	CalStatus	CDFWStatus	RPlantRank	QuadCode	QuadName	DataStatus	TaxonSort	
1	745	3912145	PALERMO	Animals - Amphibians	Spea hammondi	western spadefoot	AAABF02020	Proposed Threatened	None	SSC	-	3912145	PALERMO	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondi
2	745	3912145	PALERMO	Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
3	745	3912145	PALERMO	Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
4	745	3912145	PALERMO	Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
5	745	3912145	PALERMO	Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
6	745	3912145	PALERMO	Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912145	PALERMO	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
7	745	3912145	PALERMO	Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912145	PALERMO	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
8	745	3912145	PALERMO	Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912145	PALERMO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
9	745	3912145	PALERMO	Animals - Birds	Laterallus jamaicensis	California black rail	ABNME03041	None	Threatened	FP	-	3912145	PALERMO	Mapped	Animals - Birds - Rallidae - Laterallus

# Step 4 (I,J): Generating a CNDDDB Search

The screenshot shows the BIOS web application interface. On the left is a 'Contents' sidebar with various layers. The main map area shows a satellite view with a purple circular area representing the project area and buffer, and a gray rectangular area representing the search polygon. A red box highlights the map and the 'Select By Graphics' panel on the right. The 'Select By Graphics' panel has a 'Draw a shape to select by:' section with a 'Select By Shape' button, and an 'Or Enter Coordinates' section with a text input field containing '35.44,-119.65' and a 'Select By Location' button. Below these are 'Optional Buffer' settings with a value of '5' and an 'Apply Buffer' checkbox. At the bottom, a table displays search results for 'CNDDDB-tracked Elements by Quad [ds2853]'. The table has columns for OBJECTID, QUADCODE, QUADNAME, ElmType, SciName, CommonName, ElmCode, Fed Status, CalStatus, CDFWStatus, RPlantRank, QuadCode, QuadName, Data Status, and TaxonSort. The table shows 9 rows of data, with the first row highlighted in green.

OBJECTID	QUADCODE	QUADNAME	ElmType	SciName	CommonName	ElmCode	Fed Status	CalStatus	CDFWStatus	RPlantRank	QuadCode	QuadName	Data Status	TaxonSort	
1	745	3912145	PALERMO	Animals - Amphibians	Spea hammondi	western spadefoot	AAABF02020	Proposed Threatened	None	SSC	-	3912145	PALERMO	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondi
2	745	3912145	PALERMO	Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
3	745	3912145	PALERMO	Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
4	745	3912145	PALERMO	Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
5	745	3912145	PALERMO	Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
6	745	3912145	PALERMO	Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912145	PALERMO	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
7	745	3912145	PALERMO	Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912145	PALERMO	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
8	745	3912145	PALERMO	Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912145	PALERMO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
9	745	3912145	PALERMO	Animals - Birds	Laterallus jamaicensis	California black rail	ABNME03041	None	Threatened	FP	-	3912145	PALERMO	Mapped	Animals - Birds - Rallidae - Laterallus

(I) Be sure to zoom your map out to view your search area and make sure it matches your proposed Project Area.

Blue/Teal Lines = Quads that were searched for sensitive species.

Purple Area = Project Area and Buffer region.

Gray Lines = Drawn Polygon or Polyline.

(J) You can also view the total number of reported occurrence records from your search here. "Features" is the number of quads that were searched, and "related records" is the number of occurrences that have been reported in those areas.

# Step 5 (A,B): Downloading the Species Table

The screenshot shows the BIOS web application interface. On the left, there are navigation menus for Contents, Graphics Layers, External Layers, BIOS Layers, and Reference Layers. The main area is a map of the Oroville area with a cyan rectangle and a purple circle overlaid. On the right, the 'Select By Graphics' panel is open, showing options to draw a shape or enter coordinates. Below the map, a table of species data is displayed. A red box highlights the 'Download Table' icon (a cloud with a downward arrow) at the top center of the table. A red arrow points from the text in box (A) to this icon.

OBJECTID	QUADCODE	QUADNAME	ElmType	SciName	CommonName	ElmCode	FedStatus	CalStatus	CDFWStatus	RPlantRank	QuadCode	QuadName	DataStatus	TaxonSort	
1	745	3912145	PALERMO	Animals - Amphibians	Spea hammondi	western spadefoot	AAABF02020	Proposed Threatened	None	SSC	-	3912145	PALERMO	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondi
2	745	3912145	PALERMO	Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
3	745	3912145	PALERMO	Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
4	745	3912145	PALERMO	Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
5	745	3912145	PALERMO	Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
6	745	3912145	PALERMO	Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912145	PALERMO	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
7	745	3912145									-	3912145	PALERMO	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
8	745	3912145									-	3912145	PALERMO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
9	745	3912145									-	3912145	PALERMO	Mapped	Animals - Birds - Rallidae - Laterallus

(A) To download your Occurrences Table click on the “Download Table” button located at the top center of the table. It looks like a cloud with an arrow pointing down out of it. This will download the table to your computer in an Excel (.csv) format.

(B) If you do not have Microsoft Excel or another similar program able to access the data your other option is to print the table. You can do this by clicking on the “Print Table” icon located at the top center of the table.

**Note:** My preference is to use Microsoft Excel, or a similar app, as then you can better organize and more easily comb through and sort the data; especially for larger project areas with many occurrences.

# Step 5: Downloading the Species Table

- Once you download or print your file you should be able to view all the sensitive resources (wildlife, plants, habitats) located in and around your proposed project area.
- These tables will include the following pertinent information:
  - Species Names (Scientific & Common)
  - Listing Status (Federal, State, & CDFW)
  - Rare Plant Rank (If Applicable)
  - General Location (Quad)
  - Taxonomic Group (e.g., Birds, Plants, Fish, etc.)
- Tables will often contain multiple records of the same species as well. The number of these detections can give you an idea of species that are more common detected within or near the project area.
- This CNDDDB search, combined with other search engines (USFWS's IPaC & Calflora's What Grows Here?) make for great tools to build out an HMP and account for any potential sensitive resources within a project area.
- These tables, whenever generated, may be submitted as an Attachment with your Grants Application as part of HMP Part 1 ITEM #2 if you certify that there are no potential risk factors to special status species or sensitive habitats from proposed project activities. Otherwise, these lists may be used to help build out your HMP and identify the resources you should consider within it.

# Step 5 (C): Downloading the Species Table

(C) If you choose to download your table and open it in Excel it will look something like this.

The screenshot displays the Microsoft Excel interface with a large data table. The table has the following columns: OBJECTID, QUADCODE, QUADNAME, ElmType, SciName, CommonName, ElmCode, FedStatus, CalStatus, CDFWStatus, RPlantRar, QuadCode, QuadName, DataStatus, and TaxonSort. The data rows contain various species names and their associated codes and statuses. A red arrow points to the right side of the table, indicating its width.

OBJECTID	QUADCODE	QUADNAME	ElmType	SciName	CommonName	ElmCode	FedStatus	CalStatus	CDFWStatus	RPlantRar	QuadCode	QuadName	DataStatus	TaxonSort
745	3912145	PALERMO	Animals -	Spea ham	western sh	AAABF020	Proposed	None	SSC	-	3912145	PALERMO	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
745	3912145	PALERMO	Animals -	Ardea heri	great blue	ABNGA040	None	None	-	-	3912145	PALERMO	Unproces:	Animals - Birds - Ardeidae - Ardea herodias
745	3912145	PALERMO	Animals -	Ardea albi	great egr	ABNGA040	None	None	-	-	3912145	PALERMO	Unproces:	Animals - Birds - Ardeidae - Ardea alba
745	3912145	PALERMO	Animals -	Egretta thi	snowy egr	ABNGA060	None	None	-	-	3912145	PALERMO	Unproces:	Animals - Birds - Ardeidae - Egretta thula
745	3912145	PALERMO	Animals -	Nycticora:	black-cr	ABNGA110	None	None	-	-	3912145	PALERMO	Unproces:	Animals - Birds - Ardeidae - Nycticorax nycticorax
745	3912145	PALERMO	Animals -	Pandion h	osprey	ABNKC010	None	None	WL	-	3912145	PALERMO	Unproces:	Animals - Birds - Pandionidae - Pandion haliaetus
745	3912145	PALERMO	Animals -	Haliaeetu:	bald eag	ABNKC100	Delisted	Endanger	FP	-	3912145	PALERMO	Unproces:	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
745	3912145	PALERMO	Animals -	Buteo swa	Swainson	ABNKC190	None	Threatene	-	-	3912145	PALERMO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
745	3912145	PALERMO	Animals -	Laterallus	California	ABNME030	None	Threatene	FP	-	3912145	PALERMO	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
745	3912145	PALERMO	Animals -	Riparia ri	bank swal	ABPAU080	None	Threatene	-	-	3912145	PALERMO	Mapped a	Animals - Birds - Hirundinidae - Riparia riparia
745	3912145	PALERMO	Animals -	Agelaius t	tricolored	ABPBX000	None	Threatene	SSC	-	3912145	PALERMO	Mapped a	Animals - Birds - Icteridae - Agelaius tricolor
745	3912145	PALERMO	Animals -	Acipenser	green stur	AFCOA010	Threatene	None	SSC	-	3912145	PALERMO	Mapped a	Animals - Fish - Acipenseridae - Acipenser medirostris pop. 1
745	3912145	PALERMO	Animals -	Oncorhyn	chinook s	AFCHA020	Threatene	Threatene	-	-	3912145	PALERMO	Mapped a	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 11
745	3912145	PALERMO	Animals -	Oncorhyn	chinook s	AFCHA020	None	None	SSC	-	3912145	PALERMO	Unproces:	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 13
745	3912145	PALERMO	Animals -	Oncorhyn	steelhead	AFCHA020	Threatene	None	SSC	-	3912145	PALERMO	Mapped a	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 11
745	3912145	PALERMO	Animals -	Mylophar	hardhead	AFCJ2501	None	None	SSC	-	3912145	PALERMO	Unproces:	Animals - Fish - Cyprinidae - Mylopharodon conocephalus
745	3912145	PALERMO	Animals -	Lasionycti	silver-hai	AMACC020	None	None	-	-	3912145	PALERMO	Mapped	Animals - Mammals - Vespertilionidae - Lasionycteris noctivagans
745	3912145	PALERMO	Animals -	Corynorhi	Townsend	AMACC080	None	None	SSC	-	3912145	PALERMO	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
745	3912145	PALERMO	Animals -	Eumops p	western m	AMACD020	None	None	SSC	-	3912145	PALERMO	Mapped	Animals - Mammals - Molossidae - Eumops perotis californicus
745	3912145	PALERMO	Animals -	Actinemys	northwest	ARAAD020	Proposed	None	SSC	-	3912145	PALERMO	Mapped	Animals - Reptiles - Emydidae - Actinemys marmorata
745	3912145	PALERMO	Communi	Northern	Northern	ICTT44110	None	None	-	-	3912145	PALERMO	Mapped	Community - Terrestrial - Northern Hardpan Vernal Pool
745	3912145	PALERMO	Animals -	Branchine	vernal poc	ICBRA030	Threatene	None	-	-	3912145	PALERMO	Mapped a	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
745	3912145	PALERMO	Animals -	Linderiell	California	ICBRA0601	None	None	-	-	3912145	PALERMO	Mapped a	Animals - Crustaceans - Chirocephalidae - Linderiella occidentalis
745	3912145	PALERMO	Animals -	Lepidurus	vernal poc	ICBRA1001	Endanger	None	-	-	3912145	PALERMO	Mapped a	Animals - Crustaceans - Triopsidae - Lepidurus packardii
745	3912145	PALERMO	Animals -	Desmocer	valley eld	ICCOL4801	Threatene	None	-	-	3912145	PALERMO	Mapped	Animals - Insects - Cerambycidae - Desmocerus californicus dimorphus
745	3912145	PALERMO	Animals -	Bombus c	Crotch's b	IIHYM2448	None	Candidate	-	-	3912145	PALERMO	Unproces:	Animals - Insects - Apidae - Bombus crotchii
745	3912145	PALERMO	Animals -	Gonidea a	western ri	IMBIV1901	None	None	-	-	3912145	PALERMO	Mapped	Animals - Mollusks - Unionidae - Gonidea angulata
745	3912145	PALERMO	Plants -	V: Calycade	spicata ca	PDAST1P0	None	None	-	1B.3	3912145	PALERMO	Mapped	Plants - Vascular - Asteraceae - Calycadenia spicata
745	3912145	PALERMO	Plants -	V: Limnanth	woolly me	PDLM020:	None	None	-	4.2	3912145	PALERMO	Unproces:	Plants - Vascular - Limnathaceae - Limnanthes floccosa ssp. fl
745	3912145	PALERMO	Plants -	V: Leptosiph	bristly lep	PDPLM090	None	None	-	4.2	3912145	PALERMO	Unproces:	Plants - Vascular - Polemoniaceae - Leptosiphon aureus
745	3912145	PALERMO	Plants -	V: Juncus lei	Ahart's dw	PMJUN011	None	None	-	1B.2	3912145	PALERMO	Mapped	Plants - Vascular - Juncaceae - Juncus leiospermus var. ahartii
745	3912145	PALERMO	Plants -	V: Wolffia br	Brazilian	PMLEM030	None	None	-	2B.3	3912145	PALERMO	Unproces:	Plants - Vascular - Lemnaceae - Wolffia brasiliensis
745	3912145	PALERMO	Plants -	V: Orcuttia t	slender O	PMPOA46	Threatene	Endanger	-	1B.1	3912145	PALERMO	Mapped a	Plants - Vascular - Poaceae - Orcuttia tenuis
745	3912145	PALERMO	Plants -	V: Azolla mic	Mexican n	PPAZO010	None	None	-	4.2	3912145	PALERMO	Unproces:	Plants - Vascular - Azollaceae - Azolla microphylla
744	3912146	BIGGS	Animals -	Nannopte	double-cr	ABNFD010	None	None	WL	-	3912146	BIGGS	Unproces:	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
744	3912146	BIGGS	Animals -	Ardea heri	great blue	ABNGA040	None	None	-	-	3912146	BIGGS	Unproces:	Animals - Birds - Ardeidae - Ardea herodias

**Note:** It does look a bit messy at first glance, but anyone familiar with excel should be able to sort and organize this occurrence data into a more digestible and organized table for evaluation.



# Step 5 (D): Downloading the Species Table

(D) If you instead choose to print it out, your table will look something like this.

OBJECTID	QUADCODE	QUADNAME	ElmType	SciName	CommonName	ElmCode	FedStatus	CalStatus	CDFWStatus	RPlantRank	QuadCode	QuadName	DataStatus	TaxonSort
745	3912145	PALERMO	Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	Proposed Threatened	None	SSC	-	3912145	PALERMO	Mapped	Animals - Amphibians - Scaphiopodidae - Spea hammondii
745	3912145	PALERMO	Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
745	3912145	PALERMO	Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
745	3912145	PALERMO	Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Egretta thula
745	3912145	PALERMO	Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	3912145	PALERMO	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
745	3912145	PALERMO	Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3912145	PALERMO	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
745	3912145	PALERMO	Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	3912145	PALERMO	Unprocessed	Animals - Birds - Accipitridae - Haliaeetus leucocephalus
745	3912145	PALERMO	Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3912145	PALERMO	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
745	3912145	PALERMO	Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3912145	PALERMO	Mapped	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus
745	3912145	PALERMO	Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3912145	PALERMO	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Riparia riparia
745	3912145	PALERMO	Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3912145	PALERMO	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
745	3912145	PALERMO	Animals - Fish	Acipenser medirostris pop. 1	green sturgeon - southern DPS	AFCAA01031	Threatened	None	SSC	-	3912145	PALERMO	Mapped and Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris pop. 1
745	3912145	PALERMO	Animals -	Oncorhynchus	chinook salmon -	AFCHA0205L	Threatened	Threatened	-	-	3912145	PALERMO	Mapped and	Animals - Fish -

# Contact Information

For any questions regarding using CDFW's BIOS 6 search engine to run CNDDDB searches for OHMVR Division Grants Applications please feel free to reach out via the email address provided below:

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