



## California Natural Diversity Database

<https://www.wildlife.ca.gov/Data/CNDDDB>

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## CNDDB Key Facts

In many cases, the staff that are tasked with providing maps and analysis of the CNDDB haven't been trained on its usage. The CNDDB is a complex dataset and there are a number of essential facts to understand before working with and creating output from it.

### The Key Facts about the CNDDB are:

1. It is **part of an international network** of natural heritage programs, managed under the umbrella non-profit conservation organization, [NatureServe](#) (and formerly by the science staff at The Nature Conservancy). The data and mapping standards come from NatureServe, although many of these were initially influenced by the Department's early adoption of GIS.
2. It is a **positive detection** database. Records in the database exist only where species were detected. This means there is a bias in the database towards locations that have had more development pressures, and thus more survey work. Places that are empty or have limited information in the database often signify that little survey work has been done there. You cannot imply that there is less diversity in these places due to lack of information. There are no organized inventory or survey efforts designed specifically to populate the database.
3. **The CNDDB is NOT a public dataset**, and should not be included on maps that will be made public in reports and other documents. The "**Data Use Guidelines**" document outlines appropriate ways to put the CNDDB data on maps, and provides details on the map symbology. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>
4. The Department issues an **updated dataset every month**, on the first Tuesday of the month. Our staff works on this dataset full-time, so there are new additions and updates every month. If you use the GIS dataset (versus the web applications), be sure to get an updated copy at the beginning of every month. <https://www.wildlife.ca.gov/Data/CNDDDB/Data-Updates>
5. It is best to always **use the official layer symbology** that is included in the monthly GIS download package. This symbology conveys differences in the accuracy of the data that was used to map the occurrences. For instance, there are multiple sizes of circles that can be used to represent an Element Occurrence. The bigger the circle, the less accurate the source location information is. This is very different from a polygon in a species range map, for instance. The official symbology has these as un-filled circles. If you fill them with color, there's much more likelihood of misinterpretation of these to indicate more of the species, or to imply a larger likely habitat area.
6. CNDDB Element Occurrences are all represented by polygons. In the past, a point GIS dataset was also distributed along with the polygon GIS dataset. It is possible for a user to generate a point GIS dataset using the centroids of the polygons. **The only appropriate use for such a point GIS dataset** is to show basic distribution on a statewide, or near statewide, map. At larger scales (zoomed in), the points grossly misrepresent the true Element Occurrence distribution and/or spatial error of the data. Analysis done using the point layer will almost always result in erroneous results. For example, tallying what species occur in a specific geographic area will usually miss some species if the point data is used for the analysis.

7. **Acreage summaries should never be done** using the CNDDDB dataset. Nor should the Element Occurrence polygons ever be used to indicate an amount of area covered by a species within a project area. The polygon sizes generally represent differing degrees of inaccuracy in the data, not how much of an area a species covers.
8. There is a **Commercial version of the database** as well as a Government version. The Commercial version has approximately 2% of all occurrences generalized to Quad polygon features for data sensitivity or contributor requirements. This is important to know if you're working with a Commercial subscriber (e.g., a private consultant). Your dataset view may be different than theirs if you are a Government user.
9. **CNDDDB and BIOS are different things.** BIOS is a system for housing hundreds of biological datasets, and has a web-based viewer – the BIOS Data Viewer – for examining those datasets on a map. CNDDDB is one of these datasets. A full comparison can be seen here:  
<https://www.wildlife.ca.gov/Data/CNDDDB/CNDDDB-vs-BIOS>

If you have any questions on the use of this dataset, contact the CNDDDB Coordinator:  
<https://www.wildlife.ca.gov/Data/CNDDDB>