



**California Natural Diversity Database**  
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## Guidelines for Submission of Spatial Data to the CNDDB

The CNDDB welcomes spatial dataset submissions, whether those are in GIS or tabular format. This type of data submission works best for large amounts of data. The following list of required and optional fields should serve as a set of guidelines for any GIS or tabular dataset submitted to the CNDDB. Since the CNDDB tracks many taxa found in many different settings throughout California, there is not a single set of criteria appropriate for all circumstances. In general, the CNDDB would prefer to have more details rather than fewer. Note that for tabular datasets (Excel tables, Access databases, etc.) coordinates are necessary.

Please double-check your data before submitting it to the CNDDB. It is not unusual for the CNDDB to receive a table with a column heading such as "Field\_7" or a set of text entries which were cut off after the first 255 characters. All fields should either have names which are self-explanatory (e.g., "SurveyDate") or come with some other accompanying explanation. The significance of each field may be explained through GIS metadata, an email, or some other attached document.

Feel free to [contact us](#) if you have any questions about submitting data.

Field	Required?	Description
Observer information	Yes	Name of the person (or persons) who performed the survey.
Observer contact info	Yes	Contact information for the person who performed the survey. This information may be spread across several separate fields, if applicable. At a minimum, this should include an email address or phone number.
Scientific name	Yes	Scientific name of the species. Please use the subspecies or variety name when relevant (e.g., <i>Masticophis lateralis euryxanthus</i> as opposed to just <i>Masticophis lateralis</i> ).
Common name	No	Standard common name of the species.
Species found (Y/N)	No	If this field is not included, the CNDDB will assume that the species was found on any date and at all locations provided. Negative detections (known area of historical occurrence, but presently absent) are also useful. Include details of survey effort for negative data.
Species determination	No	Describe how the identification of the species was made during the survey.
Determination confidence	No	Level of confidence in the determination of the species (i.e., very confident, only marginally confident).
Date of field work	Yes	The most specific date field work was conducted. If multiple days, please enter latest, most recent date, and clarify date ranges or multiple visits in comments if needed.
Number of individuals	Yes	The number of individuals observed or detected. May be an estimate, range or order of magnitude (e.g., 100s, 1000s, 100,000s).
Phenology	No	For plant observations, state percent that was vegetative, flowering, and/or fruiting.

Field	Required?	Description
Collection information	No	Collection number (personal or catalogue numbers) and museum where deposited, if applicable.
Animal age classes	No	Indicate the number of individuals observed in each age class (adult, juvenile, larvae, egg mass, unknown).
Animal site use	Yes, for avian detections	Indicate how the site was being used at the time of detection (i.e., nesting, over-wintering, foraging, roosting, basking, etc.). Field is required for bird detections but optional for other taxa.
Animal behavior	Yes, for avian detections	Describe the behavior of the animal when detected, especially behavior indicating evidence of reproduction.
Animal detection method	Yes, for animals	How the detection was made (seen, heard singing, scat found, live trapping, photo station, etc.).
Location description	No	Text description of location which would allow someone to locate the site. Serves as a double-check that coordinates or GIS features are being displayed properly. Using improper settings in GIS software or keying in coordinates wrong can easily cause locations to be mapped incorrectly. Suggestions for location descriptions would include "0.2 mile NW of intersection of Moore Rd & Joiner Pkwy, Lincoln" or "T12N R6E S16 SE 1/4 of SW 1/4."
Latitude or northing	Yes, for coordinate tables	Coordinates should either be in decimal degrees latitude/longitude or UTM. GIS files <sup>1</sup> (shapefiles, geodatabases, KMLs, etc.) inherently include spatial coordinate data.
Longitude or easting	Yes, for coordinate tables	Coordinates should either be in decimal degrees latitude/longitude or UTM. GIS files <sup>1</sup> (shapefiles, geodatabases, KMLs, etc.) inherently include spatial coordinate data.
Datum	Yes, for coordinate tables	The datum used to determine the location coordinates (e.g., NAD83, WGS84, NAD27). All GPS and map coordinates require a datum.
UTM zone	Yes, for UTM coordinate tables	When tables of UTM coordinates are used the zone is required. In California this would be either Zone 10 or Zone 11.
Coordinate source	Yes	Please provide the source of coordinates, such as a GPS, topographic map, GoogleEarth, or GIS software.
Coordinate accuracy	No	Estimated accuracy of provided coordinates. This may be a value calculated automatically by a GPS unit or an estimated value based upon the confidence of a person interpreting aerial imagery or a map. This field is not required but its use is strongly encouraged as it will help CNDDDB staff decide what type of spatial feature to use to represent an occurrence.
Level of survey effort	Yes, when species not found	Description of the effort which went into the survey (number of person-hours, protocol followed, etc.)
Habitat description	No	Field not required, but strongly recommended. Describe the habitat such as vegetation type, dominants, associates, soil types, aspects, presence of necessary resources, and other physical characteristics relevant to the species and observation.

<b>Field</b>	<b>Required?</b>	<b>Description</b>
Overall quality & viability	No	Is the likely persistence of the occurrence into the future excellent, good, fair, or poor? This is an assessment of the overall viability of this occurrence. Both the quality and condition of the site and of the occurrence must be considered when scoring. Take into account population size, demography, viability over time, site condition, and disturbances.
Surrounding land uses	No	State the immediate and surrounding land uses which affect this site.
Visible disturbances	No	State the disturbances that are or may impact this site or occurrence.
Threats	No	Describe the threats to this occurrence. Include, but distinguish between, both current and impending threats.
Landowner	No	State the landowner, if known. "Private" is sufficient for private ownership.
Comments	No	Other comments about the observation or detection which would be useful in evaluating the occurrence or which would provide additional relevant information. Suggestions include explanations of negative data, survey effort, study design, disposition, relocation, or conservation concerns.
Other	No	Other types of supporting information. May include references to study site numbers, links to separate reports or photographs, etc.

<sup>1</sup>GIS shapefiles and/or geodatabases must also contain the projection, typically a .prj file.