Getting started with CEDEN

The following pages provide a step-by-step introduction to using the CEDEN website for data submission and data access.
The California Environmental Data Exchange Network (CEDEN) is a central location to find and share information about California's water bodies, including streams, lakes, rivers, and the coastal ocean. Many groups in California monitor water quality, aquatic habitat, and wildlife health to ensure good stewardship of our ecological resources. CEDEN aggregates this data and makes it accessible to environmental managers and the public.

For more information, a two page CEDEN Fact Sheet and eight page Information Document are available for download.

Additional information is available as Adobe PDF formatted, printable documents.

The news and highlights box provides information about recent additions to the site and data. A Twitter feed is also available for breaking news. You may subscribe to the Twitter feed by clicking on the blue bird.

The My Water Quality Portals Developed by the California Water Quality Monitoring Council use data from CEDEN and elsewhere to provide additional information using these water quality data.
This "Getting Started" summary introduces data managers to the tools and documentation to be able to submit data to your Regional Data Center (RDC) and ultimately to the California Environmental Data Exchange Network (CEDEN).
Getting your data into CEDEN

Submitting data to CEDEN is a two phase process:

The first phase involves working with a Regional Data Center to make sure your data are in the proper format for CEDEN.

The second phase involves giving your RDC permission to export your data to CEDEN. Your RDC maintains a large database which is a subset of the data in CEDEN. This database is unavailable to the public and contains all data submitted to the RDC by various data providers. Your data will be placed in the RDC database for review and is exported once you make all the necessary edits to become CEDEN comparable. Your RDC will work with you to ensure that the format of your data and naming conventions follow the rules required to export your data to CEDEN.

The following six steps are used as guidance for submitting data to your RDC and ultimately to CEDEN:

Step 1: Review Required Data Elements
Step 2: Determine Comparability of Data with CV RDC
Step 3: Enter Data into Appropriate Templates
Step 4: Verify Data are Correct and Comparable
Step 5: Submit Data to your RDC
Step 6: Confirm Data are Ready to be Exported to CEDEN

Resources to locate your data center, access documentation, templates and standard codes for CEDEN are available on the Submit Data page of the CEDEN website.
Step 1: Review Required Data Elements

Summary:
As a data generator you should review CEDEN templates specific for your data types and ensure that you have information for all required data elements provided in those templates.

Data Entry Templates:

CEDEN can accept a variety of data collected from freshwater, estuarine, and marine environments. Data in CEDEN come from laboratory, physical and biological analyses.

The templates used to submit data to your RDC should be selected based on your individual project/program requirements. If you have any questions about which template is appropriate, contact your RDC and we will help you determine which template is best.

CEDEN Required Data Elements:

Required data elements refer to the Microsoft Excel columns or fields that must contain information in order for your data to be transferred to CEDEN. All CEDEN templates indicate which data fields are required by CEDEN and are described in the CEDEN documentation. All minimum data requirements are similar between templates and have associated documentation to aid in data entry. Detailed guidance documents are available to assist you in completing these templates.

If you have any questions about these templates or have any question regarding template and required data elements please contact your RDC or the CEDEN help desk (swamphelpdesk@mlml.calstate.edu) for more information.
Step 2: Determine Comparability of Data

Summary:
Review the CEDEN Standard Names and Codes and work with your RDC to add additional project specific codes to ensure comparability of data with CEDEN standards.

Standard Names and Codes:
Step 2 focuses on making sure that the data you want to submit to your RDC uses appropriate naming conventions, called controlled vocabulary codes. Controlled vocabulary refers to acceptable names and codes that ensure comparability among all of the data sets that are submitted to CEDEN. These codes are critical to guaranteeing for example, that the same chemicals are called by the same name across all projects and that a single sample location used by two different projects is given a single name. The controlled vocabulary allows any data user to obtain all of the data from any site or involving a specific chemical.

If the appropriate code is not available, please contact your RDC to determine the correct code to be used. Your inquiry may result in the addition of a new code.
Step 3: Enter Data into Appropriate Template

**Summary:**
Populate the appropriate [data template](#) for your project’s data. Data entry manuals are available for guidance and additional explanation.

**Select a Data Template:**
Templates can be used to submit data to your RDC and should be selected based on your project/program requirements. Step 1 discusses CEDEN required data elements, the different types of data templates available, and the tables associated with each.

**Enter Your Data:**
Enter your data into the template by following the instructions in the appropriate [guidance document](#).
Step 4: Verify Data are Correct and Comparable

Summary:
Verify that your data are correct and that all standard names and codes needed for your project is in the RDC database.

Verify Data:
It is the responsibility of the data generator to verify that all data submitted to their RDC are correct including association to projects, values of the results, and any associated qualifiers. All data should be verified including field (field measurement and habitat documentation) and laboratory generated data (chemistry, toxicity and tissue). Your RDC has developed checklists and queries that can be used to help the data generator verify their data.

LookUp List and Sample Entry Verification:
CEDEN RDCs provide online data checkers as a helpful tool to check your completed data template(s).

After a template is filled with project data (see Step 3), the completed template can be submitted to the data checker to be checked. The data checker verifies that formats of the data entered into the template are comparable with CEDEN standard names and codes. Once the file is checked, a report is generated that details any errors in the file. Your RDC can assist with information on each error message that could potentially be generated by the online data checker.

Files may be checked as many times as necessary to ensure errors have been corrected. The data checker is used as a tool to help catch errors across many projects and therefore some of the errors may not be applicable to your program/project. Please contact your RDC if you have questions regarding the online data checker.
Step 5: Submit Data to your RDC

Summary:
Submit data online through your RDC’s online data checker or contact your RDC for other options to submit data.

Submit Data to your RDC:
Your RDC’s online data checker can be used to submit data to the RDC. It is recommended that you verify your data prior to submittal using the online data checker (see Step 4). Once the completed template is verified through the online data checker, your data can be submitted by clicking the submit data button.

This will send the data to your RDC. Data may be submitted to the RDC even if errors are reported by the online data checker. Your RDC will review data as it is received and follow up with the data provider regarding any significant errors and/or questions regarding the submitted data.

If you do not wish to use the online data checker for submitting your data, please contact your RDC directly to discuss other options.
Step 6: Confirm Data are Ready to be Exported to CEDEN

Summary:
Your RDC will contact the data provider with a summary of the data received by the RDC. The data generator will confirm when data should be exported to CEDEN for public access.

Confirming that Data are Complete:
An Excel file containing the metadata of your project (including number of results and associated sample information) is generated by the RDC. This file will be sent to you once all data associated with your project have been submitted and uploaded into the RDC database. The data generator should review this file to confirm that all metadata are correct. This allows the data to be considered complete.

Confirm Data Can be Exported to CEDEN:
In the same metadata Excel file, the data generator will be given the option to indicate whether a data set should be exported to CEDEN or retained by the RDC. Common reasons why a data generator would want to retain the data in the RDC database rather than exporting to CEDEN include final reports or manuscripts for publication using the data have not been completed or submitted.

Exporting to CEDEN:
The RDC is responsible for exporting data to CEDEN.
Obtaining data from CEDEN

Data contained in the California Environmental Data Exchange Network (CEDEN) may be searched and downloaded from the CEDEN website using the Data Query Tool. An overview of this tool is provided on the following page.
Click the blue buttons to select the data categories and types desired. (Hold down the CTRL key to select multiple items from lists of options)

Available dates for selected data are listed, you may limit the date range using the From and To date options.

After selecting desired data, click Retrieve Data to download the data to your computer.

The Map Stations button will show locations of available data stations on the map interface. Automatic mapping initiates dynamic updates on the map window as data options are selected.

Click the blue buttons to select the data categories and types desired. (Hold down the CTRL key to select multiple items from lists of options)