



CEDEN

CALIFORNIA ENVIRONMENTAL DATA EXCHANGE NETWORK



Developing a Statewide Water Quality Monitoring and Visualization System

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The Problem: Lots of data!

- Hundreds of entities collect water data in California
- Locating, obtaining and understanding these data presents a monumental task

California has:

- 211,000 miles of rivers and streams
- 1100 miles of coastline
- 1.6 million acres of lakes
- 1.3 million acres of bays and estuaries
- Annually – 15 million acre-feet of groundwater are extracted

Leads to: Inconsistent Analysis

- For example:
 - Variability of data obtained and assessed by the State for 303(d) listings



Why does this occur?

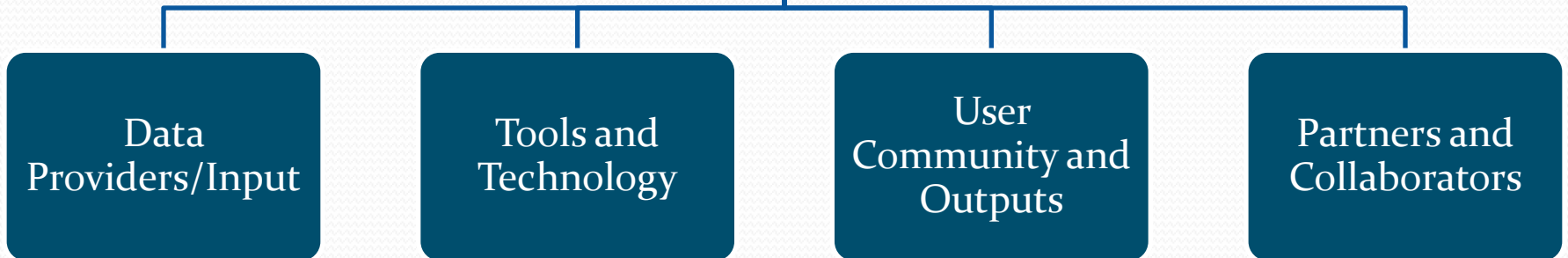
- The State Board has data that come in from numerous sources
 - e.g. State programs, NPDES permits, NGO's, etc.
- These data don't reside in one unified location
 - Not available in similar formats/standards
 - Not all collected for same purpose
- To resolve this, the State invested in development of CEDEN

How CEDEN solves this problem:

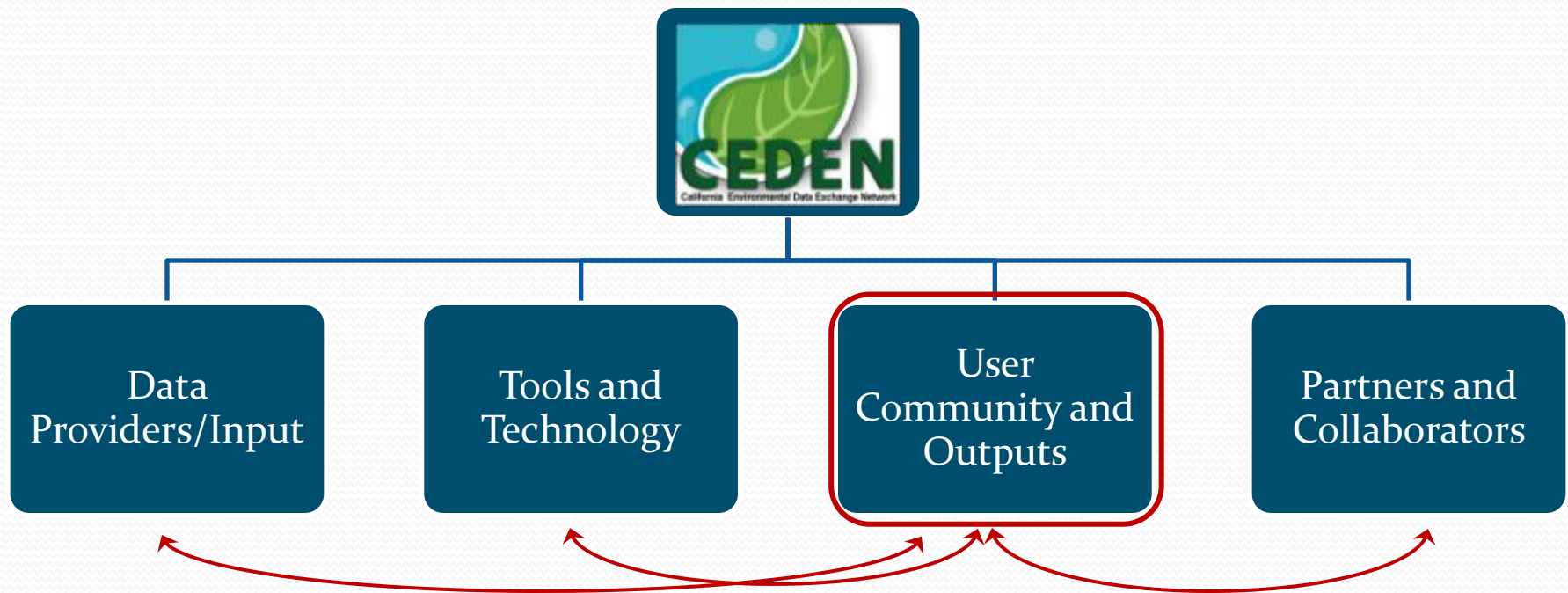
- Consolidates California's ambient water quality data
 - Provides easy access to everyone* for analysis, decision-making and research purposes.

*resource managers, scientists, citizen groups, and the public

Components of CEDEN



Focus on end-user community

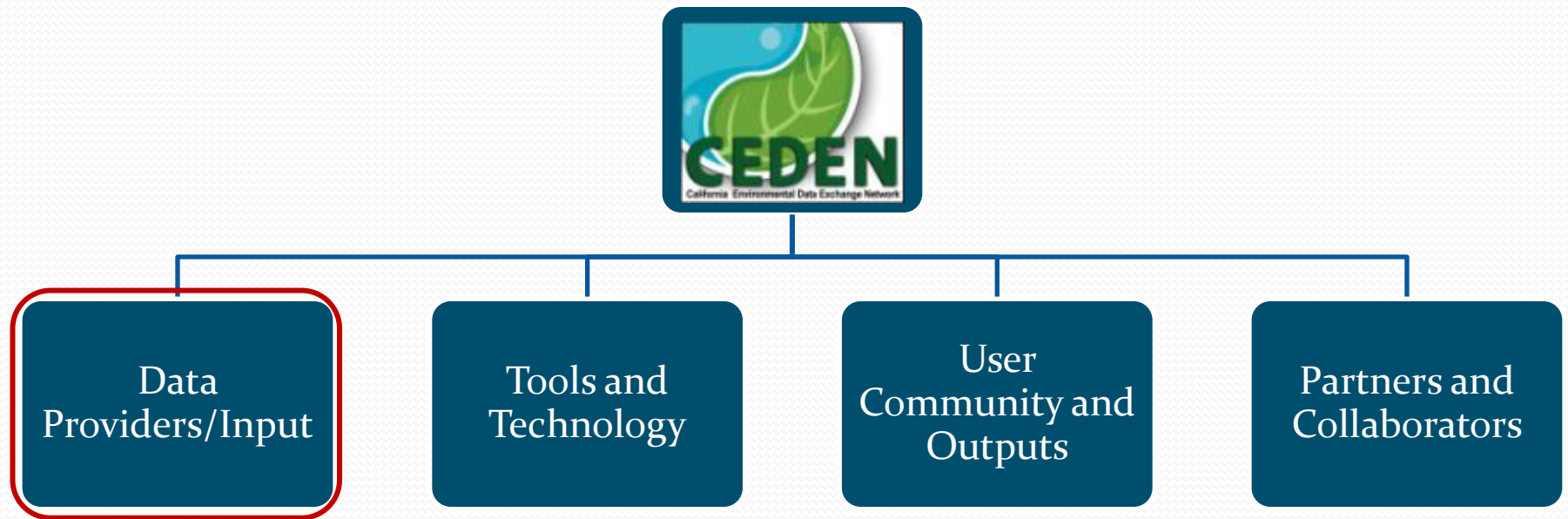


Everything we do in CEDEN is informed by, and serves the needs of, our user community.

Metrics of success

- CEDEN becomes the definition of **readily available data** for the Integrated Report [303(d) & 305(b)]
- Provide everyone access to the **same data** the State Board uses in their decision making (**transparency** of process)

Incorporating additional data



Data input goals

- Get at least 80% of providers from the previous integrated report data call to submit their data through CEDEN for the next cycle
- Provide the State twice the data they had previously
 - Increase the number of providers submitting data to CEDEN

Steps we've taken to make it easy

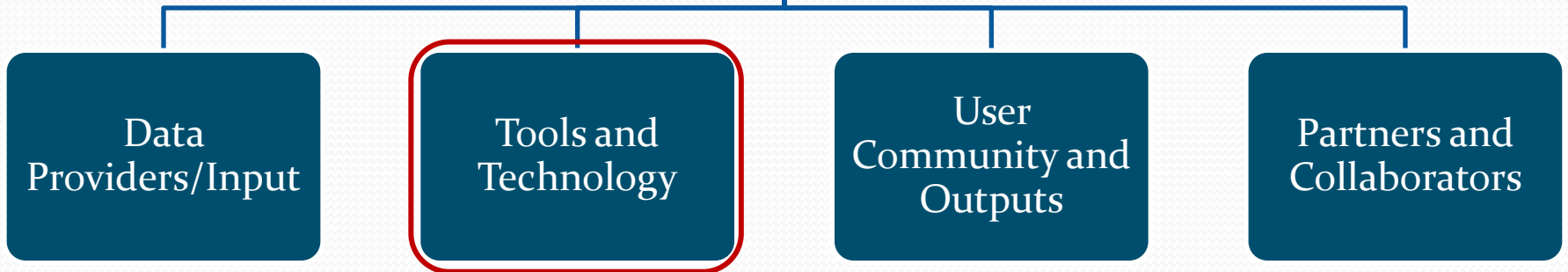
- Established four Regional Data Centers to assist data providers in preparing and submitting data
- Developed data input templates to make data submissions easier for data providers
- Developed documentation and set up a CEDEN help desk as a point of contact for questions

CEDEN Methods Demo

- Marlene Merchain will lead a demonstration and discussion on:
 - Data preparation
 - Data submission
 - Data retrieval

Small Conference Room following lunch (1:00)

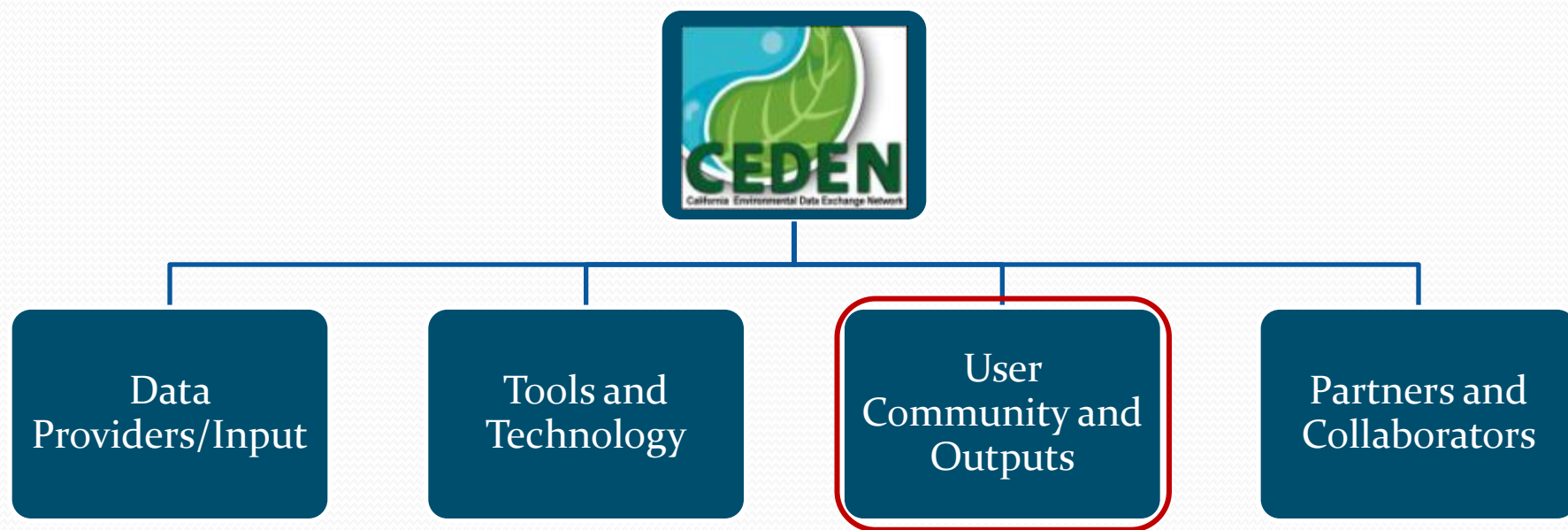
CEDEN Technology



Data Infrastructure

- The system presently supports commonly used data types
 - Chemistry
 - Toxicology
 - Field Data
- System is continually evolving to support additional data types, methods and analytes

Data Output





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Find Data

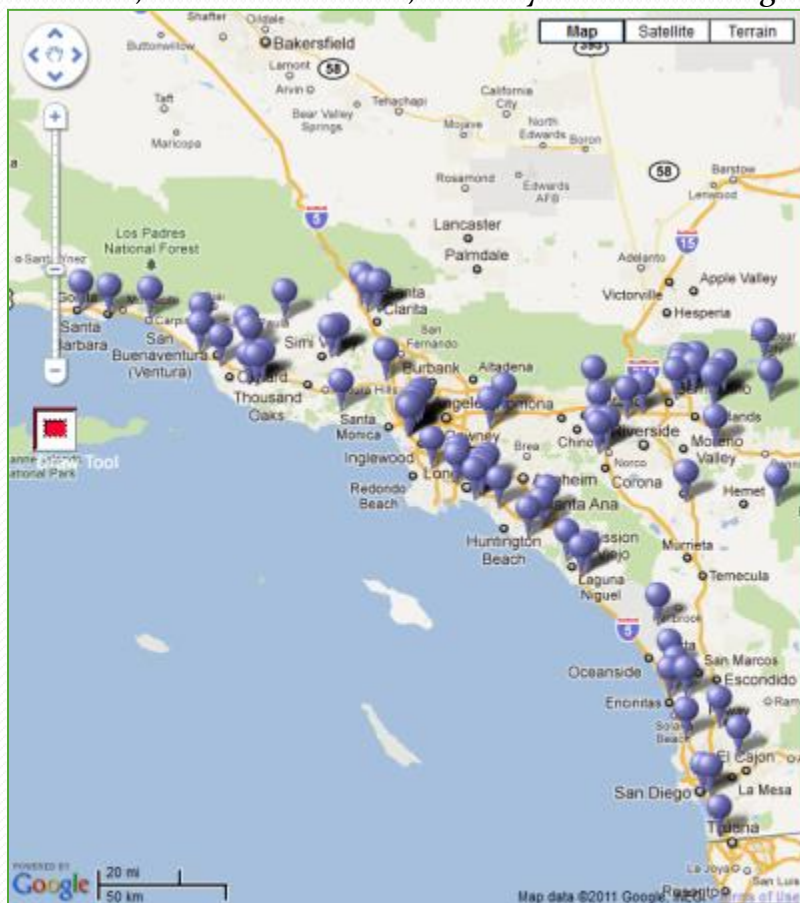
Submit Data

About CEDEN

contact us | site map

Search

CEDEN houses data about California's aquatic habitats and other ambient waters, including lakes, streams, rivers, wetlands, stormwater, treated wastewater, and recycled water dating back to 1950.



RESULT CATEGORY: ☒ Water Quality ☐ Toxicity ☐ Tissue

☐ Turn on automatic station mapping

Click Map Stations at any time to show stations on the map

START OVER **MAP STATIONS** **HELP**

Programs **SELECT** Southern Ca. Stormwater Monitoring Coalition
Surface Water Ambient Monitoring Program

Projects **SELECT** So. Ca. Stormwater Monitoring Coalition Project
SWAMP Monitoring
SWAMP Stream Pollution Trends

Parameter Groups **SELECT** Do not limit search by Parameter Groups

Parameters **SELECT** Do not limit search by Parameters

Matrixes **SELECT** Do not limit search by Matrixes

Stations **SELECT** A-1
ACJ01
Agua Hedionda Creek 6
Arroyo Simi @ Tapo Upper
Atascadero Creek at Ward Drive
Ballona Creek @ Centinela
Ballona Creek Downstream of Sawtelle (Centinella)
Belmont Pump
Bouquet Canyon Creek
Bouton Creek

☐ Include stations that are missing latings

Available date range: Feb-17-1994 to Jun-10-2008

From: Mar 01 1994 To: Sep 31 2008 (Clear Dates)

[Show QA Lookup](#)
[Show Controlled Vocabulary](#)

RETRIEVE DATA ☒ All Rows ☐ First 1000 Records Only ☐ First 30000 Records Only

Record Count: 18279
Download Format: excel

Note: If number of records exceeds 30000, the data will be zipped and emailed to you.

Tools under development

- Transparency to view data as the State Board does:
 - What data were used?
 - What calculations/assessment were made?
 - Documented processes programmed into tools
- Improvements to data selection/filtering tools
 - Spatial, temporal and attribute based queries
 - Simplified interfaces (sliders and selection tools to access specific data)



CEDEN houses commonly-formatted data on California's aquatic habitats and other ambient waters, including lakes, streams, rivers, wetlands, stormwater, treated wastewater, and recycled water dating back to 1950.

Data Finder

What type of information are you looking for?

- ☐ Maps
- ☐ Assessments
- ☒ Raw Data

How would you like to search for this information?

- ☒ By data type (parameter)
- ☐ By location

[GO](#)[RESET](#)[HELP](#)

[Browse data catalog](#)



Visit the:
Water Quality Monitoring Council's



data interpretation web portal

Data Selector

Results Category

- ☐ Water Quality (###)
- ☐ Toxicity (###)
- ☐ Tissue (###)

Parameter Groups

- ☐ Conventional (###)
- ☐ Habitat (###)
- ☐ Inorganics (###)
- ☐ Metals
- ☐ Microbiological
- ☐ Nutrients
- [+ Show More](#)

Matrices

- ☐ Sample water (###)
- ☐ Runoff (###)
- ☐ Sediment (###)
- [+ Show More](#)

Data Filters

Filter 1



Filter 2



Filter 3



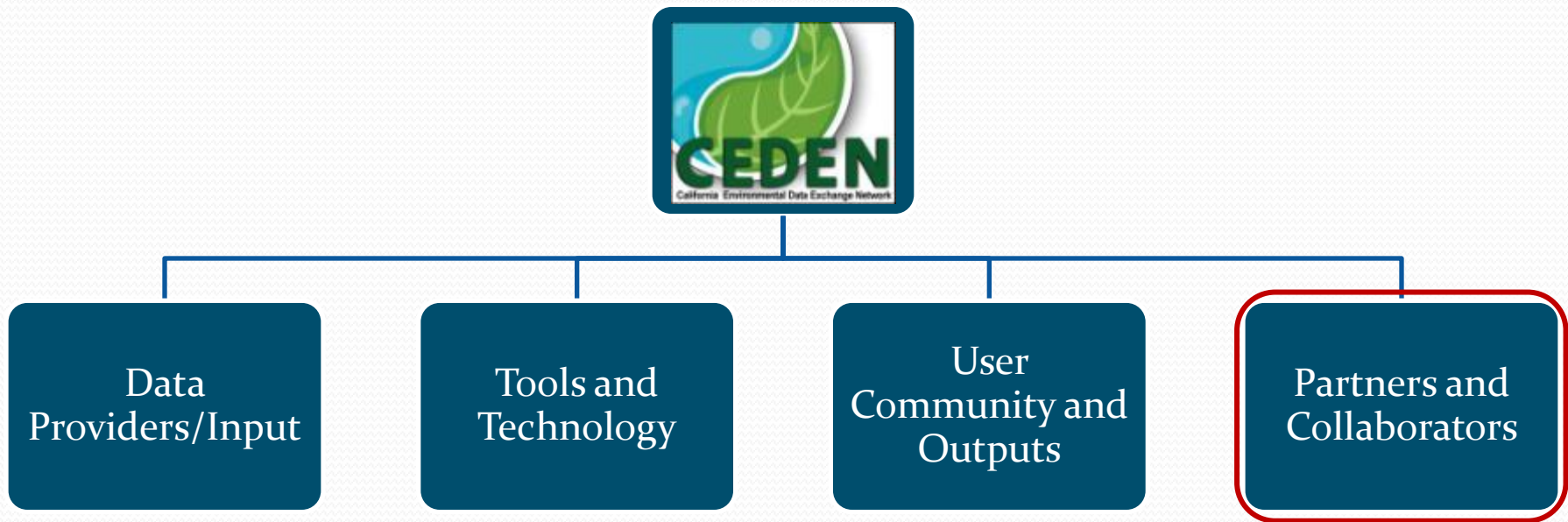
Date Range

From

To

[Add to Cart](#)☐ Include QA data

Partnerships



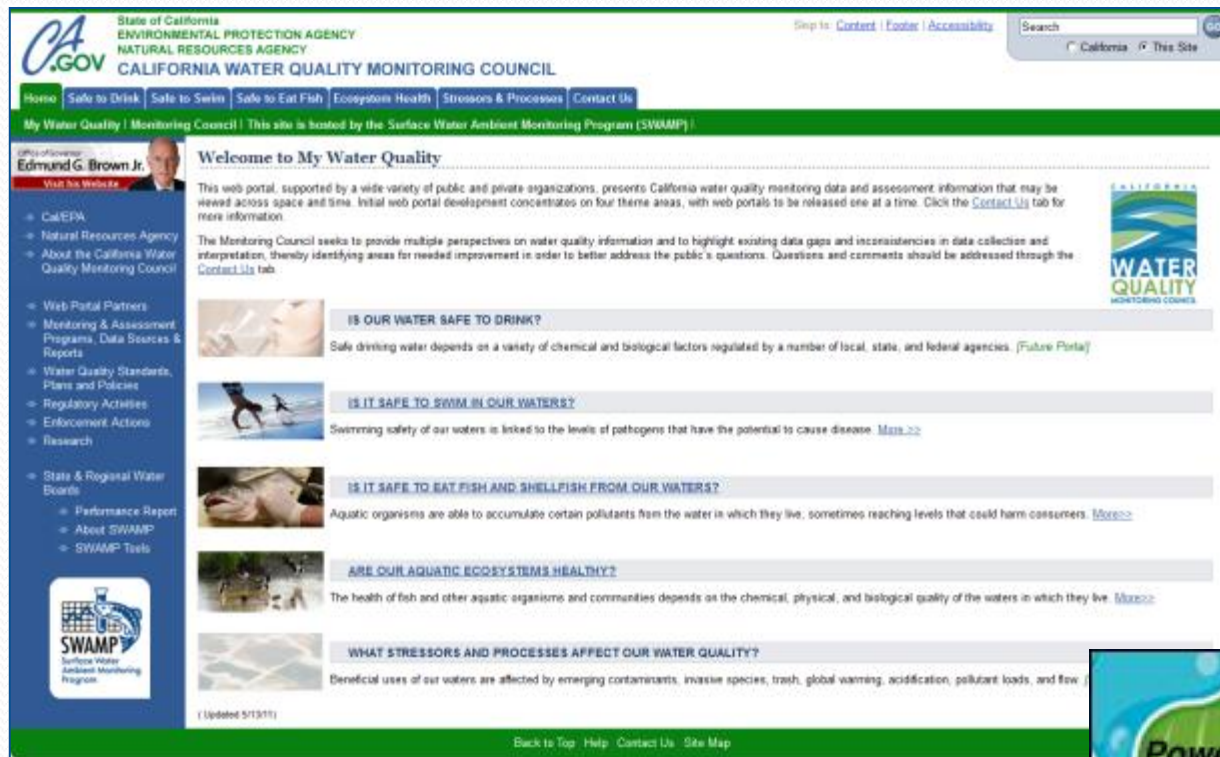
Other entities have similar missions (data collators)
important to the 303(d) process

Partnerships

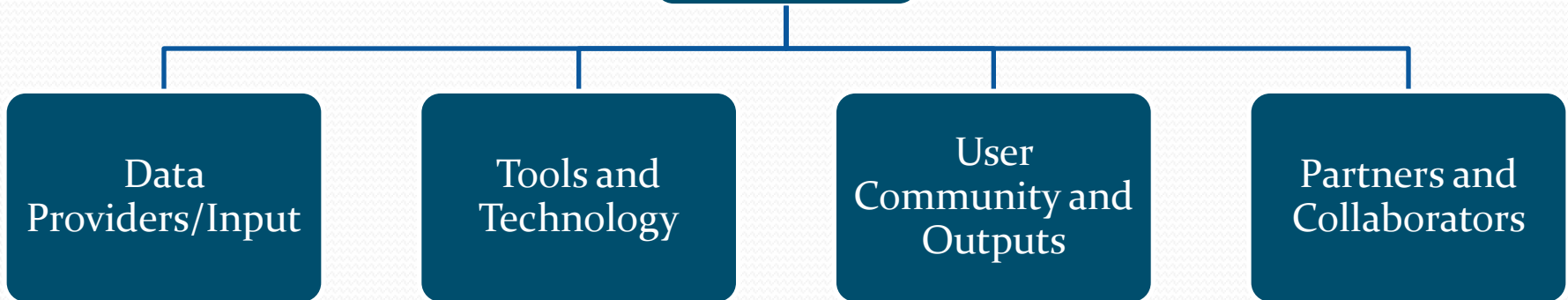
- We are identifying opportunities for CEDEN to interact and collaborate with appropriate partners
 - CIWQS, GAMMA, WQX, etc.
- Working across programs to avoid duplication of efforts
 - Don't make you submit data to multiple places
 - We are working to develop cross-walks between systems to make this submission and access seamless

Applications “Powered by CEDEN”

- California Water Quality Monitoring Council Portals



Through these components CEDEN provides an evolving platform for transparent data access, analysis and decision-making.





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Thank You! Questions?

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