



# Putting Data to Work:

*What We Have and What We Need*

California Water and Environment Modeling Forum

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# Presentation Outline

- What We Have – Implementation outcomes to date
- What's Underway – Current implementation efforts
- What's Ahead – Long-term goals
- What You Can Do



**Data  
Publication  
and Sharing**

**Protocols  
and  
Guidance**

**Building  
Partnership**

**Communication/  
Engagement**

# QUIZ: What Do You Know about AB 1755?

- Who authored Assembly Bill 1755?
- When was AB 1755 enacted?
- Which California Code changed as a result of AB 1755 passage?
- What is the official name of AB 1755?
- What is the primary focus of AB 1755?
- Who must implement AB 1755?

**Assembly Bill No. 1755**

CHAPTER 506

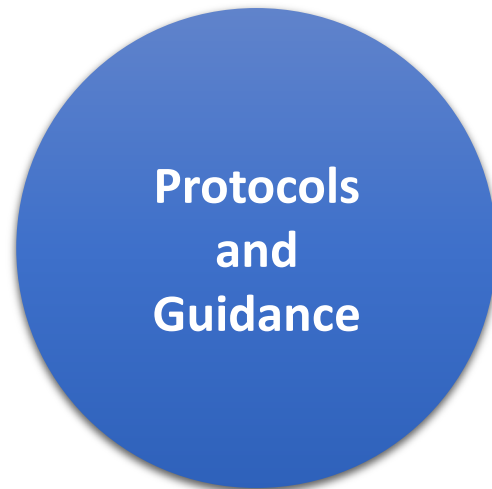
An act to add Part 4.9 (commencing with Section 12400) to Division 6 of the Water Code, relating to water data.

[Approved by Governor September 23, 2016. Filed with Secretary of State September 23, 2016.]

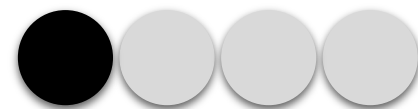
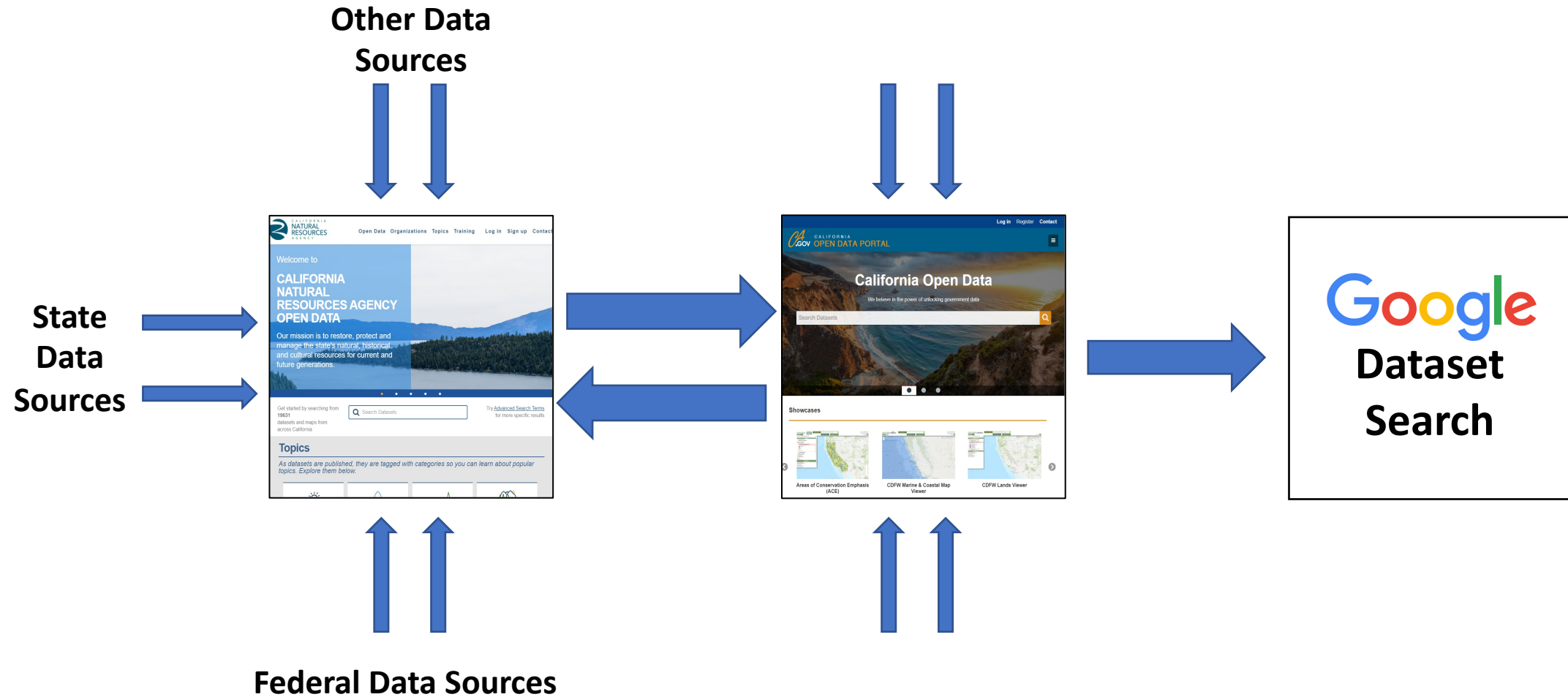
LEGISLATIVE COUNSEL'S DIGEST

AB 1755, Dodd. The Open and Transparent Water Data Act.  
Existing law imposes on the Department of Water Resources various duties with respect to water in the state. Under existing law, the State Water Resources Control Board administers a water rights program pursuant to which the state board grants permits and licenses to appropriate water.

# What We Have: Implementation Outcomes to Date



# Water and Ecological Data Sharing

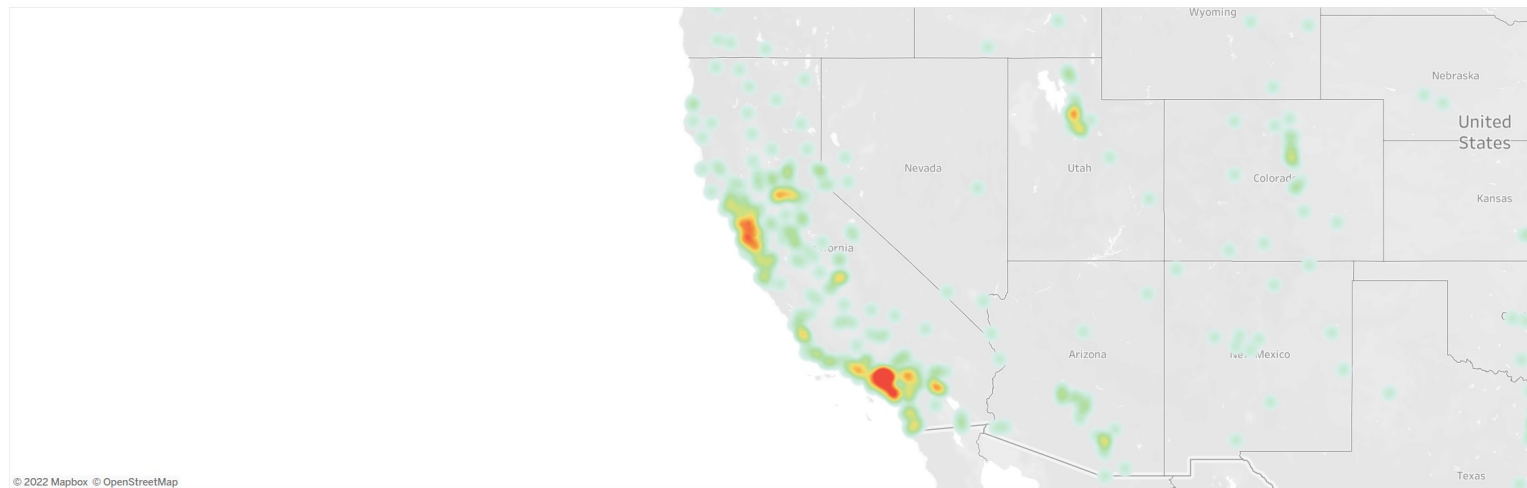


# Open Data Platform in Use



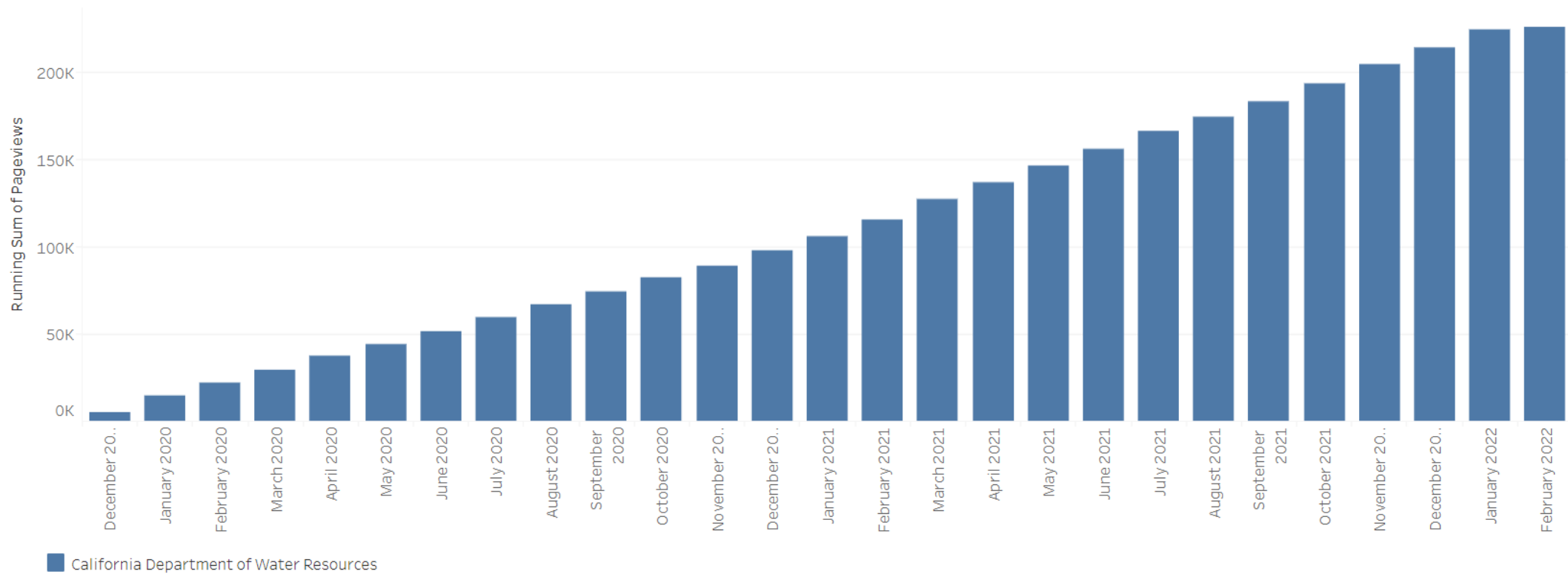
## USERS BY LOCATION

The map below shows the geographic areas where visitors are located according to their IP address. Darker red represents a higher number of visitors from that area. All information is collected at the city level and data is shown for the past 90 days.



# Increasing Views of DWR Datasets Pages

Dataset by Organization



# Published Datasets and Resources

**Datasets** ⓘ

View:  Date:

**19,631** Published Datasets

**DWR : 315**  
**Federal: 281**

**Resources** ⓘ

View:  Date:

**56,810** Published Resources

**DWR : 3,032**  
**Federal: 2,461**

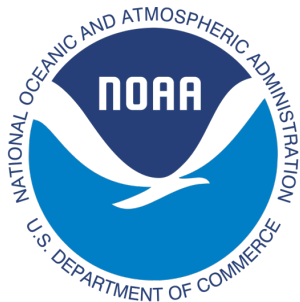
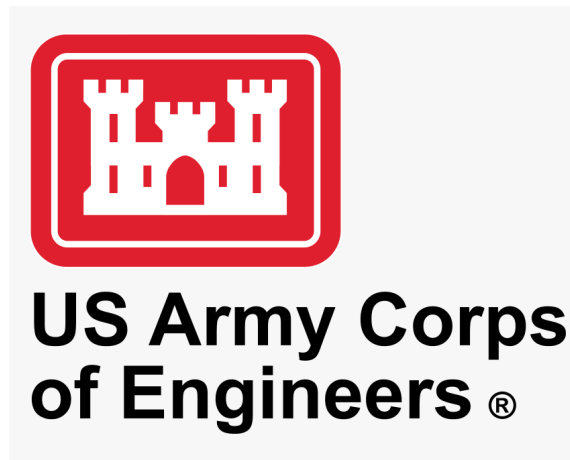




# Federal Agencies



— BUREAU OF —  
RECLAMATION



FEMA



# Data Types (Topics)

Water

Ocean

Climate

Wildlife

Conservation

Land  
Management

Energy

Natural  
Hazards

Recreation



# Popular and New/Recently Updated Datasets

## Popular Datasets

Browse popular datasets below and see what other citizens find interesting.



### Statewide Crop Mapping

109 recent views

[URL](#) [SHP](#) [GDB](#)



### National Hydrography Dataset (NHD)

90 recent views

[PDF](#) [https](#) [Esri REST](#) [HTTPS](#) [website](#) [ZIP](#) [CSV](#) [web](#)



### Periodic Groundwater Level Measurements

83 recent views

[CSV](#) [ZIP](#) [TXT](#)



### Well Completion Reports

81 recent views

[CSV](#) [ZIP](#) [XLSX](#)



### Water Budget Calculators

78 recent views

[XLS](#)

## New and Recent Datasets

Browse new or recently updated datasets below. Click to view details.



### Water Quality Data

Updated on April 4, 2022

[CSV](#)



### NIFC 2022 Wildfire Perimeters

Updated on April 4, 2022

[HTML](#) [ArcGIS GeoServices REST API](#) [GeoJSON](#) [CSV](#) [KML](#) [ZIP](#)



### GSP Monitoring Data

Updated on April 4, 2022

[CSV](#)



### Periodic Groundwater Level Measurements

Updated on April 4, 2022

[CSV](#) [ZIP](#) [TXT](#)



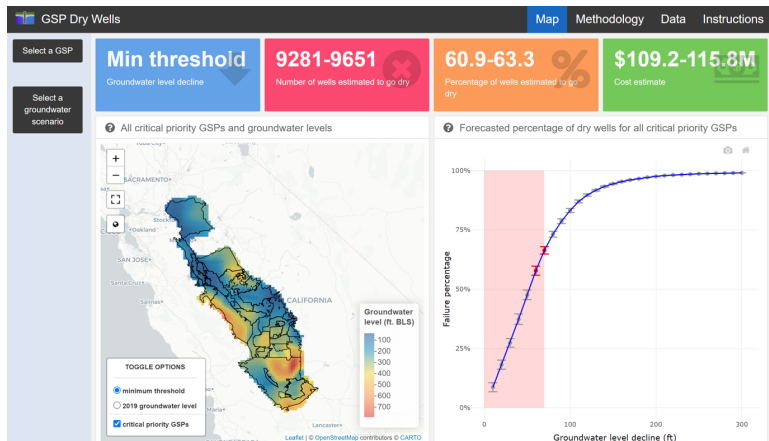
### Household Water Supply Shortage Reporting System Data

Updated on April 4, 2022

[CSV](#)



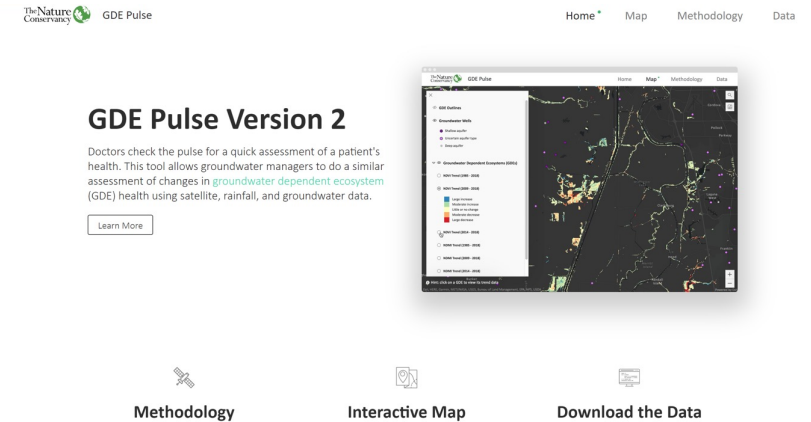
# Data at Work: Groundwater Data Examples



GSP Dry Wells



SGMA Data Viewer



GDE Pulse



# Protocols and Guidance

## Protocols for Assembly Bill 1755, the Open and Transparent Water Data Act

<b>Preliminary Protocols for Assembly Bill 1755, the Open and Transparent Water Data Act.....</b>	<b>1</b>
Introduction.....	1
Foundational Concepts.....	1
Protocols .....	2
Data Standards .....	2
Interoperability.....	2
Initial Minimum Protocols.....	3
Identify a Data Steward.....	3
Publish and Document on an Open Data Platform .....	4
Metadata Requirements.....	4
Data Dictionary Requirements.....	4
Guideline for Optional Descriptive Text .....	5
Access Data.....	6
Continuing Protocol Development - Use Cases and the Open Water Information Architecture.....	6
Continuing Development of Protocols – Long Term.....	8
Interoperability Testbeds .....	9
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# Open Data Guidance

- California Department of Fish and Wildlife
- State Water Resources Control Board
- California Department of Water Resources

## DWR Open Data Handbook

September 2021



## DWR Open Data Publishing Guide

September 2021



## Open Water

State Water Resources Control Board  
DRAFT Strategic Data Action Plan  
(SDAP)

version 11012019

Department of Fish and Wildlife  
DEPARTMENTAL BULLETIN

Number: 2019-01  
Date Issued: April 11, 2019  
Expires: Until Rescinded

To: All Department of Fish and Wildlife Scientific Staff

Subject: Scientific Data Governance Policy

### POLICY STATEMENT

All California Department Fish and Wildlife (Department) scientific data collection, data acquisition, and/or data development activities must incorporate the standards expressed in the Department's Scientific Integrity Policy (Departmental Bulletin No. 17-02) and this Scientific Data Governance Policy.

### Introduction

The Department is tasked with managing California's fish, wildlife, and plant resources and their habitats. Collection and sharing of scientific data by Department staff is therefore critical to the mission of the Department. Given that these data represent one of the Department's most valuable assets as well as an irreplaceable investment of staff time and funding, they also need to be properly stored, maintained, and protected.



# Supporting Open Data



- Setting the rules (for better user experience)
  - CDFW
  - CWRCB and CWQMC
  - DWR



- Equipping the riders/drivers (training/learning opportunities)
  - CDFW
  - CWRCB and CWQMC
  - DWR



- Setting up communities of practice within the State agencies



# Building Partnerships

- California Water Data Consortium

- Cross-sector collaboration to advance open water data
- Unique public-private partnership
- Non-profit founded in 2019 to assist the State in implementation of AB 1755
- Consortium Board, Steering Committee, Working Groups



- Internet of Water Coalition

- Better water data for better water management
- Organizations working together to build foundational water data infrastructure across the United States



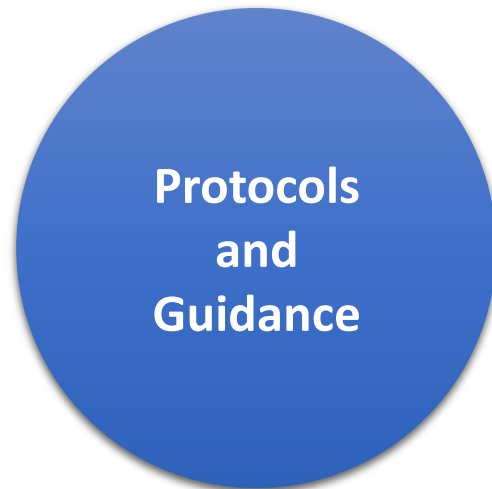


# Communication and Engagement

- Hosted/Participated in Public Meetings
- CA Water Data Challenges (2018, 2019)
- Annual California Water Data Science Symposia (hosted by SWRCB)
- March is Water Data Month (vis-a-day)
- Staff Engagement/Training
- Community-building within State Agencies (forums, brown-bag sessions)



# What's Underway: Current Implementation Efforts



# On-going Activities

## Data Publication and Sharing

- Continue to add datasets from multiple sources
- Review datasets for enhancing discoverability, accessibility, interoperability, and (re)usability

## Protocols and Guidance

- Define open data framework for State-held data
- Expand and enhance existing protocols and standards, as needed
- Gather feedback and revise guidance documents, as needed



# Building Partnership

- California Water Data Consortium
  - Advancing projects to demonstrate value of data
    - Groundwater Accounting Platform
    - Groundwater elevation data submittal streamlining
    - LiDAR Data
    - Urban Water Reporting
    - Reporting Water Use in the Delta
- Internet of Water Coalition
  - Advancing projects to demonstrate value of data
    - Harmful Algal Blooms
    - Streamgaging Network (SB 19)



# Communication and Engagement

## Users

- Understand data needs
- Raise awareness about the platform
- Encourage open data use in management of water resources
- Solicit feedback for platform enhancement

## Publishers

- Encourage and support open data publication
- Collect feedback for platform enhancement
- Share learning resources to publish data in better ways

## Executives and Policy Makers

- Understand informational needs and build confidence in data-driven decisions
- Support availability and use of open data in management of water resources



# What's Ahead: Long-Term Goals



**Data  
Publication  
and Sharing**

**Protocols  
and  
Guidance**

**Building  
Partnership**

**Communication/  
Engagement**

# Data Publication and Sharing

- Framework for data federation
- Legacy data preservation, inventory, and access
- Delivery of tools and data products
- Maintenance of data portals
- Interactive web application for use case documentation
- Digital object identifiers



# Protocols and Guidance

- Alignment of State agency definition of AB 1755 compliance (pursuant to Water Code Section 12406)
- Development/delivery of open data training curriculum
- Enhanced data literacy
- Defined data stewardship principles





# Building Partnership

- Collaboration with local, State, and federal agencies
- Collaboration with NGOs and private sector
- Interagency communications network
- Knowledge and technology transfer with cooperating states



# What You Can Do

- ✓ Join our subscriber list ([AB1755@water.ca.gov](mailto:AB1755@water.ca.gov))
- ✓ Get involved in the upcoming CA Water Data Challenge
- ✓ Check out Consortium-hosted events
  - April 5: Data for Lunch
  - May 16: LiDAR Derived Products Stakeholder Workshop
- ✓ Join a Consortium project team
- ✓ Document your own use(s) of datasets
- ✓ Use State-hosted open datasets and offer feedback
- ✓ Share your ideas for demonstrating the value of data

# QUESTIONS?

[AB1755@water.ca.gov](mailto:AB1755@water.ca.gov)

[water.ca.gov/ab1755](http://water.ca.gov/ab1755)