

CALIFORNIA WATER DATA CHALLENGE

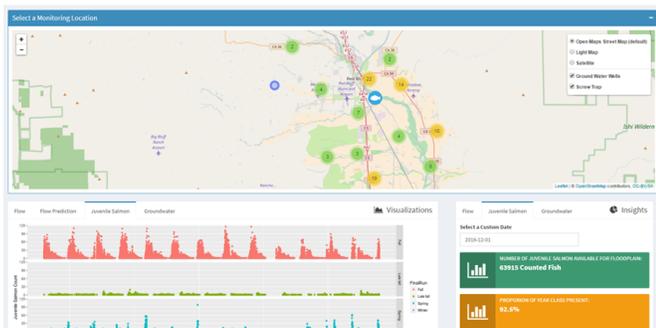
#thirsty4data @CAWaterDataChallenge



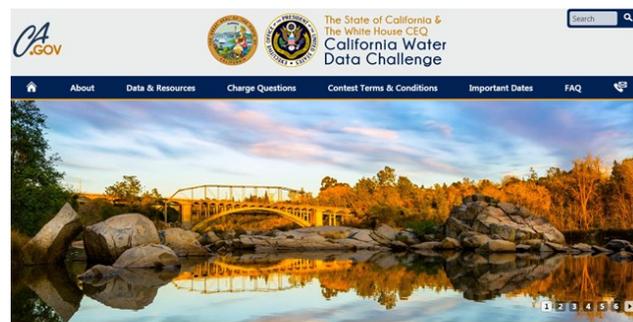
The 2016 California Water Data Challenge was a first of its kind collaboration between the White House Council on Environmental Quality and three California state agencies (including the Natural Resources Agency, Environmental Protection Agency, and Government Operations Agency), with additional support from other agencies and organizations. The event, which concluded with the judging of entries on December 9, 2016, challenged participants to leverage open source technology and available water information to support decisions around water reliability and resource sustainability in California. Inspired by President Barack Obama's commitment to improving open data and government, the Challenge demonstrated the potential for collaboration, transparency, and innovation to address our water management issues.

Background Issues

One of our nation's biggest challenges is ensuring that all Americans have access to clean and safe water. Our water resources are critical for supporting healthy communities, maintaining our nation's agriculture, sustaining fish populations, generating power, and providing outdoor recreation opportunities for all Americans to enjoy. However, recent events in California—where a five-year drought has forced new strategies and increased cooperation to manage the effects of low river flows, depleted reservoirs, and water shortages—have shown that we must revisit how we manage our nation's water resources, and find new and innovative ways to build a sustainable water future. California's experience serves as a reminder that unless we take action to increase efficiency, reduce water use, and maintain water supplies, the future of our nation's water, and therefore the future of our environment and economy, is at risk.



California Water Data Challenge winner FlowWest's ***Sustainable Floodplain Habitat Finder*** combines open-source data visualization and decision support tools to help water resources and fishery managers evaluate the relative potential for floodplain habitat creation at a given site with a real-time, data-driven approach.



The State of California and the White House Council on Environmental Quality Water Data Challenge

The California Water Data Challenge website is at: <http://waterchallenge.data.ca.gov>

Goals and Opportunities

As we consider the threats to our water resources, one of the best opportunities we have to strengthen drought-related decision-making and to inform the American public about the significant challenges posed by drought is to make better use of existing information and data.

The California Water Data Challenge was designed to address this need by bringing together developers, coders, companies, and universities whose creative capacity can help maximize the impact of existing Federal and State datasets to produce data tools that transform how information is accessed and used, to move towards a more effective water management system. Ultimately, this Challenge serves as an example of what is possible across the nation—ensuring that all communities, from west coast to east, are able to effectively and efficiently access and understand the information they need to ensure that a sustainable supply of water continues for all.

Entries and Judging

There were 34 submissions to the challenge, with entries from citizen volunteers, consulting firms, student teams, and non-governmental organizations. Eight of the submissions were in the open source category and qualified as finalists invited to present their entries to the judges. The judges, a mix of data science experts and water policy leaders, evaluated the entries based on technical competence and capabilities, use of data to provide effective outcomes, creativity and innovation, and valuable information and insights regarding data.

Submissions are at: <https://goo.gl/pUYwWH>

Winner—FlowWest

The winning submission was developed by FlowWest, whose [Sustainable Floodplain Habitat Finder](#) app uses six different datasets to provide insights into where and when to target the best floodplain habitat for juvenile salmon. The judges were impressed by the team's ability to find a unique and important problem ripe for a data driven solution, and then develop a prototype of a tool with live data connections in such a short time frame.

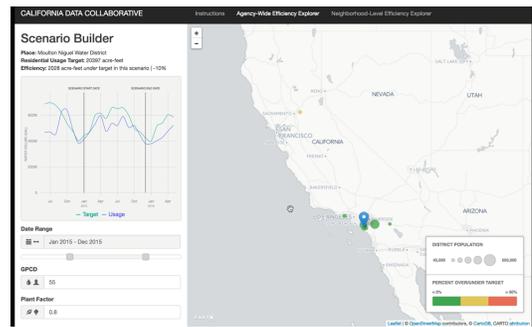
"It was nothing short of extraordinary to bring that level of thought, data and effort to bear on an important problem in such a short timeframe"

—Mark Gold, Event Judge and Assistant Vice Chair for Sustainability at UCLA, on the winning entry

Special Mentions

The judges also recognized four other finalists for special mention:

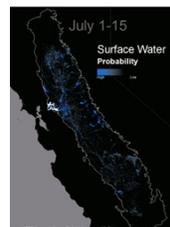
- The California Data Collaborative's [Water Efficiency Explorer](#) was given special mention in the Urban Water Supply category.
- Point Blue and the United States Geological Survey's [Automated Water Resources Tracking System](#) was given special mention in the Ecosystem Health Category.
- Two citizen volunteer teams were recognized as Rising Innovators: Team Will Work for Froude's [Water Supply App](#), and Team Storage AF's [Providing Context to a Proposed Shasta Dam Expansion](#).



The California Data Collaborative's [Efficiency Explorer](#) is an interactive dashboard that supports analysis of the impact of new standards with a scenario explorer tool.

Next Steps

The winning FlowWest team will be invited to present at a State Water Board meeting in 2017, all special mentions will be invited to present at brown bag series in 2017, and the Rising Innovators will be given professional development time with each of the three participating State of California agencies. Also, in 2017 there will be major steps to apply open data standards to California's water data in compliance with the Open and Transparent Water Data Act (AB1755, Dodd), and California state agencies are continuing to make data available on the State's open data portal (data.ca.gov) and host data challenge events.



Point Blue's [Automated Water Resources Tracking System](#) uses satellites and bioinformatics to make water data available in near real-time, and is a foundation for coordinated data-driven decision support to optimize water management for biodiversity and ecosystem services.

More Information

To learn more about the State Water Boards' open data efforts, follow the Board's open water data team on Twitter @CaWaterDataDive or using the hashtag #thirsty4data, and visit the Water Board Data and Databases website at:

waterboards.ca.gov/resources/data_databases/

