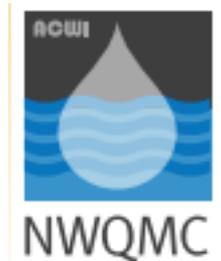


Update on Water Quality Portal

CHARLES KOVATCH, US EPA OFFICE OF WATER

JIM KREFT, USGS CIDA

ACWI UPDATE MEETING AUGUST 19, 2014



Purpose

Describe the Water Quality Portal activities since we last presented in 2012

Explain the benefits of the Water Quality Portal

Review recent activities

Conduct a Demo on the Portal

Discuss upcoming development and next steps

Data are valuable, plan for re-use

Electronic data are more valuable than data in file cabinets

The more data are re-used, the more valuable they become

- Collect once – use multiple times

Shared data are of even higher value

- Provide for better planning and management decisions
- Incentivize collaborative efforts
- Make the most use of the data collection resources being invested

Benefits of the Portal

Reduces the effort to use other data sources

- Collecting data from multiple sources
- Combining into common format
- Delivering in a single file

Leverages and protects investments in monitoring data

- Common data elements emerging from monitoring community
- Marketplace of what, when and where for monitoring

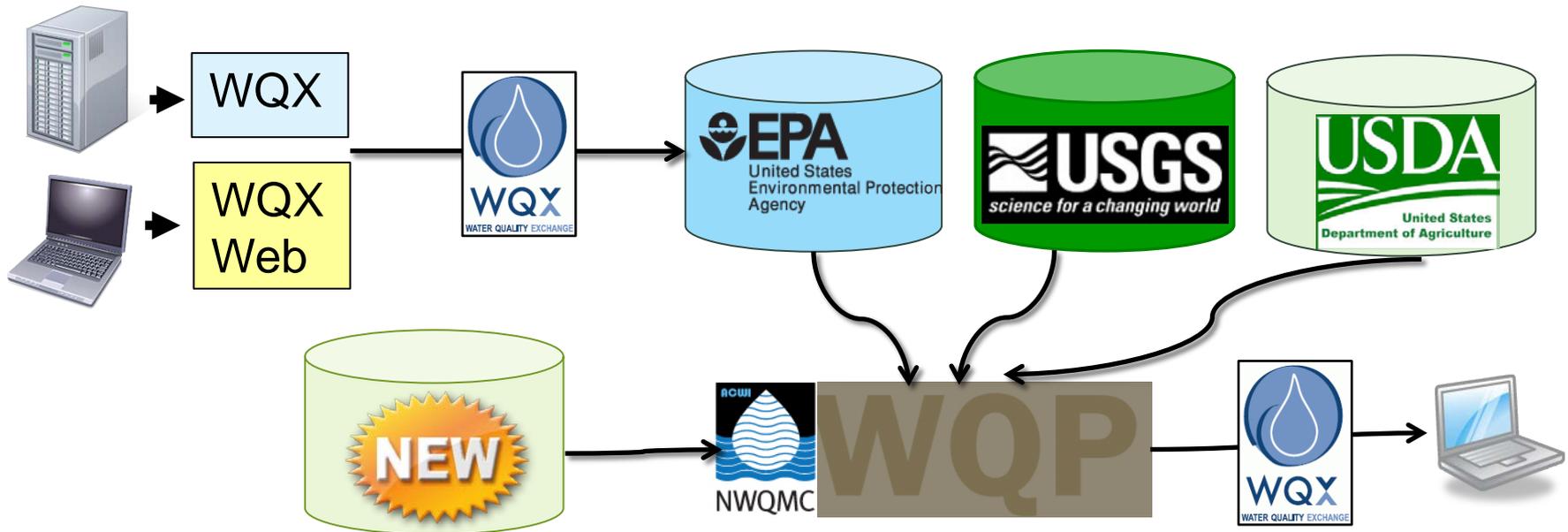
Supports water quality based decision making

- Comparing to water quality standards
- Identifying hotspots
- Developing protection and restoration plans
- Modeling expected changes

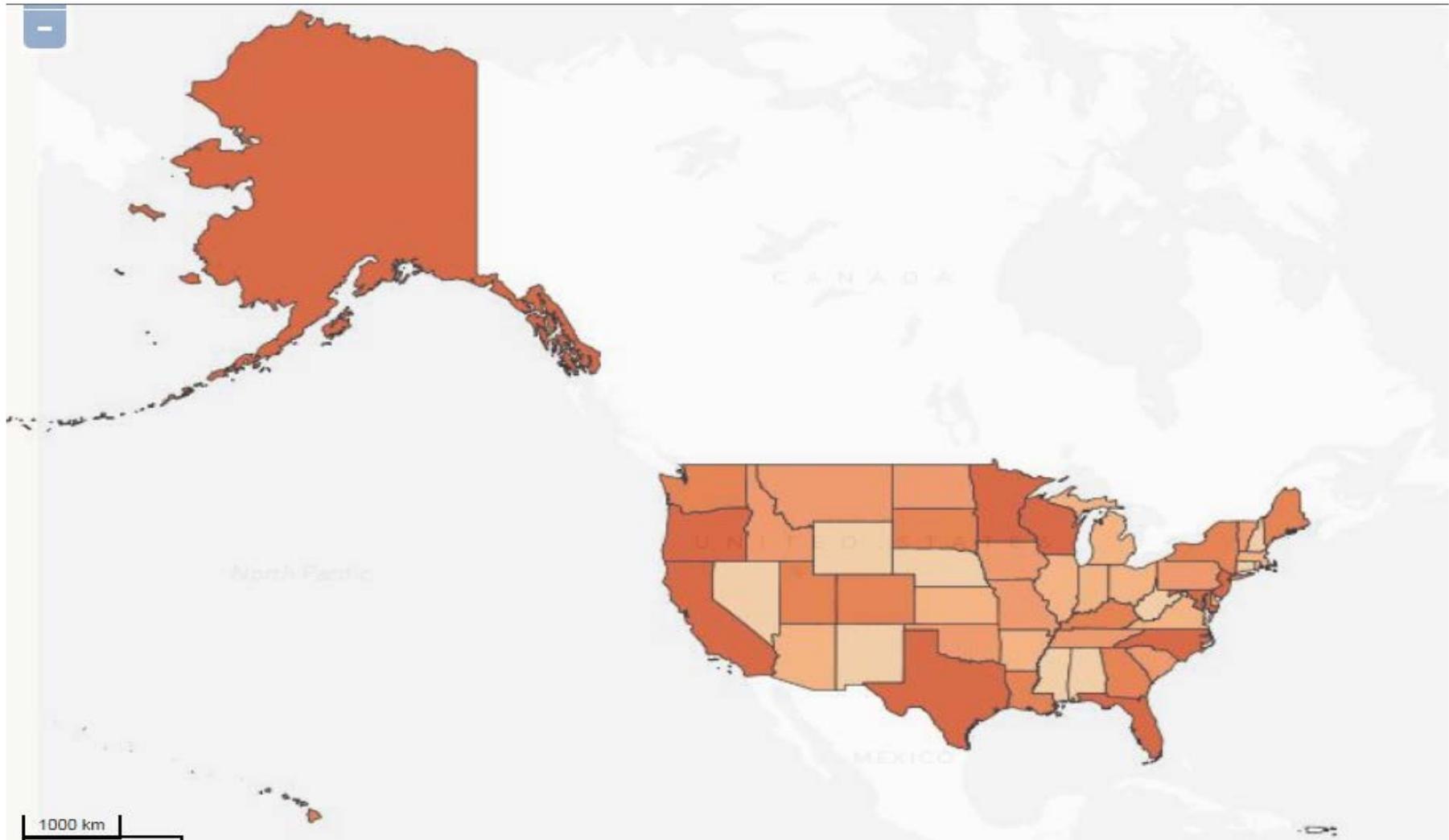


Increases Access to Data

With the National Water Quality Monitoring Council (**NWQMC**), the Water Quality Portal (**WQP**) integrates publicly available water-quality data, through use of the Water Quality eXchange (**WQX**), from the USGS **NWIS**, EPA **STORET**, and USDA **ARS STEWARDS**.



Access to Water Quality Data



Over 240 million discrete water data records and 2.2 million stations

Access to Multiple Data Types

Portal Data Records (240m total)

- USGS NWIS – 90m records
- USDA STEWARDS – 1m records
- USEPA STORET – 150m records

Portal Data Contributors

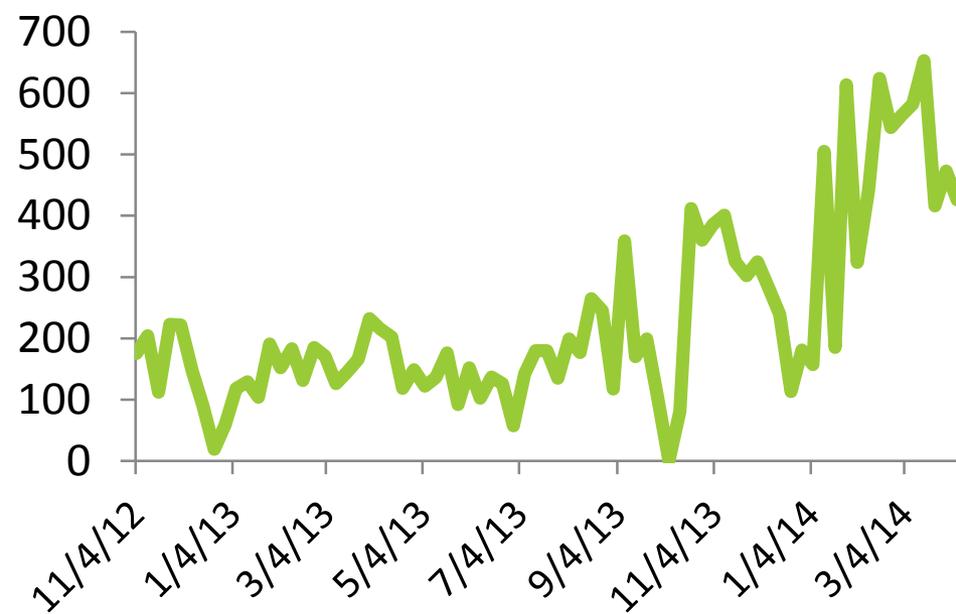
- Federal – EPA, USGS, USACOE, NPS, USBR
- States and territories – 50 with 5 more in progress
- Tribes – 130 agencies
- Other organizations – county, watershed groups, academic

Portal Data types

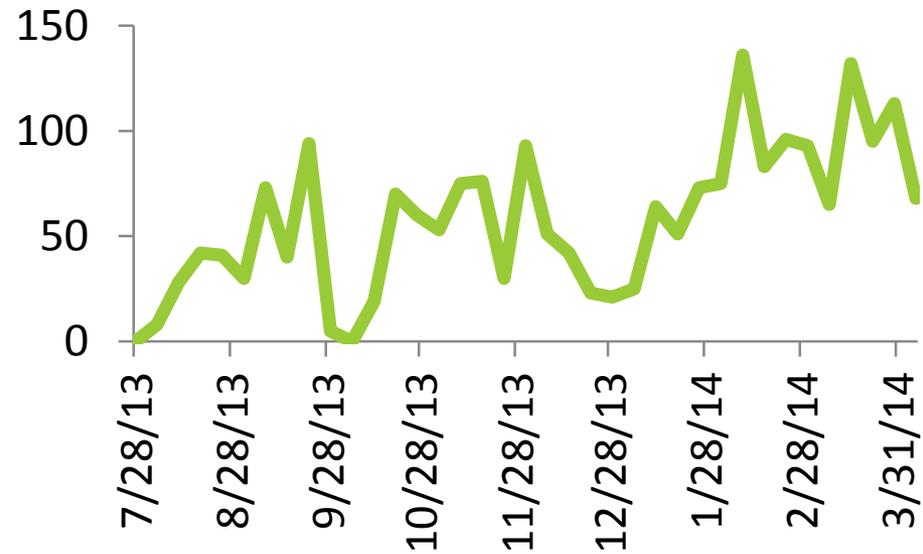
- Physical/Chemical
- Biological (Summer 2014)
- Habitat, Metrics, Indexes (Fall 2015)



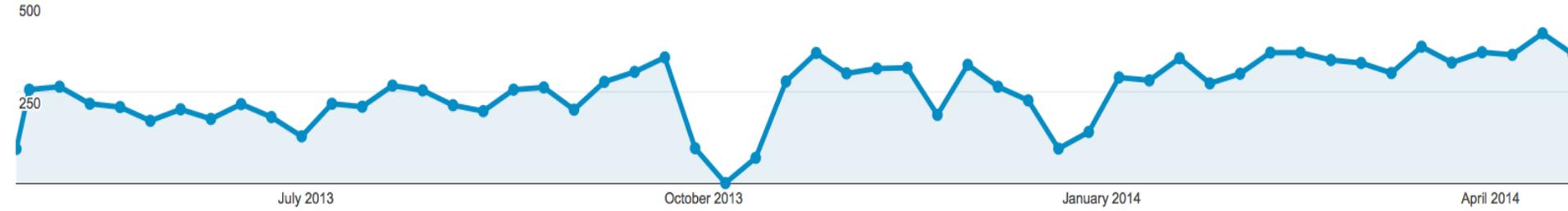
Weekly Portal Downloads



Total Weekly Map Create Events



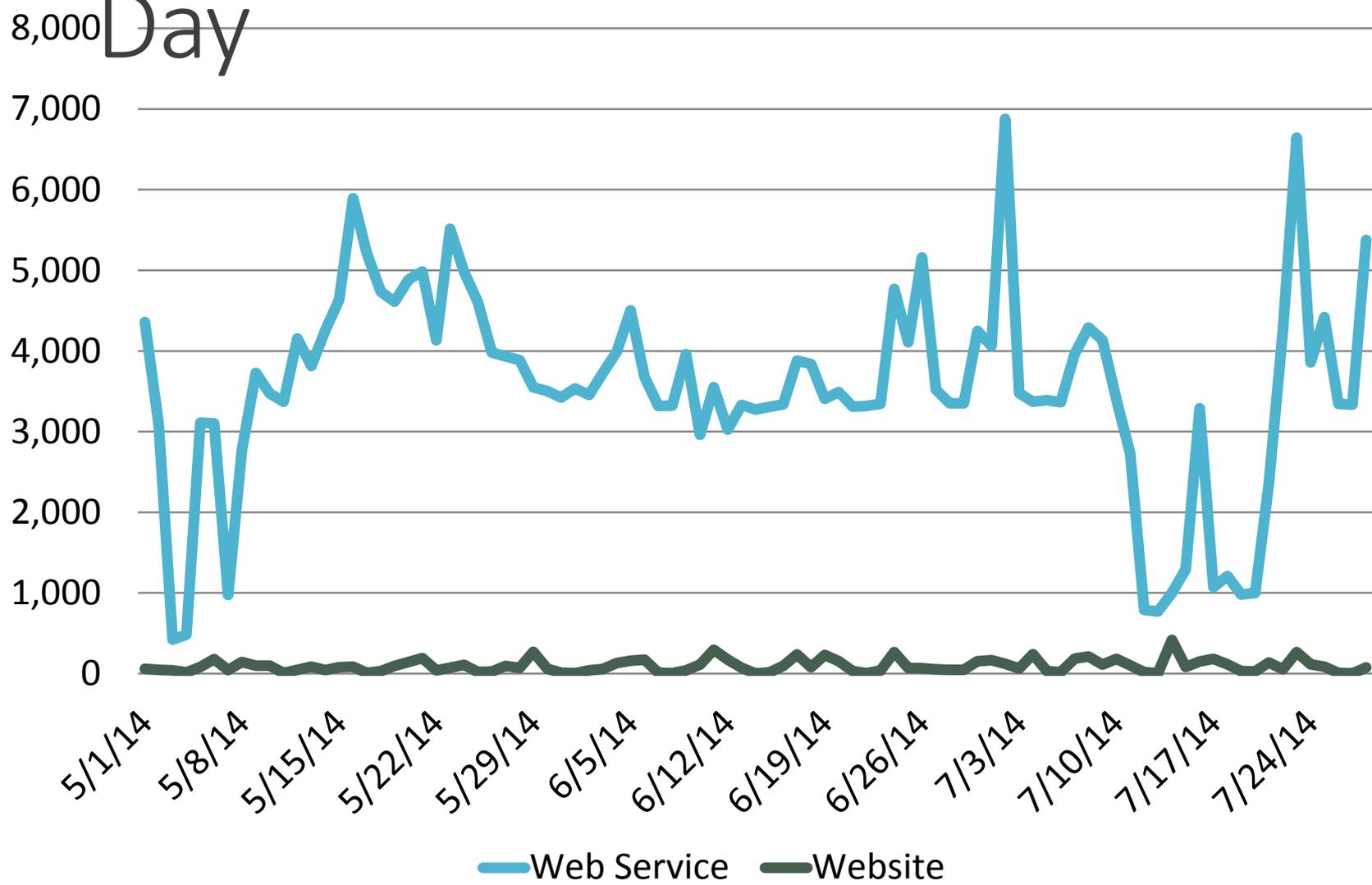
Number of Visits to Water Quality Portal per week April 2013-April 2014





Number of Downloads per

Day





Number of Downloads

(from May 1 2014 to July 28, 2014)

Records Downloaded

	Web Service	WQP Site	Total
Total	523,969,462	935,702,883	<u>1,459,672,345</u>
Daily Average	5,887,297	10,513,516	16,400,813

Number of Downloads

	Web Service	WQP Site	Total
Total	314,988	8,431	323,419
Daily Average	3,539	95	3,634

Comparison of Person Visits (from June 2014 vs. June 2013)

Sessions

78.77%

1,398 vs 782



Users

74.48%

930 vs 533



Pageviews

111.38%

3,268 vs 1,546



Pages / Session

18.24%

2.34 vs 1.98



Avg. Session Duration

34.13%

00:06:40 vs 00:04:59



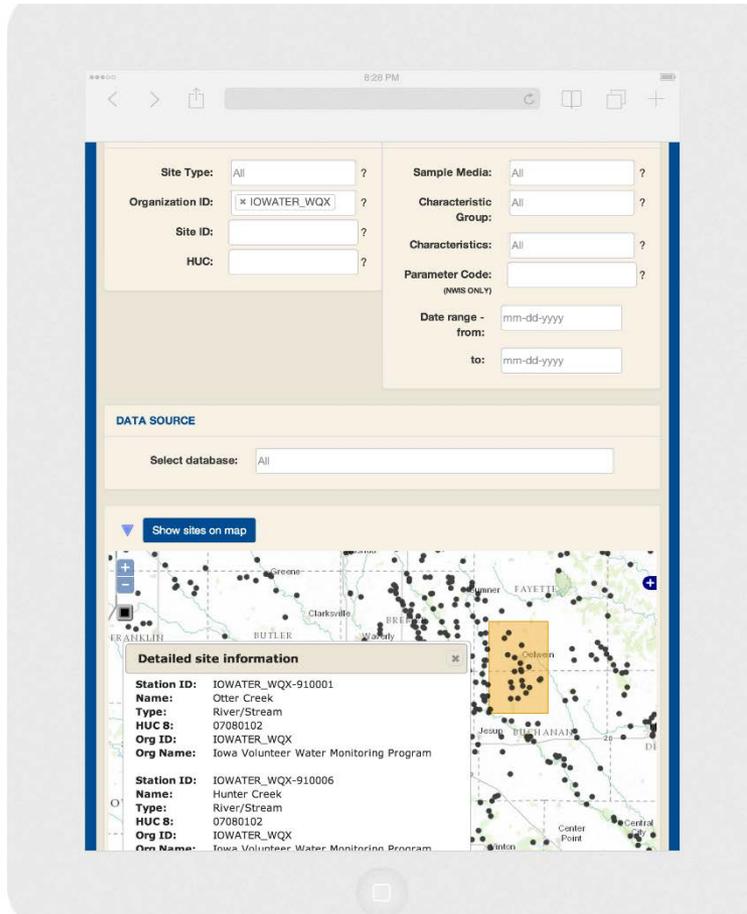
Bounce Rate

-18.16%

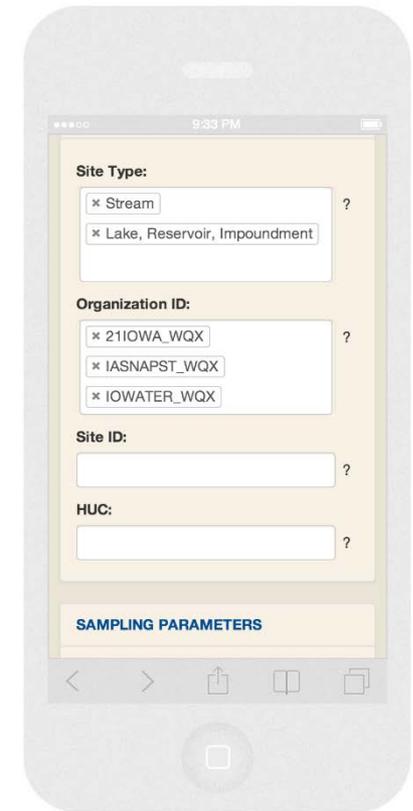
32.55% vs 39.77%



Built using Responsive Design



Water Quality Portal works on any device with a modern web browser



Portal FY14 Accomplishments

- *Added USDA:* Added USDA Agricultural Research Service - Sustaining the Earth's Watersheds, Agricultural Research Data System (STEWARDS) which provides watershed assessment study data.
- *Enhanced the map interface:* Users can now immediately see the locations of their queried sites and download data from a specific site or sites of interest directly from the map.
- *Linked to the National Environmental Methods Index (NEMI):* NEMI users are able to download Portal records that have been collected using a given method, and see a map of collection locations related to a record.
- *Extended and improved Web Services:* Portal users can make 3-5000 automated data calls per day to support models and other analytical tools.
- *Responsive design refresh :* WQP can now be used on any device with a modern web browser, regardless of size.

Water Quality Portal Demo

Portal data holdings

- <http://waterqualitydata.us>
- Characteristics and query capabilities
- Display stations on a map
- Web Service usage example

The screenshot shows the homepage of the National Water Quality Monitoring Council (NWQMC) Water Quality Portal. The header features the NWQMC logo and the text "NATIONAL WATER QUALITY MONITORING COUNCIL" and "Working Together for Clean Water". The main content area includes a large "WQP" logo, the title "Water Quality Portal", and a brief description: "The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC)." Below this, there are four main sections: "DOWNLOAD DATA" (with a link to download data in Excel, CSV, TSV, and KML formats), "HOW TO USE THE WQP" (with links for User Guide, Web Services Guide, FAQs, and Upload Data), "NATIONAL RESULTS COVERAGE" (with a link to view water-quality data in your state), and "ABOUT THE WQP" (with links for What is the WQP?, Contributing organizations, Other Water Quality Sites, and Contact us). The footer displays the logos for USGS and EPA.



Portal FY15 Activities

Development

- Identify additional data partners and sources
- Examine opportunities to improve data quality
- Serve biological data out of the Portal
- Improve mapping interface and NHD based searches
- Discuss continuous data solution
- Increase visibility of data in the portal

Outreach

- Highlight new community tools
- Promote data sharing
- Attend meetings
- Conduct webinars

Discussion with ACWI

Increase data partners – Who would ACWI members suggest we contact to participate in the Portal?

Increase Portal Use – What do ACWI members need to communicate its availability and identify use cases?

Sensor Data – We want to convey that we are participating in discussions. What questions do ACWI members have related to the Portal and sensor data?

Taxonomic Registries – We want to leverage one central taxonomic registry, who would ACWI members identify as the coordinator on this effort?

International Water Quality data standard- What role would ACWI like to play in extending WQX to work within international standards?

Questions

Charles Kovatch

Kovatch.Charles@epa.gov

202-566-0399

Jim Kreft

jkreft@usgs.gov

608-821-3919

