Water Quality Portal

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Overview

Summary of FY14 Accomplishments and Planned FY15 Activities

- Task 1: O&M
- Task 2: Data Input
- Task 3: New Data Partners
- Task 4: New Data Types and Data Integration
- Task 5: Data Output
- Task 6: Data Tools and Display
- Task 7: Portal IT Changes and Enhancements
- Task 8: Communication and Outreach
- Task 9: Portal Role

Next Steps

Task 1: O&M

FY14 Activities

1. Major Rework of WQP Services to
   1. Support additional data providers
   2. Serve the increased load of a demanding user community
   3. Bring the WQP in line with USGS Office of Water Information and DOI IT Transformation
2. Rework of WQP Website
   1. Responsive, works on any modern browser
3. Major improvements in quality and robustness of data loading and transformation architecture

FY15 Activities

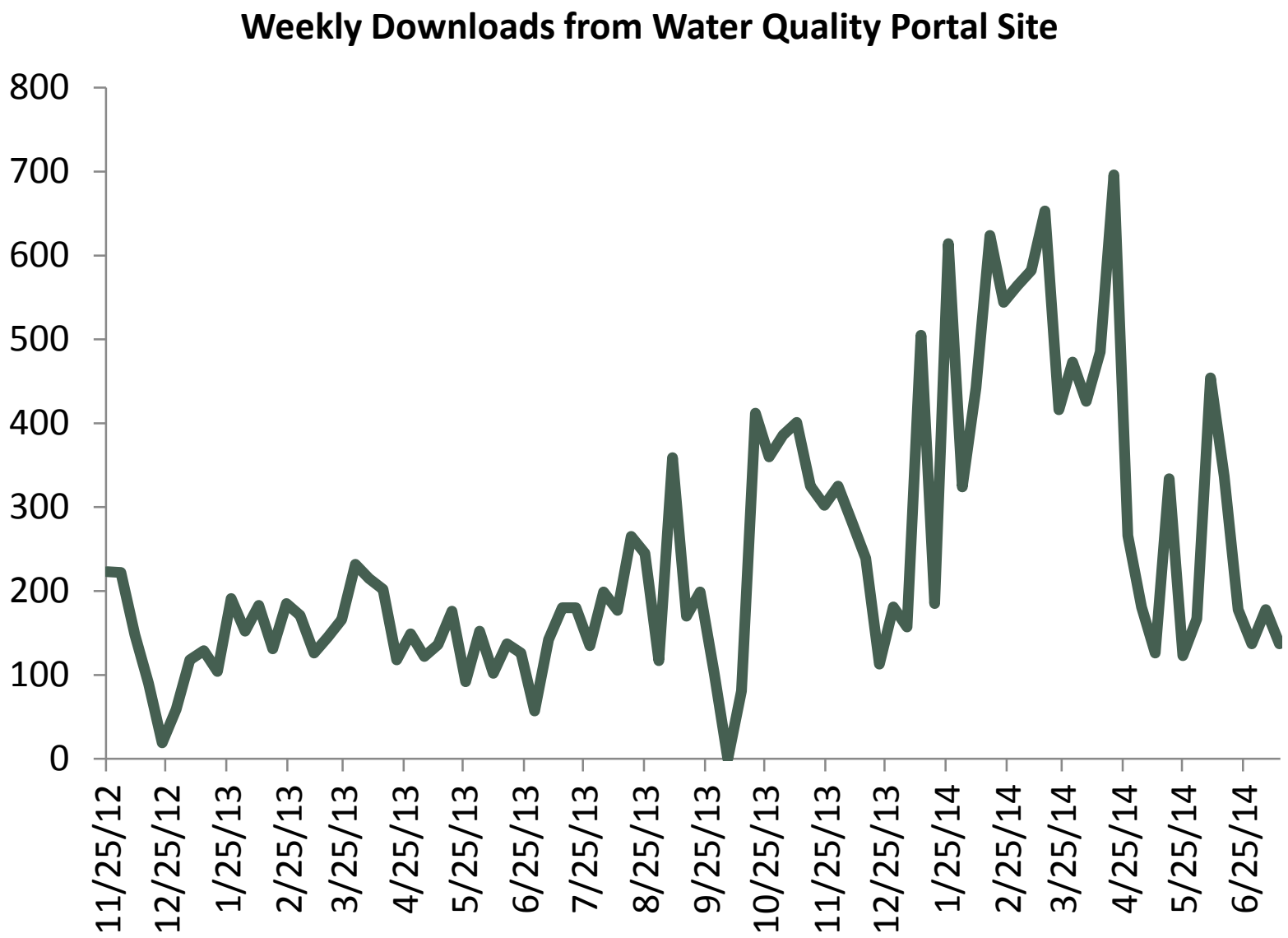
1. Further expand backend to meet needs of user community
2. Improve data sharing and increase timeliness of data loads

WQP Usage

WQP launched in April 2012

- 50-100 visits per weekday
- Over 10,000 unique Visitors
- 3000-5000 downloads per day from **web services**
- Recently added USDA Agricultural Research Service STEWARDS database
- Steady increase in visits and actual use in starting in Fall 2013

Number of Visits to Portal per Week April 2013-July 2014


Weekly Downloads from Water Quality Portal Site
800
700
600
500
400
300
200
100
0
11/25/12
12/25/12
1/25/13
2/25/13
3/25/13
4/25/13
5/25/13
6/25/13
7/25/13
8/25/13
9/25/13
10/25/13
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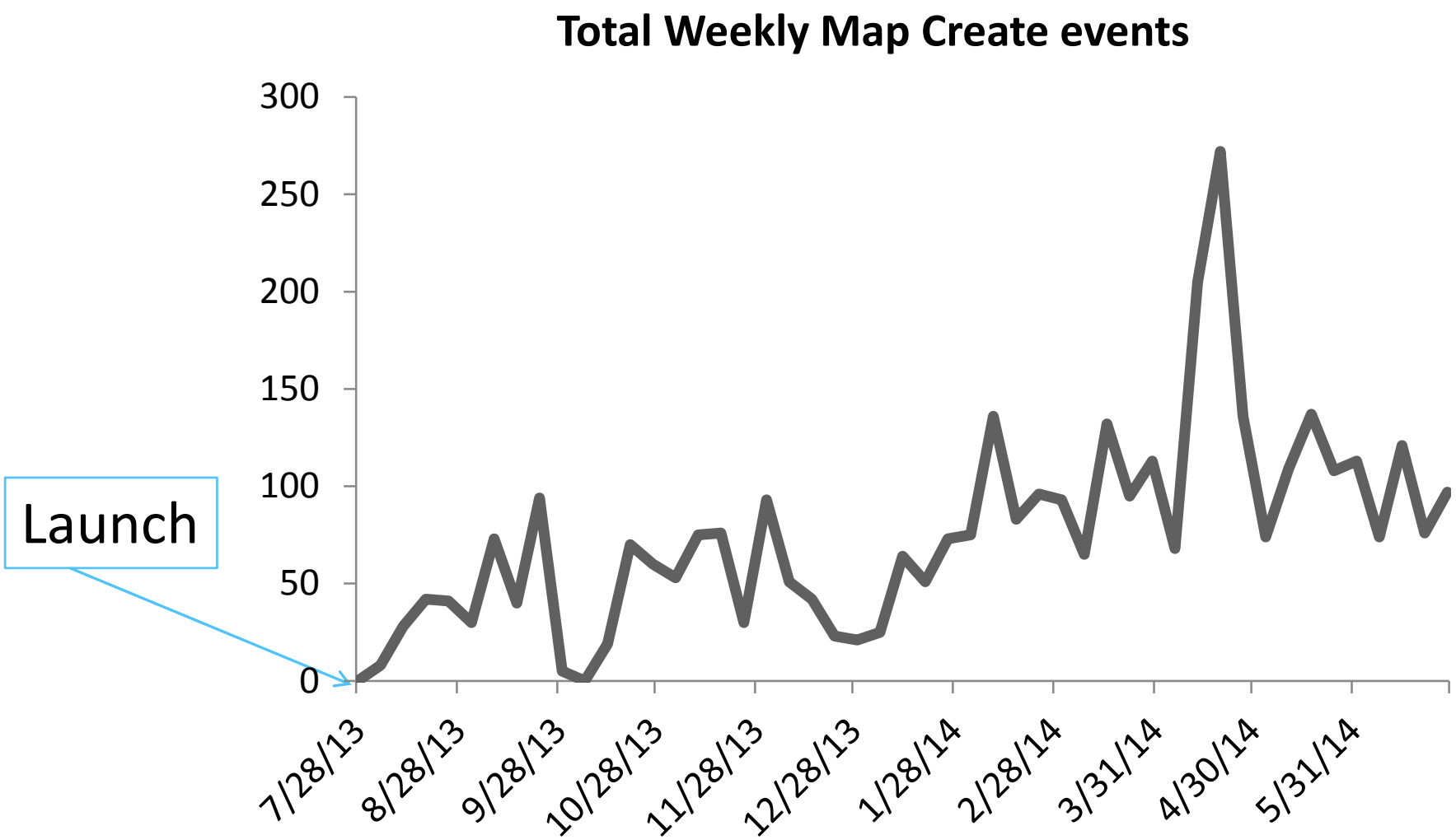
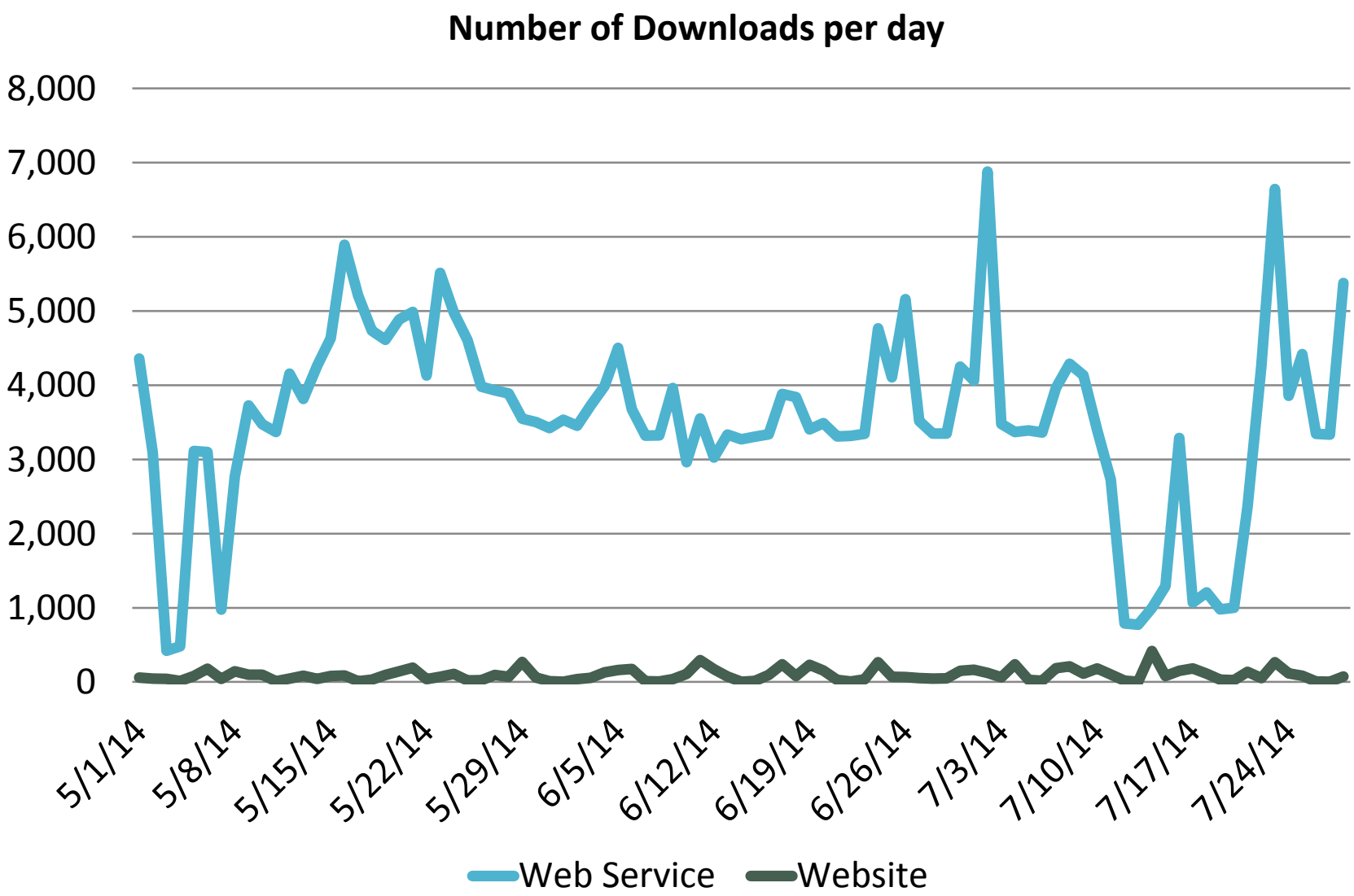
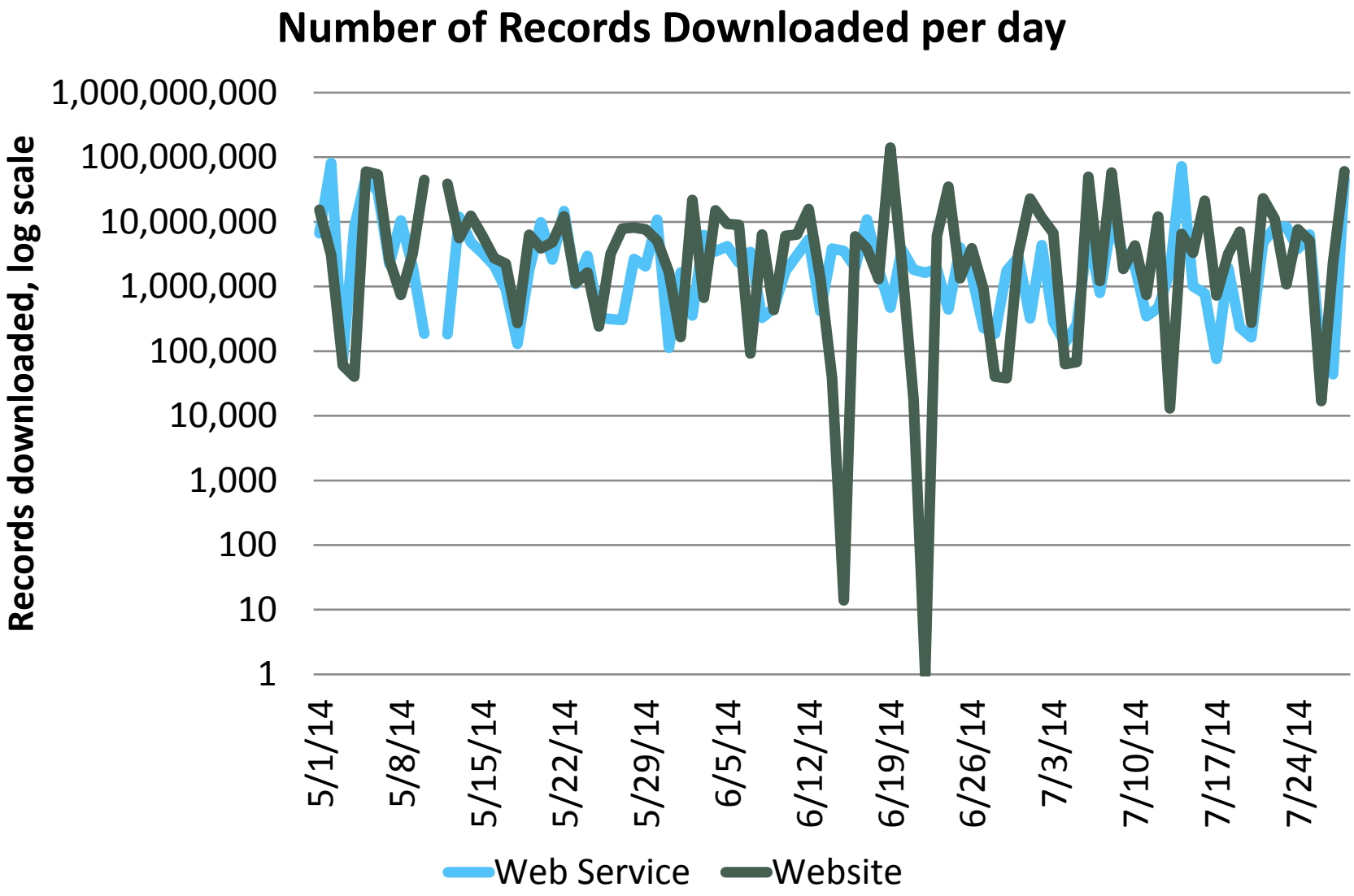
5/25/14
6/25/14


Total Weekly Map Create events
300
250
200
150
100
50
0
Launch
7/28/13
8/28/13
9/28/13
10/28/13
11/28/13
12/28/13
1/28/14
2/28/14
3/31/14
4/30/14
5/31/14


Number of Downloads per day
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
5/1/14
5/8/14
5/15/14
5/22/14
5/29/14
6/5/14
6/12/14
6/19/14
6/26/14
7/3/14
7/10/14
7/17/14
7/24/14
Web Service
Website


Number of Records Downloaded per day
Records downloaded, log scale
1,000,000,000
100,000,000
10,000,000
1,000,000
100,000
10,000
1,000
100
10
1
5/1/14
5/8/14
5/15/14
5/22/14
5/29/14
6/5/14
6/12/14
6/19/14
6/26/14
7/3/14
7/10/14
7/17/14
7/24/14
Web Service
Website

May 1 2014 to July 28, 2014

Records Downloaded

	Web Service	WQP Site	Total
Total	523,969,462	935,702,883	1,459,672,345
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

June 2014 vs. June 2013

Sessions

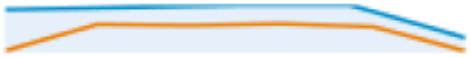
78.77%

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%

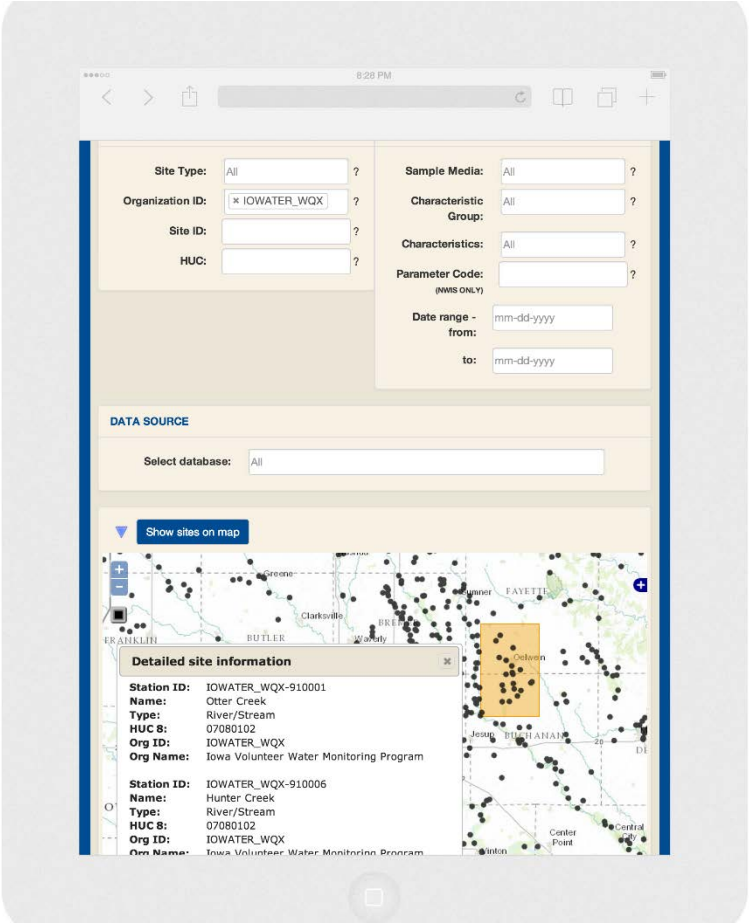
00:06:40 vs 00:04:59

Bounce Rate

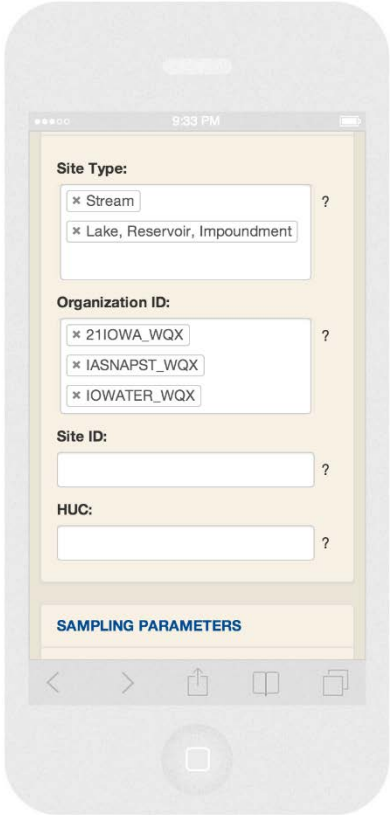
-18.16%

32.55% vs 39.77%

Responsive Design



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



Task 2: Data Input

FY14 Activities

1. Worked with states to submit physical and chemical data

FY15 Activities

1. Continue working with states to increase data holdings for physical, chemical, and biological monitoring data
2. Identify ways we can increase the requirement to use WQX and update our existing governance and policies
3. Work with WIS and discuss the specificity on the timing of data submittal.
   1. E.g. is data submitted at end of year or 1-3 months. This impacts the spatial pattern of data availability
4. Reduce the EPA to USGS ETL burden
5. Explore WQX movement toward an OGC standard
6. Consolidate and align IT IS, Catalogue of Life, Marine Species, USDA Algae data and others

Task 3: New Data Partners

FY14 Activities

1. Added USDA ARS STEWARDS
2. Explored NOAA and Gulf Coast Monitoring Network

FY15 Activities

1. Add EPA GLNDA
2. Seek assistance from NWQMC to identify other data partners
3. Identify means to recognize the data owner / source or maintain the identity of new data partners in the Portal
4. Work more closely with NAWQA to enable query by parameter code
5. Assisting citizen monitoring groups with monitoring data preparations and providing them with a list of contacts to collaborate

Task 4: New Data Types and Data Integration

FY14 Activities

1. Integration with NEMI
2. Add biological data from STORET to the Portal
3. Integration with Streamflow and Groundwater in NWIS to place a site on the map
4. Explore Integration with NHD

FY15 Activities

1. NEMI – extend the WQX outbound to display more information
2. Add habitat data from STORET to the Portal
   1. Align the Portal and WQX schema with USGS Biodata
   2. Update the taxon list for WQX and Biodata
3. Discuss ways to integrate static datasets like STORET Legacy and others for inclusion in the Portal
4. Participate in sensor / continuous monitoring data discussions
5. Explore how links to other coverages can be displayed in the Portal
   1. Explore how SPARROW could be a data layer like NPDAT
   2. Explore how to serve EPA Wastewater portal

Task 5: QA/QC

FY14 Activities

1. Improve and extend QA/QC data checks to more capabilities
   1. R Client
   2. Python Client

FY15 Activities

1. Develop plan on how to prioritize data cleanup activities and engage states
   1. Conduct the QA on the data warehouse to clean up duplicates, erroneous values, empty stations
2. Hold discussions on how NWIS and STORET will continue to align with the Portal and avoid duplication of service
   1. Have the Portal sere all the data out of STORET and NWIS
3. Move toward a new solution that advertises or acknowledges the participation or ownership of the data

Task 6: Data Output

FY14 Activities

1. Refine map display from user comments
2. OGC-Compliant Web Mapping Service and Web Feature Service

FY15 Activities

1. Refine map display as layers are added
2. Continue progress (w/ ORD) to realize map display and data retrieval capabilities (Purple Box)
3. Engage with WIS to define how to categorize monitoring site types
4. Extend WQX Outbound with relation to OGC Observations and Measurement – Water Quality Best Practice
5. Include more data from WQX inbound to WQX outbound
6. Discoverable pages for Organizations/Sites/Activities/Results

Task 7: Portal IT Changes and Enhancements

FY15 Activities

1. Improve EPA-to-USGS change log communication
2. Ability to track and categorize the users
3. Develop or make available summary and/or analytical tools
   1. Make R tools available
4. Publish metadata out of a query as part of the output to know what the web service called
5. Query by sample count and publish information about sample counts

Task 8: Communication and Outreach

FY14 Activities

1. Host webinar, present in Cincinnati, work with EPA Regions

FY15 Activities

1. Develop the communication/outreach plan with the NWQMC (and others) to engage states to improve their representation and data sharing
   1. What does the Council need to better communicate and promote the Portal
   2. Meet with the Volunteer and Outreach committee to identify opportunities
2. Schedule webinars and engage partner multipliers
3. Look for opportunities to utilize social media to advertise Portal
4. Develop 2-3 training factsheets for Portal
5. Develop 2 page factsheets on people who are making use of the Portal
6. Conduct onsite trainings for WQX and Portal

Task 9: Portal Role

FY14 Activities

1. Provide a “one-stop” location to quickly search/pull data for analysis

FY15 Activities

1. Develop a plan to gain more user information to better define Portal role and support customers/users
2. Improve our understanding of who uses the Portal and how, what do they publish or what would they like to see published
3. Support Climate Change initiatives (work with EPA ORD and USGS Climate centers)
4. Identify the Portal as the official repository by states, tribes, and federal agencies for water quality monitoring data
5. Identify the Portal as the front system for USGS and EPA
6. Identify how to expand the burden of the Portal to other external partners
7. Work with Nate to identify opportunities to partner with opendata.gov and other groups to participate in the Portal and leverage other technologies
8. Build the capability of the water monitoring marketplace to improve water resources management

Next Steps

Engage with WIS on FY15 activities to define detailed steps and provide input on outstanding questions

Engage with CO on FY15 activities to develop communication and outreach plan to increase data sharing and Portal use

Engage with NWQMC to develop longterm vision for Portal

Questions ?

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