

Water Quality Portal Update

Jim Kreft

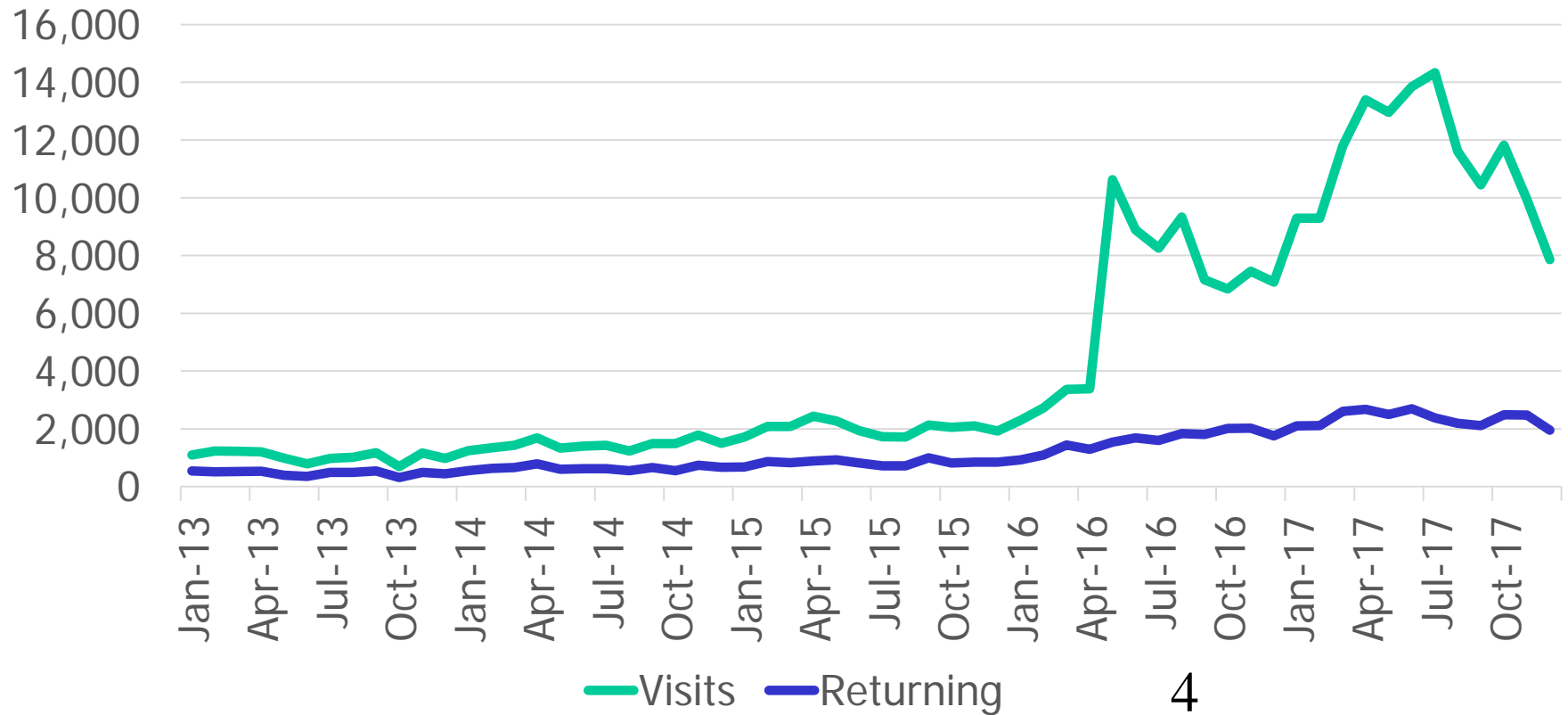
USGS Water Mission Area

Multiple Data Sources and Types

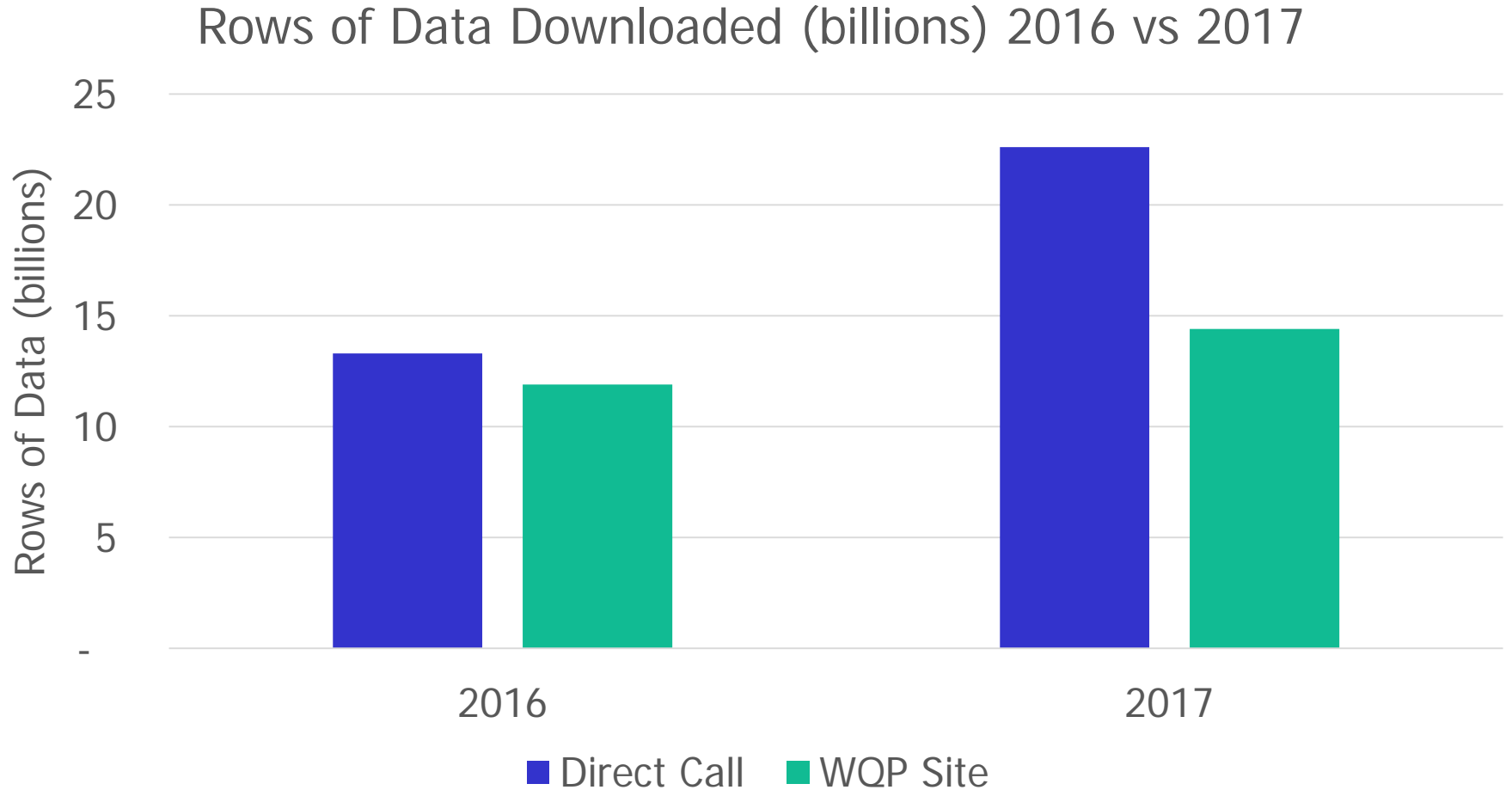
- Portal Data Records (347 million total)
 - USGS
 - Biodata: 1.4 million
 - NWIS: 101 million
 - EPA (STORET/WQX): 244 million
 - ARS/STEWARDS: 1.2 million
- Data Contributors
 - Federal- EPA, USGS, USCOE(regional), NPS, USBR
 - States and Territories- 50+ multiple in progress
 - Tribes- over 250
- Data Types
 - Physical/Chemical
 - Biological
 - Metrics
 - QA/QC (Coming soon)

Portal Usage- Visits

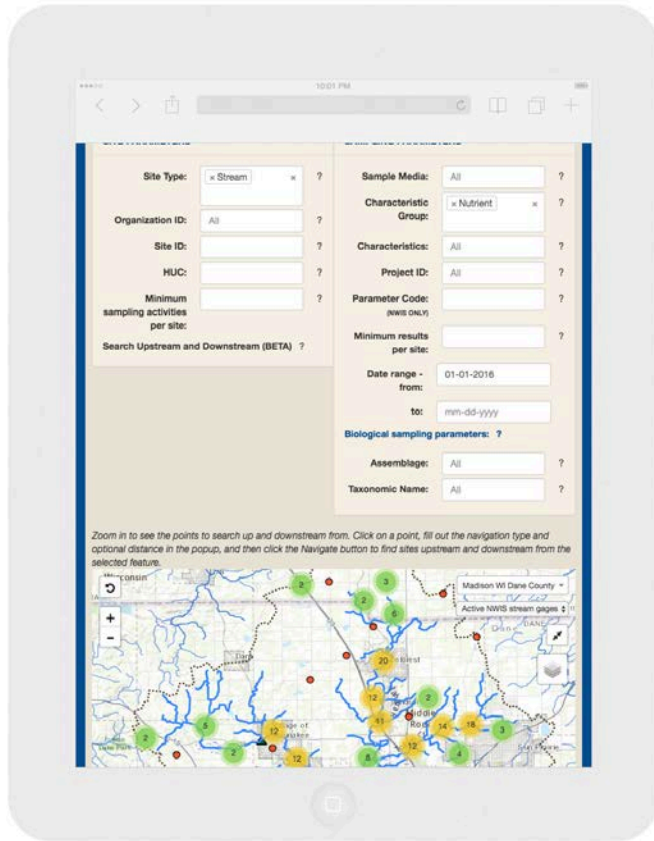
Monthly Visits and Returning Visitors, 2013-2017



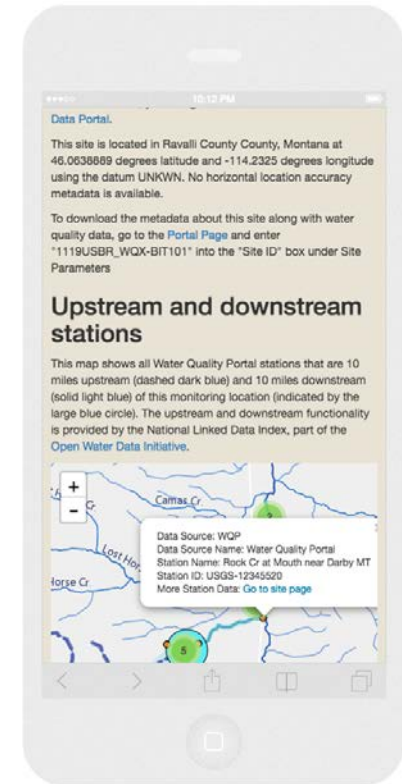
Data Downloads



Built Using Responsive Design



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



FY17 WQP Strategic Plan Progress

💧 System Performance

- Core improvements of technical infrastructure
 - Documentation and standardization ([Swagger docs](#))
 - Cloud readiness
- Extension of EPA Data load to to more components
- USGS- ensuring NWIS Modernization aligns with portal

💧 Data Quantity and Quality

- EPA team is doing significant out reach and training efforts
- Portal is serving out metrics and reporting levels
- Multiple best practices workgroups: Nutrient, Metals, and Biological Data
- 347 Million result records available

FY17 WQP Strategic Plan Progress

💧 Data Display and Discovery

- Upstream/downstream querying is possible
- Working with stakeholders to develop a summarization service
- EPA team developing data analysis tool

💧 Outreach/Education

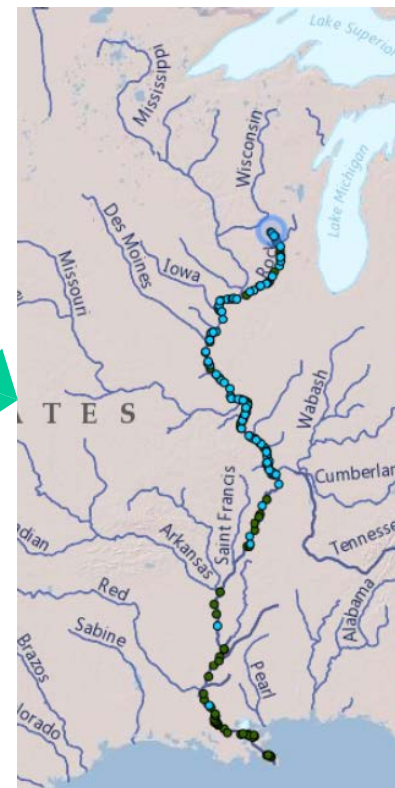
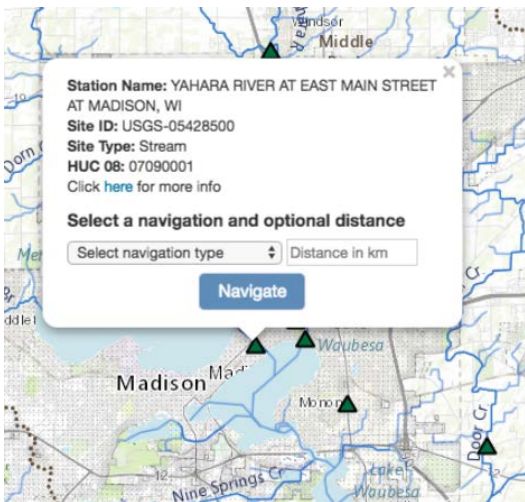
- Peer Reviewed paper:

<https://doi.org/10.1002/2016WR019993>

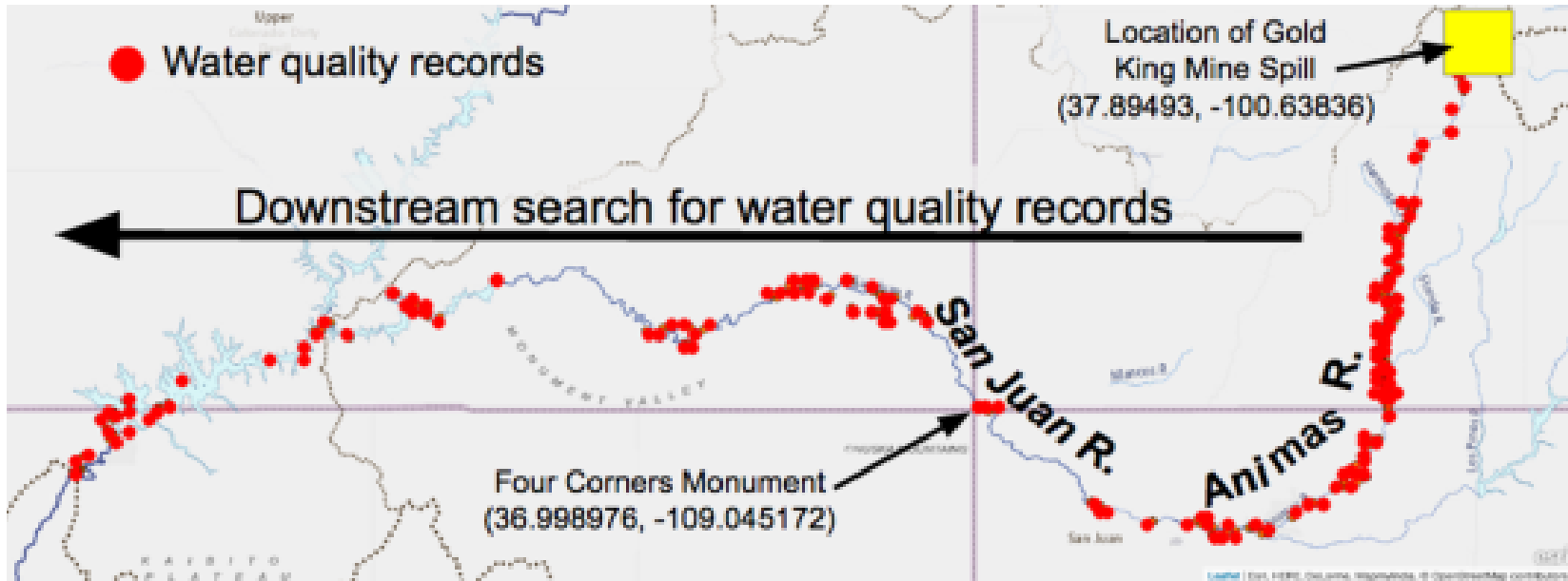
- Communication plan drafted

Sites with Nutrient data, downstream from the Yahara River bridge

SITE PARAMETERS	SAMPLING PARAMETERS
Site Type: <input type="text" value="x Stream x"/> ?	Sample Media: <input type="text" value="All"/>
Organization ID: <input type="text" value="All"/> ?	Characteristic Group: <input type="text" value="x Nutrient"/>



Leveraging Downstream Queries



Can answer questions in minutes that took days or weeks previously- see Young 2016

Water Resources Research

Volume 53, Issue 2, pages 1735-1745, 12 FEB 2017 DOI: 10.1002/2016WR019993

<http://onlinelibrary.wiley.com/doi/10.1002/2016WR019993/full#wrcr22485-fig-0003>

Young, Dwane, 2016 NWQMC

https://acwi.gov/monitoring/conference/2016/2_wednesday_may4/G3/2-

[G3_Young_Portal_inTight TimeFrames_secure.pdf](https://acwi.gov/monitoring/conference/2016/2_wednesday_may4/G3/2-G3_Young_Portal_inTight TimeFrames_secure.pdf)

FY18 goals

- 💧 System Performance
 - Explore hosting alternatives (e.g. cloud)
 - Continue incremental data loading improvements
- 💧 Data Quantity and Quality
 - Additional endpoints: Project, Indexes, Files
 - Continue discussions around data quality
 - Work with new organizations to submit data
- 💧 Data Display and discovery
 - Summarization service- lead to summary data on user-relevant pages
 - EPA team working on data analysis tool
- 💧 Outreach/Education
 - Portal Communication Plan (With NWQMC WIS)
 - Factsheets and other outreach materials
- 💧 Strategy and status- Continued discussion with NWQMC