

Water Use Data and Research Program: Update

Interstate Council on Water Policy
Water Data and Science Committee
February 21, 2019

WUDR Overview

The USGS Water Use Data and Research Program (WUDR) is authorized under the SECURE Water Act Section 9508.

- ▶ \$12,500,000 authorized for Grants Program.
- ▶ Each State can receive a maximum of \$250,000, cumulatively, in financial assistance.
- ▶ The USGS receives \$1.5 M appropriations annually since 2015.
 - ▶ Non-competitive awards of \$26K were made available to each State to write a “Workplan” to document current water-use data collection and research in each state.
- ▶ Since FY16 funding is awarded competitively.

WUDR Overview

Goals:

- ▶ Improve the availability, quality, compatibility, and delivery of water use data that is collected and/or estimated by States.
- ▶ Integrate State water-use or water-availability datasets into USGS databases.
- ▶ Collaboration and communication with USGS Water Science Center highly recommended.

Figure A. Map showing states that received \$26,000 Water Use Data and Research Program funds to describe current water use, and priorities for improving water use data in their state.

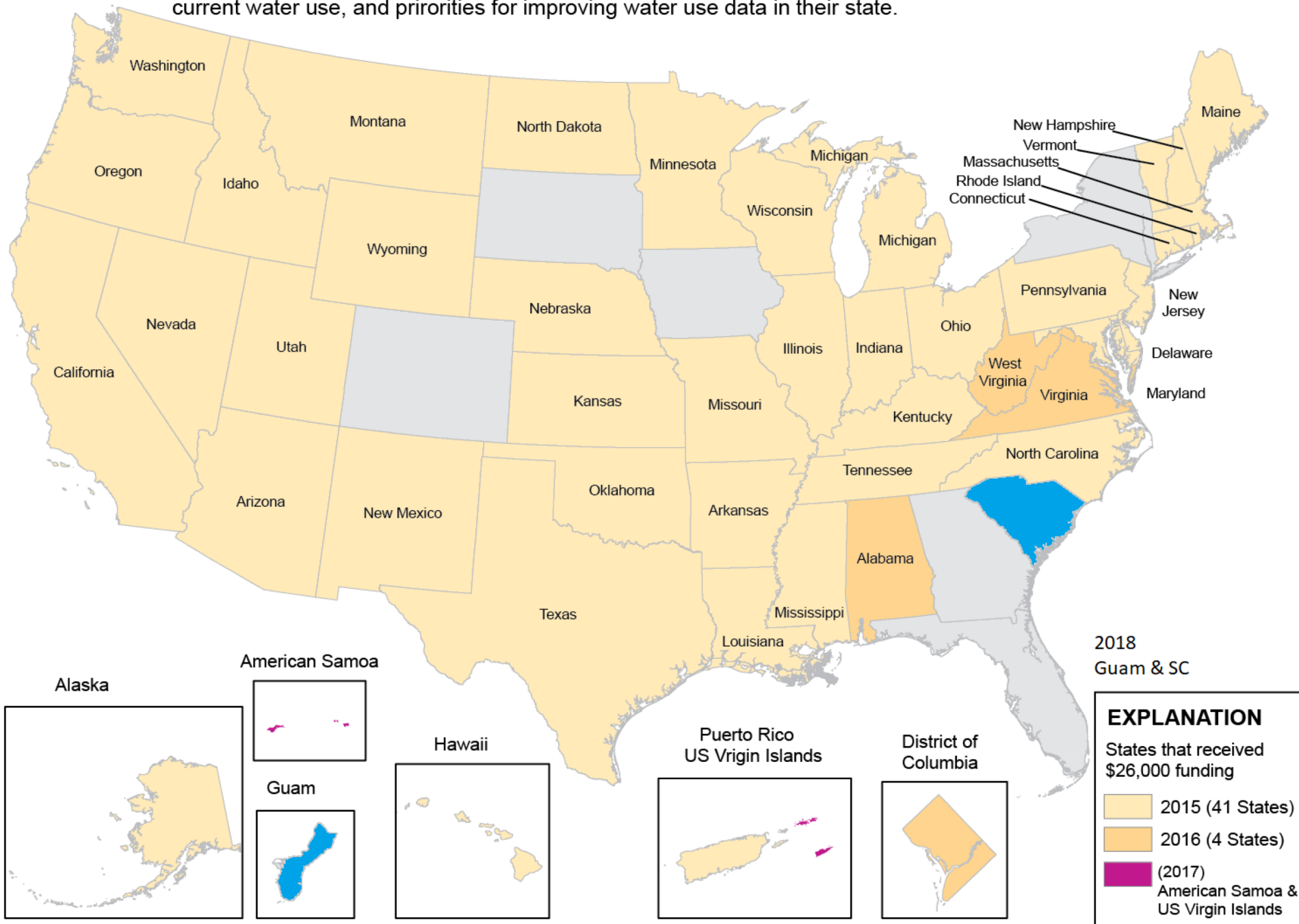


Figure B. Map showing states that were awarded cooperative agreements to improve water use data and research in their state through the Water Use Data and Research Program's 2016 Competitive Program Announcement.

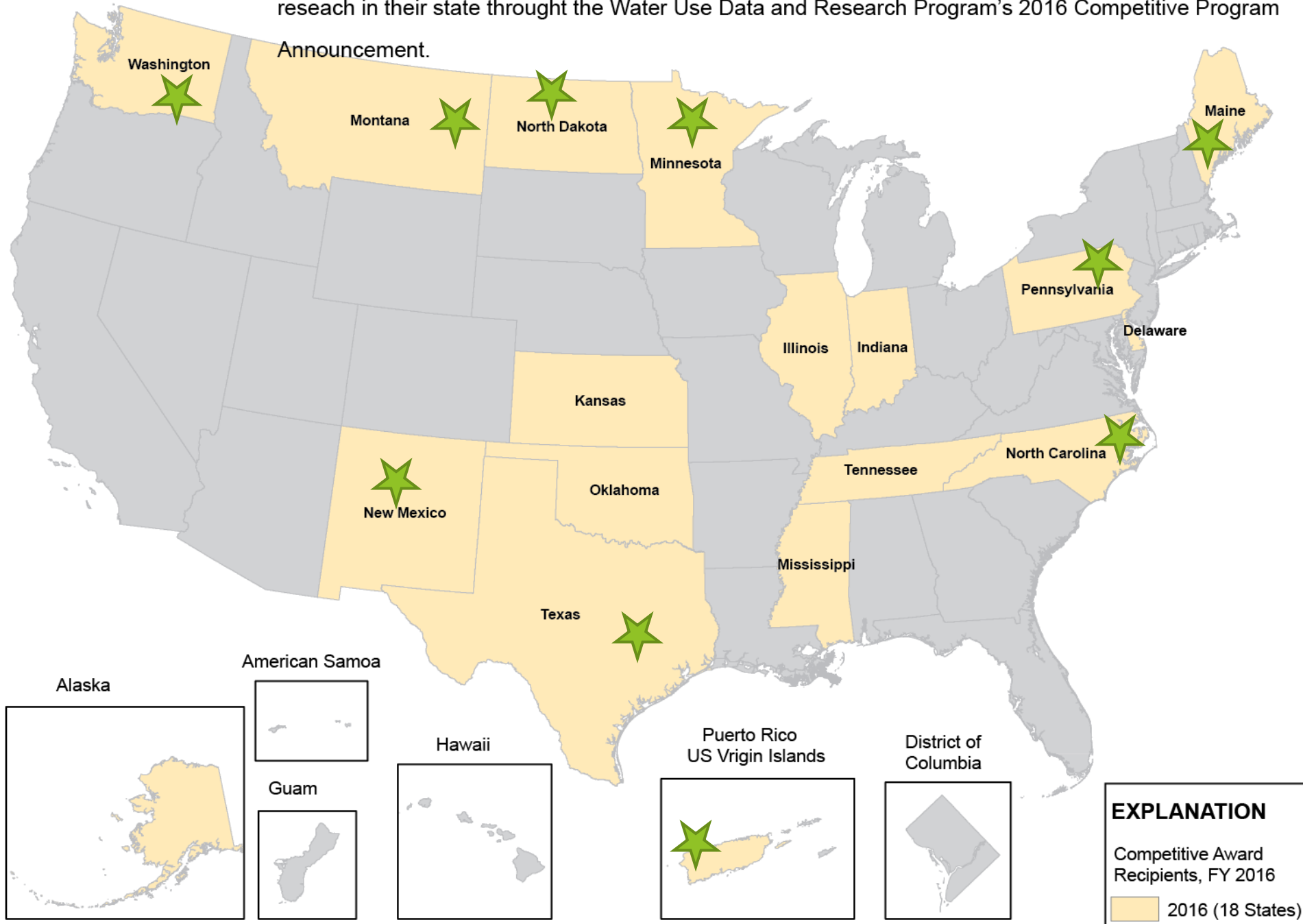
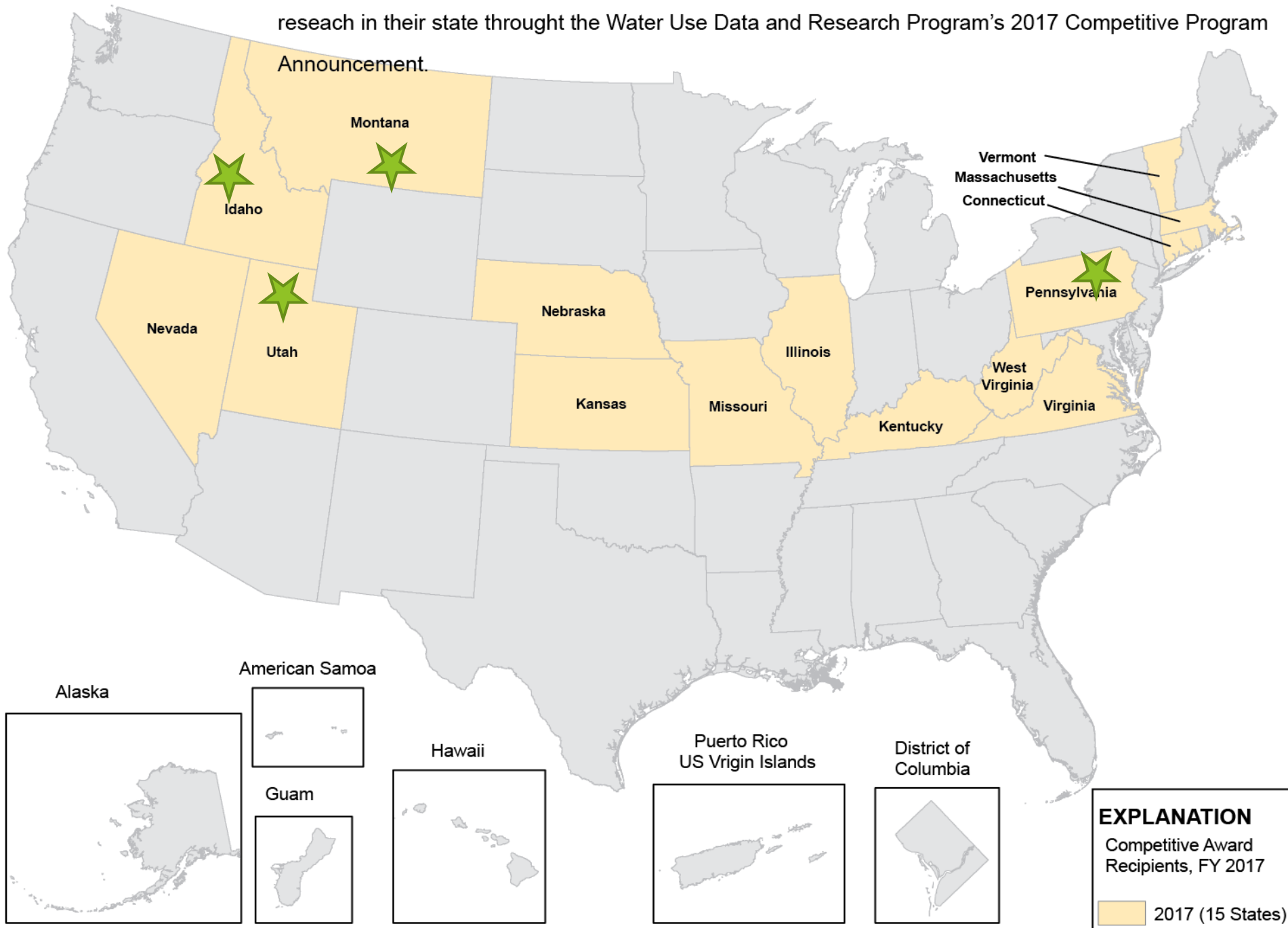
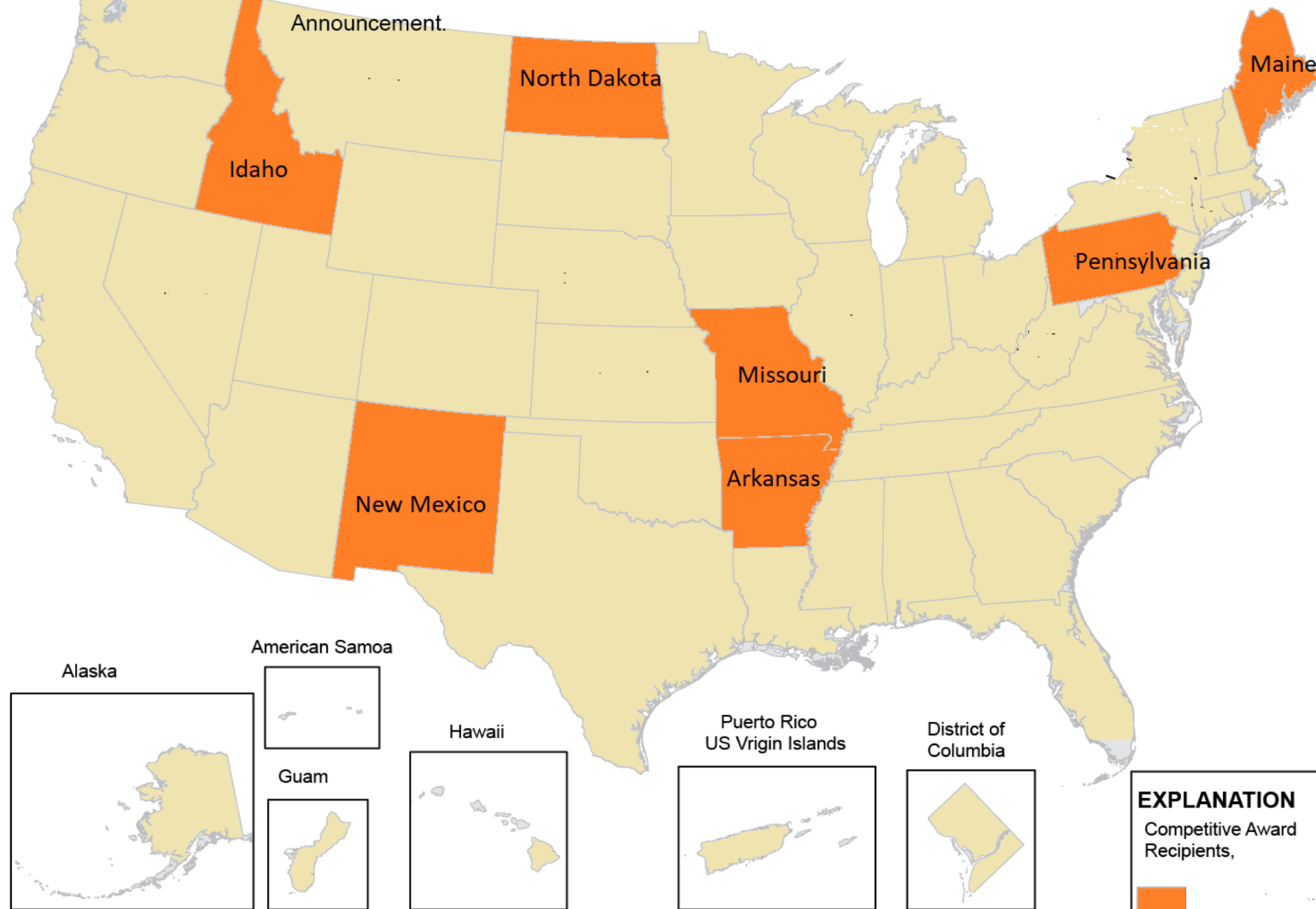


Figure C. Map showing states that were awarded cooperative agreements to improve water use data and research in their state through the Water Use Data and Research Program's 2017 Competitive Program Announcement.



FY18

Map showing states that were awarded cooperative agreements to improve water use data and research in their state through the Water Use Data and Research Program's Competitive Program Announcement.



Funding

- ▶ Competitive award applications are restricted to a minimum of \$24,000 and a maximum of \$125,000 federal funding.
- ▶ Proposed projects can be for 1 to 2 years.

Applicant Eligibility

- ▶ State water resource agencies which collect water use data.
- ▶ Applicants must have submitted a FINAL “Workplan” document as outlined by the WUDR FY15 Guidance in order to be eligible to receive an award.
- ▶ Data must be made available to USGS in machine-readable open source format.
- ▶ USGS personnel cannot prepare an application for an organization.
- ▶ USGS personnel cannot receive WUDR funds.

Priority Topics

Three priority topics (in no particular order)

- ▶ Improve water-use data for IRRIGATION, PUBLIC SUPPLY, or INDUSTRIAL use categories by improving the frequency of reporting at **HIGHER SPATIAL** and **TEMPORAL RESOLUTION**.
- ▶ Improve the COLLECTION PROCESS, DATABASE DEVELOPMENT, QA/QC PROCESSES, or **DELIVERY** of data to outside users.
- ▶ Conduct studies that DEVELOP **NEW METHODS** and/or COEFFICIENTS to improve water-use estimates for categories of use where measured or reported data are not available.

Reporting Requirements

- ▶ Progress Reports
 - ▶ Due every 6 months for the duration of the project.
- ▶ Final Technical Report
 - ▶ Describe in detail the work performed and results obtained during the grant period.
 - ▶ **Due 90 days after the project end date.**
- ▶ Annual Financial Reports
- ▶ Final Financial Report

Completed: FY16 Awards

- ▶ ME - Improved **irrigation** water use methods.
- ▶ MN - Improve data quality and data delivery.
- ▶ MT - Improve public-supply water use using surveys.
- ▶ NM - Geospatial mapping of **irrigated lands**.
- ▶ NC - Improve data collection, QC, and data delivery.
- ▶ ND - Improved data collection for large public supply using surveys. Improved methods for estimating use.
- ▶ PA - Enhance web-based report and data viewer.
- ▶ PR - Improve data collection using web-based system, **improve irrigation (groundwater) methods**.
- ▶ TX - Online geospatial mapping application for public supply service areas.
- ▶ WA - Improve metering database capabilities, improve data collection and reporting, **improve consumptive use estimates**.

Spring 2019: FY16 Awards

- ▶ AK - Database delivery improvements and improve temporal scale data collection.
- ▶ DE- Database reporting improvements, **consumptive use for public supply**.
- ▶ IL - Database improvements and backlog of data.
- ▶ IN - Database improvements.
- ▶ KS - Database improvements and improved user interface.
- ▶ MS - Database improvements, enhance reporting.
- ▶ OK - Modernize/redesign database reporting system.
- ▶ TN - Database development and improved data collection, improved data delivery.

Completed: FY17 Awards

- ▶ ID - Improved geospatial data for some uses, improve metadata and data discoverability and delivery. Emphasis on **irrigation**, public supply.
- ▶ MT (2nd)- Improve methods for **irrigation (incl. CU)** in areas where measured data are not available.
- ▶ PA(2nd) - Extend database improvements to link sub facility and primary facility reports.
- ▶ UT - Improve online reporting tools and data storage for major uses, new data delivery capabilities.

Fall 2019: FY17 Awards

- ▶ CT - Improve data collection at higher spatial and temporal scales.
- ▶ IL(2nd) - Improved data collection, QAQC, and data delivery, **Industrial consumptive use**.
- ▶ KS(2nd) - Continue database improvements, QA, queries, and transferability for water right data.
- ▶ KY - Improve database content for **major uses by aquifer**, improve data delivery.
- ▶ MA - Improve database content (backlog paper), improved estimates for domestic use; **estimate CU for cranberry bogs**.
- ▶ MO - Improve data collection at higher temporal and spatial scales for major uses.
- ▶ NE - Develop database for non-irrigation categories.
- ▶ NV - Database improvements, enter backlog data, QA/QC improvements.
- ▶ VT - Improved data collection and storage for some uses.
- ▶ VA - New methods to estimate **consumptive use for water users**.
- ▶ WV - Improve data collection and reporting tool, **improve consumptive use** methods, redesign online mapping tool.

Winter 2020: FY18 Awards

- ▶ AR - Develop online systems to migrate data. QAQC tools.
- ▶ ID(2nd) - Improved data collection, **new irrigated croplands mapping**. (Sept 2019)
- ▶ ME(2nd) - Improved public supply and domestic methods.
- ▶ MO(2nd) - **Improved irrigation methods**, online QAQC reporting tools.
- ▶ ND(2nd) - Improved data collection/coefficients for rural systems.
- ▶ NM(2nd) - Geospatial maps of public supply areas, livestock use.
- ▶ PA(3rd) - Convert paper forms to online forms for electronic submission.

Summary

States with multiple-year awards

(ID, IL, KS, ME, MO, MT, NM, ND, PA)

Almost all emphasized improved data collection and delivery processes.

New methods - 12 projects

- ▶ 40 projects over 3 years.
- ▶ 10 FY16 and 4 FY17 projects were completed in 2018.

No Cost Extensions have been granted.

- ▶ Completed reports are being reviewed and information shared back to USGS WU specialists in WSCs.

Water-Use Data and Research Program

Water managers across the United States require more complete, timely, and accurate water-availability information to support policy and decision-making, specifically, data associated with water withdrawals and consumptive use. Recognizing the limitations of current water-use data, the SECURE Water Act authorized a program that supports activities related to data collection and methods research and development at the State level. The USGS Water-Use Data and Research program (WUDR) will provide financial assistance through cooperative agreements with State water resource agencies to improve the availability, quality, compatibility, and delivery of water-use data that is collected or estimated by States. The Act requires that these State water use and availability datasets be integrated with appropriate datasets that are developed and/or maintained by the USGS.

Federal fiscal year 2015 (FY2015), was the first year that funding was appropriated for this program. In FY15 funding was distributed to State Water-Resource Agencies non-competitively, in the amount of \$26,000 per state. The funding was provided to allow each State to evaluate their current water-use data in relation to USGS baseline standards for each category of water user and to develop a workplan to improve it. In FY2016 and subsequent years, funding will be distributed under a competitive proposal process.



What's the latest?

Posted Tuesday, 02-Oct-2018 10:47:57 EDT

[2018 WUDR Program Announcement](#) (PDF)

[Q&A sessions for the 2018 grant process](#) (.pptx)

[FY18 Program Awards list](#) | [FY17 Program Awards list](#)

[USGS data-transfer guidance document](#) now available (.docx)

Water-Use Open Forum

The USGS is pleased to host a monthly [water-use webinar series](#) to provide the greater water-use community with an opportunity to share challenges, and solutions to water-use data issues such as data collection, data storage, quality assurance, analysis, and data dissemination. For more information, or to see previous presentations ... [Read more](#)

The next presentation will be:

Date, speaker, and topic TBA

Important Links

[USGS Data-Transfer Guidance](#)

[2018 WUDR Program Announcement](#) (PDF)

[Contacts](#)

[Grant Application Information](#)

[Baseline Standards Table](#)

[ICWP Stakeholder meetings](#)

Guidelines

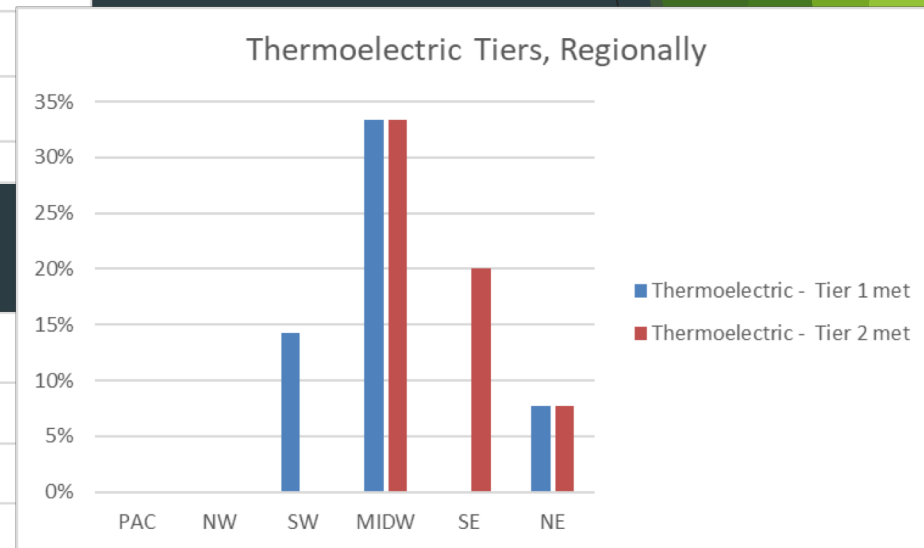
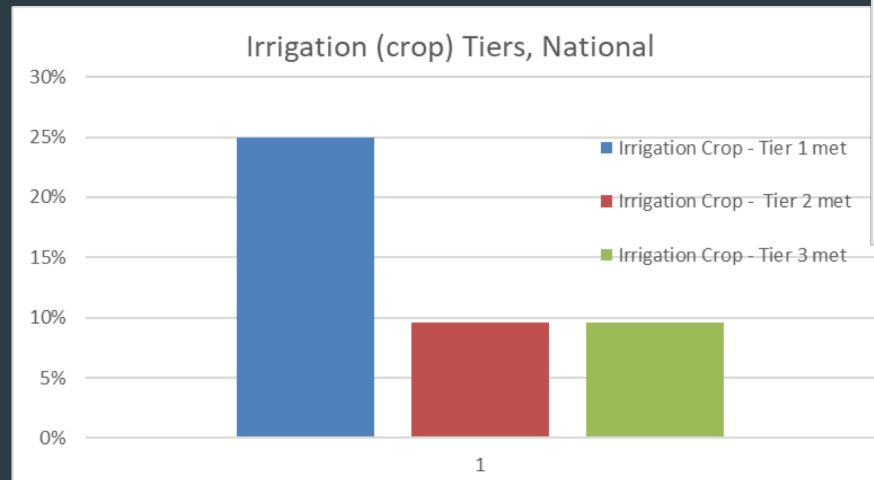
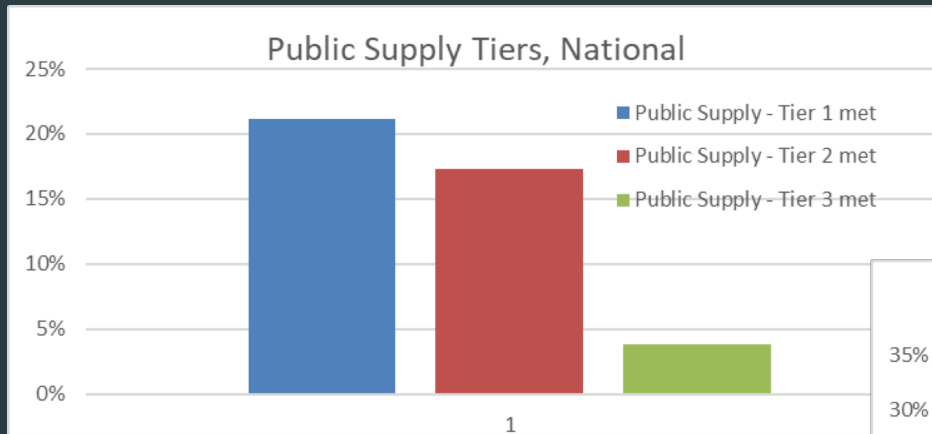
- Tiers depict higher temporal and spatial resolution of data
- Some categories have 2 tiers (TE, ssDO, Golf, AQ, CO) or 1 tier (HY, WW)

| Category | BASELINE GOALS (Tier 1) | Tier 2 | Tier 3 |
|---------------|---|---|---|
| Public Supply | <p>Monthly withdrawals reported by system, water source, and water type.</p> <p>Deliveries to domestic users from public-supply systems, and populations served.</p> <p>Report system information relevant to HUC-8 and county, and groundwater withdrawals with aquifer designation.</p> | <p>Site-specific annual and monthly withdrawals (by intake, well, or well field) reported by water source, and by water type.</p> <p>Quantity of water purchased between systems, and source(s) of purchased water.</p> <p>Quantity of water sold between systems.</p> <p>Reporting and/or verification of water deliveries for domestic, commercial, industrial, thermoelectric and other use.</p> | <p>Interbasin transfers.</p> <p>System uses (internal and other non-revenue uses) and losses.</p> <p>Improve estimates of populations served by site (for example, by surface-water intake, well or well field).</p> <p>Use of reclaimed wastewater for public or landscape irrigation.</p> |

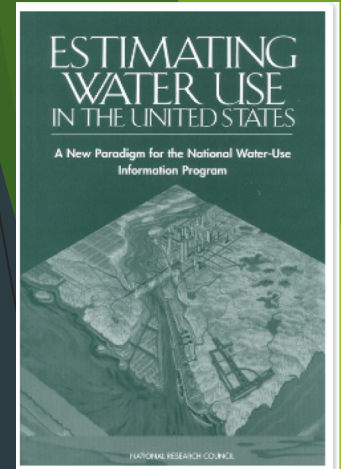
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| Irrigation- Crop | <p>Aggregate annual withdrawals reported by water source, by water type, acres irrigated, and method of irrigation.</p> <p>Aggregate areas may be sub-county levels, but are feasible to summarize to county or HUC8.</p> | <p>Site-specific monthly withdrawals by well and/or diversion from surface-water feature, or delivery from reclaimed wastewater.</p> <p>Monthly withdrawals reported by water source, water type, with associated acres irrigated and crop type, and method of irrigation system.</p> | <p>Consumptive use and conveyance loss estimates by aggregate area (sub-county, county, HUC8, or up to HUC12.</p> <p>Site-specific return flows.</p> |
| Thermoelectric | <p>Site-specific, annual and monthly withdrawals, and net power generation reported by cooling-system type (once-through or recirculating), by water source and by water type, and the source of the information (plant, govt. agency, etc.).</p> | <p>Site-specific annual and monthly consumptive use.</p> | |

Workplan Summary

Residual is null response or unclear from workplan.



Reporting Requirements



- ▶ All States agencies that WUDR is working with have legal mandate that requires some form of water-use reporting.
- ▶ Reporting thresholds vary.
- ▶ Requirements for reporting by type of use vary.
- ▶ State-wide narrative of reporting was last compiled in 2002.
- ▶ *“What kinds of data are collected and stored by each state, and how often?”*
- ▶ Could compile a summary of workplan information about State’s reporting requirements, priorities to improve information, and what is being accomplished so far.



Thank You

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