



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
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STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

August 11, 2015
Honolulu, Hawaii

Request to Authorize the Chairperson to Enter into a
U.S. Geological Survey Water Use Data and Research Financial Assistance Agreement

SUMMARY OF REQUEST:

Staff requests that the Commission on Water Resource Management (Commission) delegate authority to the Chairperson to enter into a Financial Assistance Agreement with the U.S. Geological Survey (USGS) for Water Use Data and Research for the purpose of developing and implementing a workplan outlining water use data priorities.

BACKGROUND:

The USGS Pacific Islands Water Science Center informed Commission staff in July 2015 that the USGS received an appropriation in Federal Fiscal Year 2015 to begin working with States to improve water use data collection, estimation, and reporting. The USGS, through its National Water Use Information Program (NWUIP), is the only Federal agency that collects water-use data as part of its mission. The NWUIP works with State, local, and Federal partners to consolidate dozens of disparate data sets to create comprehensive reports of water use in the United States every five years. Because of differences in methodology and data quality, USGS water-use compilations require significant effort to standardize (to the extent possible) such data between States. The NWUIP products form the basis of the water-use component of the National Water Census as called for by the SECURE Water Act (Section 9508, Public Law 111-11).

The total authorized funding for the Water Use Data and Research program is \$12.5 million over a period of five years. The maximum funding available in Federal fiscal year (FY) 2015 is \$1.352 million, the maximum funding available in FY 2016 will be \$1.5 million, depending upon Congressional approval. Funds will be coordinated with a single agency in each State; however, it is highly recommended that agencies within each State work together to address and improve water-use data. In addition, collaboration and coordination with USGS personnel, at

both the Regional and Water Science Center levels, will be required as part of the program to ensure all program related activities are meeting technical requirements.

The financial assistance is intended for the State water resource agency to develop a workplan outlining individual State water-use data improvement priorities, with the ultimate goal of States providing to the USGS withdrawal data and ancillary information for each major category of water use according to USGS baseline standards. These workplans will provide the basis for future grant awards through a competitive process. Workplans will be reviewed and approved by the USGS Water Use Data and Research program technical committee. In order to receive awards as part of the competitive process beginning in Federal FY 2016, pending funding appropriations from Congress, States must submit a completed workplan.

The USGS has identified baseline goals, and additional levels of data, for all major categories of water use (See Water Use Data and Research Financial Assistance Guidance, Exhibit 1). Data that are collected and/or estimated with program funds are also subject to the following requirements:

1. All data must be stored in an electronic format.
2. A description of methods used to estimate values, coefficients, and/or other data must be provided.
3. A description of data quality assurance and control procedures must be provided.
4. Non-sensitive data, that is available for export or download from the state agency database, must be accessible to the USGS
5. The data must be made available to the USGS at the HUC8, county level, and aquifer (for groundwater sources). (Note: HUC8 is an 8-digit hydrologic unit coding system devised by USGS. For Hawaii, each island is identified by a unique HUC8 identifier. For example, the HUC8 for Hawaii Island is 20010000 while the HUC8 for Oahu is 20060000.)
6. Interaction with USGS Water Science Center personnel is required.

SCOPE OF WORK:

The Commission submitted its application for federal financial assistance electronically to the USGS Office of Acquisitions and Grants on July 31, 2015.

The Hawaii Water Code (1987) authorizes and directs the Commission (Hawaii Revised Statutes §174C-5 and § 174C-43 and Hawaii Administrative Rules § 13-168-7) to collect water use reports of wells and stream diversions from permitted owners and operators. To effectively manage Hawaii's natural water resources, the Commission must acquire and maintain records of all actual withdrawals of water resources. This step is fundamental in understanding the cumulative stresses imposed upon the ground and surface water resources by well owners and stream diverters in the state. It also provides the basis for informed decisions that:

1. Protect and sustain viable sources of ground and surface water in the state;
2. Promote efficient and environment-compatible withdrawals of water resources; and

3. Provide best available information to resolve water disputes involving ground and surface water.

The Commission staff intends to develop a workplan internally, in coordination with the USGS' Pacific Islands Water Science Center and other stakeholders (e.g., county water supply departments), that is consistent with current water use data collection objectives and priorities. Funding will also be applied towards implementation of certain workplan objectives, such as further development and improvement of the Commission's comprehensive Water Resource Information Management System (WRIMS). This work is expected to help meet certain minimum Tier 1 baseline goals defined in Exhibit 1.

FUNDING:

Staff requests that the Commission authorize the Chairperson to enter into a Financial Assistance Agreement in the amount of \$26,000 with USGS for water use data and research. No matching State funds are required.

The total cost of this agreement is \$26,000. According to Exhibit 1, funds will be awarded on a non-competitive basis to all 50 States, the District of Columbia, and the U.S. Caribbean Territories, with each receiving \$26,000 to develop a workplan outlining individual State water use data priorities, and with the ultimate goal of States providing to the USGS withdrawal data and ancillary information for each major category of water use according to USGS baseline standards.

ENVIRONMENTAL REVIEW (CHAPTER 343, HRS):

Environmental Assessment Trigger. Pursuant to HRS §343-5(a)(1), the proposed action triggers the need for an Environmental Assessment (EA) based on the use of State or County lands or funds.

Environmental Assessment Exemption. HRS §343-6(a)(2) provides that actions that have minimal or no significant effects on the environment are exempt from the preparation of an EA and provides for exempt classes of action, HAR §11-200-8. The subject project is exempt from the preparation of an EA for the following reason:

HAR §11-200-8(A)(5): Basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource.

HAR §11-200-8(A)(10): Continuing administrative activities including, but not limited to purchase of supplies and personnel-related actions.

RECOMMENDATION:

Recommend that the Commission:

1. Authorize the Chairperson to enter into a Financial Assistance Agreement with the U.S. Geological Survey for Water Use Data and Research for the purpose of developing and implementing a workplan outlining water use data priorities.
2. Find and determine that the proposed project is exempt for preparing an EA. This project will likely have minimal or no significant effect on the environment and is therefore exempt from the preparation of an EA pursuant to HRS Chapter 343 and HAR Section 11-200-8(A)(1), (5), and (10).

Respectfully submitted,



W. ROY HARDY
Acting Deputy Director

- Exhibit 1. USGS Water Use Data and Research Financial Assistance Guidance
Exhibit 2. 343 Environmental Notice

APPROVED FOR SUBMITTAL



SUZANNE D. CASE
Chairperson



Water Use Data and Research Financial Assistance Guidance

Background

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 that are used to establish local and regional water budgets. State water resource agencies are the primary authorities responsible for regulating and collecting data on water supplies, allocations and rights. The U.S. Geological Survey (USGS), through its National Water Use Information program (NWUIP), is the only Federal agency that explicitly collects water-use data as a part of its mission. The NWUIP works with State, local, and Federal partners to consolidate dozens of disparate data sets to create comprehensive reports of water use in the United States every five years. Because of differences in methodology and data quality, USGS water-use compilations require significant effort to standardize (to the extent possible) such data between States. The NWUIP products form the basis of the water-use component of the National Water Census as called for by the SECURE Water Act (Section 9508, Public Law 111-11).

Recognizing the limitations of current water-use data, the SECURE Water Act authorized a program that supports activities related to data collection, methods research and development at the State level. The USGS Water Use Data and Research program 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 and/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.

The total authorized funding for the Water Use Data and Research program is \$12.5 million over a period of five years. The maximum funding available in Federal fiscal year (FY) 2015 is \$1.352 million, the maximum funding available in FY 2016 will be \$1.5 million, depending upon Congressional approval. Funds will be coordinated with a single agency in each State; however, it is highly recommended that agencies within each State work together to address and improve water-use data. In addition, collaboration and coordination with USGS personnel, at both the Regional and Water Science Center levels, will be required as part of the program to ensure all program related activities are meeting technical requirements. In FY 2015, funds will be awarded non-competitively to all 50 States, the District of Columbia, and the U.S. Caribbean Territories, with each receiving \$26,000 to develop a workplan outlining individual State water-use data improvement priorities, and with the ultimate goal of States providing to the USGS withdrawal data and ancillary information for each major category of water use according to USGS baseline standards. These workplans will provide the basis for future grant awards through a competitive process. **Workplans will be reviewed and approved by the USGS Water Use Data and Research program technical committee.**

In order to receive awards as part of the competitive process beginning in Federal FY 2016, pending funding appropriations from Congress, States must submit a completed workplan.

The USGS, in collaboration with the Interstate Council on Water Policy (ICWP), will work with States to develop and implement this program. The ICWP will host three stakeholder meetings in 2015, to gather State partner input that will allow the USGS to begin planning for the competitive process, which will begin in FY 2016.

Baseline Standards

The USGS has identified baseline goals, and additional levels of data, for all major categories of water use (see table below), most of which have been estimated by the USGS and published every 5 years since 1985. These guidelines are provided to assist State water-resource agencies in determining areas in which to focus proposed work. States that currently meet the baseline standards outlined in Tier 1, for a specific water-use category, would focus on Tier 2 and Tier 3. States are not required to meet the baseline goals (Tier 1) in all categories before addressing Tier 2 and Tier 3 data needs. Data collected and studies conducted in Tiers 1, 2, and 3 should be designed to benefit both local and national estimates and provide information for water availability studies by water managers, academia, federal, and or local agencies. The definitions of basic water-use terms and categories as used by USGS can be found in USGS Circular 1405 (<http://pubs.usgs.gov/circ/1405/>).

In addition to the standards listed in the table, baseline goals (Tier 1) for most categories of water use include:

1. Facility or system withdrawals for the following categories: Public Supply, Self-supplied Industrial, Irrigation-Crop, Thermoelectric, Irrigation-Golf Course, Livestock (major facilities), Mining, and Aquaculture.
2. Withdrawals, deliveries or returns by water source – groundwater, surface water, reclaimed wastewater, wastewater effluent, and/or recycled water. For groundwater sources the aquifer should be identified.
3. Withdrawals by water type – fresh or saline

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

	aquifer designation.	deliveries for domestic, commercial, industrial, thermoelectric and other use.	
Industrial	Annual withdrawals by facility, reported by water source, by water type, and industry classification. Groundwater withdrawals reported with reference to aquifer.	Site-specific (by intake and/or well) annual and monthly withdrawals reported by water source, by water type, and industry classification. Deliveries from public supply to industrial facility, and deliveries from other sources, such as treated wastewater.	Site-specific consumptive use estimates. Site-specific discharges to surface water, or land application.
Irrigation- Crop	Aggregate annual withdrawals reported by water source, by water type, acres irrigated, and method of irrigation. Aggregate areas may be sub-county levels, but are feasible to summarize to county or HUC8.	Site-specific monthly withdrawals by well and/or diversion from surface-water feature, or delivery from reclaimed wastewater. Monthly withdrawals reported by water source, water type, with associated acres irrigated and crop type, and method of irrigation system.	Consumptive use and conveyance loss estimates by aggregate area (sub-county, county, HUC8, or up to HUC12. Site-specific return flows.
Thermoelectric	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.). Site-specific return flows.	Site-specific annual and monthly consumptive use.	
Self-Supplied Domestic	Self-supplied domestic populations, by HUC8 and county, and by water source.	Studies of actual metered domestic withdrawals, monthly by source. Improve estimates of self-supplied populations by utilizing property data and/or public water supply service areas, or other	

		methods.	
Irrigation – Golf Courses	Site-specific annual and monthly withdrawals reported by water source, by water type, and acres irrigated. Groundwater withdrawals designated by aquifer.	Consumptive use estimates, by course, reported by month or annual. Acres irrigated by system type, by course.	
Livestock	Annual withdrawals for major facilities, reported by water source and by water type.	Site-specific annual and monthly withdrawals for all facilities reported by source of water, and by water type. Site-specific animal counts and animal type.	Improved and verified coefficients for water use per head for animal type, confined or open-range, seasonal variability, and other variables. Water withdrawals from sources supported by USDA programs to protect streams.
Mining	Annual withdrawals reported by HUC-8 and county, by source of water, and by water type.	Site-specific annual and monthly withdrawals. Site-specific commodity identified.	Evaluation/reporting on water use by process (commodity processing, dewatering, dust suppression, etc.). Reporting on return flows/discharge of water from dewatering.
Aquaculture	Annual withdrawals reported by HUC-8 and county, by source of water, and by water type.	Site-specific annual and monthly withdrawals. Site-specific facility information (method, species cultured, etc.)	
Commercial	Annual and monthly deliveries from public supply for commercial use.	Site-specific annual and monthly withdrawals for self-supplied establishments.	
Hydroelectric Power	Site-specific, annual and monthly water use (water use to spin turbines) by water source and water type, and the source of the information (plant, govt. agency, etc.).		
Wastewater Treatment	Annual and monthly deliveries from wastewater treatment plants to other users. Specify category		

	delivered to (i.e. industrial, thermoelectric, irrigation, etc.)		
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Additional Requirements:

Data that are collected and/or estimated with program funds are subject to the following requirements:

1. All data must be stored in an electronic format.
2. A description of methods used to estimate values, coefficients, and/or other data must be provided.
3. A description of data quality assurance and control procedures must be provided.
4. Non-sensitive data, that is available for export or download from the state agency database, must be accessible to the USGS
5. The data must be made available to the USGS at the HUC8, county level, and aquifer (for groundwater sources).
6. Interaction with USGS Water Science Center personnel is required.

Beginning in the Federal FY 2016, Water Use Data and Research program funds will be announced and awarded as part of a competitive process that will be guided, annually, by a technical committee whose members will include representatives from the stakeholder community as well as USGS. Water Use Data and Research funds will be coordinated with a single agency in each State; however, it is highly recommended that agencies collaborate within States as part of the program. **Collaboration and coordination with USGS personnel, at both the Regional and Water Science Center levels, will be required to ensure data and research activities are meeting technical requirements. All data must be stored electronically and made available in formats appropriate for existing USGS databases. Additionally, methods used for data collection (estimated values, coefficients, etc.) and a description of data quality assurance and control will be required.**

Application for FY 2015 Funds

The USGS Water Use Data and Research program will allocate funds equally among all partners for the development of workplans that will outline State water-use data and research priorities.

Application Submission Closing Date – July 30, 2015, 6:00 pm Eastern Daylight Time

Electronic Application Requirement – the USGS Office of Acquisitions and Grants will notify the main point of contact (identified in collaboration with Water Science Center personnel) when funds are available for allocation. This notification will include instructions for applying for FY 2015 awards.

Funds and Start Dates

A maximum of \$1.352 million will be available for support of cooperative agreements in FY 2015. A maximum of \$1.5 million will be available in FY 2016, subject to the availability of funds through the Congressional approval.

Research Priorities for Competitively Awarded Funds

Beginning in FY 2016, and in subsequent years, program funds will be awarded through a competitive process. Annual Program Announcements will outline research priorities, which will be developed in collaboration with State partners. The research priorities identified below reflect the priorities outlined by the USGS National Water Use Information Program; to ensure this list is comprehensive, the USGS has contracted with the ICWP to host a series of Stakeholder Meetings which will be held between August 1, 2015, and November 1, 2015. Meeting locations will be in Salt Lake City, UT, Chicago, IL, and Tuscaloosa, AL. These meetings facilitate further discussions of these guidelines and other water-use related research priorities with State partners, with the goal of developing and outlining the data collection and research activities that will be used to guide the competitive process.

USGS Identified Research Priorities

- HUC 8 water-use reporting
- Water-tracking and Interbasin transfer (between HUC 8 units)
- System uses (internal and other non-revenue uses) and losses from public supply systems
- Irrigation: sources and volumes (including golf courses)
- Inventory of self-supplied industrial
- Mining: withdrawals with source and commodity identified
- Improvement of the domestic per capita coefficients
- Groundwater use: Identifying aquifer and HUC of withdrawal, and further refining the definition of saline/brackish water
- Estimation of public supply deliveries to customer groups or classes, such as commercial, industrial, and domestic
- Public supply systems stratified by socioeconomic factors
- Improved data collection and delivery

Involvement of Federal Employees

Federal employees, including USGS employees, are prohibited from serving as an investigator on any application submitted under this program. This does not prohibit cooperation or collaboration between USGS and non-USGS scientists; in fact, this program will be carried out with close collaboration between USGS researchers and State agencies; however, funds from the USGS Cooperative Water Program cannot be used to match funding from this program through a joint funding agreement (JFA). State agencies are integral to data collection, methods development, and data management activities, working with local cooperators and other federal agencies to facilitate project development and data acquisition and management. The USGS will manage and develop all the technical requirements and guidance associated with this program. Together the USGS and State collaborators will refine existing water-use databases, develop new techniques for estimating water use, and establish data management policies for sharing of water-use data that adhere to baseline standards previously developed by the USGS for water-use categories nationally. Data and information collected as part of this program must be stored electronically in existing USGS databases, but may be disseminated via a variety of means, including State series reports, graduate student theses, USGS series reports, and scientific publications that are jointly authored by USGS and their state partners.

Questions?

For Water Use Data and Research program management and/or support issues, please contact Melinda Dalton, (678) 924-6637, msdalton@usgs.gov

For Water Use Data and Research program technical questions and/or issues, please contact your USGS Regional Water Use Specialist:

Western Region (Alaska, Arizona, California, Idaho, Hawaii, Nevada, Oregon, Utah, Washington) – Molly Maupin, 208-387-1307, mamaupin@usgs.gov

Northeast Region (Connecticut, Delaware, District of Columbia, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, Wisconsin) – Cheryl Dieter, 443-498-5537, cadieter@usgs.gov

Central Region (Arkansas, Colorado, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, and Texas, Wyoming) – Tammy Ivahnenko, 719-544-7155 x110, ivahnenk@usgs.gov

Southeast Region (Alabama, Florida, Georgia, Mississippi, North Carolina, US Caribbean Territories, South Carolina, Tennessee) – Melissa Harris, 615-837-4792, mharris@usgs.gov

EXEMPTION NOTIFICATION

Regarding the preparation of an environmental assessment pursuant to Chapter 343, HRS and Chapter 11-200, HAR

Project Title: Financial Assistance Agreement with the U.S. Geological Survey (USGS) for Water Use Data and Research.

Project / Reference No.: Not Applicable

Project Location: Statewide

Project Description: Delegation of authority to the Chairperson to enter into a Financial Assistance Agreement with the U.S. Geological Survey (USGS) for Water Use Data and Research.

Chap. 343 Trigger(s): Use of State Funds

Exemption Class No.: In accordance with Hawaii Administrative Rule Section 11-200-8(a)(5) and 11-200(8)(a)(10), the subject request is exempt from the preparation of an environmental assessment pursuant to Exemption Class No. 5, that states "Basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource" and Class No. 10, that states "Continuing administrative activities including, but not limited to purchase of supplies and personnel-related actions".

Entering into a financial assistance agreement with the USGS for the purpose of developing and implementing a workplan outlining water use data priorities is not expected to result in any impacts or disturbances to the natural and environmental resources in the State of Hawaii. As such, staff believes that the proposed financial assistance agreement with USGS and associated water use data workplan development and implementation should be exempt from the preparation of an environmental assessment.

Consulted Parties: Not applicable.

Recommendation: It is recommended that the Commission find that this agreement and associated work will have minimal or no significant effect on the environment and is presumed to be exempt from the preparation of an environmental assessment.



Suzanne D. Case, Chairperson

Date 8/5/15