



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

July 20, 2011
Honolulu, Hawaii

Request to Enter into a Joint Funding Agreement with U.S. Geological Survey
For Statewide Hydrologic Data Collection and
Water Resource Monitoring for Federal Fiscal Year (FFY) 2012

SUMMARY OF REQUEST

Staff is recommending that the Commission on Water Resource Management (Commission) enter into a joint funding agreement with the U.S. Geological Survey (USGS) for the inventory and investigation of Hawaii's water resources.

BACKGROUND

The cooperative monitoring of Hawaii's hydrologic resources began in 1909 when the USGS entered into an agreement with the Territory of Hawaii, and at its inception, monitoring was focused mainly on surface water. Initially only 12 streams were being gaged continuously. By 1914 there were 87 continuous-record stations. The program continued to grow, reaching its peak in 1966 when 197 gages were operational under the agreement. Over the years, some gages were discontinued for a variety of reasons, which include shifting fiscal priorities, changing economic realities, completed data acquisition objectives, and dwindling partnership engagement in monitoring and data collection.

In 1972, ground water data collection became an integral part of the agreement and began establishing the baseline data throughout the State with 170 observation wells. For reasons similar to the surface water gages, observation well data recording has steadily declined over the years such that only 18 well sites now remain to provide data continuity in FFY 2012.

Beginning in 1998, the Commission streamlined the cooperative agreement by transferring the crest-stage stream-gaging program to civil defense agencies where these data (e.g. flooding issues) are more relevant to disaster response rather than sustainability issues, and by eliminating duplication of ground water data collection efforts in wells. Ground water data gathering changed and expanded to incorporate the data provided by water system purveyors and well owners, who were required by law and rule to report their water-use and ground water and

chloride levels. Partnership with the Division of Forestry and Wildlife's (DOFAW) through its Watershed Management Grant Program (WMGP) had boosted the operation of gaging stations on watershed partnership lands. However, in these challenging economic times, the WMGP has withdrawn its support to gaging operations in watershed management areas, disengaging the watershed partnerships from Commission and USGS efforts in monitoring the water resources in watershed areas. Meanwhile, the Waiahole Trust Fund helps defray the cost of monitoring the Waiahole Ditch system and its sources. Exhibit 1 provides a summary of changes to the program, including the operational cost, since FFY 2006. Exhibit 2 displays the changes in the total number of monitoring stations since the inception of the program.

The cooperative monitoring of Hawaii's hydrologic resources fulfills the Commission's mandate to "maintain an inventory of all water uses and water resources". Haw. Rev. Stat. §174C-5(14) The program also allows the Commission to assess water resource impacts from climate variability, changing land use, and increasing water demands. Maintaining a long-term hydrologic monitoring program with the USGS is an essential component of the Commission's mission to manage Hawaii's water resources.

CURRENT AGREEMENT

Although the nature of the agreement and relationship of the parties involved remains the same as the previous year's agreement, the total number of stations has been reduced. A proposed list of stations to be funded in the FFY 2012 agreement is attached (Exhibit 4). The Commission is currently working with the USGS to find additional cooperators to fund some of the monitoring stations listed to further reduce the cost of the agreement and to maintain the integrity of the data network. The total cost of the agreement will not exceed \$857,760, with the Commission's share not exceeding \$487,760.

Under the Joint Funding Agreement for FFY 2012, the USGS will collect basic hydrologic data and provide data summary reports on water resources throughout the State of Hawaii. A proposed scope of services outlines the expectations of the agreement in Exhibit 3. The period for the agreement will span the duration of FFY 2012 (October 1, 2011 to September 30, 2012).

The table below summarizes the annual changes in funding requirements for this joint funding agreement.

COST	FFY2010	FFY2011	FFY2012
Total Joint Funding Requirement	\$718,400	\$809,980	\$857,760
Expected (full-year) CWRM cost-share not to exceed	\$405,500	\$404,990	\$487,760
Percentage CWRM cost-share	56%	50%	57%
DOFAW Watershed Management Grant	\$0	\$0	\$0
Waiahole Ditch Monitoring Fund	\$50,500	\$35,495	\$32,850
Ground water well continuous monitoring	\$6,000	\$6,000	\$6,800
Rain gage continuous recording	\$9,600	\$9,790	\$10,800
Continuous recording stream gage	\$20,000	\$20,400	\$22,500

OTHER

I. Chapter 343 – Environmental Assessment (EA) Compliance

EA Triggers

In accordance with §HRS 343-5(a), the proposed action triggers the need for an EA based on the use of state funds.

EA Exemption

The proposed action qualifies for an exemption from an EA based on §HAR11-200-8(a), basic data collection, research, experimental management and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource.

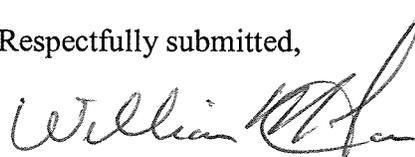
RECOMMENDATIONS

Staff recommends that the Commission:

- 1) Authorize the Chairperson to enter into a joint funding agreement with the U.S. Geological Survey in FFY 2012 to undertake the specified monitoring activities, and
- 2) Delegate authority to the Chairperson to modify the list of monitoring stations to delete stations from the joint funding agreement if other cooperators can be found.

The terms of this agreement will be subject to the approval of the Department’s Deputy Attorney General. Contract execution will be done in accordance with Chapter 103D, HRS, and Chapter 3-122, Hawaii Administrative Rules.

Respectfully submitted,



WILLIAM M. TAM
Deputy Director

- Exhibits:
- 1 Summary of Changes to the Cooperative Program: 2005-2012
 - 2 Graph of Declining Stations
 - 3 Proposed Scope of Services
 - 4 Proposed List of Stations

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson

EXHIBIT 1

SUMMARY OF CHANGES TO THE COOPERATIVE PROGRAM: 2006 to 2012

Federal Fiscal Year	No. of Stream Gages	No. of Wells Ground Water	No. of Rain Gages	CWRM Contribution \$	Changes and Comments
2006	25	56	21	\$342,740	<ol style="list-style-type: none"> DAR LNR 401 funds for \$25,000 to provide data analysis of stream flow statistics statewide Waiahole Trust Fund provided \$35,000 for Waiahole stations Kauai County to enter into their own cooperative agreement with USGS for wells owned by them
2007	32	31	22	\$459,020	<ol style="list-style-type: none"> USGS monitoring costs increased by 31% Addition of \$132,000 from the Watershed Management Grant Program Waiahole Trust Fund provided \$42,713 for Waiahole gages
2008	32	34	21	\$526,600	<ol style="list-style-type: none"> USGS monitoring costs increased by 7.5 % Addition of \$118,175 from the Watershed Management Grant Program Waiahole Trust Fund provided \$41,040 for Waiahole stations
2009	27	26	18	\$504,000	<ol style="list-style-type: none"> USGS monitoring costs increased by 10.3% Watershed Management Grant Program support was reduced to \$48,896 Waiahole Trust Fund provided \$48,000 for Waiahole stations
2010	25	17	14	\$405,500	<ol style="list-style-type: none"> Quarterly implementation of the agreement Watershed Management Grant Program withdraws support Waiahole Trust Fund provided \$50,500 for Waiahole stations USGS monitoring costs increased by about 4.5%
2011	28	20	14	\$404,900	<ol style="list-style-type: none"> USGS cost share increases to 50% Additional Federal match used to reinstate monitoring stations Waiahole Trust Fund provided \$35,495 for Waiahole stations
2012	27	18	14	Not to exceed \$487,760	<ol style="list-style-type: none"> CWRM cost share increases to 57% Waiahole Trust Fund to provide \$32,850 for Waiahole stations USGS monitoring costs increased by about 10%

EXHIBIT 1

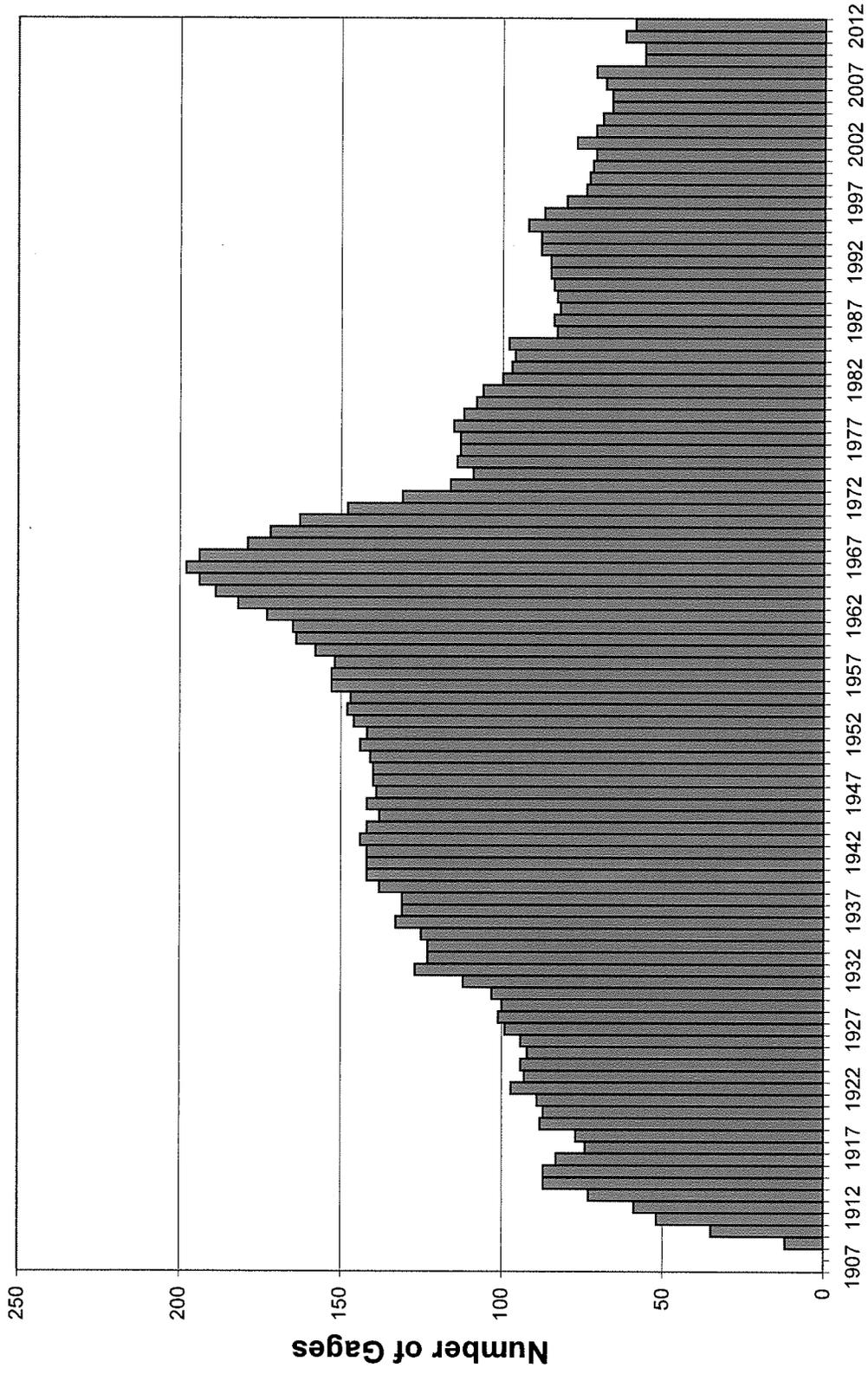


EXHIBIT 2

[EXHIBIT 3]

SCOPE OF SERVICES

1. This Joint Funding Agreement is a continuation of the joint funding agreement for the collection of hydrological data in the State of Hawaii between the U.S. Geological Survey, United States Department of the Interior and the Commission on Water Resource Management, Department of Land and Natural Resources, State of Hawaii.
2. The scope of services involves the collection and computation of data on water resources collected in multiple locations throughout the State of Hawaii.
3. U.S. Geological Survey shall collect data at an agreed upon list of surface water stations, ground water monitoring stations, and rainfall stations, as set forth in Exhibit 3 which is attached hereto and incorporated by reference.
4. U.S. Geological Survey shall provide data summary reports and review of historical data sets.
5. U.S. Geological Survey shall host the maps, data, and reports resulting from this program in a publicly-accessible website, and shall provide the Commission staff direct and easy access to acquire, download, or transfer the data and report from a USGS server. The parties shall use good faith efforts to resolve any disagreements in the scope and validation of data acquisition and the contents of the report.
6. U.S. Geological Survey shall provide a readable statement of cooperative relations and visually identifiable symbol of the Commission as a cooperator in print, digital, and online publications of the data and reports of the monitoring stations that are included in the current cooperative program, and as well as the stations that were historically supported and funded by the Commission.
7. At least quarterly and upon request by the Commission on Water Resource Management, the U.S. Geological Survey will update the Commission on the progress of its work on this Joint Funding Agreement.
8. The Commission on Water Resource Management shall assist the U.S. Geological Survey in its work under the Joint Funding Agreement to the extent feasible and practicable under existing resources of the Commission.

[EXHIBIT 4]

Proposed List of Stations for FFY2012

Station Number	Island	Station Name	Station Type	Cost	USGS match	Difference	Period of record
215901159235301	Kauai	2-5923-01 Kilohana W-A, Kauai, HI	GW WL 1/4	3,900	-	3,900	1974-88, 2004-
215607159344301	Kauai	2-5634-01 Hanapepe Ridge, Kauai, HI	GW WL-RT	6,800	2,400	4,400	1972-
212154158015201	Oahu	3-2101-03 Honouliuli, Oahu, HI	GW WL 1/4	3,900	1,500	2,400	1910-21, 1923-
212738158034301	Oahu	3-2703-02 Kunia Basal Monitor Well, Oahu, HI	GW WL 1/4	3,900	-	3,900	2001-
213438158091101	Oahu	3-3409-16 Mokuleia, Oahu, HI	GW WL 1/4	3,900	1,200	2,700	1924-
211832157515501	Oahu	3-1851-19 Halekauwila Street, Pipe A, Oahu, HI	GW WL+QW 1/4	5,600	1,400	4,200	1973-
211832157515502	Oahu	3-1851-19 Halekauwila Street, Pipe B, Oahu, HI	GW WL+QW 1/4	5,600	1,400	4,200	1973-
212238157561101	Oahu	3-2256-10 Aiea US Navy, (187-B), Oahu, HI	GW WL	4,500	1,300	3,200	1928-31, 1934-
210402156495801	Molokai	4-0449-01 Ualapue	GW WL 1/4	3,900	1,500	2,400	1938-
210825157004301	Molokai	4-0800-01 Kualapuu Deep Monitor Well, Molokai, HI	QW profile/GW-cont	4,500	1,800	2,700	2001-
205140156304501	Maui	6-5130-01 Waikapu 1, Maui, HI	GW WL 1/4	3,900	1,500	2,400	1974-
205312156321402	Maui	6-5332-04 Kepaniwai Observation Well, Maui, HI	GW WL 1/4	3,900	1,500	2,400	1991-
205433156184101	Maui	6-5418-01 EMWDP Monitor Well, Maui, HI	GW WL 1/4	3,900	1,200	2,700	2002-
205405156305401	Maui	6-5430-05 Waiehu Deep Monitor Well, Maui, HI	QW profile/GW WL	6,800	2,400	4,400	1986-
194327156002301	Big Island	4360-01 Kalaea N Kona (W12-11)	GW WL-Cont	6,800	2,000	4,800	2009-
190423155371501	Big Island	8-0437-01 Waiohinu, HI	GW WL 1/4	800	400	400	1997-
193251155072101	Big Island	8-3207-04 Mt. View, HI	GW WL 1/4	3,900	1,000	2,900	1997-
200132155471101	Big Island	8-6147-01 Kawaihae W-3, HI	GW WL 1/4	3,900	1,000	2,900	1973-
220356159281401	Kauai	1051.0 N. Wailua Ditch Raingage nr Lihue, Kauai, HI	RF-RT	10,800	4,200	6,600	1928-
220713159361201	Kauai	1083.0 Mohihi Crsg Raingage nr Waimea, Kauai, HI	RF-RT	10,800	4,200	6,600	1910-
220739159373001	Kauai	1082.0 Waiakoali Raingage nr Waimea, Kauai, HI	RF-RT				1910-

220927159355001	Kauai	1084.0 Kiloohana Rain Gage nr Hanalei, Kauai, HI	RF-RT	10,800	4,200	6,600	1910-
212359157502601	Oahu	772.3 Moanalua RG No. 1 at alt 1,000 ft, Oahu, HI	RF-RT	10,800	4,200	6,600	1968-
212855157504501	Oahu	837.0 Waiahole RG at Kamehameha Hwy., Oahu, HI	RF-RT	9,000	900	8,100	2007-
213215157552800	Oahu	883.12 Poamoho Rain Gage No 1, nr Wahiawa, Oahu, HI	RF-RT	10,800	5,400	5,400	1967-
213237157530701	Oahu	886.4 Kahana Raingage at alt 95 ft, Oahu, HI	RF-RT	9,000	900	8,100	1961-90, 1994-
213608158011101	Oahu	897.9 Pupukea Rd Rain Gage at alt 1,160 ft, Oahu, HI	RF-RT	10,800	4,200	6,600	1967-
213732158010201	Oahu	897.11 Kamananui Rain Gage at alt. 720 ft, Oahu, HI	RF-RT	10,800	3,000	7,800	2003-
203721156151601	Maui	255.0 Kepuni Gulch Raingage, Maui, HI	RF-RT	10,800	4,200	6,600	1964-
194117155174801	Big Island	83.0 Quarry Rain Gage at Saddle Rd, HI	RF-RT	10,800	4,200	6,600	1962-
194945155534402	Big Island	92.5 Kiholo Rain Gage, HI	RF-RT	10,800	3,000	7,800	2002-
200518155405801	Big Island	185.7 Kawainui Rain Gage near Kamuela, HI	RF-RT	9,000	2,700	6,300	2002-
16010000	Kauai	Kawaikoi Stream nr Waimea, Kauai, HI	SW RT-Cont	22,500	11,250	11,250	1909-17, 1919-
16049000	Kauai	Hanapepe Riv blw Manuahi Str nr Eleele, Kauai, HI	SW RT-Cont	22,500	11,250	11,250	1917-21, 1926-
16060000	Kauai	SF Wailua River nr Lihue, Kauai, HI	SW RT-Cont	22,500	11,250	11,250	1911-
16068000	Kauai	EB of NF Wailua River nr Lihue, Kauai, HI	SW RT-Cont	22,500	11,250	11,250	1912-
16071500	Kauai	Left Branch Opaekaa Str nr Kapaa, Kauai, HI	SW RT-Cont	22,500	11,250	11,250	1960-
16097500	Kauai	Halauleani Str at alt 400 ft nr Kilauea, Kauai, HI	SW RT-Cont	22,500	11,250	11,250	1957-
16103000	Kauai	Hanalei River nr Hanalei, Kauai, HI	SW RT-Cont	22,500	11,250	11,250	1912-19, 1962-
16212800	Oahu	Kipaapa Str nr Wahiawa, Oahu, HI	SW RT-Cont	22,500	11,250	11,250	1957-
16229000	Oahu	Kalihi Str nr Honolulu, Oahu, HI	SW RT-Cont	22,500	11,250	11,250	1913-
16240500	Oahu	Waiakeakua Str at Honolulu, Oahu, HI	SW RT-Cont	22,500	11,250	11,250	1913-
16294900	Oahu	Waikane Str at alt 75 ft at Waikane, Oahu, HI	SW RT-Cont	22,500	11,250	11,250	1911-12, 1959-
16345000	Oahu	Opaeula Str nr Wahiawa, Oahu, HI	SW RT-Cont	22,500	11,250	11,250	1959-
16213000	Oahu	Waikele Str at Waipahu, Oahu, HI	SW RT-Cont	22,500	11,250	11,250	1951-

16294100	Oahu	Waiahole Stream above Kamehameha Hwy, Oahu, HI	22,500	11,250	11,250	
16296500	Oahu	Kahana Str at alt 30 ft nr Kahana, Oahu, HI	22,500	11,250	11,250	2001-
	Oahu	Punaluu Str abv div nr Punaluu, Oahu, HI	22,500	11,250	13,500	1958-
16508000	Maui	Hanawi Stream near Nahiku, Maui, HI	22,500	11,250	11,250	1953-
16604500	Maui	Iao Stream at Kepaniwai Park nr Wailuku, Maui, HI	22,500	11,250	11,250	1914-16, 1921-
16614000	Maui	Waihee Rv abv Waihee Dtch intk nr Waihee, Maui, HI	22,500	11,250	11,250	1983-
16620000	Maui	Honokohau Stream near Honokohau, Maui, HI	22,500	11,250	11,250	1910-13, 1983-
16518000	Maui	West Wailuaiki Stream near Keanae, Maui, HI	22,500	11,250	11,250	1913-
16587000	Maui	Honopou Stream near Huelo, Maui, HI	22,500	11,250	11,250	1914-17, 1921-
16704000	Big Island	Wailuku River at Piihonua, HI	22,500	9,000	13,500	1910-
16720000	Big Island	Kawainui Stream nr Kamuela, HI	22,500	11,250	11,250	1928-
16770500	Big Island	Paaau Gulch at Pahala, HI	22,500	11,250	11,250	1964-
16717000	Big Island	Honolii Stream nr Papiikou, HI	22,500	11,250	11,250	1962-
16725000	Big Island	Alakahi Stream near Kamuela, HI	22,500	9,000	13,500	1911-13, 1967-
						1964-