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**REPORT TO THE TWENTY-SEVENTH LEGISLATURE**  
**2013 Regular Session**

**IDENTIFICATION OF RIVERS AND STREAMS WORTHY OF PROTECTION**

**I. INTRODUCTION**

Section 174C-31(c) (4), Hawaii Revised Statutes (HRS), State Water Code, provides that the Commission on Water Resource Management (Commission),

[i]dentify rivers or streams, or portions of a river or stream, which appropriately may be placed within a wild and scenic river system, to be preserved and protected as part of the public trust. For the purpose of this paragraph, the term 'wild and scenic rivers' means rivers or streams, or a portion of a river or stream, of high natural quality or that possess significant scenic value, including but not limited to, rivers or streams which are within the natural area reserves system. The Commission shall report its findings to the legislature twenty days prior to the convening of each regular legislative session.

This Report updates the Legislature on the Commission's 2011 activities to implement Section 174C-31(c) (4), HRS.

**II. BACKGROUND**

In 1990, the Commission (in partnership with the National Park Service) undertook the Hawaii Stream Assessment (HSA). This endeavor had two primary objectives: 1) Inventory Hawaii's perennial streams and their physical characteristics; and 2) Assess the aquatic, riparian, cultural, and recreational values of Hawaii's perennial streams. Secondary objectives were to: a) Centralize stream-related data and reference sources in a database and bibliography; b) Identify and prioritize areas where more information is needed; c) Provide data to assist in making management decisions within a statewide context rather than on an ad hoc basis; d) Develop general stream protection guidelines; and e) Identify specific streams appropriate for protection and enhancement.

On August 22, 2000, the Supreme Court of Hawaii (Supreme Court) issued its decision in the Waiahole Ditch Contested Case Hearing. In its decision, the Supreme Court emphasized that "instream flow standards serve as the primary mechanism by which the Commission is to discharge its duty to protect and promote the entire range of public trust purposes dependent upon instream flows." 94 Haw. 97, 9 P.3 409 (2000). Thus, the Commission directed its efforts towards the development of a methodology for establishing instream flow standards, the identification of rivers and streams worthy of protection and the implementation of Section 174C-31(c)(4), HRS.

In July 2002, pursuant to the Waiahole decision, the Commission established the Stream Protection and Management (SPAM) Branch. The SPAM Branch incorporates the "Instream Use and Protection" and "Surface Water Regulation" sections. In July 2005, the SPAM Branch

prepared a Program Implementation Plan to “[m]anage and Protect Hawaii’s Surface Water Resources through a Comprehensive Instream Use Protection Program and the Establishment of Instream Flow Standards.”

This Annual Report updates the activities, projects, and studies currently being carried out by the Commission’s SPAM Branch to develop and implement a statewide stream protection program. For work prior to 2012, please see previous year’s annual reports.

### **III. STREAM PROTECTION AND MANAGEMENT UPDATES**

#### **A. SPAM Branch:**

During 2012, the SPAM Branch continued the hiring process to fill its vacancies. To date, the Hydrologic Program Manager, or Branch Chief, and one hydrologist position have been filled. The remaining vacancy is for a Geologist I position, which is actively being recruited for.

#### **B. Implementation of Priority Interim Instream Flow Standards (IIFS) for East Maui:**

In response to the August 31, 2011 Order Dismissing the Appeal by Native Hawaiian Legal Corporation (NHLC), on behalf of Na Moku Aupuni o Koolau Hui (Na Moku), by the Intermediate Court of Appeals (ICA), NHLC submitted an Application for Writ of Certiorari in the Supreme Court on November 29, 2011 to review the cited lack of jurisdiction by the ICA.

On January 11, 2012, the Supreme Court issued its Order Accepting Application for Writ of Certiorari Vacating the ICA Order Dismissing Appeal for Lack of Jurisdiction, and Remanding Appeal to the ICA. Currently, the Commission staff is awaiting review of the appeal by the ICA.

The Commission staff is continuing to work with East Maui Irrigation Co. and local communities to implement and invigilate the IIFS established by the Commission. This includes regular quarterly trips to conduct streamflow measurements and download water level data. The Department of Land and Natural Resources’ Division of Aquatic Resources is also continuing to conduct studies to assess the impacts of streamflow restoration on selected streams.

#### **C. Iao Ground Water Management Area High-Level Source Water Use Permit Applications and Petition to Amend Interim Instream Flow Standards of Waihee, Waiehu, Iao, and Waikapu Streams Contested Case Hearing:**

In June 2010, the Commission issued its final Decision and Order (D&O) setting IIFS for four West Maui streams – Waihee, Waiehu, Iao and Waikapu (collectively “Na Wai Eha”). The Commission’s D&O was subsequently appealed to Intermediate Court of

Appeals; however, the Supreme Court of Hawaii decided to hear the case instead. The Court held oral arguments on June 6, 2012.

On August 15, 2012, the Supreme Court (Court) issued its decisions in Supreme Court No. SCAP-30603. The Court analyzed four points of error:

- A) This Court must dismiss Maui Department of Water Supply's cross-appeal, as it seeks resolution of an abstract proposition of law.
- B) The Commission failed to enter Findings of Fact and Conclusions of Law regarding the effects of its amended IIFS on traditional and customary Native Hawaiian practices.
- C) The Commission's D&O does not adequately justify its decision not to restore streamflow to the Iao and Waikapu Streams.
  - 1) The Commission's analysis regarding instream use is incomplete.
  - 2) The Commission did not err in using United States Geological Survey (USGS) data as a starting point for analysis.
- D) The Commission violated the Public Trust in its treatment of diversions.
  - 1) The Commission did not err in articulating the burden of proof in determining an IIFS.
  - 2) The Commission did not err in using Dr. (Ali) Fares's model of irrigation requirements as a starting point for analysis.
  - 3) The Commission erred in calculating Hawaiian Commercial & Sugar Company's (HC&S's) acreage.
  - 4) The Commission erred in its treatment of some of the diverters' system losses.
  - 5) The Commission erred in its consideration of HC&S's Well No. 7.
  - 6) The Commission erred in its consideration of recycled wastewater.

The Court dismissed Maui Department of Water Supply's cross-appeal, vacated the Commission's June 10, 2010 Findings of Fact, Conclusions of Law, D&O, and remanded the remaining points to the Commission for further proceedings consistent with their opinion. The Commission is currently reviewing the Court's decision with the object of developing approaches for addressing the explanation of the law laid out in the court's written opinion.

In the matter of the Stipulation & Orders (S&O) issued for the implementation of IIFS on South Waiehu Stream, the Commission issued a fourth S&O on January 3, 2012. The Commission's orders are summarized as follows:

- 1) Suspend full implementation of the D&O until January 3, 2013;
- 2) During the suspension period, undertake measures designed to achieve the delivery of 250,000 gallons per day, during low flow periods, to the kuleana users through the South Waiehu diversions ditch, with excess streamflow remaining in South Waiehu Stream;

- 3) HC&S will modify the diversion ditch to channel the diverted water towards the grate of the kuleana users' intake;
- 4) HC&S, in coordination with Commission staff, will reset the sluice gate on the South Waiehu diversion to a baseline setting to meet the desired 250,000 gallons per day; and
- 5) The baseline shall be maintained during the suspension period.

For information on the Iao Ground Water Management Area High-Level Source Water Use Permit Applications and Petition to Amend Interim Instream Flow Standards of Waihee, Waiehu, Iao, and Waikapu Streams Contested Case Hearing (CCH-MA-01), see Commission website: [http://hawaii.gov/dlnr/cwrp/cch\\_CCHMA0601.htm](http://hawaii.gov/dlnr/cwrp/cch_CCHMA0601.htm).

#### **D. Surface Water Use Permit Applications for Na Wai Eha:**

Following the Commission's September 27, 2011 adoption of a process to determine Appurtenant water rights, the Commission issued a public notice on October 26, 2011 to announce the Appurtenant rights determination process in the Na Wai Eha surface water management areas (Waihee, Waiehu, Iao and Waikapu Streams). The Public Notice outlined a two-step process for Appurtenant water rights determination. The first step being to determine whether there is an Appurtenant water right associated with the parcel of land on which water is being used or is proposed to be used. The second step will be to quantify the amount of water associated with that parcel as part of the surface water permitting process. Applicants for Appurtenant water rights were asked to submit information and documentary evidence in support of a claim by February 6, 2012.

On August 15, 2012, the Commission delegated authority to the Chairperson to appoint a hearing's officer to review the Appurtenant water rights claims it had received and determine the standing of persons or entities filing written objections to those claims.

On August 24, 2012, the Commission issued a public notice in which all of the 216 Appurtenant water rights claims it had received to date were identified. The Public Notice also laid out the procedure for filing a written objection to an Appurtenant water rights claim. Written objections should address and provide (as applicable): 1) Documentation demonstrating that the parcel was not used as a residence or for cultivation at the time of the Mahele; 2) Documentation demonstrating that the appurtenant right has been reserved or extinguished; or 3) Evidence suggesting there are materially false statements or representations in the application. The deadline for submitting objections was September 19, 2012.

The Commission staff is currently assisting the appointed Hearing's Officer with the process of reviewing the Appurtenant water rights claims and all documentation and evidence contained in the written objections. As this process proceeds, any additional information and Public Notices will be posted on the Commission website.

For more information on the designation of the Na Wai Eha surface water hydrologic units and Surface Water Management Area, visit the Commission website at: [http://hawaii.gov/dlnr/cwrm/act\\_SWMANaWaiEha.htm](http://hawaii.gov/dlnr/cwrm/act_SWMANaWaiEha.htm).

To view all Na Wai Eha water use permits applications for existing uses and related public notices, visit: [http://hawaii.gov/dlnr/cwrm/sw\\_nawaiehaswup.htm](http://hawaii.gov/dlnr/cwrm/sw_nawaiehaswup.htm).

To view all information, public notices, and claims for appurtenant rights in the Na Wai Eha area, visit: [http://hawaii.gov/dlnr/cwrm/sw\\_nawaieharights.htm](http://hawaii.gov/dlnr/cwrm/sw_nawaieharights.htm).

#### **E. East Maui Irrigation Diversion System Seepage Reconnaissance Study:**

On February 25, 2011, the Commission entered into a Joint Funding Agreement with the USGS to conduct a reconnaissance level study of the four main ditches comprising the East Maui Irrigation Diversion System. The System consists of some 75 miles of open ditches and tunnels, which divert and transport water from Northeast Maui streams to Central Maui. The water is used for sugarcane cultivation, general agriculture, and domestic purposes. This study will contribute to the Commission staff's ongoing evaluation of the IIFS flows established for East Maui streams.

During this 1.5-year study, USGS will assess, at a reconnaissance level, the amount of seepage into or from the system by documenting seepage rates for various types of construction along sections of the ditch. HC&S funded approximately 1/3 of the study, which cost \$130,000.

The results of this study, including a system map showing the diversion ditch characteristics (open lined, open unlined, etc.) and associated seepage rates were published as USGS Open-File Report 2012-1115, which is available from the USGS website at: <http://pubs.usgs.gov/of/2012/1115/>.

#### **F. Low-Flow Characteristics for Streams in the Lahaina District of West Maui, Hawaii:**

On June 21, 2011, the Commission entered into a Joint Funding Agreement with USGS to conduct a low-flow study of the principal streams in ten watersheds in the Lahaina District. The streams to be studied include Honolua, Honokahua, Kahana, Honokowai, Wahikuli, Kahoma, Kauaula, Launiupoko, Olowalu, and Ukumehame. The motivation for the study arose from two petitions to establish amended IIFS for Honokohau and Honolua Streams in Northwest Maui (submitted in August 2006 by Maui Pineapple Company, Inc.) The study area was expanded to accommodate projected development and land use change in West Maui.

The study, which runs from July 1, 2011 to June 30, 2014, has five components:

- 1) Background research and synthesis of contemporary ground and surface water conditions, surface water diversions, and rainfall;
- 2) Stream reconnaissance surveys;

- 3) Quantifying streamflow by establishing low-flow partial records stations;
- 4) Characterizing gains and losses in streamflow by conducting seepage tests;
- 5) The preparation of thematic maps (to be published in the project report).

The report is expected to be published in mid-2014, and will be made available on the Internet as a USGS Scientific Investigation Report. For more information on the USGS West Maui low-flow stream study, see the USGS website at: [http://hi.water.usgs.gov/studies/lahaina\\_lowflow/](http://hi.water.usgs.gov/studies/lahaina_lowflow/).

The USGS study will also contribute to a \$3 million cost share agreement to develop a watershed plan, in support of the West Maui “Ridge to Reef” Initiative, that the Department of Land and Natural Resources has entered into with the United States Army Corps of Engineers (USACE). In fulfillment of its role as a non-federal participant, the Commission will contribute information and data on surface water conditions and drought mitigation planning within the project area.

**G. USGS Cooperative Agreement:**

In 1909, USGS and then Territory (now State) of Hawaii entered into a cooperative agreement to gage Hawaiian streams (and monitor groundwater). Since 1909, gaging records have been compiled for more than 140 (37%) of Hawaii’s 376 perennial streams. For Federal Fiscal Year (FFY) 2013 (see Table 1), the lower total cost of the agreement reflects an actual increase in the contribution made by the USGS. The total number of gaging stations has remained relatively stable for the last several years, with the addition of one continuously recording gaging station for FFY 2013 (See Table 2). However, in recent decades there has been a steady decline in the number of operational gaging stations and consequently in the amount of data available to the State’s water resource managers.

**Table 1. Summary of annual changes in funding requirements for the USGS Cooperative Agreement.**

<b>COST</b>	<b>FFY 2011</b>	<b>FFY 2012</b>	<b>FFY 2013</b>
Total Joint Funding Requirement	\$809,980	\$857,760	\$699,760
Expected Commission cost-share	\$404,990	\$487,760	\$417,650
Percentage Commission cost-share	50%	57%	59%
Division of Forestry and Wildlife Watershed Management Grant	\$0	\$0	\$0
Waiahole Ditch Monitoring Fund	\$35,495	\$41,850	\$39,850
Ground water well continuous monitoring	\$6,000	\$6,800	\$6,090
Rain gage continuous recording	\$9,790	\$10,800	\$9,670
Continuous recording stream gage	\$20,400	\$22,500	\$20,150



**Table 2. Summary of annual changes in the number of gages from Federal FY 2009 to 2013.**

<b>GAGING STATION TYPE</b>	<b>FFY 2009</b>	<b>FFY 2010</b>	<b>FFY 2011</b>	<b>FFY 2012</b>	<b>FFY 2012</b>
No. of continuous stream gages	27	25	28	27	<b>28</b>
No. of wells (ground water levels and water quality)	26	17	20	18	<b>18</b>
No. of rain gages	18	14	14	14	<b>14</b>

Long-term gaging data are essential for identifying the nature and cause of trends in streamflow, assessing resource availability, estimating flood frequency, and specifying water quality standards. Continued support for the USGS Cooperative Agreement is critically important, not only because the information it generates ensures that the Commission is better able to protect, control and regulate the use of Hawaii's water resources for the benefit of its people, but also for the health and safety of the general public. The Commission staff continues to confer with USGS on a regular basis as part of the review and evaluation process of its statewide ground and surface water monitoring programs.

Real-time and historical data for groundwater (wells) and surface water (streams) are available from the USGS Pacific Islands Water Science Center website at: <http://hi.water.usgs.gov/>.

#### **IV. CONCLUSION**

The Commission's ongoing efforts (described in this Report) were conducted in support of its statewide stream protection and management program (including the amendment of IIFS), and are consistent with the Supreme Court of Hawaii's directives. As more water resource data and information becomes available it will be incorporated into the Hawaii Water Plan and into the Commission's decision making process, thereby enhancing the management and protection of Hawaii's surface water resources.