

Report to the Twenty-Fifth Legislature
2010 Regular Session

On

IDENTIFICATION OF RIVERS AND STREAMS WORTHY OF PROTECTION



Prepared by the

Department of Land and Natural Resources
Commission on Water Resource Management
State of Hawaii

In response to

Section 174C-31(c) (4),
Hawaii Revised Statutes

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IDENTIFICATION OF RIVERS AND STREAMS WORTHY OF PROTECTION

INTRODUCTION

Section 174C-31, Hawaii Revised Statutes (HRS), of the State Water Code, reads, in pertinent part:

"Identify 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 to the Legislature provides an update on the current activities of the Department of Land and Natural Resources' (DLNR) Commission on Water Resource Management (Commission) to implement the provisions of Section 174C-31, HRS.

BACKGROUND

Initial efforts undertaken by the Commission, in response to the legislative directive to list streams of high natural quality, involved a joint project with the National Park Service to prepare the Hawaii Stream Assessment (HSA), a two-year project with 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 of HSA included: 1) Centralizing stream-related data and reference sources in a database and bibliography; 2) Identifying and prioritizing areas where more information is needed; 3) Providing data to assist in making management decisions within a statewide context rather than on an ad hoc basis; 4) Developing general stream protection guidelines; and 5) Identifying specific streams appropriate for protection and enhancement.

On August 22, 2000, the Hawaii Supreme Court (Supreme Court) released its ruling on the appeal of the Waiahole Ditch Decision and Order. In their 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." It is under this interpretation of the State Water Code that the Commission has directed its efforts to develop a methodology for establishing instream flow standards, to ultimately identify rivers and streams worthy of protection and implement the provisions of Section 174C-31, HRS.

In accordance with the Supreme Court decision, the Commission established the Stream Protection and Management (SPAM) Branch in July 2002. The SPAM Branch is comprised of the Instream Use and Protection Section and the Surface Water Regulation Section. A Program Implementation Plan was prepared by the SPAM Branch in July 2005 highlighting the mission statement:

"Manage and Protect Hawaii's Surface Water Resources through a Comprehensive Instream Use Protection Program and the Establishment of Instream Flow Standards."

This Annual Report provides updates on the various activities, projects, and studies currently being carried out by the Commission's SPAM Branch to develop and implement a statewide stream protection program. Please refer to past Annual Reports for previous update information

STREAM PROTECTION AND MANAGEMENT UPDATES

Stream Protection and Management Branch: In 2006, the Legislature expanded the SPAM Program with the addition of a second hydrologist position and one geologist position. This expansion has enabled the SPAM Program to make considerable progress in advancing the program's mission. However, the geologist position was vacated in late 2008 and the Commission has since been unable to fill the vacancy during the current budget situation facing the State.

Implementation of Priority Interim Instream Flow Standard (Interim IFS) for East Maui: On September 25, 2008, the Commission approved staff recommendations, with minor amendments, to establish measurable interim IFS values for the five surface water hydrologic units of Honopou, Hanehoi, Piinaau, Waiokamilo, and Wailuanui. Since that time, staff has worked closely with members of the community, East Maui Irrigation Company (EMI), and others, to implement actions in order to meet the interim IFS flows along specified reaches of each stream.

In October 2008, Commission staff held two meetings in Haiku and Keanae, to review the Commission's decision and discuss implementation efforts with the community. Staff has since conducted numerous site visits to east Maui to measure streamflow, document EMI actions to release water, and conduct additional field investigations related to water use and physical stream conditions.

In May 2009, the Commission entered into a joint funding agreement with the United States Geological Survey (USGS) to install and maintain five staff plates on Honopou, Hanehoi, Palauhulu, and Wailuanui Streams. USGS recently completed installation of all five gages and will need to conduct several streamflow measurements to develop the rating curve for each site. Once the rating curves are done, the staff plates will provide for more convenient and efficient monitoring by Commission staff and the community.

The Commission is continuing to monitor and evaluate streamflow following the actions that were taken by EMI, to determine if any interim IFS must be adjusted. For more detailed information on the implementation of interim IFS for the five priority hydrologic units in east Maui, please visit the Commission website at: http://hawaii.gov/dlnr/cwrm/currentissues_Implement5EastMaui.htm

Remaining Interim Instream Flow Standard (Interim IFS) Petitions for East Maui: Following the September 2008 Commission meeting, staff began preparing the Instream Flow Standard Assessment Reports (IFSAR) for the 16 remaining hydrologic units (consisting of 19 petitions). The 16 remaining surface water hydrologic units being considered are as follows:

- 6047 – *Waikamoi (includes Alo and Wahinepee Streams)*
- 6048 – *Puohokamoa*
- 6049 – *Haipuaena*
- 6050 – *Punalau*
- 6051 – *Honomanu*
- 6052 – *Nuaailua*
- 6054 – *Ohia (Waianu)*

- 6057 – *West Wailuaiki*
- 6058 – *East Wailuaiki*
- 6059 – *Kopiliuula (includes Puaakaa Stream)*
- 6060 – *Waiohue*
- 6061 – *Paakea*
- 6062 – *Waiaaka*
- 6063 – *Kapaula*
- 6064 – *Hanawi*
- 6065 – *Makapipi*

Commission staff will employ the same process with a shortened timeline to seek comments on the 16 IFSARs, which were released in draft form to the public on September 25, 2009. Hardcopies of the reports were limited due to budget constraints, so greater effort was put towards informing the public and distributing the reports electronically.

A public fact gathering meeting, to receive additional information from the public on the 16 hydrologic units, will be held at the Paia Community Center, Maui, on October 15, 2009. The public review period for the 16 IFSARs will close on October 30, 2009. The Commission staff intends to make interim IFS recommendations on the 16 hydrologic units at the Commission's December 2009 meeting.

For more information on the Petitions to Amend the Interim IFS for 27 Streams in East Maui, to view field reports, or to download any one of the IFSARs, please visit the Commission website at: http://hawaii.gov/dlnr/cwrm/currentissues_Petition27EastMaui.htm

Designation of the Na Wai Eha Surface Water Hydrologic Units as a Surface Water Management Area: The Commission designated the Na Wai Eha Surface Water Hydrologic Units (Waihee, Waiehu, Iao, and Waikapu) as Surface Water Management Areas on March 13, 2008. Since that time, the Commission received 125 applications for existing surface water uses as of April 30, 2009, and continues to receive applications for new surface water uses. The State Water Code requires that applications be published in a newspaper at least once a week for two consecutive weeks and also requires a monthly bulletin of all pending applications. The State Water Code also provides for objections to applications and responses to objections. Objections may be filed by a person who has some property interest in any land within the hydrologic unit from which the water is drawn, or who will be directly and immediately affected by the water use claimed in the application. If an objection to an application is made by any person who has standing to file an objection, the Commission must hold a hearing on the objection. Objections have been filed for all applications by parties who have standing to file objections. Therefore, a Hearing on Objections for all the applications will be held at a date, time, and location to be announced.

For more information on the Surface Water Management Area designation of the Na Wai Eha surface water hydrologic units, or to view the existing surface water use permit applications, please visit the Commission website at: http://hawaii.gov/dlnr/cwrm/currentissues_SWMANaWaiEha.htm

Central Maui (Na Wai Eha) Stream Study: In June 2006, the Commission entered into a cooperative agreement with USGS to conduct a multi-phase study to assess hydrological and biological conditions of Waihee River and Waiehu, Iao, and Waikapu Streams. This 3.5-year Study is being undertaken as a cooperative project between the USGS, Maui Department of Water Supply, Maui County Office of Economic Development, Office of Hawaiian Affairs, and the Commission. The fieldwork for this study has since been completed and a draft report is currently undergoing an internal peer-review process by USGS. USGS hosted a cooperators meeting in August 2009 and expects to publish the final report in March 2010.

For more information on the Central Maui (Na Wai Eha) Stream Study, please visit the USGS website at: http://hi.water.usgs.gov/studies/project_nawaieha.htm

Statewide Stream Diversion Study: The 2006 Legislature, by way of Act 160, appropriated funds to the Commission for the purpose of conducting statewide field investigations to verify and inventory surface water uses and stream diversions, and update existing surface water information. The Commission contracted R.M. Towill Corporation (Consultant) and the Stream Diversion Study commenced in March 2007.

Based on preliminary results, the Consultant was able to inspect 1,022 diversions across the islands of Maui and Kauai. The data (field notes, photographs, streamflow measurements, etc.) is currently being cataloged and a final summary findings report is being prepared for submission to the Commission. This project is expected to be completed by December 31, 2009.

Statewide Stream Channel Condition Inventory: Recognizing the importance and continuing need for stream information, the Commission appropriated \$200,000 from its Fiscal Year (FY) 2007 budget to conduct a Statewide Stream Channel Condition Inventory (Inventory). The Commission contracted PBR Hawaii & Associates, Inc. (Consultant) and the Inventory commenced in June 2008.

The Consultant has completed the preliminary data review and aerial photo analysis phases of the project, and has provided a draft GIS (geographic information system) geodatabase product to the Commission for review. The Consultant is currently undertaking the field investigation phase using a protocol developed in collaboration with Commission staff. While the GIS geodatabase provides a very complete assessment of stream channel alterations statewide, the field investigations will be limited by available funding. However, the field investigation protocol and findings by the Consultant is expected to provide a solid foundation of data for Commission staff to work with upon project completion. This project is expected to be completed by January 31, 2010.

Assessment of Methods for Measuring Diverted Streamflow: Following on the surface water management area designation of Na Wai Eha, Maui, the Commission will require water use permits for stream diversions and withdrawal of stream water. Permit conditions for new and existing uses may include measurement of flow. The Commission contracted Element Environmental, LLC. (Consultant) and the Assessment of Methods for Measuring Diverted Streamflow (Assessment) commenced in August 2008.

Commission staff received a draft report in early August 2009 inventorying the various methods for measuring different types of surface water diversions. Staff is completing its review and will be forwarding meeting with the Consultant to discuss revisions. This project is expected to be completed by December 31, 2009.

Punaluu Watershed Alliance: The Punaluu Watershed Alliance (Alliance), comprised of the Punaluu Community Association, Kamehameha Schools, Honolulu Board of Water Supply (BWS), USGS, and the Commission, was formed to provide better information for setting IFS, build community participation, and provide opportunities for student education. A memorandum of understanding for establishing the Alliance was formally entered into on October 19, 2005.

Commission staff continues to meet regularly with the Alliance to discuss community needs and concerns, in addition to coordinating efforts to address instream flow standards. Information on the Punaluu Watershed Alliance is expected to be available on the Commission website in early 2010.

Lalakea Alternative Mitigation Project: The Lalakea Alternative Mitigation Project (LAMP) is the product of an alternative settlement agreement with Kamehameha Schools. In February 2002, the Commission ordered Kamehameha Schools to develop an alternative mitigation project in lieu of a fine of \$453,000. The resulting LAMP is a cooperative effort between Kamehameha Schools and Bishop Museum, with oversight by the Commission.

The last educational and research field trip took place in June 2006. Kamehameha Schools submitted the final compiled report to the Commission in November 2008. Information on the Lalakea Alternative Mitigation Project is expected to be available on the Commission website in early 2010.

National Hydrography Dataset (NHD): NHD is a comprehensive set of digital spatial data that contains information about surface water features such as lakes, ponds, streams, rivers, and springs. The dataset interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system, much like addresses on streets. Water-related information (e.g., length, discharge, etc) can be attributed to each stream segment or surface water feature. Since NHD provides a nationally consistent framework for attribution and analysis, water-related information provided by one organization (national, state, local) can be shared with other organizations, and easily integrated into many different types of applications to the benefit of all. NHD will enable scientists to link data about water quality, water flow, aquatic species, and other important information.

A more complete database of surface water information for Hawaii will improve understanding of the resource, provide better data for decision making, and expand the exchange of information between government agencies. The success of NHD depends on partnerships established with a wide variety of organizations that work with geospatial hydrologic data. The Commission recognizes that the most current, highest resolution, and continuously maintained geospatial datasets reside with State and local governments, private entities, and other federal agencies. In an effort to improve the mapping of surface water in the State, the Department of Health, Department of Land and Natural Resources, and the Office of Planning are partnering to update, enhance, and maintain NHD for Hawaii. A memorandum of understanding (MOU) was executed in August of 2009 between the state agencies and USGS that provides for update of the base surface water map using local knowledge of the resource from the State. As partners, each will work cooperatively to implement a program to exchange updates and improvements to NHD.

The impetus for this effort is to create a publicly available surface water dataset, which represents the consolidation of hydrologic data from the three state agencies. Information on NHD and Hawaii stewardship effort is expected to be available on the Commission website in early 2010.

USGS Agreement: The cooperative agreement between USGS and the State officially began in 1909 when USGS entered into an agreement with the Territory of Hawaii. Over 140 (37%) of the 376 perennial streams in Hawaii have been gaged since the inception of the cooperative program. However, the steady decline of the number of monitored streams has diminished the amount of data available to water resource managers,.

Although the nature of the agreement and the relationship of the parties involved are fundamentally unchanged, the fiscal situation and program implementation of the Federal Fiscal Year (FFY) 2010 agreement are markedly different from the FFY 2009 agreement. Notable changes from the previous agreement are as follows:

- Program implementation in the first quarter of FFY 2010 with possible extensions
- Quarterly extensions of the agreement up to September 30, 2010 are subject to the availability of funds and approval by the Chairperson
- General fund restriction (\$48,254)

- Withdrawal of watershed management grant program support (\$48,896)
- Elimination of sixteen monitoring sites
- USGS operational cost increases by about 4.5%
- Reduction of monitoring frequency on sites that are not wired to a real-time network

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

COST	FFY 2008	FFY 2009	FFY 2010
Total Joint Funding Requirement	\$919,800	\$837,334	\$718,400
Expected CWRM cost-share	\$526,600	\$504,000	\$405,500
Percentage CWRM cost-share	57%	60%	56%
DOFAW Watershed Management Grant	\$118,175	\$48,896	\$0
Waiahole Ditch Monitoring Fund	\$41,040	\$48,896	\$50,500
Ground water well continuous monitoring	\$5,400	\$5,730	\$6,000
Rain gage continuous recording	\$7,200	\$9,168	\$9,600
Continuous recording stream gage	\$18,000	\$19,100	\$20,000

Due to the State's fiscal situation, the current budget execution policy is to provide agencies with quarterly allocation of their FY 2010 operating budgets. Allocations for subsequent quarters will be made upon further consideration of state revenues and expenditure requirements, allowing for more definitive revenue forecast to become available during the course of the fiscal year. Therefore, under the subject cooperative agreement, the period of performance starts with the first quarter of the FFY 2010 with the state share of \$101,375 to the cost of monitoring the agreed-upon stations. With possible continuation to the end of FFY 2010, the Commission's share of the cooperative program should not exceed \$405,500. The table below highlights the reduction in gages from FFY 2006 to FFY 2010 (in bold).

GAGING STATION TYPE	FFY 2006	FFY 2007	FFY 2008	FFY 2009	FFY 2010
No. of continuous stream gages	25	32	32	27	25
No. of wells (ground water levels and water quality)	56	31	34	26	17
No. of rain gages	21	22	21	18	14

Long-term stream data is vital for flood analysis in the construction of roads and housing developments, assessment of water quality criteria and dam safety, and the long-term monitoring of streamflow trends, erosion, and other environmental concerns. Continued support for the USGS Cooperative Agreement is critically important, not only towards the Commission's responsibility of water resource protection and management, but for the health and safety of the general public. The Commission staff continues to confer with USGS on a regular basis to review and evaluate a comprehensive statewide ground and surface water monitoring program.

Waiahole Ditch Contested Case Hearing: On August 22, 2000, the Hawaii Supreme Court (Supreme Court) released its first ruling on the appeal of the Waiahole Ditch Decision and Order issued by the Commission on December 24, 1997. On remand, the Commission issued its third Findings of Fact, Conclusions of Law, and Decision and Order (D&O III) on July 13, 2006. On August 11, 2006, three of the parties in the contested case hearing filed two Notices of Appeal. The matter currently remains under review by the intermediate appellate court.

For more information on the Waiahole Ditch Combined Contested Case Hearing (CCH-OA95-01), please visit the Commission website at: http://hawaii.gov/dlnr/cwrm/currentissues_CCHOA9501.htm

Iao Ground Water Management Area High-Level Source Water Use Permit Applications and Petition to Amend Interim Instream Flow Standards of Waihee, Waiehu, Iao, & Waikapu Streams Contested Case Hearing: In June 2004, Earthjustice, on behalf of its clients Hui O Na Wai Eha and Maui Tomorrow Foundation, Inc., filed a petition to amend the Interim IFS for Waihee, North and South Waiehu, Iao, and Waikapu Streams (Na Wai Eha). In May 2006, the Commission notified the affected parties that the petition to amend the Interim IFS for Na Wai Eha would be combined with the Iao High-Level Ground Water Use Permit Applications. In June 2006, standing was granted to Hui O Na Wai Eha/Maui Tomorrow Foundation, Office of Hawaiian Affairs, Maui Department of Water Supply, Wailuku Water Company, LLC, and Hawaiian Commercial & Sugar Company. The contested case hearing began on December 3, 2007 on Maui.

On December 5, 2008, Hui O Na Wai Eha/Maui Tomorrow Foundation, Office of Hawaiian Affairs, Maui Department of Water Supply, Wailuku Water Company, LLC, and Hawaiian Commercial & Sugar Company submitted their proposed findings-of-facts to the hearings officer. On April 9, 2009, the Hearings Officer's Proposed Findings of Fact, Conclusions of Law, and Decision and Order was submitted to the Commission. The parties were given a deadline to file written exceptions by May 11, 2009. The Commission is scheduled to hear oral arguments on the written exceptions on October 15, 2009.

For more 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, & Waikapu Streams Contested Case Hearing (CCH-MA-01), please visit the Commission website at: http://hawaii.gov/dlnr/cwrm/currentissues_CCHMA0601.htm

CONCLUSION

The ongoing efforts identified in this report are consistent with the Supreme Court's directives and will provide needed information in support of the Commission's implementation of a comprehensive stream protection and management program statewide. Refined assessments of available water resources, as they are developed based upon ongoing and new data collection, will be appropriately incorporated in future updates of the Hawaii Water Plan.

As noted, all of the above efforts are critical to developing IFS and will lead to improving the Commission's overall management of surface water resources, enhancing the Commission's current surface water data collection and monitoring program, and facilitating needed discussion and agency/public input regarding stream-related issues.