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STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

October 17, 2007
Honolulu, Oahu

Request to Enter Into a Contract for Professional Services to
Conduct a Statewide Stream Channel Condition Inventory

SUMMARY OF REQUEST:

Staff is requesting that the Commission authorize the Chairperson to enter into a contract or contracts for professional services to conduct a statewide stream channel condition survey to identify and inventory stream channel alterations.

LOCATION: Statewide application

BACKGROUND:

The State Water Code mandates that the Commission on Water Resource Management (Commission) establish a statewide instream use protection program (State Water Code, Hawaii Revised Statutes, chapter 174C, section 71). The principle mechanism that the Commission has for protection of instream uses is to establish instream flow standards. "Each instream flow standard shall describe the flows necessary to protect the public interest in the particular stream. Flows shall be expressed in terms of variable flows of water necessary to protect adequately fishery, wildlife, recreational, aesthetic, scenic, or other beneficial instream uses in the stream in light of existing and potential water developments including the economic impact of restriction of such use" (State Water Code, section 174C-71(1)(C)). The State Water Code defines instream uses as beneficial uses of stream water for significant purposes which are located in the stream and which are achieved by leaving the water in the stream. Instream uses include, but are not limited to: (1) maintenance of fish and wildlife habitats; (2) outdoor recreational activities; (3) maintenance of ecosystems such as estuaries, wetlands, and stream vegetation; (4) aesthetic values such as waterfalls and scenic waterways; (5) navigation; (6) instream hydropower generation; (7) maintenance of water quality; (8) the conveyance of irrigation and domestic

Approved by Commission on
Water Resource Management
at the meeting held on
OCT 17 2007

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water supplies to downstream points of diversion; and (9) the protection of traditional and customary Hawaiian rights.

The State Water Code also directs the Commission to "protect stream channels from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses." The conditions of stream channels are a fundamental component of instream flow standards as they relate to the sustainability of instream uses. To adequately "weigh the importance" of protection, enhancement, or reestablishment of beneficial instream uses of water, an inventory of current stream channel conditions is required.

In 1983, the Department of Land and Natural Resource's (Department) former Division of Water & Land Development (DOWALD) published a report titled *Instream Use Study: Windward Oahu (Report R68)*. The purposes of the study were to: 1) Identify instream resources in Windward Oahu; 2) Identify and recommend methods of assessing instream flow requirements; and 3) Identify potential strategies for protecting instream values. Having been prepared prior to the enactment of the State Water Code, this report served as one of the earliest attempts to address instream flows and instream uses on a regional basis. One component of the report was to identify and delineate stream channel modifications, since this was a major consideration in defining recreational activities and other instream uses.

Unfortunately, similar studies do not exist for other regions of the State. The 1990 Hawaii Stream Assessment provided a rather comprehensive assessment of biological, riparian, recreational and cultural values, but only briefly mentioned stream modifications. The condition of the stream channel, whether natural or modified, is an important component in assessing the instream uses for a given stream system. Streams provide habitat for native fishes which require unimpeded access to the ocean as part of their diadromous life cycle. Loss of natural stream channels often indicate a reduction in riparian and wetland habitat, accompanied by a reduction of recreational opportunities and aesthetic values. However, stream channel modifications are often necessary to protect property, prevent flooding, store water, and to provide access to otherwise inaccessible areas.

In the course of assessing a stream's instream and non-instream uses, the Commission will need to examine best available information on a case-by-case basis. Such an inventory will require coordination with federal, state, and county agencies. Recognizing the importance and continuing need for stream information, the Department included a funding request as part of its FY '08 Budget to undertake regional stream studies in support of establishing instream flow standards. The State Legislature approved $400,000 to the Commission, $150,000 of which will be transferred to the Department's Division of Aquatic Resources for various stream studies including, but not limited to, standardized point-quadrat aquatics surveys and rapid bioassessment surveys in under-sampled watersheds. Of the remaining $250,000, the Commission has appropriated $200,000 to conducting this Statewide Stream Channel Condition Inventory.

SCOPE OF SERVICES:

This proposed Inventory calls for identification and documentation of existing stream channel alterations statewide. The inventory would include, but not be limited to, geographic

information system (GIS) derived locations of: (1) channelizations; (2) retaining walls; (3) dams; (4) in-stream reservoirs; (5) bridges; (6) culvert crossings; (7) ford crossings; (8) access ramps; and (9) flood-prevention structures. The $200,000 is an estimated amount in consideration of time and effort required to complete coordination with various government agencies, perform GIS assessments of aerial imagery, and conduct site-specific field investigations where necessary. The inventory of channel modifications would be transferred to the Commission in the form of a computer database, along with GIS layers identifying the spatial locations of various attributes.

Much of the information the Commission desires already exists with various government agencies which are responsible for, or oversee, the maintenance of stream channels. However, much of the data has not been maintained, is not comparable, or does not exist in a common format that is readily accessible. The Commission's goal is to create a comprehensive database of stream channel modifications that will be maintained and updated accordingly based upon current stream channel alteration permit requirements.

FUNDING:

The funds from the Department's LNR 404, Water Resources Program FY '08 Budget is already available for project implementation.

RECOMMENDATION:

Staff recommends that the Commission authorize the Chairperson to enter into a contract or contracts for professional services to conduct the statewide stream channel condition inventory to identify and delineate stream channel modifications. The terms of this contract(s) will be subject to the approval of the Chairperson and 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,

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Deputy Director

APPROVED FOR SUBMITTAL:

LAURA H. THIELEN
Chairperson