

Report to the Twenty-First Legislature
2002 Regular Session

On

EXPENDITURE AND PROGRESS REPORT OF STUDY INCORPORATING
THE STATE AGRICULTURAL WATER USE AND DEVELOPMENT PLAN
INTO THE STATE WATER PROJECTS PLAN



Prepared by the

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

In response to

Act 259, SLH 2001
(HB 200, HD1, SD1, CD1, Relating to the State Budget)
Section 19

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BENJAMIN J. CAYETANO
Governor

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INTRODUCTION

House Bill 200, House Draft 1, Senate Draft 1, Conference Draft 1, relating to the State Budget was signed into law (Act 259, Session Laws of Hawaii (SLH) 2001) by Governor Benjamin J. Cayetano on June 22, 2001 effective July 1, 2001. Section 19 of this Act provided that of the Special Fund Appropriation for Water Resources (LNR 404), the sum of \$12,400 for FY 01-02 shall be expended for the coordination and incorporation of the State Agricultural Water Use and Development Plan into the State Water Projects Plan; and further provided that a detailed expenditure report and progress report of this study be submitted to the Legislature no later than 20 days prior to the convening of the 2002 Regular Session.

This report to the Legislature provides an update on the current activities of the Commission on Water Resource Management (Commission) to implement the provisions of Act 259, SLH 2001.

BACKGROUND

Hawaii Water Plan (HWP)

Recognizing the complexities associated with planning, regulation, and management of the State's water resources, the Commission developed a Statewide Framework for Updating the HWP. The framework advocates an Integrated Resource Planning (IRP) approach to provide for coordination and guidance in updating and integrating the various components of the HWP. Implementation of an IRP process will facilitate current planning and decision-making processes administered by the State and County, and will enable agencies to set priorities and develop appropriate strategies to meet the State's growing water demands. This framework, adopted by the Commission on February 16, 2000, serves as a guiding document to preparation and/or updates to the eight (8) component parts of the HWP which include the Water Resource Protection Plan, Water Quality Plan, State Water Projects Plan, Agricultural Water Use and Development Plan, and the four (4) County Water Use and Development Plans.

Funding constraints have limited updating of the HWP to the following components: the State Water Projects Plan and a partial update of the Water Resource Protection Plan. No funding has been appropriated for completion/updating of the other components of the Hawaii Water Plan, which include the Water Quality Plan and the Agricultural Water Use and Development Plan. Related to these efforts, the Honolulu Board of Water Supply, as the lead agency for the City and County of Honolulu, and the Maui Department of Water Supply, as the lead agency for the County of Maui, are continuing their efforts to update the Oahu and Maui Water Use and Development

Plans (WUDP), respectively. Preparation and updating of these County WUDPs will require close coordination with the Commission and compliance with the statewide framework adopted by the Commission.

State Water Projects Plan (SWPP)

A final draft of the updated SWPP has been completed and consists, in part, of an extensive survey and evaluation of future State agency project water demands. The primary objective of the SWPP is to provide a coordinated framework for the planning and implementation of source development strategies to meet projected State agency water demands. The update of the SWPP also involved inventorying of State water sources including wells, stream diversions, and water systems, and the preliminary assessment of State department water conservation programs. The SWPP also identifies system service areas, system capacity, existing uses for each system, and provides a range of forecasts (high, medium, low) for future water demands, based on a 20-year projection. On October 26, 2000, the Commission approved the final draft of the SWPP and authorized the scheduling of public hearings to solicit public comment on the draft update of the SWPP. However, pursuant to recent changes in project plans and scheduling, State agency water demand projections are currently being re-assessed and may require subsequent revisions to the final draft of the SWPP. The scheduling and conduct of statewide public hearings are pending completion of this plan review.

Water Resource Protection Plan (WRPP)

The Commission has also undertaken steps to complete a partial update of the WRPP. Updating of the WRPP has been focused on efforts to augment the Commission's current surface water protection and management program. Efforts include the identification and delineation of watershed sectors/systems suitable for adoption as surface water hydrographic units. Establishment of statewide hydrographic units along with the development and adoption of an associated stream (and stream segment) coding system will aid the Commission in its regulation and management of our state's surface water resources. The partial update to the WRPP will also include an initial assessment/inventory of stream diversions and related information about the location of stream diversions and stream channel alterations within each designated watershed units. The data will consist of geographic coordinates, which will be used to produce geographic information system (GIS) coverages allowing for enhanced analysis of surface water issues by the Commission.

Updating of these components of the WRPP will facilitate further refinement of proposed Stream Protection and Management (SPAM) administrative rules and will lead to more effective implementation of current and proposed stream protection and management measures under the Commission's Instream Use Protection Program. As part of this effort, the current update of the WRPP will incorporate available information (e.g., the adopted 1990 WRPP, the draft 1992 WRPP, the 1990 HSA, (SPAM) Task Force recommendations/provisions, and results of the draft Multi-Attribute Prioritization of Streams (MAPS) study) to identify and prioritize rivers and streams for potential designation and protection as Heritage Streams. Following the conceptual approach and preliminary findings of the MAPS projects, an acceptable stream ranking system

will be developed to identify and prioritize high-quality streams. Such ranking will also aid the Commission in prioritizing further data collection and analyses of streams statewide.

Concurrent with the updating of the WRPP, the Commission also plans to solicit inter-agency and public participation in the discussion of stream-related issues and the development of an acceptable stream assessment methodology. The goals of these discussions include, but are not limited to: 1) the identification of evaluation criteria and acceptable approaches for evaluating surface water resources; 2) establishment of quantifiable interim instream flow standards; 3) development of permanent instream flow standards; 4) assessment of stream quality and availability for development; 5) identification and prioritization of needed stream assessment studies and/or management projects; and 6) identification of alternative sources of funding.

AGRICULTURAL WATER USE AND DEVELOPMENT PLAN (AWUDP)

Pursuant to Act 101, SLH 1998, the Department of Agriculture (DOA) is responsible for preparation and regular updating of the AWUDP. The initial plan was to have been prepared and submitted to the Legislature no later than 20 days prior to the convening of the regular session of 2000. However, in light of current funding constraints, completion of the AWUDP has been deferred pending Legislative appropriation of funding required for preparation of the plan by DOA. Preparation of the AWUDP by DOA shall be coordinated with the Commission for future incorporation into the SWPP.

Legal Mandate and Specific Statutory Requirements - AWUDP

Based on the provisions of Act 101, SLH 1998, the AWUDP shall provide for:

- A master inventory of irrigation water systems;
- Identification of system rehabilitation needs, costs and sources of funding for repair and maintenance;
- Development of prioritization criteria and a 5-year program for system repairs;
- Set up of a long-range plan to manage the systems; and
- Incorporation of the above findings into the SWPP.

Recommended Plan Elements

The effort described above is identified in Act 101, SLH 1998, as a “master irrigation inventory plan” and should therefore be considered as an initial step in the development of a comprehensive AWUDP. The additional steps that would need to be taken to complete a comprehensive AWUDP should include the following:

- 1) Based on existing statewide agricultural land uses, assess the existing agricultural water irrigation needs of each of the counties.
- 2) Based on long-term agricultural crop development plans, develop a range of future agricultural irrigation water needs for each of the counties, including projected agricultural water demands of the Department of Hawaiian Home Lands (DHHL).

- 3) Based on the information from the WRPP and the “master irrigation inventory plan,” identify existing sources for irrigation water and assess any shortfalls or excess capacities in existing irrigation systems.
- 4) Identify options for development of additional and alternative irrigation water sources.
- 5) Identify options for conserving irrigation water and/or managing the uses to reduce the total irrigation water demand.
- 6) Develop strategies encompassing both demand management and resource development options.

PROGRAM STATUS

Obtaining the funding for the type of AWUDP contemplated in the Statewide Framework for Updating the Hawaii Water Plan will pose a significant challenge during this phase of the HWP update. Act 101, SLH 1998, which mandated that the DOA undertake the AWUDP, did not provide the necessary funding for even the modest scope of work identified in the legislation. Again, given the current financial condition of the State and county governments, the availability of funding for an expanded agricultural development planning effort and subsequent agricultural water needs assessment would likely be extremely limited. Federal funding and assistance from private-sector sources will be needed. Because of its importance in assisting the counties with their overall water use and development planning efforts, funding for the AWUDP must be identified and aggressively pursued in order to complete this critical planning component.

Federal matching funds of \$300,000 to conduct a “water resources study” was approved by the U.S. House-Senate Conference Committee in late October 2001, and has been included as part of the Energy and Water Development Appropriations Bill for federal FY 2002. If passed, these federal funds will be available to assist Hawaii in the preparation of an AWUDP. Currently, there is a bill pending in the State Legislature to provide the matching funds. Required State-matching funds must be secured in FY 2003 to initiate preparation and at least partial completion of a comprehensive AWUDP.

At a minimum, the DOA must undertake a scope of work for the AWUDP that meets the requirements of Act 101, SLH 1998. It is acknowledged that this scope of work essentially undertakes only an inventory of irrigation systems and identifies the extent of repair and rehabilitation that would be required over a five-year period. Such a scope would not provide for the development of agricultural water demand projections, which are critical inputs needed by the counties in their WUDP update. The agricultural water demand projections for agricultural lands served by state irrigation systems will be developed under the scope of work for the SWPP (DOA and DHHL projections are being compiled as part of the overall assessment of water needs for all state agencies). Projections of agricultural water demands for privately held agricultural lands and/or operations are not presently covered under any of the planning efforts being undertaken by state or county agencies.

Although the SWPP will make initial estimates of state agricultural water demands, more extensive demand projections for private agricultural water needs will have to be developed. A major effort is anticipated with respect to identifying and projecting agricultural water requirements for privately held agricultural lands. A critical planning activity in this effort will be to identify and quantify the types of crops that will be grown and to project the extent of agricultural lands that will be under cultivation over the planning horizon covered by the HWP. This effort essentially requires that a comprehensive statewide agricultural development plan be developed to provide the basis for projecting realistic agricultural water demands.

EXPENDITURE AND PROGRESS REPORT

The Commission is specifically directed to coordinate the incorporation of the AWUDP into the SWPP. In light of the present funding constraints, which precludes the preparation of the AWUDP by the DOA, the special fund appropriation of \$12,400 provided by Act 259, SLH 2001, to the Commission has been programmed for expenditure in the following manner.

Procurement of consultant services is presently underway to assist the Commission in carrying out its coordinative functions to effectively integrate key elements of the AWUDP into the SWPP. The proposed scope of work to be undertaken includes, but is not limited to:

- Identifying information/data needs for the preparation of the AWUDP; specifically for the development of a State agricultural water system inventory database that can be shared with the development of other component plans.
- Establishment of a standardized format for the compilation of data (e.g., surveys & inventory forms) to facilitate data gathering, information sharing, and data consistency.
- Evaluation of options for the most effective means of incorporating specific elements of the AWUDP into the various other components of the HWP (e.g., County WUDPs) by analyzing the integration of data and relational structure for the overall Plan.
- Investigating alternatives for the structure/final format of the AWUDP based on the anticipated uses of the Plan, as well as the effort required for future Plan updates.

Implementation of the requirements and recommendations developed as a result of this scope of work will be subject to obtaining the necessary funding to complete the AWUDP. Completion of the Plan (and subsequent integration of plan components) may need to be phased over the next several years and possibly over successive iterations of the updating process for the HWP.

PROGRAM LIMITATIONS

Program limitations stem primarily from inadequate staffing and a lack of funding resources. In keeping with the findings/recommendations of the State Auditor's report (Report No. 96-3), the Commission will continue to seek additional positions; the permanency of existing temporary positions; and pursue required funding from the Legislature to properly carry out the statutory provisions of the State Water Code. These objectives are consistent with the recommendations of the State Auditor, which states "the commission should revise and adopt the amended Hawaii Water Plan, ensure that revisions are coordinated and that the plan developed is useful to the staff, the commissioners, and other agencies," and is in direct conformity with the Hawaii Supreme Court's decision re-affirming the Commission's statewide responsibility to protect and manage the State's water resources.