

DAVID Y. IGE  
GOVERNOR OF  
HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**DEPT. COMM. NO. 20**

October 18, 2017

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
ROBERT K. MASUDA  
FIRST DEPUTY  
JEFFREY T. PEARSON, P.E.  
DEPUTY DIRECTOR - WATER  
AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

The Honorable Ronald D. Kouchi,  
President  
and Members of the Senate  
Twenty-Ninth State Legislature  
State Capitol, Room 409  
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki, Speaker  
and Members of the House of  
Representatives  
Twenty-Ninth State Legislature  
State Capitol, Room 431  
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Water Security Grant Program report, as required by Act 172, Session Laws of Hawaii 2016. In accordance with Section 93-16, HRS, a copy of this report has been transmitted to the Legislative Reference Bureau and the report may be viewed electronically at <http://dlnr.hawaii.gov/reports/>.

Sincerely,

A handwritten signature in black ink, appearing to read "Suzanne D. Case".

SUZANNE D. CASE  
Chairperson

Enclosure

Report to the Twenty-Ninth Legislature  
2018 Regular Session

**WATER SECURITY GRANT PROGRAM**



Prepared by the

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

In response to  
Act 172, Session Laws of Hawaii 2016

October 2017

# WATER SECURITY GRANT PROGRAM

## I. PURPOSE

The purpose of Act 172, Session Laws of Hawaii 2016 (Act 172), is to establish a two-year pilot program for a water security advisory group to enable public-private partnerships that increase water security by providing matching state funds for projects and programs that:

1. Increase the recharge of groundwater resources;
2. Encourage the reuse of water and reduce the use of potable water for landscaping irrigation; and
3. Improve the efficiency of potable and agricultural water use.

## II. ACT REQUIREMENTS

Act 172 required the Department of Land and Natural Resources (Department) to establish a two-year pilot program to develop public-private partnerships to increase water security; establish an advisory group to advise the Department on the priority of proposals for projects and programs to increase water security; and recommend the award of state matching funds. The last contract for a project or program recommended for approval by the Water Security Advisory Group shall be executed by June 30, 2018.

The Act also requires the Department to submit an annual report on the pilot program to the Governor and Legislature prior to the convening of the 2017 and 2018 Legislative Sessions. The reports shall include:

1. Summary of all the projects and programs approved to increase water security by improving recharge of groundwater, reducing the use of potable water for irrigation, or encouraging the reuse of water – **Section IV**
2. Proposals for future projects and programs- **Section V**
3. A financial report for the preceding fiscal year- **Section VI**
4. Objectives and budget projections for the following fiscal year- **Section VII**

. This report complies with the preparation of a final report on the pilot program.

## III. PROGRAM STATUS

The Department's Commission on Water Resource Management (Commission) was assigned to implement Act 172. To date, grant funds have been awarded to selected proposals in accordance with the direction provided in the Act (See Table 2 for Priority List and Final Rankings). The Commission had not previously administered any grant programs and did not have any staff that possessed the requisite expertise or knowledge in grant program administration. The Commission reached out to other divisions and agencies that have experience in grant program administration, such as the Department's Division of Forestry and Wildlife's Watershed Partnership Program, the Hawai'i Invasive Species Council, Hawai'i Tourism Authority, and Department of Health, in order to develop an efficient and appropriate process. The following sections describe the proposal administration process.

**Project Administration Contracting:** Due to limited staff resources and pre-existing workload, the Commission procured the services of a contractor to assist staff with the implementation of Act 172, as the Department indicated in its testimony before Legislature “that existing staff resources are insufficient to take on this additional task.“. The Contractor completed the following tasks:

- Convene and moderate meetings of the Water Security Advisory Group, prepare summary minutes
- Develop Request for Proposal (RFP) document to solicit projects and proposals, prepare public notice
- Develop Grant Match Certification Document
- Review and organize proposals received, prepare priority list
- Facilitate discussions with priority listed offerors
- Prepare notice of best and final offer to priority listed offerors
- Assist in the preparation of contract documents
- Assist in preparing a summary report of the implementation of Act 172

**Formation of the Water Security Advisory Group (WSAG):** To enable the evaluation of projects or programs that increase water security, Act 172 required the creation of a WSAG made up of:

1. The manager and chief engineer of the board of water supply for each county (or their designee);
2. The deputy director of the Commission;
3. A member with knowledge of agricultural water storage and delivery systems;
4. A member from a private landowning entity that actively partners with a watershed partnership;
5. A member with knowledge, experience, and expertise in the area of Hawaiian cultural practices; and
6. A member representing a conservation organization.

To solicit qualified individuals for the non-government seats, the Chairperson of the Department of Land and Natural Resources published a notice for applicants on November 17, 2016 (<http://files.hawaii.gov/dlnr/cwrm/notice/2016/nt20161117.pdf>).

After the Chairperson accepted applications and identified qualified persons, the WSAG consisted of the following members:

1. Jeffrey T. Pearson, Deputy Director, Commission on Water Resource Management
2. Kirk Saiki, Manager and Chief Engineer, Kaua‘i Department of Water
3. Barry Usagawa, Water Resource Division Chief, Honolulu Board of Water Supply
4. Eva Blumenstein, Planning Program Manager, Maui Department of Water Supply
5. Keith Okamoto, Manager-Chief Engineer, Hawai‘i Department of Water Supply
6. John Richards, Agricultural Water Systems Expert
7. John Morgan, President, Kualoa Ranch
8. Trisha Watson, Hawaiian Cultural Expert
9. Lauren Roth Venu, Advocacy Chair of the U.S. Green Building Council

**Request for Proposals:** To solicit proposals to meet the requirements of Act 172, the WSAG convened on March 2, 2017 to finalize a RFP document and to develop the criteria to evaluate the proposals received. A copy of the RFP is available online at [https://dlnr.hawaii.gov/cwrm/files/2017/03/WSAG17-RFP-Final-3\\_17\\_20171.pdf](https://dlnr.hawaii.gov/cwrm/files/2017/03/WSAG17-RFP-Final-3_17_20171.pdf). The evaluation criteria developed, including the number of points allocated to each item, is included in the RFP. In addition to the evaluation criteria, the RFP required that applicants have all major permits and permissions completed at the time of application, so that projects can be “shovel ready” when funding is awarded.

The RFP was advertised via statewide press release on the Department’s website and widely distributed via email notification on March 17, 2017 with an initial deadline of April 18, 2017 for submission to the Commission.

To better inform potential applicants about Act 172 and to provide an opportunity for potential offerors to get any necessary clarification of the RFP, a preproposal conference was held on March 28, 2017 in the Department’s Board Room. A summary of the conference and the questions and answers related to the RFP were released via RFP Addendum #1 on April 4, 2017 ([https://dlnr.hawaii.gov/cwrm/files/2017/04/WSAG-RFP-Addendum-4\\_3\\_2017.pdf](https://dlnr.hawaii.gov/cwrm/files/2017/04/WSAG-RFP-Addendum-4_3_2017.pdf)).

A second RFP addendum was released on April 12, 2017 ([https://dlnr.hawaii.gov/cwrm/files/2017/04/WSAG17-RFP-Addendum-4\\_12\\_2017.pdf](https://dlnr.hawaii.gov/cwrm/files/2017/04/WSAG17-RFP-Addendum-4_12_2017.pdf)). Addendum #2 also extended the deadline for proposals to April 20, 2017.

**Proposal Selection Process:** A total of 16 proposals were received by the April 20, 2017 deadline from a wide range of applicants. Table 1 below lists the proposals received with a short summary of the proposed project, the requested grant amount, the total project cost, and the proposed Act 172 objective. The proposals are available online at <http://dlnr.hawaii.gov/cwrm/planning/watersecurity/>.

Table 1. Proposals Received by the WSAG

<b>Proposal</b>	<b>Applicant</b>	<b>Island</b>	<b>Requested Award Amount</b>	<b>Total Project Cost</b>	<b>Act 172 Objective</b>
<b>WSAG-1</b> Restoration of the Hakioawa Watershed on Kaho‘olawe for Ground Water Recharge	Kaho‘olawe Island Reserve Commission (KIRC)	Kaho‘olawe	\$100,000	\$239,029	Groundwater Recharge
<b>WSAG-2</b> Lāna‘i Water Efficiency Improvement Project	Lāna‘i Water Company	Lāna‘i	\$30,000	\$60,750	Water Conservation
<b>WSAG-3</b> Engaging Community to Restore Wetland Kalo and Study Water Recharge	Ka‘ala Farm Inc	O‘ahu	\$74,293	\$148,585	Groundwater Recharge

<b>WSAG-4</b> Kipahulu Forest Reserve Restoration Project	Division of Forestry and Wildlife (DOFAW)	Maui	\$73,535	\$147,070	Groundwater Recharge
<b>WSAG-5</b> Follow the Drop - Storm Water Curriculum, Mobile Application & Rain Garden Installation	Kupu	O'ahu	\$61,952	\$128,452	Groundwater Recharge
<b>WSAG-6</b> Wai for Hawai'i	Center for Tomorrow's Leaders	O'ahu	\$7,500	\$15,000	Water Conservation/ Water Reuse
<b>WSAG-7</b> Increasing Water Use Efficiency and Conservation by Upgrading Agricultural Water Meters	Moloa'a Irrigation Cooperative	Kaua'i	\$26,936	\$54,652	Water Conservation
<b>WSAG-8</b> Wai'anae Kai Forest Reserve Protection and Restoration Project	DOFAW	O'ahu	\$70,000	\$140,000	Groundwater Recharge
<b>WSAG-9</b> Increasing Efficacy in Water Usage and Recharge at Ala Mahamoe, O'ahu, through Native Plant Restoration and the Establishment of a Hawaiian Cultural Garden	Ko'olau Mountains Watershed Partnership	O'ahu	\$19,470	\$44,789	Groundwater Recharge
<b>WSAG-10</b> Increasing Recharge Through Detention Basins	Grove Farm	Kaua'i	\$100,000	\$1,283,200	Groundwater Recharge
<b>WSAG-11</b> Integrating Green Stormwater Infrastructure Along the Ala Wai Canal	Eco Solutions	O'ahu	\$49,650	\$99,650	Groundwater Recharge
<b>WSAG-12</b> Water Security for Agriculture: Capturing and Utilizing On-Farm Surface Water	Hoku Nui Maui, LLC	Maui	\$100,000	\$310,225	Water Conservation

<b>WSAG-13</b> Lo‘i Kalo as Retention Basins: A New Approach to Designing Constructed Wetlands in Hawai‘i	The Nature Conservancy	O‘ahu	\$68,006	\$136,012	Groundwater Recharge
<b>WSAG-14</b> Assessing Payments for Ecosystem Services (PES) Approaches	Conservation International	Statewide	\$93,435	\$187,265	Groundwater Recharge/ Water Reuse
<b>WSAG-15</b> Legislative Package and Community Engagement	Sierra Club	Statewide	\$57,599	\$110,530	Water Conservation
<b>WSAG-16</b> The Ala Wai Watershed- Public Private Partnership Models for Freshwater Security and Community Resilience	O‘ahu Economic Development Board	O‘ahu	\$100,00	\$245,000	Groundwater Recharge/ Water Reuse

On May 11, 2017, a WSAG meeting was held to organize a priority list of offerors. Priority Listed Offerors for the award of Water Security Grant funding must meet the legislative goals of Act 172 and fall into one or more of the following categories:

- (1) Establish new areas or increase existing areas for the recharge of groundwater resources;
- (2) Reduce the use of potable water for landscape irrigation and encourage the reuse of water; and
- (3) Improve the efficiency of potable domestic water or agricultural irrigation use.

All projects and programs were required to track and report on the amount of water conserved, recharged, or reused by the projects and programs. All projects and programs must have all permissions and authorizations necessary to implement the project at the time of submission including all applicable major permits and Chapter 343, Hawaii Revised Statutes (HRS), compliance.

Of the 16 proposals received, the WSAG determined that only 12 were eligible for the “priority list of offerors”, which allows those proposals to be ranked. The WSAG concluded that the four rejected proposals did not meet the requirements of Act 172 to track and report the amount of water recharged, conserved, or reused.

Evaluation criteria, listed in the RFP, allowed for ranking by the WSAG Awards were made to the responsible offerors whose proposals were determined to be the most advantageous to the State based on the following evaluation criteria:

- (1) Previous experience, capability and proficiency in implementing proposed project or program
- (2) Project can be leveraged by others, has partnerships that can lead to scaling project or program

- (3) Measurable benefit of volume of water recharged, reused or conserved
- (4) Project Proposal: Methodology, Timeline, Expected Results, Innovation, Budget, and Possible Shortfalls
- (5) Project sustainability, longevity and operation and maintenance strategy
- (6) Project outreach, visibility and demonstration value

Table 2 below lists the proposals by their ranking and the recommended award amount.

Table 2. Priority List and Final Ranking of Proposals by the WSAG

<b>Proposal</b>	<b>Ranking</b>	<b>Award Amount</b>
<b>WSAG-1</b> Restoration of the Hakioawa Watershed on Kaho‘olawe for Ground Water Recharge	2	\$100,000
<b>WSAG-2</b> Lāna‘i Water Efficiency Improvement Project	10	\$30,000
<b>WSAG-3</b> Engaging Community to Restore Wetland Kalo and Study Water Recharge	4	\$74,293
<b>WSAG-4</b> Kipahulu Forest Reserve Restoration Project	11	\$55,743
<b>WSAG-5</b> Follow the Drop- Storm Water Curriculum, Mobile Application & Rain Garden Installation	1	\$61,952
<b>WSAG-6</b> Wai for Hawai‘i	8	\$7,500
<b>WSAG-7</b> Increasing Water Use Efficiency and Conservation by Upgrading Agricultural Water Meters	6	\$26,936
<b>WSAG-8</b> Wai‘anae Kai Forest Reserve Protection and Restoration Project	9	\$70,000
<b>WSAG-9</b> Increasing Efficacy in Water Usage and Recharge at Ala Mahamoe, O‘ahu, through Native Plant Restoration and the Establishment of a Hawaiian Cultural Garden	3	\$19,470
<b>WSAG-10</b> Increasing Recharge Through Detention Basins	12	\$0
<b>WSAG-12</b> Water Security for Agriculture: Capturing and Utilizing On-Farm Surface Water	7	\$100,000
<b>WSAG-13</b> Lo‘i Kalo as Retention Basins: A New Approach to Designing Constructed Wetlands in Hawai‘i	5	\$68,006
<b>Total</b>		<b>\$613,900</b>

The WSAG determined that funding could be awarded to the 11<sup>th</sup> ranked project if the applicant was willing to revise their proposal to accommodate a lower grant award to fit within the available funding of \$613,900. The WSAG delegated authority to its Chair to negotiate with DOFAW to amend the grant amount and scope for the Kipahulu Forest Reserve Restoration project.

Commission staff held discussions with DoFAW representatives. An amended proposal was received. The reduced award allowed the WSAG to recommend funding to a total of 11 applicants based on the available funding.

**Board of Land and Natural Resources (Board) Approval:** On June 9, 2017, the Commission presented the recommendations of the WSAG to the Board in accordance with Act 172 (<https://dlnr.hawaii.gov/wp-content/uploads/2017/06/M-1.pdf>). The Board accepted the recommendations of the WSAG, thereby allowing the Commission to begin the procurement process to distribute the Act funding.

#### IV. SUMMARY OF PROJECTS

A summary of the eleven projects and programs approved to increase water security by improving recharge of groundwater, reducing the use of potable water for irrigation, or encouraging the reuse of water is as follows:

- **WSAG-1** Restoration of the Hakioawa Watershed on Kaho‘olawe for Ground Water Recharge
  - Native planting (10,000 plants) and herbicidal treatment of non-native vegetation.
  - Water Saved: 67,885,000 gallons captured by the project and a percentage of that will be recharged.
  - Amount Funded: \$100,000
  - Location: Kaho‘olawe Island
  
- **WSAG-2** Lāna‘i Water Efficiency Improvement
  - Installation of smart meters for homeowners to view water usage and receive leak alarms; Testing of latest technology (ultrasonic and positive displacement) to be shared with other water systems.
  - Water Saved: Monthly records number of leaks and customer notifications. Anticipates improvement of water conservation.
  - Amount Funded: \$30,000
  - Location: Lāna‘i
  
- **WSAG-3** Engaging Community to Restore Wetland Kalo and Study Water Recharge
  - Re-engineering the auwai system for efficiencies and studying recharge; Piloting low tech ways to measure recharge by limiting inflow, outflow and evapotranspiration.
  - Water Saved: Measured throughout project, anticipated that newly engineered auwai system can put more in production with same staff due to efficiencies => increases recharge.
  - Amount Funded: \$74,293
  - Location: O‘ahu
  
- **WSAG-4** Kipahulu Forest Reserve Restoration Project
  - Ungulate removal, fencing, out planting, weed management, and biocontrol.
  - Water Saved: An estimated additional 40.15 million gallons of water a year in groundwater recharge.
  - Amount Funded: \$55,743
  - Location: Maui

- **WSAG-5** Follow the Drop
  - Storm Water Curriculum, Mobile Application & Rain Garden Installation.
  - Water Saved: 232,000-305,000 gallons per year is recharged.
  - Amount Funded: \$61,952
  - Location: O‘ahu
  
- **WSAG-6** Wai For Hawai‘i
  - Rainwater Catchment Tank and Outreach
  - Water Saved: Water reuse estimated by “using the local rain gauge with the area of the roof that is guttered to the tank”.
  - Amount Funded: \$7,500
  - Location: O‘ahu
  
- **WSAG-7** Increasing Water Use Efficiency and Conservation by Upgrading Agricultural Water Meters to AMA
  - Upgrading agricultural water meters to Advanced Metering Analytics.
  - Water Saved: Notification of leaks in real time to increase water use efficiency and a tool to implement water conservation practices with agricultural irrigation.
  - Amount Funded: \$26,936
  - Location: Kaua‘i
  
- **WSAG-8** Wai‘anae Kai Forest Reserve Protection and Restoration Project
  - Vegetative firebreak maintenance, native plant restoration, installation of six 450 gallon water totes with catchment, community outreach and education.
  - Water Saved: 2,700 gallons for reuse in the project area from catchment. Total volume of storage, more saved annually. Fire would decrease the recharge by 102 Million Gallons per year, this project prevents the reduction of recharge.
  - Amount Funded: \$70,000
  - Location: O‘ahu
  
- **WSAG-9** Increasing Efficacy in Water Usage and Recharge at Ala Mahamoe, O‘ahu, through Native Plant Restoration and the Establishment of a Hawaiian Cultural Garden
  - Native plant restoration and development of a cultural garden.
  - Water Saved: Using the water-budget from northeast Mauna Loa as their model along with the total number of acres converted from alien and mixed alien/native forest to open native forest, they will calculate an estimate of the overall change in aquifer inputs resulting from restoration efforts.
  - Amount Funded: \$19,470
  
- **WSAG-12** Water Security for Agriculture-Capturing and Utilizing On-Farm Surface Water
  - Construction of 1,300ft farm road as catchment surface and a 1.5 million-gallon Detention Basin.
  - Water Saved: Creates a new water resource that mitigates the use of approximately 3,361,630 gallons per year of potable water for agriculture and landscaping. Sets up monitoring equipment to track rainfall and water capture over the course of the project period.
  - Amount Funded: \$100,000
  - Location: Maui

- **WSAG-13** Lo‘i Kalo as Retention Basins: A New Approach to Designing Constructed Wetlands in Hawai‘i
  - Restoration, Monitoring, Outreach and Community Engagement.
  - Water Saved: Estimating recharge by measuring infiltration as percolation into the subsoil (Flow in + Rainfall minus flow out ET and change in water level).
  - Amount Funded: \$68,006
  - Location: O‘ahu

## **V. PROPOSAL FOR FUTURE PROJECTS AND PROGRAMS**

As described above in Section IV, eleven projects were selected out of the sixteen that were submitted for consideration by the WSAG. Funding has been released for these projects and there is no funding allotted for future programs involving water security grant projects or administration based on Act 172. Please see Section IX for recommendations on future water security grant projects.

## **VI. FINANCIAL REPORT FOR FISCAL YEAR (FY) 2017**

To enable the Department to implement Act 172, the Legislature appropriated \$750,000 of funding. Upon release of the funds, the Governor withheld five percent to reflect a contingency restriction placed on all State discretionary funds in FY 2017.

Section 4 of Act 172 allows the Department to contract with an entity to carry out the duties and activities associated with the Act. As the Commission does not have the staff resources necessary to implement the Act, \$98,600 was expended to procure the services of a consultant to assist the Commission. This left a total of \$613,900 available for grant awards. These funds had to be encumbered by June 30, 2017.

Table 3. Financial Report Breakdown

<b>Projects</b>	<b>Amount Awarded</b>	<b>Administration &amp; Facilitation Fees</b>	<b>Government 5% withholding</b>	<b>Total</b>
<b>WSAG-1</b> Restoration of the Hakioawa Watershed	\$100,000			
<b>WSAG-2</b> Lāna‘i Water Efficiency Improvement	\$30,000			
<b>WSAG-3</b> Engaging Community to Restore Wetland Kalo	\$74,293			
<b>WSAG-4</b> Kipahulu Forest Reserve Restoration	\$55,743			
<b>WSAG-5</b> Follow the Drop	\$61,952			
<b>WSAG-6</b> Wai For Hawai‘i	\$7,500			
<b>WSAG-7</b> Increasing Water Use Efficiency	\$26,936			
<b>WSAG-8</b> Wai‘anae Kai Forest	\$70,000			
<b>WSAG-9</b> Increasing Efficacy and Recharge at Ala Mahamoe	\$19,470			
<b>WSAG-12</b> Water Security for Agriculture	\$100,000			
<b>WSAG-13</b> Lo‘i Kalo as Retention Basins	\$68,006			
<b>Total Amount Awarded:</b>	\$613,900	\$98,900	\$37,200	\$750,000

**VII. OBJECTIVES AND BUDGET PROJECTIONS FOR THE FOLLOWING FISCAL YEAR**

As described above in Section V, all the funding appropriated under Act 172 has been allocated and encumbered. There are no additional funds available. The Commission will continue to administer the contracts that have been awarded to the projects selected by the WSAG to ensure the successful implementation of the Act.

**VIII. IMPACT OF PROJECTS**

As required by Act 172, funds will be used to fund priority projects and programs that increase water security and are recommended by the water security advisory group. Selected projects resulted in five programs related to water recharge, four programs in water conservation, and one program in water reuse. Projects are required to report on water savings, so after completion water savings per project will be quantified and recorded for tracking purposes. The following table shows estimations for total water savings per project based on calculations described in the proposals. For proposals that did not estimate ultimate water savings, the contractor attempted to quantify water savings based on related studies and statistics, and these calculations have been noted with an asterisk (\*). Quantifying water savings is particularly challenging for water recharge, and for some projects it was not possible to estimate a value (projects labeled ‘TBD’). The final amount of water saved will be calculated and reported by proposal implementers as required by the Request for Proposals.

Table 4. Estimated Water Savings Per Project

	Conservation	Reuse	Recharge	Total
Restoration of the Hakoawa Watershed			67.886 MG/ Year	<b>67.886 MG/ Year</b>
Lāna‘i Water Efficiency Improvement	TBD			TBD
Kalo Engaging Community to Restore Wetland Kalo			TBD	TBD
Kipahulu Forest Reserve Restoration			40.15 MG/Year	<b>40.15 MG/Year</b>
Follow the Drop*			(.232 - .305) MG/Year*	<b>.269MG/Year</b>
Wai For Hawai‘i*	.06 MG/ Year*			<b>.06 MG/ Year</b>
Increasing Water Use Efficiency/Upgrading to AMA	TBD			TBD
Wai‘anae Kai Forest		.0027 MG/ year	102 MG/Year	<b>102.0027 MG/Year</b>
Increasing Efficacy and Recharge at Ala Mahamoe			TBD	TBD
Water Security for Agriculture	3,361,630 MG/ Year			<b>3,361,630 MG/ Year</b>
Lo‘i Kalo as Retention Basins			TBD	TBD
<b>MGD Secured:</b>				<b>3,361,840.37 MG/Year + TBD</b>

**Note:** Conservation, reuse, and recharge impact estimations marked with an asterisk (\*) were calculated by consultant, not the project administrator. These calculations are estimations, not exact figures, and were quantified using available water saving studies and statistics.

## IX. RECOMMENDATIONS

Based on the experience gained implementing Act 172, the following recommendations are provided:

### *Specificity of Projects*

Based on the variety of proposals submitted for the Act 172 Water Security Grant, it is recommended that future request for proposals specify types of projects in more detail than just those that increase water conservation, reuse, and recharge. Targeting geographies based on hydrology and geology is one example of a specification that could increase recharge in valuable areas and meet the intent of the legislation. Specifying a range of dollar amounts for the grant awards in any new legislation would also allow for such guidance to be included in the request for proposals. Being more specific allows for a higher return on investment with more of an impact to Hawai‘i’s fresh water resources. Requesting proposals in specific water saving categories will help solidify projects that have higher water saving potential, thus accelerating Hawai‘i towards the target of creating 100 million gallons per day of additional fresh water capacity by 2030.

### *Increased Timeline*

The requirement to encumber funds before the end of the fiscal year prohibited a long advertisement period for proposals. This limited both the total number of applicants and their ability to secure matching funds. Increasing the amount of time allowed to administer the RFP would allow for more proposals to be submitted with the required matching funds.

### *Requirements and Exemptions*

The Act does not provide an exemption from Chapter 103D, HRS – Hawai‘i Public Procurement Code. The Commission understands that the competitive sealed proposals method of procurement is the most appropriate method. There is a conflict between the Act and existing statutes. For example, the Office of Information Practices has clarified that the Sunshine Law would apply to the WSAG, but there is a requirement for confidentiality under Chapter 103D, HRS. The Commission met several times with the State Procurement Office (SPO). SPO advised the Commission to seek exemptions needed to comply with provisions of the Act.

Since state procurement guidelines are incompatible with Hawai‘i’s Sunshine Law requirements and other requirements of Act 172, including the requirement of public deliberations for each water security grant proposal, allowing for future projects to be exempt from state procurement requirements, or certain aspects thereof, would streamline the process and make it less onerous.

In addition to procurement issues, other challenges that required resolution prior to the implementation of the Act included: the process for approval of recommended priority projects; potential conflict of interest for advisory group member organizations to receive grants; certification of the matching funds; application of Chapter 343, HRS – Environmental Impact Statements; project ownership; and liability. The Commission worked closely with state agencies having appropriate jurisdiction to ensure the success of the Act.

### *Program Administration*

With an additional staff position to support the administration of a water security grant program, the Commission would be a suitable administrator. The Department recommend that the Commission approve projects, instead of the Board, which would require revised Act language.