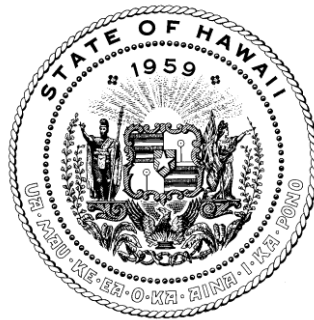


Report to the Twenty-Eighth Legislature
2016 Regular Session

**THE HAWAII DAM AND RESERVOIR SAFETY PROGRAM
STATE FISCAL YEAR 2015**



Prepared by the
Department of Land and Natural Resources
State of Hawaii

In response to
Section 179D-29, Hawaii Revised Statutes

November 2015

THE HAWAII DAM AND RESERVOIR SAFETY PROGRAM STATE FISCAL YEAR 2015

This report is prepared pursuant to Hawaii Revised Statutes (HRS) Section 179D-29 and covers the period from July 1, 2014 through June 30, 2015.

INTRODUCTION

The Department of Land and Natural Resources (Department), Engineering Division administers the “Hawaii Dam and Reservoir Safety Act of 2007”, HRS Chapter 179D (Dam and Reservoir Safety Program). This Act, in conjunction with Hawaii Administrative Rules (HAR) Chapter 13-190.1, “Dams and Reservoirs”, governs the design, construction, operation, maintenance, enlargement, alteration, repair, and removal of dams, reservoirs, and their appurtenant works in the State of Hawaii, to protect the health, safety, and welfare of the citizens of the State by reducing the risk of failure of the dams or reservoirs. Pursuant to HRS Section 179D-29, the Department shall submit an annual report to the Governor and the Legislature by January 5 of each year concerning the activities of the department relating to this chapter for the preceding fiscal year. The report shall include but not be limited to information on the following:

- (1) Approvals of plans and specifications for the construction of dams and reservoirs and for alterations, modifications, repairs, removal, and enlargements of any dams and reservoirs;
- (2) A listing of dam and reservoir safety inspections made;
- (3) Use of appropriated funds;
- (4) Rules adopted or amended;
- (5) Enforcement orders and proceedings;
- (6) Dam and reservoir failures and department evaluations of the reasons for the failure, if known; and
- (7) Any other available data regarding the effectiveness of the State's dam and reservoir safety program.

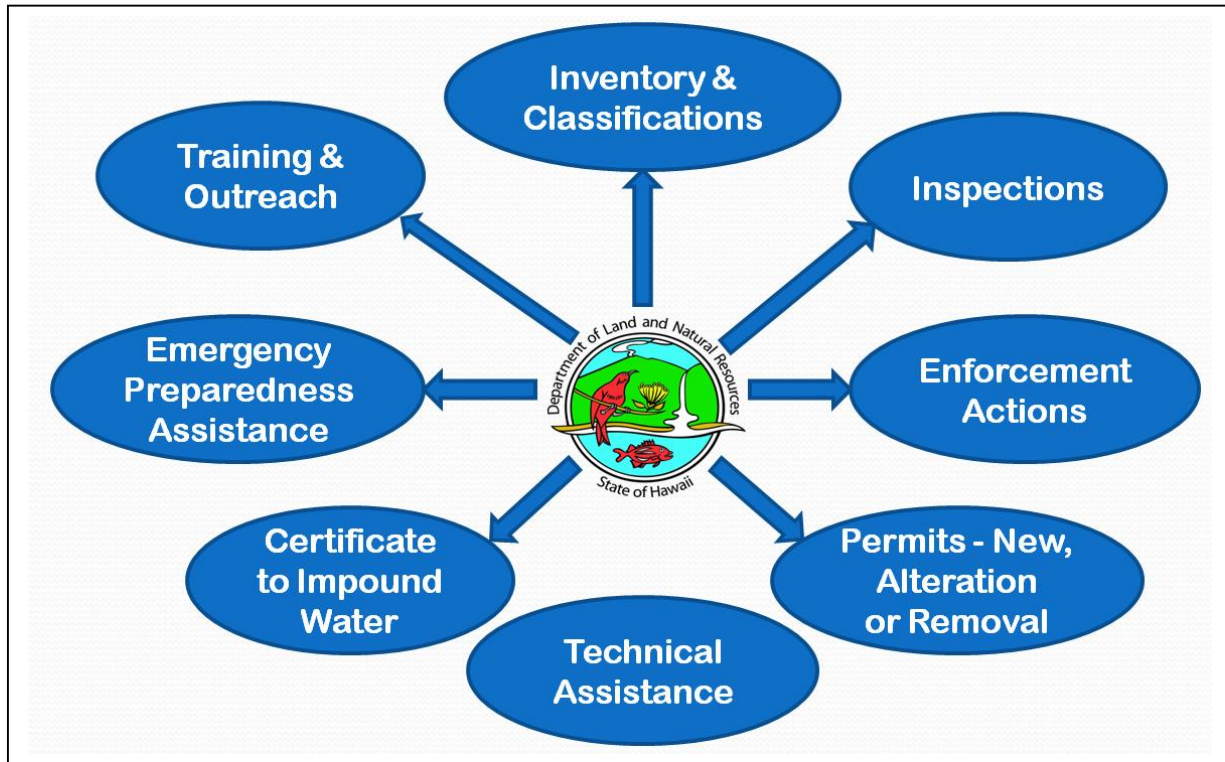
BACKGROUND

Historically, dams and reservoirs in Hawaii were predominately developed by the agriculture industry in the early 1900s. Today, dams and reservoirs continue to be used by the agriculture industry, in addition to providing storage for drinking water, flood control, hydro-electric, recreation and other purposes.

Only dams that meet a certain jurisdictional size criteria (height and volume) are regulated by the Department. Regulated dams are identified as having artificial barriers which are 25-feet or more in height or have an impounding capacity of 50-acre-feet (~17 million gallons) or more. Dams less than 6-feet in height, regardless of storage capacity, or that have a storage capacity not in excess of 15-acre-feet (5 million gallons) regardless of height do not fall under State of Hawaii jurisdiction, unless otherwise specified by the Hawaii Dam and Reservoir Safety Program.

THE HAWAII DAM AND RESERVOIR SAFETY PROGRAM

There are several core functions that make up the Hawaii Dam and Reservoir Safety Program:



Regulated Dam Inventory and Dam Classifications: The Department maintains a database of regulated structures, including classifications of each in regards to size, hazard potential and overall condition. The Department verified and updated their inventory of regulated structures in 2006 and verified the size classification. Hazard potential classifications were updated and assigned by the department as a product of their statewide dam break modeling analysis conducted between 2007 and 2011. The overall condition assessment classification is a relatively new field which the Hawaii Dam and Reservoir Safety Program is working to consistently apply across the state based on the condition assessments conducted on all regulated dams. All regulated dams were assessed and assigned an overall condition assessment classification during phase I inspections conducted statewide in 2007-2009. These condition assessment classifications are being updated based on ongoing inspection findings.

Dam Safety Inspections: Department staff routinely inspects regulated structures statewide and retains consultants as necessary, to confirm or provide additional assessments. The Department currently inspects dams on a two year frequency, and is reevaluating this frequency as it updates the existing hazard classifications for all the regulated dams statewide. The Department also conducts construction or other informal inspections that are in addition to these visual dam safety inspections. For a listings of the dams inspected this past fiscal year, see Section B.

Enforcement Actions: The Hawaii Dam and Reservoir Safety Act of 2007 authorized the Department to take enforcement action for both emergencies and any other violations of the Act. The Department has established administrative enforcement action procedures that are initiated by the following general deficiencies:

- Failure of dam and reservoir owners to comply with general requirements and responsibilities.
- Non-compliance with dam safety permit general terms and special conditions
- Non-compliance with certificate to impound terms and conditions

The Department did issue some penalty fines for delinquent submissions, however did not proceed with enforcement actions against any dam owner in Fiscal Year 2015 (See Section D)

Dam Safety Construction Permits: A permit from the Board of Land and Natural Resources (Board) is required for all dam construction, alteration, enlargement, modifications or removal work. Dams are uniquely engineered structures that require knowledge and experience in dam safety, particularly how to safely handle water flows in and out of the structure through appurtenant features, as well as mitigating the hazards of water passing through the dam embankment itself (seepage). Dams are often under sustained hydrostatic water loads, which if not properly designed can result in a failure of the dam. Dam safety permits allow the Department to review and check proposed improvements for concurrence with current dam safety practices and guidelines. Work that is not considered routine maintenance requires prior approval from the Board. Detailed procedures and requirements for this permitting process are provided in HAR Chapter 190.1. The Department also has developed additional guidance documents for dam owners and designers as well as a standard set of general permit requirements.

Certificate of Approval to Impound: The Certificate of Approval to Impound (CAI) water requirement was included in the Hawaii Dam and Reservoir Safety Act of 2007. Issuance of this certificate will be dependent on dam and reservoir owners ensuring their structures are remedied of critical deficiencies and meet minimum operational criteria.

The Department has developed guidelines and procedures for this certificate in coordination with dam owners on the implementation of this new requirement. The Department sent out notices to complete and submit CAI applications, to all owners of regulated dams and reservoirs in the state in Fiscal Year (FY) 2014. The Department received CAI applications for most of the regulated structures and are in the process of reviewing these submissions.

Understanding that many of these dams are over 80 years old, and almost all were constructed before the development of any modern dam safety standards, the department is working with owners to establish a reasonable improvement schedule for these facilities to meet current regulations. In the interim period, the department is working with owners to mitigate these deficiencies through operational restrictions or other types of mitigative actions.

Emergency Preparedness: HRS Chapter 179D requires that all dam owners of High and Significant Hazard Potential dams complete and submit an Emergency Action Plan (EAP) to the Department. The Department developed guidelines and an EAP template for dam owners to

utilize in formulating and executing a plan of action should a possible threat or deficiency occur on their dam facilities. The Department provides training and technical assistance to dam owners and emergency management officials to assist them in the completion and execution of the EAPs. Additionally, the Department is identified as a technical advisor during dam safety emergencies where an EAP is activated.

In April 2015, the Department coordinated EAP training and table top exercises on Oahu and Maui. Over 150 dam owners, operators, emergency managers, first responders and representative from supporting agencies participated in the event. The major objectives for this event was to provide training on basic technical understanding of typical dam failure modes and need of an EAP to mitigate these potential failures, run through several EAP test scenarios, and gain feedback from all participants on revising the current EAP template. Additional training exercises were conducted on Hawaii and Kauai with approximately 130 participants attending those exercises.

The Department is working on providing an updated EAP template based on the feed back from the recent testing and training event and will be launching a new online EAP template in the upcoming year. This online version will make creating and updating EAPs easier and faster and provide online access to current EAPs for emergency managers and first responders.

Training and Outreach: The Department provides technical assistance to the dam owners, operators and consultants, as well as to the broader community of hazard mitigation partners and agencies. The Department works closely with the Association of State Dam Safety Officials, (ASDSO) to collaborate on public outreach and national awareness of the importance of dam and reservoir safety programs. Most recent training seminars included Operation and Maintenance Training and Emergency Action Planning Training.

This past FY 2015, the Department provided travel and registration funding for one person from the County of Maui Public Works Department to attend the Association of State Dam Safety Official's (ASDSO) Annual Conference in San Diego. This conference includes over 3 days of technical sessions on Dam Safety related topics and also provides the opportunity to network with other dam owners, equipment suppliers and consultants. The Department is exploring ways in which we can expand this type of educational outreach to ASDSO sponsored training events.

FUNDING

The Hawaii Dam and Reservoir Safety Program is funded under the State Land and Natural Resources LNR 810 Program, Prevention of Natural Disasters, and receives operational funding from two state special funds and one federal grant from the United States Department of Homeland Security, Federal Emergency Management Agency (FEMA). The following is a breakdown of incoming funds to the department for its dam safety activities in FY 2015:

<u>Source</u>	<u>Approximate Funding</u>
State of Hawaii – Special Land and Development Fund	\$ 445,000
State of Hawaii – Dam and Reservoir Safety Special Fund (Previous FY carry over)	\$ 1,620,317
Annual Dam Safety Fees	\$ 616,756
Application Fees & Other Revenues (including fines)	\$ 27,729
<u>FEMA – National Dam Safety Program Grant (Federal FY 2014)</u>	<u>\$ 60,247</u>
Total Available Funding	\$ 2,770,049

Expenditures from the various funding sources were made as follows:

	Operating Special Fund	Dam and Reservoir Safety Special Fund	Federal Funds	Total
Personnel Services	\$421,662	\$0	\$0	\$421,662
Consultant Services	\$0	\$113,014	\$0	\$28,833
Inspections Costs (including travel)	\$9,815	\$17,729	\$0	\$27,509
Training Expense (including travel)	\$0	\$3,158	\$7,844	\$11,001
Other Expenses (Supplies, Operating & Equipment)	\$7,305	\$17,808	\$7,640	\$32,754
B&F Management Fee	\$4,599	\$37,943	\$0	\$42,542
	\$443,381	\$189,651	\$15,484	\$648,517

Funding for the State LNR 810 Program supports multiple programs which include the State oversight of the National Flood Insurance Program, the State General Flood Control Plan and the Dam and Reservoir Safety Program. An attempt was made to isolate the dam safety portion of the allocation and expenditures in the above figures, however some overlap in expenditures between these programs are unavoidable. Most of the operating special funds were expended on salaries.

Other major expenditures were for consultant contracts and travel. Travel expenses were incurred mainly from neighbor island inspections costs, and also include the costs for out-of-state training of dam safety personnel.

The Dam and Reservoir Safety Special Fund was intended to maintain a funding reserve should there be a dam safety emergency. The Hawaii Dam and Reservoir Safety Act of 2007 initially allocated \$2,000,000 to the Hawaii Dam and Reservoir Safety Program, however only \$1,000,000 was released to the Department. With the new HAR becoming effective at the end of FY 2012, the Department was able to start collecting Dam Safety Annual Fees from regulated dam owners. The collection of these fees has enabled the Department to meet the targeted \$ 700,000 minimum emergency reserve. The Department is starting on several contracts to start installing remote water level gages to enable the Department to better monitor and assess regulated dams and reservoirs remotely.

DAM SAFETY ACTIVITIES:

- A. Approvals of plans and specifications for the construction of dam and reservoirs and for alterations, modifications, repairs, removals, and enlargements of any dams and reservoirs;

During FY 2015, three (3) permit applications, received in previous years, were issued dam safety alteration permits.

Dam Safety Permits Issued:

Dam Name	Description of Improvements	County	Permit Date
Nuuanu No.4 Reservoir	Repair and Improvement	Oahu	April 8, 2015
Happy Valley Flood Prevention	Dam Removal	Maui	October 13, 2014
Helemano 16 Reservoir	Dam Removal	Oahu	September 9, 2015

The following is a listing of active permits in FY 2015 and their current status.

Dam Name	Description of Improvements	County	Permit Status
Kehalani Retention Basin	New Construction	Maui	Under Construction, Defects observed which need to be resolved
Kapalaalaea Reservoir	Sinkhole repair	Maui	Permit approved. Piping defect found during construction, Project on Hold
Omao Reservoir	Dam removal	Kauai	Permit approved. No construction to date.
Upper Kapahi Reservoir	Dam Safety Improvements	Kauai	Under construction, Re-scope to Breach
Hanamaulu Field 21	dam removal	Kauai	Waiting for Closing Documentation

Dam Name	Description of Improvements	County	Permit Status
Wailua Reservoir	dam remediation	Kauai	Waiting for Closing Documentation
Kolea Reservoir	Dam removal	Maui	Project Completed
Aahoaka Reservoir	dam remediation	Kauai	Construction stopped – Re-Scope / Redesign project
Waimea 60 MG Reservoir (Puukapu)	Dam improvement - lining, outlet slip line, upstream control, sub-drain	Hawaii	Permit approved. Construction not started.
Paauilo Reservoir	Dam improvement - upstream control, vegetation	Hawaii	Permit approved. Construction not started.
Puu Pulehu Reservoir	Dam improvement - buttress w/ sub-drain, rehab DS slope, spillway imp	Hawaii	Permit review in progress
Waikaloa Reservoir No. 1	Major repair.	Hawaii	Permit review in progress
Maunaolu Reservoir	Drainage improvements	Oahu	Permit scope expanded, construction pending
Ahukini Reservoir	Removal	Kauai	Completed
Nuuanu No. 4 Reservoir	Repair and improvement	Oahu	Permit Approved, Construction Pending
Happy Valley Flood Prevention	Removal - Undersized	Maui	Dam Removed from Jurisdiction based on size.
Helemano 16	Removal	Honolulu	In Construction

Additionally, the Department assisted many dam and reservoir owners in the review of preliminary designs, and proposed work. The following are a listing of those reservoirs that were engaged in this type of technical assistance.

Dam Name	Description of Improvements	County	Permit Status
Puu Lua Reservoir	Dam Improvements	Kauai	Preliminary feasibility investigation for possible Pump Storage Hydro project.
Kaneha Reservoir	Dam Improvements - stability and seepage modifications	Kauai	Permit pending, preliminary discussions
Kalihiwai Reservoir	Spillway and Stability Improvements	Kauai	Permit pending, preliminary discussions
Lower Kapahi Reservoir	Removal	Kauai	Pending submission of application
Haiku Reservoir	Outlet work seepage modifications	Maui	Permit pending, preliminary discussions

Dam Name	Description of Improvements	County	Permit Status
Alexander Dam	Outlet Improvements	Kauai	Review of Ongoing Maintenance Work
Manuhonuhonu Reservoir	Install spillway channel	Kauai	Project probably to be cancelled
Oahu Reservoir 155	Dam improvement - lining and upgrades	Oahu	Permit application pending. Upgrade designed by US Army Corps of Engineers
Ukumehame Reservoir	Removal	Maui	Permit pending, review of conceptual design
Reservoir 255	Dam improvement - lining and upgrades	Oahu	Non-jurisdictional dam, being designed by US Army Corps of Engineers for DOA

B. A listing of dam and reservoir safety inspections;

In FY 2015, the Hawaii Dam and Reservoir Safety Program staff conducted 80 visual dam safety inspections on regulated dams. In addition to these inspections, the department also conducted 25 informal dam safety inspection visits (including post earthquake inspections) and conducted 4 inspections to monitor construction activity. Listings of the 80 visual dam safety inspections are provided below:

Dams in Honolulu County

State ID	Dam Name	Type of Inspection	Date
OA-0001	Nuuanu Dam No. 4	Visual Dam Safety	13-Nov-14
OA-0021	Kemoo 5 Reservoir	Visual Dam Safety	28-Jan-15
OA-0124	Kaneohe Dam	Visual Dam Safety	24-Nov-14
OA-0129	Waimanalo Reservoir	Visual Dam Safety	7-Aug-14
OA-0149	Maunaolu Reservoir	Visual Dam Safety	14-Nov-14

Dams in Maui County

State ID	Dam Name	Type of Inspection	Date
MA-0046	Waikamoi Dam No. 2	Visual Dam Safety	18-Nov-14
MA-0047	Piiholo Reservoir	Visual Dam Safety	19-Nov-14
MA-0048	Olinda Reservoir	Visual Dam Safety	18-Nov-14
MA-0054	Horner Reservoir	Visual Dam Safety	29-Oct-14
MA-0056	Hanakaoo Reservoir	Visual Dam Safety	29-Oct-14
MA-0057	Kahoma Reservoir	Visual Dam Safety	12-Jun-15
MA-0058	Honokowai Reservoir	Visual Dam Safety	24-Oct-14
MA-0059	Reservoir 140	Visual Dam Safety	24-Oct-14
MA-0070	HC&S Reservoir 20	Visual Dam Safety	29-Jun-15
MA-0072	HC&S Reservoir 22	Visual Dam Safety	30-Jun-15
MA-0075	HC&S Reservoir 30	Visual Dam Safety	30-Jun-15
MA-0076	HC&S Reservoir 33	Visual Dam Safety	29-Jun-15

State ID	Dam Name	Type of Inspection	Date
MA-0077	HC&S Reservoir 40	Visual Dam Safety	29-Jun-15
MA-0078	HC&S Reservoir 42	Visual Dam Safety	19-May-15
MA-0079	HC&S Reservoir 52	Visual Dam Safety	28-Apr-15
MA-0082	HC&S Reservoir 70	Visual Dam Safety	24-Mar-15
MA-0083	HC&S Reservoir 73	Visual Dam Safety	25-Mar-15
MA-0084	HC&S Reservoir 74	Visual Dam Safety	25-Mar-15
MA-0085	HC&S Reservoir 80	Visual Dam Safety	28-Apr-15
MA-0086	HC&S Reservoir 81	Visual Dam Safety	28-Apr-15
MA-0087	HC&S Reservoir 82	Visual Dam Safety	29-Apr-15
MA-0088	HC&S Reservoir 84	Visual Dam Safety	29-Apr-15
MA-0089	HC&S Reservoir 90	Visual Dam Safety	24-Mar-15
MA-0090	HC&S Reservoir 92	Visual Dam Safety	24-Mar-15
MA-0091	Peahi Reservoir	Visual Dam Safety	21-Jan-15
MA-0092	Papaaea Reservoir	Visual Dam Safety	21-Jan-15
MA-0093	Kaupakalua Reservoir	Visual Dam Safety	4-Dec-14
MA-0094	Kapalaalaea Reservoir	Visual Dam Safety	21-Jan-15
MA-0095	Haiku Reservoir	Visual Dam Safety	4-Dec-14
MA-0096	Pauwela Reservoir	Visual Dam Safety	4-Dec-14
MA-0125	Happy Valley Flood Prevention	Visual Dam Safety	21-Aug-14
MA-0126	Kahana Nui Dam	Visual Dam Safety	12-Sep-14
MA-0127	Napili 4-5 Desilting Basin	Visual Dam Safety	21-Aug-14
MA-0128	Napili 2-3 Desilting Basin	Visual Dam Safety	12-Sep-14
MA-0130	Honokowai Structure #8	Visual Dam Safety	12-Sep-14
MA-0132	Upper Field 14 Reservoir	Visual Dam Safety	24-Oct-14
MA-0133	Puu Koa Reservoir	Visual Dam Safety	23-Oct-14
MA-0134	Kaopala Basin	Visual Dam Safety	12-Sep-14
MA-0138	Kahakapao Reservoirs	Visual Dam Safety	18-Nov-14
MA-0139	Maui Field 290 Reservoir	Visual Dam Safety	23-Oct-14
MA-0140	Ukumehame Reservoirs	Visual Dam Safety	29-Jun-15
MA-0141	Kehalani Offsite Retention Basin	Visual Dam Safety	2-Apr-15
MA-0142	Middle Field 14 Reservoir	Visual Dam Safety	24-Oct-14
MA-0143	Kaili Ili Reservoir	Visual Dam Safety	23-Oct-14
MA-0144	Mahinahina Reservoir	Visual Dam Safety	19-Nov-14
MA-0150	Wailuku Water Reservoir 6	Visual Dam Safety	12-Jun-15
MA-0151	Wailuku Water Reservoir 10	Visual Dam Safety	19-May-15
MA-0152	Waikamoi Reservoirs	Visual Dam Safety	18-Nov-14
MA-0153	Plantation Reservoir	Visual Dam Safety	24-Oct-14
MO-0041	Kualapuu Reservoir	Visual Dam Safety	24-Feb-15

Dams in Hawaii County

State ID	Dam Name	Type of Inspection	Date
HA-0043	Puukapu Watershed Retarding Dam R-1	Visual Dam Safety	6-Nov-14
HA-0051	Hawi No. 5 Reservoir	Visual Dam Safety	6-Nov-14

Dams in Kauai County

State ID	Dam Name	Type of Inspection	Date
KA-0010	Waiakalua Reservoir	Visual Dam Safety	7-Apr-15
KA-0013	Upper Kapahi Reservoir	Visual Dam Safety	2-Jul-14
KA-0024	Kalihiwai Reservoir	Visual Dam Safety	13-Jan-15
KA-0061	Lower Kapahi Reservoir	Visual Dam Safety	2-Jul-14
KA-0063	Aahoaka Reservoir	Visual Dam Safety	13-Jan-15
KA-0098	Alexander	Visual Dam Safety	2-Jun-15
KA-0101	Hukiwai Reservoir	Visual Dam Safety	31-Mar-15
KA-0102	Ioleau Reservoir	Visual Dam Safety	31-Mar-15
KA-0103	Aepo Reservoir	Visual Dam Safety	17-Sep-14
KA-0104	Huinawai Reservoir	Visual Dam Safety	17-Sep-14
KA-0106	Kumano Reservoir	Visual Dam Safety	1-Oct-14
KA-0107	Puu O Hewa Reservoir	Visual Dam Safety	27-May-15
KA-0108	Kaupale Reservoir	Visual Dam Safety	15-Oct-14
KA-0110	Aepoalua Reservoir	Visual Dam Safety	17-Sep-14
KA-0111	Aepoekolu Reservoir	Visual Dam Safety	1-Oct-14
KA-0112	Aepoeha Reservoir	Visual Dam Safety	1-Oct-14
KA-0113	Omao Reservoir	Visual Dam Safety	15-Oct-14
KA-0114	Piwai Reservoir	Visual Dam Safety	15-Oct-14
KA-0115	Pia Mill Reservoir	Visual Dam Safety	27-May-15
KA-0119	Mauka Reservoir	Visual Dam Safety	27-May-15
KA-0145	Kauai Lagoons	Visual Dam Safety	5-May-15
KA-0146	Halaula Reservoir	Visual Dam Safety	12-Mar-25
KA-0155	Pond No. 1 at Kauai Ranch	Visual Dam Safety	12-Mar-25

Other Inspections Conducted Statewide

State ID	Dam Name	Type of Inspection	Date
KA-0012	Kapaia Reservoir	Informal - UHSLC Gage	7-Apr-15
KA-0024	Kalihiwai Reservoir	Informal - UHSLC Gage	7-Apr-15
KA-0060	Wailua Reservoir	Informal - UHSLC Gage	7-Apr-15
KA-0099	Waita Reservoir	Informal - UHSLC Gage	7-Apr-15
MA-0074	HC&S Reservoir 24	Informal - UHSLC Gage	18-Feb-15
MA-0093	Kaupakalua Reservoir	Informal - UHSLC Gage	18-Feb-15

State ID	Dam Name	Type of Inspection	Date
KA-0010	Waiakalua Reservoir	Informal - UHSLC	25-Jun-15
KA-0105	Elima Reservoir	Informal - Reservoir Drained	31-Mar-15
HA-0040	Waikoloa Reservoir No. 1	Informal - Post Earthquake	26-Aug-14
HA-0042	Waimea 60 MG Reservoir	Informal - Post Earthquake	25-Aug-14
HA-0051	Hawi No. 5 Reservoir	Informal - Post Earthquake	25-Aug-14
HA-0122	Waikoloa Reservoir No. 2	Informal - Post Earthquake	26-Aug-14
HA-0123	Puu Pulehu Reservoir	Informal - Post Earthquake	25-Aug-14
HA-0131	Paaulo Reservoir	Informal - Post Earthquake	25-Aug-14
HA-0136	Waikoloa Reservoir No. 3	Informal - Post Earthquake	26-Aug-14
HA-0147	Punawai Reservoir	Informal - Post Earthquake	25-Aug-14
MA-0048	Olinda Reservoir	Informal - Polyurea Liner	9-Dec-14
MA-0152	Waikamoi Reservoirs	Informal - Polypropolene Liner	9-Dec-14
MA-0095	Haiku Reservoir	Informal - Outlet Piping	2-Apr-15
KA-0024	Kalihiwai Reservoir	Informal - Outlet Gate Repairs	25-Jun-15
UKA-1019	Hanini Reservoir	Informal - Jurisdictional size	17-Sep-14
MA-0074	HC&S Reservoir 24	Informal - EAP Training	20-Apr-15
OA-0017	Wahiawa Dam	Informal - EAP Training	22-Apr-15
MA-0141	Kehalani Offsite Detention Basin	Informal - Channel	21-Aug-14
MA-0095	Haiku Reservoir	Informal - Annular Seepage - NOD	9-Dec-14
KA-0013	Upper Kapahi Reservoir	Construction	27-May-15
KA-0013	Upper Kapahi Reservoir	Construction	2-Jun-15
KA-0013	Upper Kapahi Reservoir	Construction	25-Jun-15
KA-0044	Ahukini Reservoir	Construction	1-Oct-14

C. Rules adopted or amended;

No rules were adopted or amended.

D. Enforcement orders and proceedings;

The Department did issue some penalty fines for delinquent submissions to the dam owner of the following dams in FY 2015:

KA-10	Waiakalua Reservoir (Delinquent Annual Fee)
OA-45	Helemano Reservoir (Delinquent Annual Fee)
KA-62	Twin Reservoirs (Delinquent Annual Fee)
MA-58	Honokowai Reservoir (Delinquent Annual Fee)
MA-142	Middle Field 14 Reservoir (Delinquent Annual Fee)
MA-132	Upper Field 14 Reservoir (Delinquent Annual Fee)

The Hawaii Dam and Reservoir Safety Program had one enforcement activity in FY 2015.

KA-62 Twin Reservoirs (Delinquent Annual Fee)

- E. Dam and reservoir failures and department evaluations of the reasons for the failure, if known;

There were no known dam failures or incidents in FY 2015.

- F. Other available data regarding the effectiveness of the Hawaii Dam and Reservoir Safety Program.

The Hawaii Dam and Reservoir Safety Program is working with dam owners to EAP for their facilities. EAPs are required by statute for only high and significant hazard potential classifications of dams. Out of the 133 regulated dams in FY 2015, 123 are classified as high or significant hazard potential structures, and only three high hazard dams do not have EAPs on file. Two of these were recently added to the State inventory and the Department is working with the owners to complete these plans. The following is a summary of EAPs on file with the Department for all classifications.

Number of Dams with EAPs						
FY 2004	FY 2007	FY 2010	FY 2012	FY 2013	FY 2014	FY 2015
12	55	121	125	130	127	130