

Water Quality Planning and the Department of Health

Department of Land and Natural Resources
Water Commission Meeting
October 16, 2013

Gary Gill
Deputy Director
Environmental Health Administration



Presentation Agenda

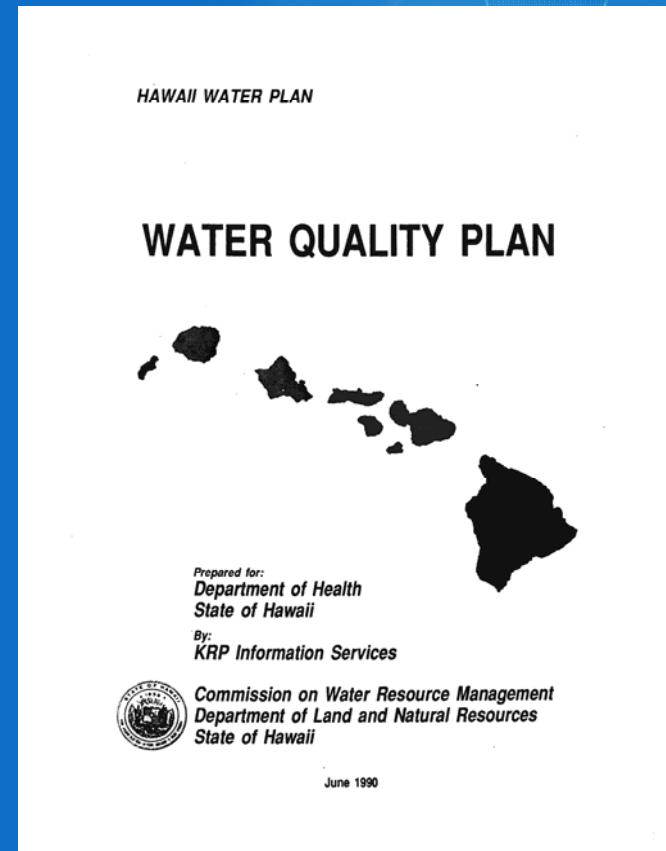
- **Proposed Schedule to Update the Water Quality Plan**
- **Water Quality Plan Section Update Changes and Challenges**
 - Clean Water Branch
 - Safe Drinking Water Branch
 - Wastewater Branch
- **Water Quality Plan in the Hawaii Water Plan**



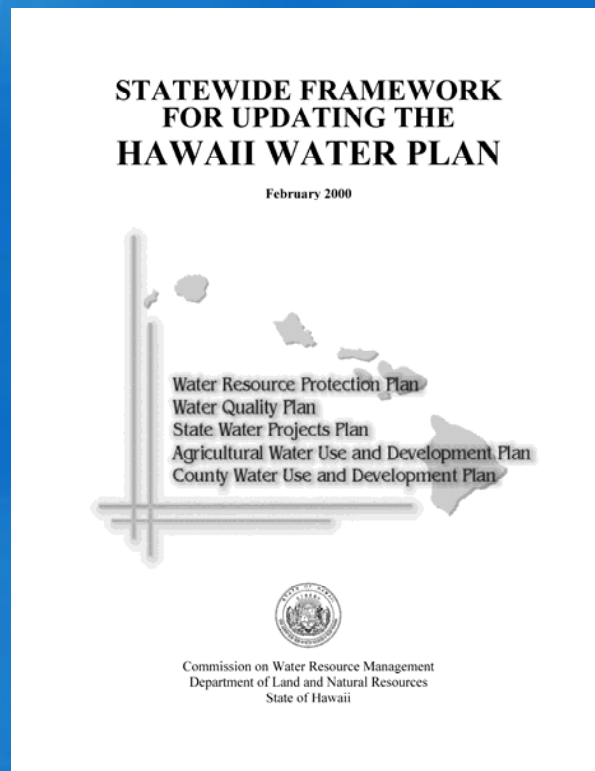
Current approved *Water Quality Plan*, dated June 1990

"...describes the DOH and other programs that are in place and in the process of development that provide protection for ground and surface waters, particularly those that are existing or potential sources of drinking water."

Revised Water Quality Plan in 1992 (not adopted)



Utilize *Framework for Updating the Hawaii Water Plan*, dated February 2000



Recommended Plan Elements:

- Source Water Assessment Program
- Source Water Protection Strategy
- Other DOH Programs (e.g. UIC, Wastewater, etc.)
- Developing Effective Linkages Between Inter-Agency Programs
- Recommended WQP Guidelines



Proposed Schedule to Update Water Quality Plan

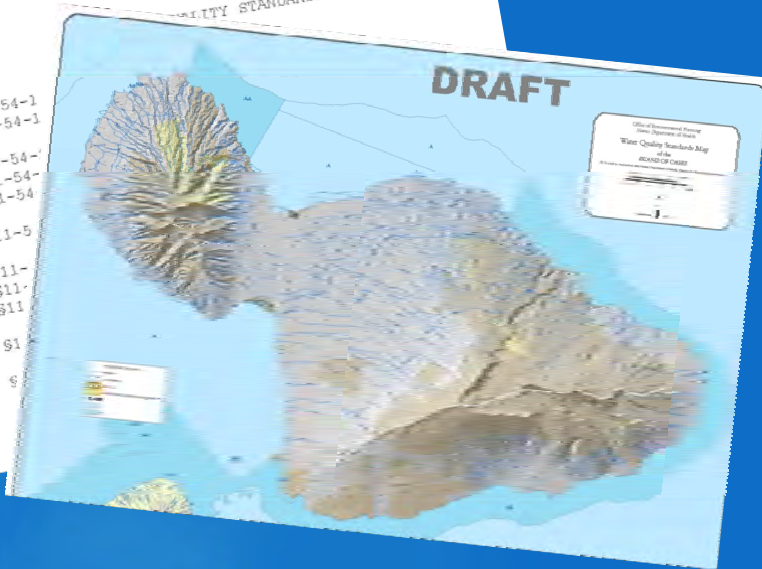
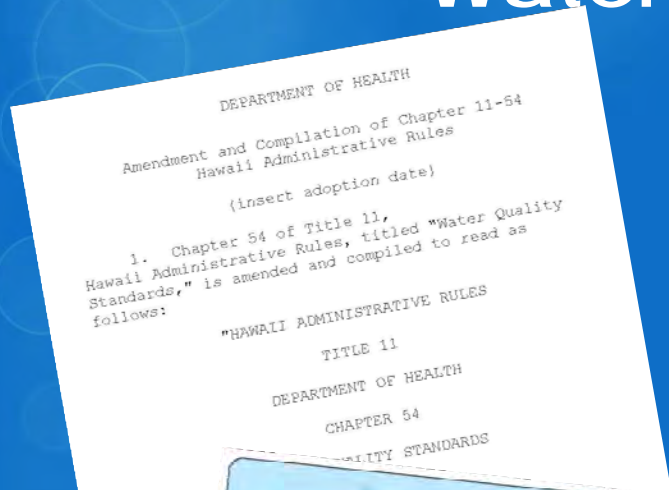


Clean Water Branch Update

- **Surface Water Quality Management Program**
 - Water Quality Standards
 - Beach Monitoring Program
 - Total Maximum Daily Load (TMDL)
 - Polluted Runoff Control Program



CWB Changes and Challenges: Water Quality Standards



- Public hearing held August 21, 2013 on revisions including two (2) substantive modifications:
 - Prevent water quality degradation from thermal discharges
 - Allow new statistical testing procedure (test of significant toxicity [TST]) for whole effluent toxicity (WET) test
- CWB compiled response to comments.
- Internal approvals forthcoming.



CWB Changes and Challenges: Beach Monitoring Program

Goal is to maintain coastal waters for the health and safety of people, plants, and animals.



Royal-Moana Beach
Waikiki, Oahu

Tier 1 Beaches

- most important and threatened - monitored 2x/week



Big Beach
Makena, Maui

Tier 2 Beaches

- moderately used - monitored 1x or 2x/6 month period



Honopu Beach
within
Na Pali
Coast
State
Park,
Kauai

Tier 3 Beaches

- hard to access, no houses nearby, and very little anthropogenic influences - monitored 1x/yr

Reduction in monitoring frequency due to
Reduction in Force, added duties, and EPA funding.

Water Quality Plan ~ CWRM Meeting ~ October 16, 2013



CWB Changes and Challenges: Beach Monitoring Program

Water Quality Data: Enterococci and Clostridium

<http://emdweb.doh.hawaii.gov/CleanWaterBranch/WaterQualityData/default.aspx>

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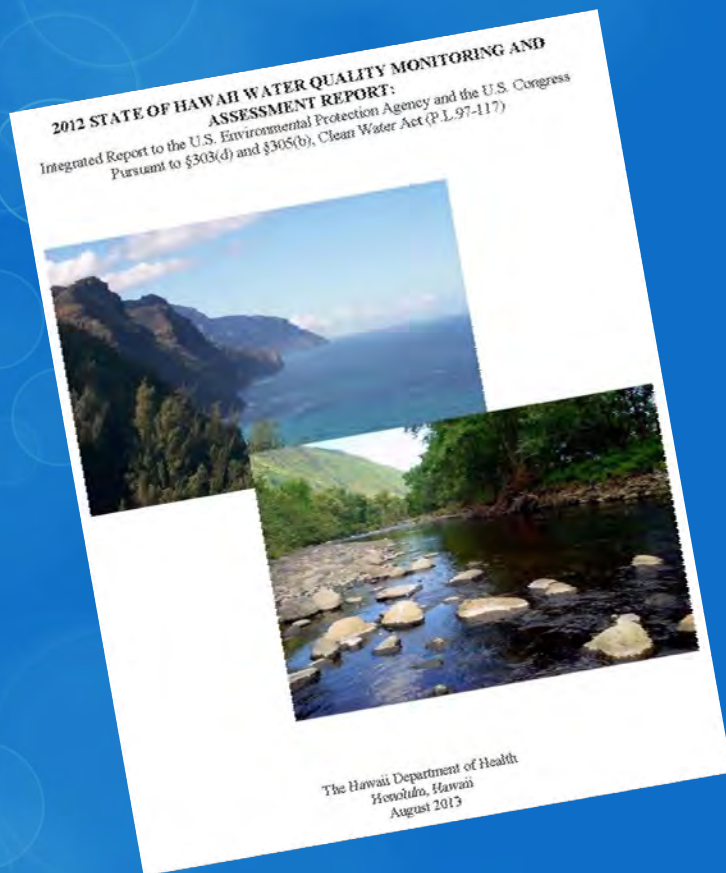
Clean Water Branch
CWB Home | About CWB | Administrative Procedures | Contact Us | [Current Warnings, Advisories, and Postings](#) | Forms | General Health Advisory | Integrated Report and Total Maximum Daily Loads | Ocean Recreation Links | Polluted Runoff Control Program | Public Notices and Update | Sample Sites | Standard NPDES Permit Conditions | Water Quality Data | Water Quality Standards | Workshop Presentations

Water Quality Data

Location Name	Identifier	Island	Date	Time	Enterococci	Clostridium	Comments	
Hukilau Hotel Shoreline	000654	Maui	10/10/2013	5:34 AM	0010	0001	tide rising, flat, no rain	Select
Kihei (South)	000676	Maui	10/10/2013	8:12 AM	0031	0001	high tide, flat, no rain	Select
Kanaha Beach	000677	Maui	10/10/2013	5:51 AM	0010	0002	tide rising, flat, no rain	Select
Kamaole Beach #1	000681	Maui	10/10/2013	8:23 AM	0010	0001	high tide, flat, no rain	Select
Kamaole Beach #3	000683	Maui	10/10/2013	8:35 AM	0010	0001	high tide, flat, no rain	Select
Maalaea Condos	000687	Maui	10/10/2013	6:41 AM	0010	0002	tide rising, flat, no rain	Select
Wailea Beach	000691	Maui	10/10/2013	8:50 AM	0010	0001	high tide, flat, no rain	Select
				7:17				



CWB Changes and Challenges: Total Maximum Daily Load (TMDL)



- For each listed waterbody/pollutant combination, establish waterbody's loading capacity and allocate among contributing point and nonpoint sources
- Provide analytical basis for planning and implementing pollution controls
- Provide assistance with identifying & prioritizing some restoration projects using 319 funds
- Incorporate CWB permit program elements into TMDL process
- Collaborate with counties and other state agencies to prioritize watersheds for restoration efforts

Approved by U.S. EPA on
September 20, 2013

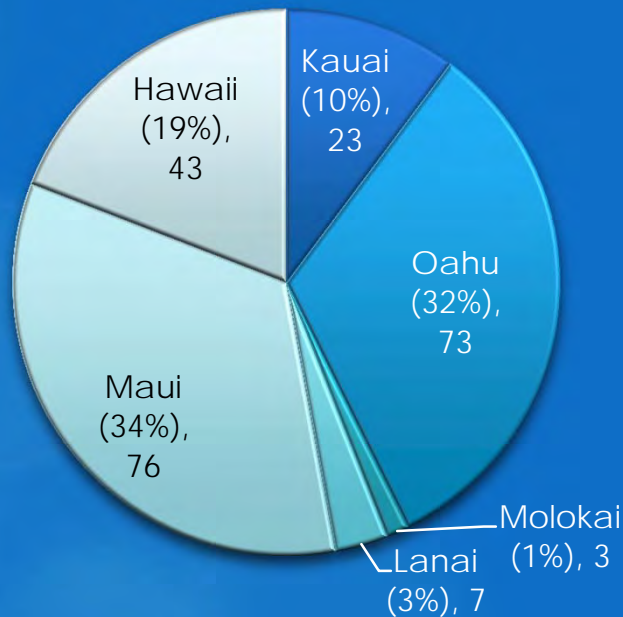


CWB Changes and Challenges: Total Maximum Daily Load (TMDL)

48 TMDL Developed
313 water bodies requiring a TMDL

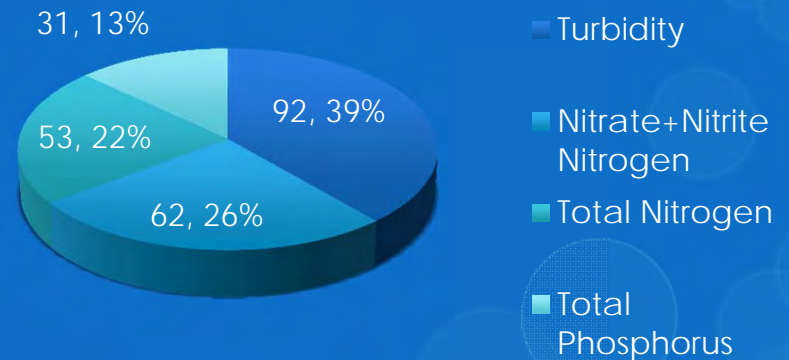
Marine Waters

225 Impaired Marine Waters
and % Segments per island



Inland Waters

88 Impaired Stream Segments
Most common listing of pollutant exceedance & % in streams



CWB Changes and Challenges: Polluted Runoff Control Program



- Prevent environmental degradation due to nonpoint source pollution
- Increase the amount of resources devoted to the control of polluted runoff and focus on collaborative efforts to more effectively utilize the limited resources
- Provide outreach and education to the community – partner with other agencies

Contractor selected to update project.
U.S. EPA to review scope.



Safe Drinking Water Branch Update

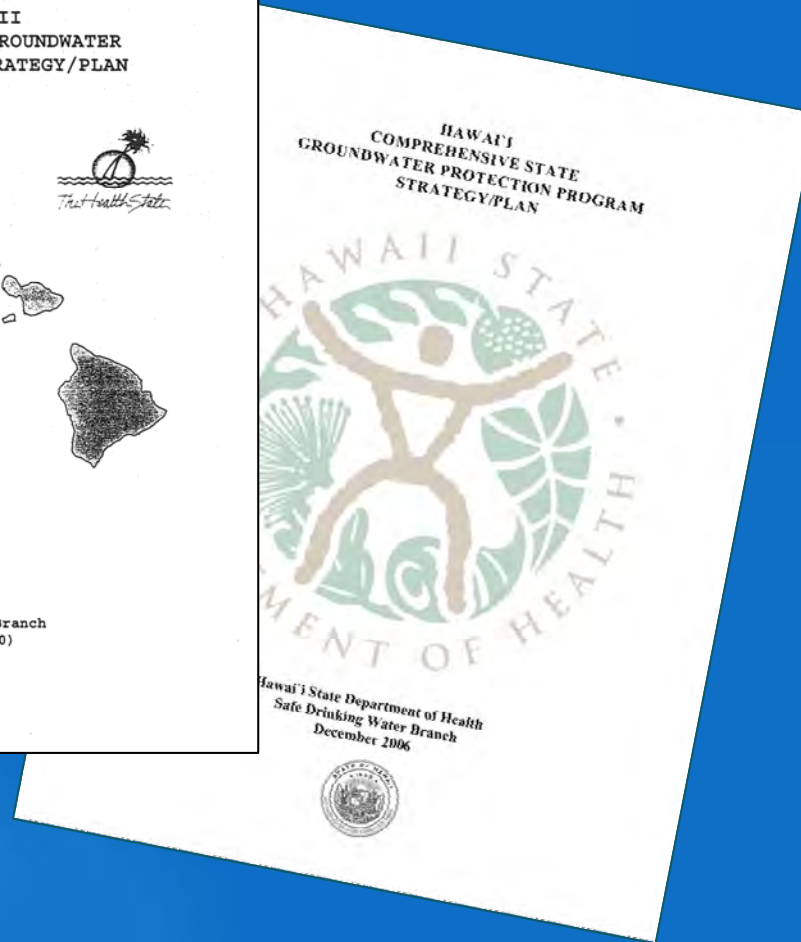
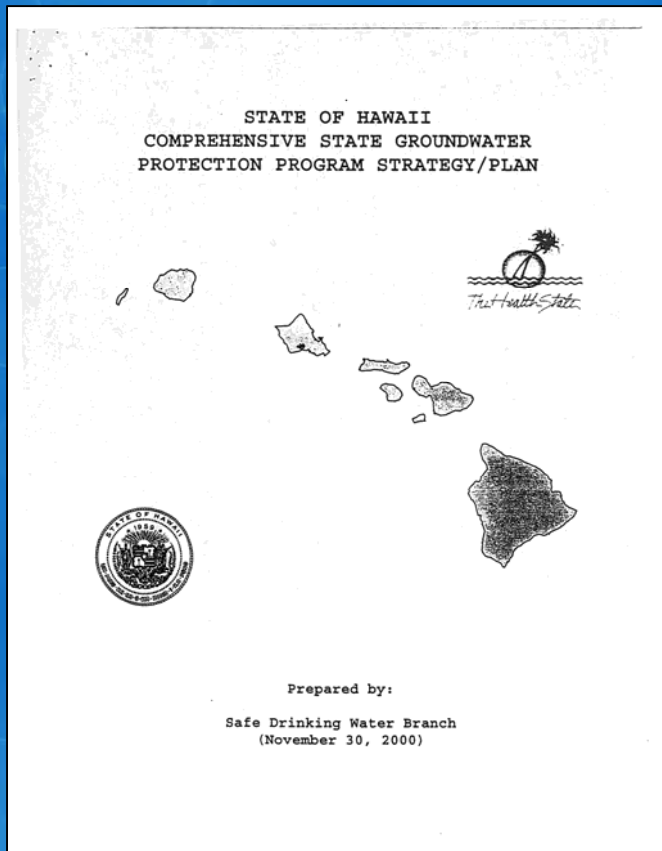
- Comprehensive State Groundwater Protection (CSGWP) Program Strategy/Plan
- Source Water Assessment and Protection (SWAP) Program
- Underground Injection Control (UIC) Program
- Groundwater Contamination Viewer



Hakalau Iki Spring Box, Hamakua, Hawaii
>\$690,000 DWSRF project



SDWB Changes and Challenges: CSGWP Program Strategy/Plan



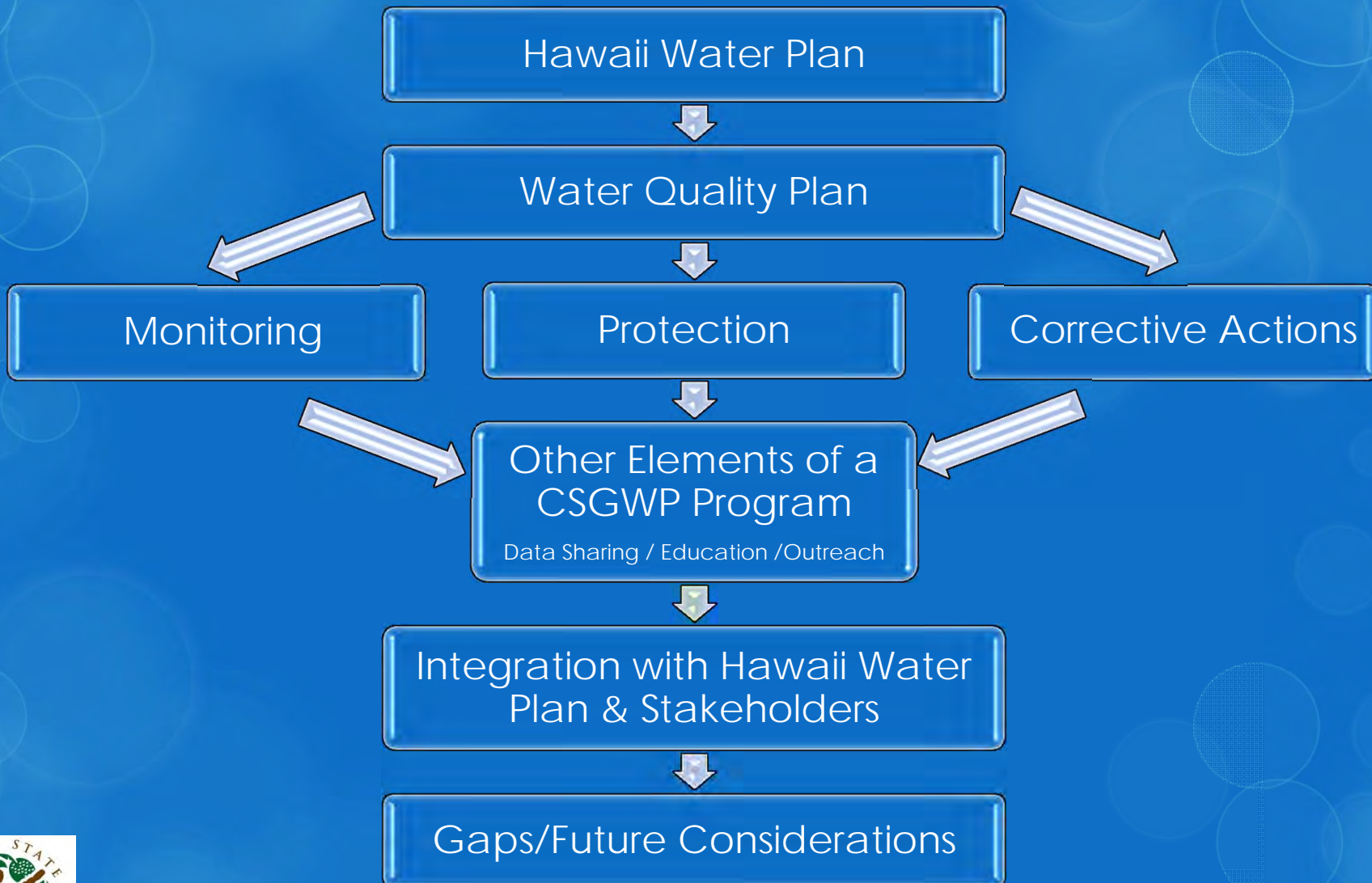
Initial CSGWP Program Strategy/Plan prepared in November 2000.

2006 draft Strategy/Plan submitted to and considered to be inadequate by U.S. EPA.

SDWB to draft and submit new CSGWP Program Strategy/Plan to U.S.EPA consistent with WQP.



CSGWP Program Consistent with WQP



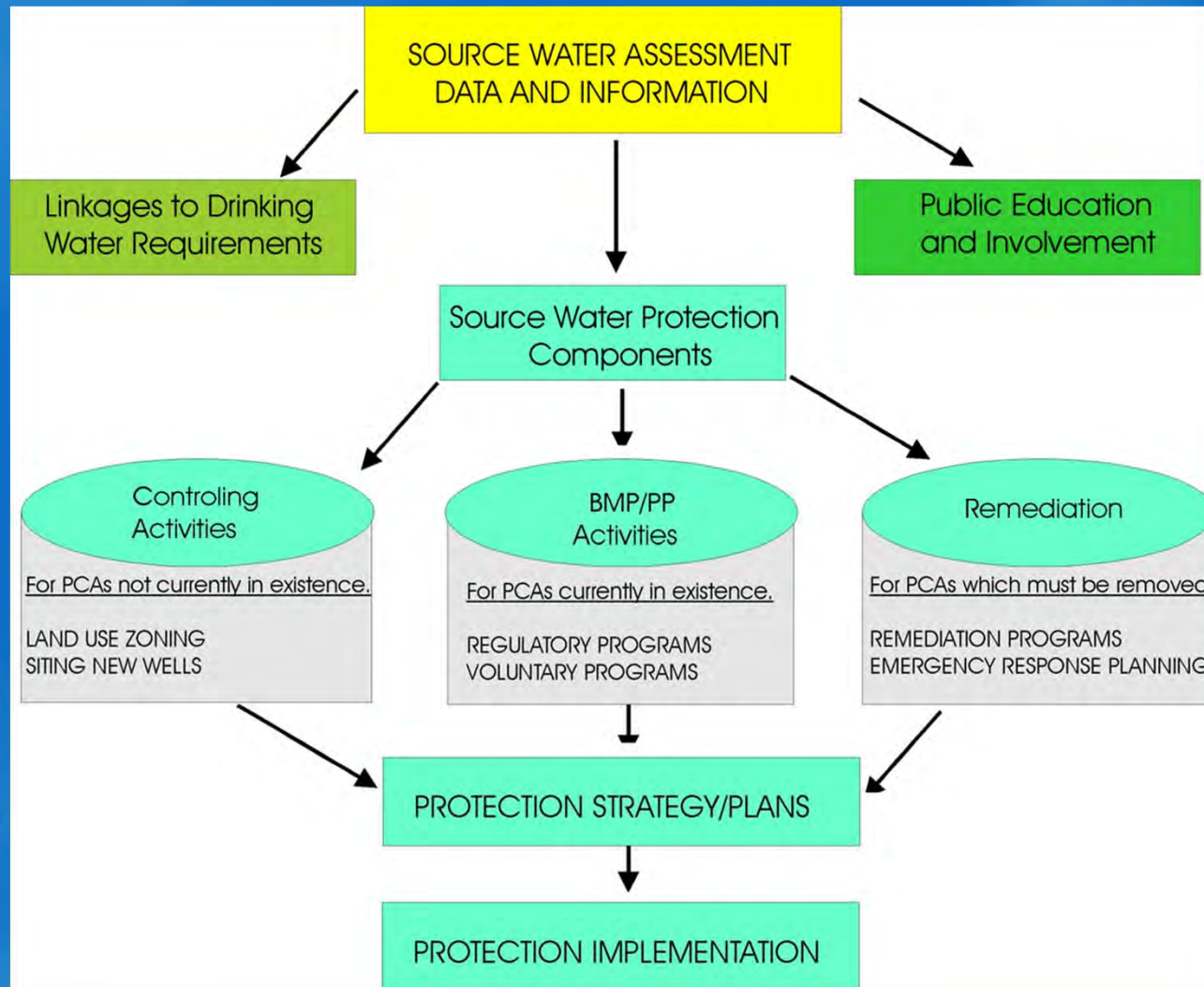
SDWB Changes and Challenges: SWAP Program



- >500 assessments conducted (all sources to date)
 - Report updated in 2006
 - Continuing assessments for new and proposed drinking water sources
 - Moving toward protection with continued collaboration on protection strategies and plans
 - Focus planning on real threats – Potential Contaminating Activities within SWAP Capture Zone.
-
- Utilize the EPA-approved Wellhead Protection Financial Assistance Program (WHP-FAP)
 - \$3,172,431 spent/encumbered to date
 - \$800,000 future estimated amount to be awarded



SWAP Data and Information

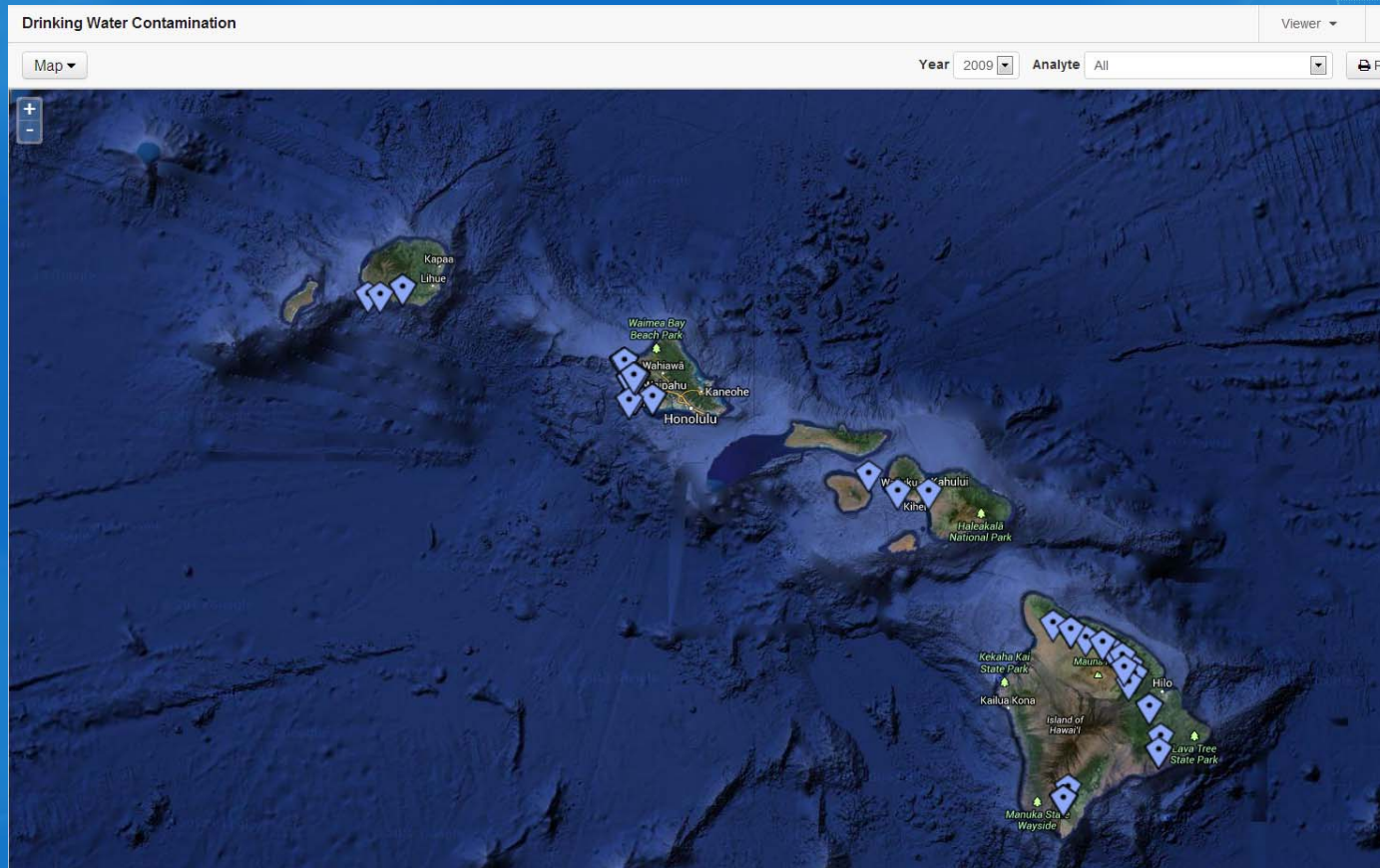


SDWB Changes and Challenges: UIC Program

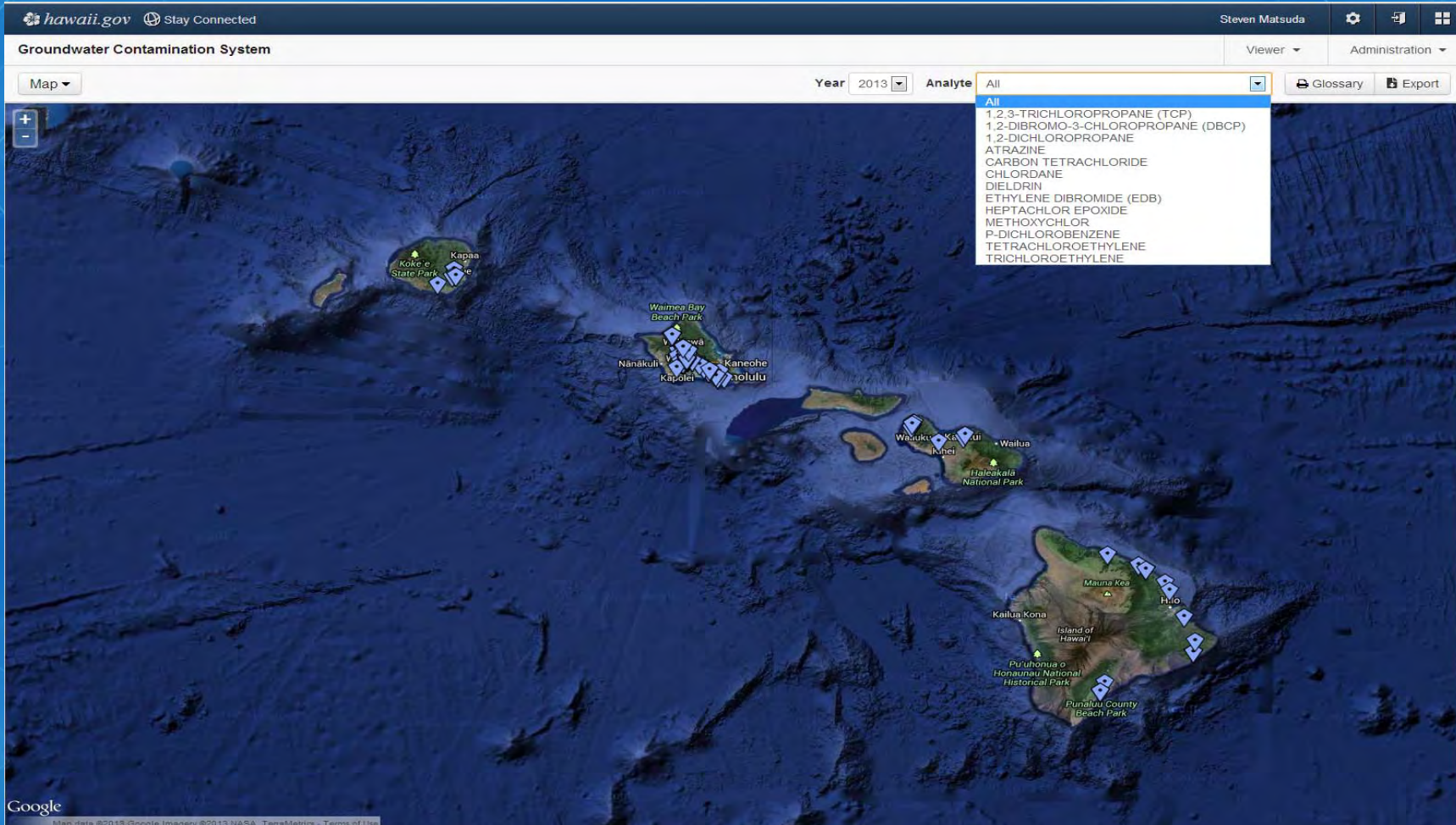
- Backlog reduced - #applications pending (as of 10/15/13)
 - 12 hard copy
 - 14 e-Permitting
- Use of e-Permitting System (Calendar Year 2013)
 - 40 received online
 - 54 hard copy received
- Update of UIC database needed
- Hire Geologist I



Groundwater Contamination Viewer



Contamination by Analyte



SDWB Sample Point Number & DLNR's State Well Number

hawaii.gov Stay Connected Steven Matsuda

Groundwater Contamination System

Year 2013 Analyte All

Island	Sample Point Num...	Well ID	Sample Point Name	Use	Analyte	Detected Date	Detected Level (ppb)	Contamination Level...
Kauai	400-064	0124-01	HANAMAULU WELL NO. 4	Well	1,2,3-TRICHLOROPROPANE (T...	09/28/2010	0.06	0.06 SMCL
Kauai	400-064	0124-01	HANAMAULU WELL NO. 4	Well	1,2,3-TRICHLOROPROPANE (T...	09/28/2010	0.06	0.06 SMCL
Kauai	400-016	0124-02	HANAMAULU WELL NO. 3	Well	1,2,3-TRICHLOROPROPANE (T...	09/28/2010	0.05	0.06 SMCL
Kauai	400-016	0124-02	HANAMAULU WELL NO. 3	Well	1,2,3-TRICHLOROPROPANE (T...	09/28/2010	0.05	0.06 SMCL
Hawaii	114-001	0131-02	NINOLE A	Well	ATRAZINE	03/27/2007	0.07	3 MCL
Hawaii	114-001	0131-03	NINOLE B	Well	ATRAZINE	03/27/2007	0.07	3 MCL
Hawaii	109-002	1229-01	PAHALA WELL # 1	Well	ATRAZINE	02/26/2007	0.08	3 MCL
Oahu	331-005	1746-01	AINA KOA WELL 1	Well	DIELDRIN	07/21/2009	0.024	0.2 10-4
Oahu	331-039	1748-01	KAIMUKI PUMPING STATION WELLS	Well	DIELDRIN	05/12/2009	0.031	0.2 10-4
Oahu	331-038	1748-01	KAIMUKI PUMPING STATION WELLS	Well	DIELDRIN	07/21/2009	0.031	0.2 10-4
Oahu	331-144	1849-01	WILDER WELL 1	Well	DIELDRIN	07/15/2009	0.032	0.2 10-4
Oahu	331-085	1948-01	MANOA WELL II	Well	DIELDRIN	06/29/2009	0.013	0.2 10-4
Oahu	331-057	1952-HS/LS	KALIHI PUMPING STATION WELLS	Well	DIELDRIN	08/26/2009	0.023	0.2 10-4
Oahu	331-056	1952-HS/LS	KALIHI PUMPING STATION WELLS	Well	DIELDRIN	08/26/2009	0.023	0.2 10-4
Oahu	331-158	2052-01	KAPALAMA WELLS PUMP 1	Well	DIELDRIN	05/14/2013	0.028	0.2 10-4
Oahu	331-159	2052-02	KAPALAMA WELLS PUMP 2	Well	DIELDRIN	07/21/2009	0.011	0.2 10-4
Oahu	355-001	2103-03	BARBERS POINT SHAFT	Well	ATRAZINE	05/22/2013	0.1	3 MCL
Oahu	331-086	2153-10	MOANALUA WELLS PUMP 1	Well	DIELDRIN	04/01/2008	0.014	0.2 10-4
Oahu	331-087	2153-11	MOANALUA WELLS PUMP 2	Well	DIELDRIN	07/07/2009	0.013	0.2 10-4
Oahu	360-003	2255-32	HALAWA SHAFT (NAVY)	Well	HEPTACHLOR EPOXIDE	09/20/2006	0.01	0.2 MCL
Oahu	360-003	2255-32	HALAWA SHAFT (NAVY)	Well	DIELDRIN	09/20/2006	0.03	0.2 10-4
Oahu	360-003	2255-32	HALAWA SHAFT (NAVY)	Well	CHLORDANE	04/13/2005	0.3	2 MCL
Oahu	360-003	2255-32	HALAWA SHAFT (NAVY)	Well	ATRAZINE	04/21/2004	0.012	3 MCL
Oahu	335-006	2301-05	HOAEAE WELLS P-5	Well	1,2,3-TRICHLOROPROPANE (T...	02/11/2008	0.44	0.06 SMCL
Oahu	335-007	2301-06	HOAEAE WELLS P-6	Well	1,2,3-TRICHLOROPROPANE (T...	05/22/2008	0.38	0.06 SMCL
Oahu	335-002	2301-34	HOAEAE WELLS P-1	Well	1,2,3-TRICHLOROPROPANE (T...	05/09/2008	0.74	0.06 SMCL
Oahu	335-003	2301-35	HOAEAE WELLS P-2	Well	1,2,3-TRICHLOROPROPANE (T...	02/11/2008	0.5	0.06 SMCL
Oahu	335-005	2301-36	HOAEAE WELLS P-4	Well	1,2,3-TRICHLOROPROPANE (T...	10/02/2007	0.5	0.06 SMCL
Oahu	335-005	2301-36	HOAEAE WELLS P-4	Well	ATRAZINE	04/13/2005	0.068	3 MCL

The table presents data collected in and prior years. Positive results were considered confirmed when verified by a follow-up test or by comparison with historical data. Historical data is included until new information confirms that concentrations have decreased to non-detectable levels.

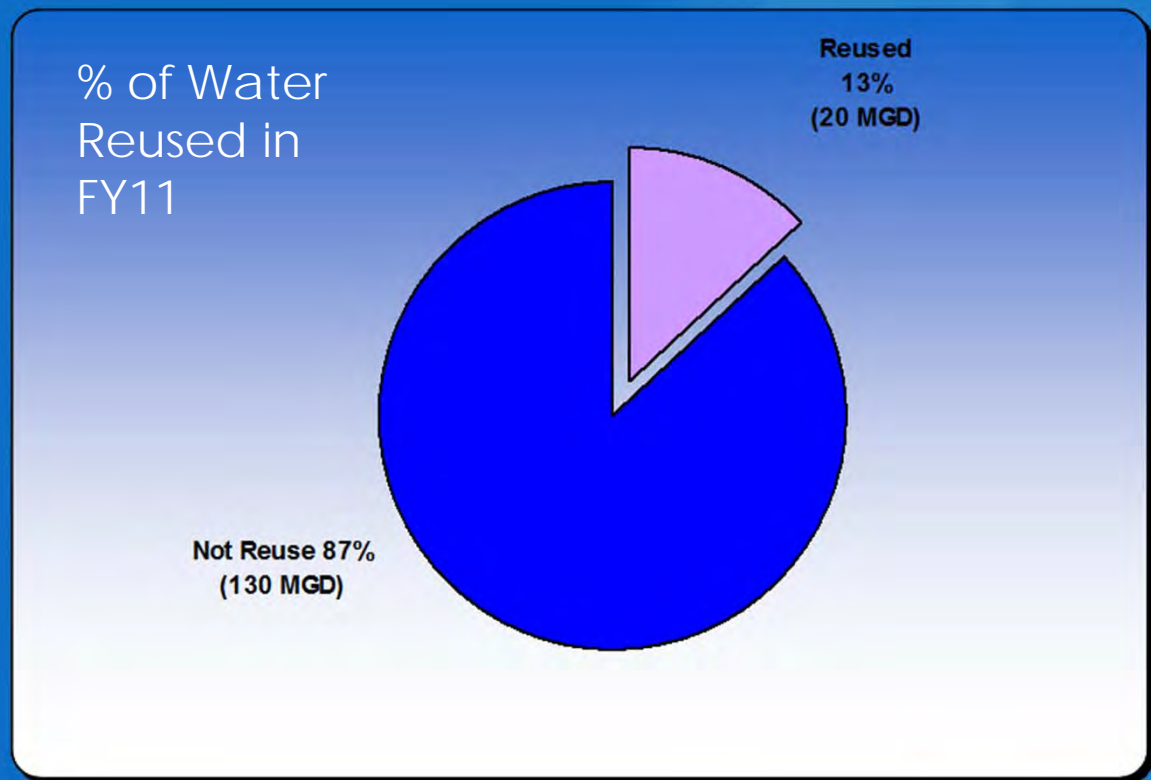


Wastewater Branch Update

Wastewater Reuse Program

**Goal is to reuse
30 MGD by 2015.**

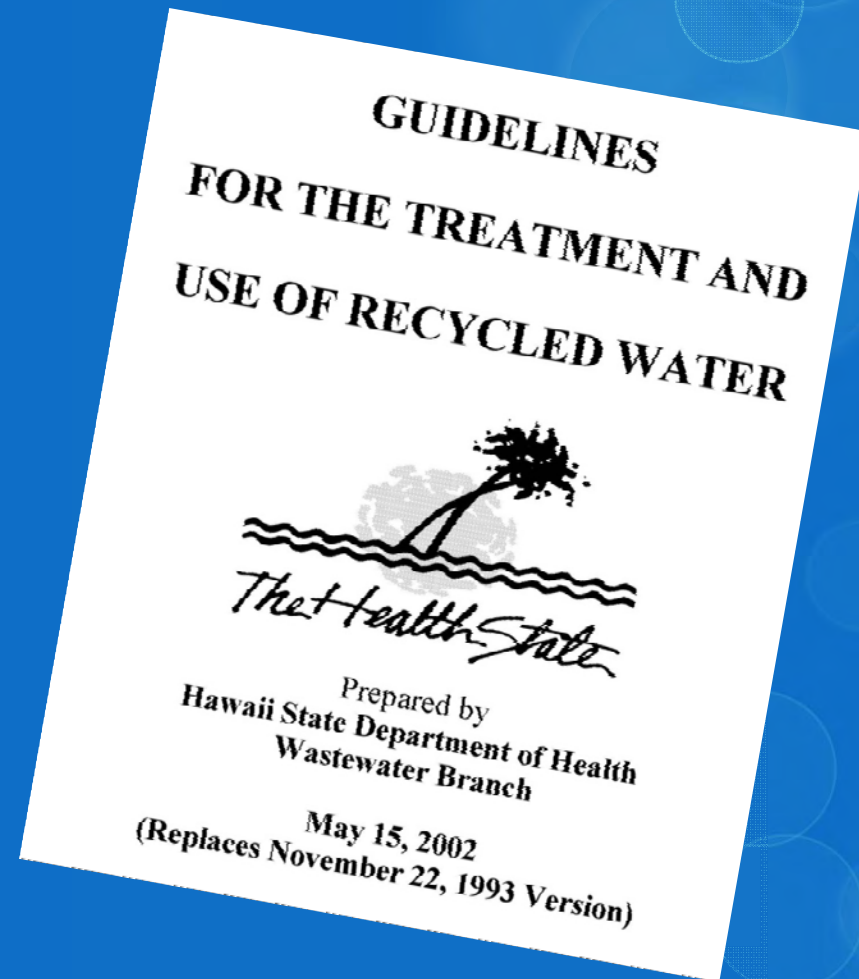
There is no such thing as wastewater, just a water resource that we are now wasting.



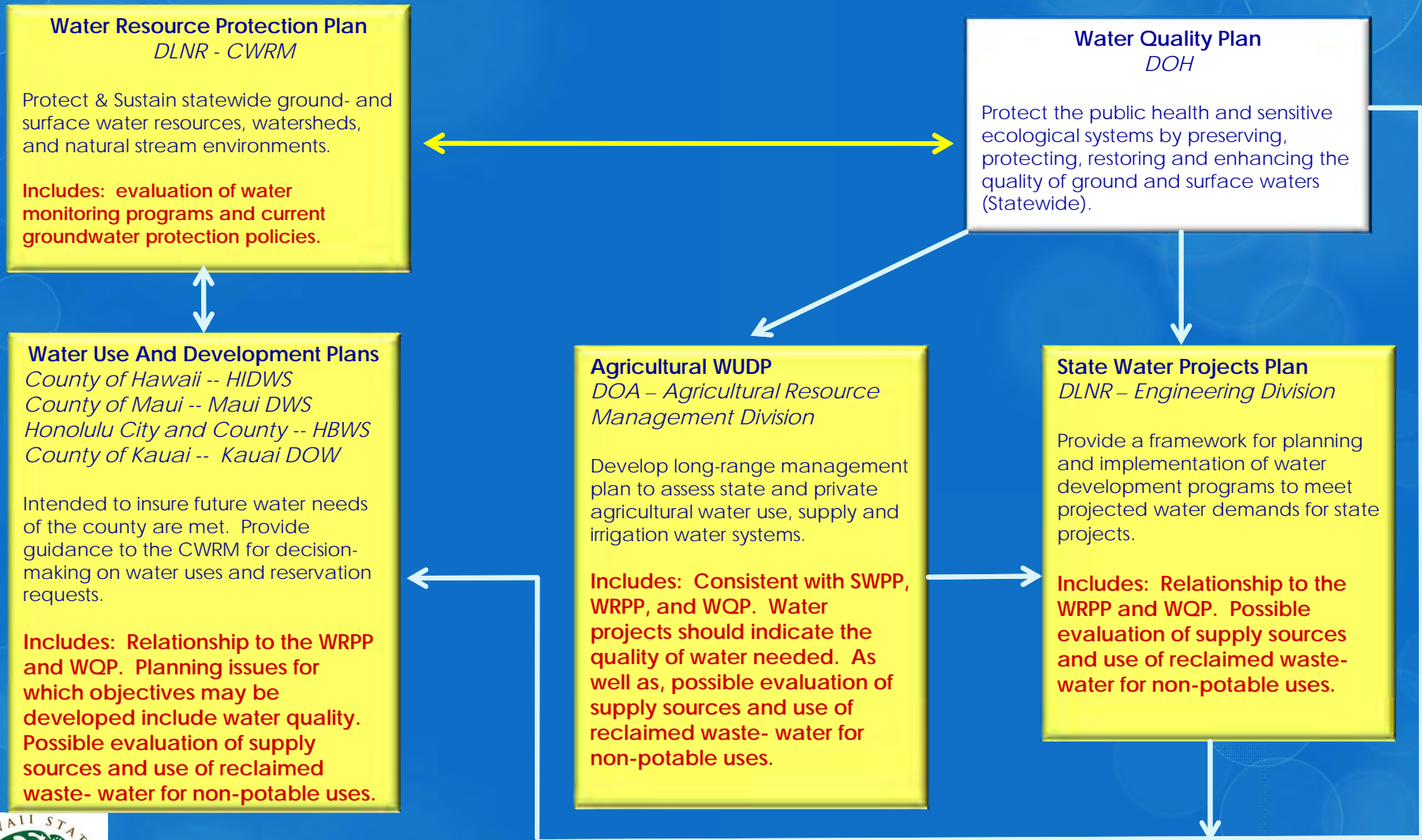
WWB Changes and Challenges: Wastewater Reuse Program

Revise the 2002
*Wastewater Reuse
Guidelines*

- Committee Coordination (WWB and other agencies)
- Wastewater Quality Monitoring (SDWB)
- Groundwater Contaminant Leachability Model (SDWB)



Water Quality Plan in the Hawaii Water Plan



Hawaii Department of Health

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