



ENVIRONMENTAL HEALTH MANAGEMENT REPORT 2016-2017



Department of Health - Environment

The **Department of Health (DOH), Environmental Health Administration (EHA)** plays a key role in ensuring the health, safety and equity of the air we breathe, the ocean and streams we enjoy, the water we drink, the land we live on, the food we eat, the products we use, managing our waste, and ensuring healthy communities. Administering such a wide array of programs is an exciting, yet challenging, responsibility.

We take this responsibility very seriously as environmental health issues intricately touch upon almost every aspect of life. The EHA has delegated authority from the U.S. Environmental Protection Agency (EPA) to implement a number of federal environmental statutes. EHA also works closely with the U.S. Food and Drug Administration (FDA) and the U.S. Centers for Disease Control and Prevention (CDC). Together with these Federal partners we ensure that we meet national standards, while also focusing on issues unique to our islands.

EHA is focused on:

- Implementing Greenhouse Gas (GHG) rules;
- Ensuring safe drinking water;
- Planning for climate change; and
- Responding to the Dengue Fever outbreak.

EHA continued to:

- Ameliorate water pollution;
- Provide low interest loans for water infrastructure;
- Improve solid waste management;
- Respond to chemical releases and oil spills;
- Increase online restaurant inspections; and
- Expand laboratory testing capabilities.

By 2020 EHA strives to:

- Return to 1990 Greenhouse Gas (GHG) levels;
- Reuse 20% of the State's wastewater; and
- Divert 50% of our solid waste stream.

For more information on the Hawaii Department of Health (HDOH).

Please visit our website: <http://health.hawaii.gov>

A copy of the 2015-18 HDOH Strategic is available at:

<http://health.hawaii.gov/opppd>

This document was prepared by the Environmental Planning Office and last updated on November 3, 2016. The report was developed in close cooperation with all of the Environmental Health Divisions, Branches and Offices. All photographs are from DOH. This highlight report is available at: <http://health.hawaii.gov/epo>



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Environmental Management Division

The **Environmental Management Division (EMD)** consists of five branches: Clean Air, Clean Water, Safe Drinking Water, Wastewater, and Solid & Hazardous Waste.

The **Clean Air Branch (CAB)** is responsible for air pollution control in the State. The primary services are provided by its three sections: Engineering, Monitoring and Enforcement. These sections conduct engineering analysis and permitting, perform monitoring and inspections and enforce federal and state air pollution control laws.

In 2015-6, CAB continued to issue air and agricultural burning permits and monitor ambient levels of eight air pollutants (including the components of vog). In SY 16, CAB responded to 1,768 complaints, conducted 2,261 inspections and investigations, sent 61 informal warning notices, and resolved 17 formal cases.

In June 2014, the Governor signed Hawaii Administrative Rule amendments to reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. The CAB immediately began implementation of this new rule and corresponding program. In 2016 the CAB will:

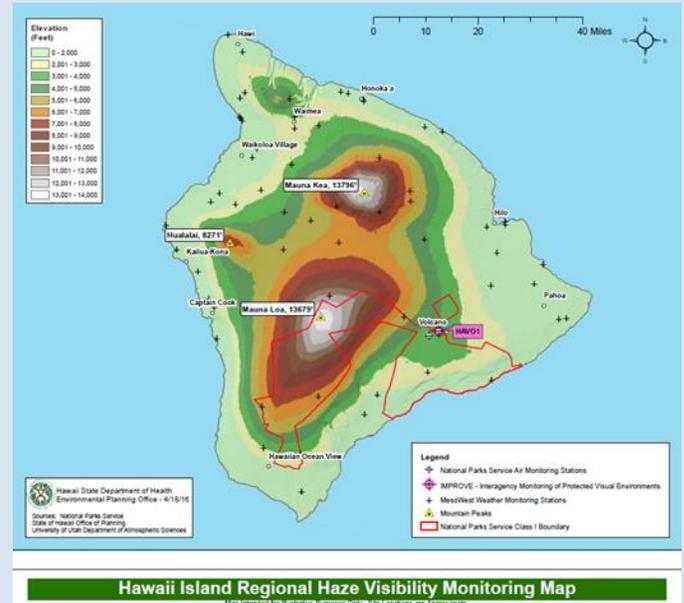
- Review 20 GHG emission reduction plans,
- Establish GHG emission caps for the 20 affected facilities; and
- Ensure minimum GHG cuts are 16% if attainable.

Greenhouse Gas Emissions		
Type	2010	2020 Goal
Energy	8.85	8.08
Ground Transport	3.10	3.23
Marine Transport	2.15	1.65
Freight	1.37	1.53
Waste	1.10	0.85
TOTAL	16.57	15.34

In 2017, the CAB plans to:

- Approve 20 GHG emission reduction plans;
- Compile and update statewide GHG emission inventories; and
- Assess the US EPA State Inventory and Projection tool to compile emission inventories independently.

From 2016-2019, the CAB will work with relevant agencies to prepare a State Plan for reducing carbon pollution from existing fossil fuel-fired electric generating units in accordance with the Federal Clean Air Act. CAB continues to track vog at six monitoring stations to provide timely public advisories and notifications.



2014 Greenhouse Gas Emissions (Metric Tons CO2e)		
Sector	# of Facilities	GHG Emissions
Power Plants	15	6,666,337
Petroleum & Natural Gas Systems	1	2,612
Refineries	2	966,156
Chemicals	2	130,138
Other	2	152,587
Waste	8	565,782
TOTAL	30	8,483,613

Source: HDOH, CAB and <https://www.epa.gov/ghgemissions>



For more information on the Clean Air Branch visit:

<http://health.hawaii.gov/cab>

The **Clean Water Branch (CWB)** protects public health by protecting and restoring coastal and inland water resources. CWB conducts statewide coastal water surveillance and watershed-based environmental management, which includes monitoring, permit issuance, enforcement, funding of polluted runoff control projects and public education.



In 2015-6, the CWB:

- Provided funds to develop and implement watershed plans;
- Reminded residents to take precautions during flood-related cleanups; and
- Tracked the number of impaired coastal waters, the total number of days of shoreline (water quality) postings, and the number of impaired streams.

Number of CWB Brown Water Advisories and Spills by Island (CY 2010-2016*)

Island	2010	2011	2012	2013	2014	2015	2016
Oahu							
Brown Water Advisory	3	5	1	8	4	18	15
Sewage Spill	30	17	20	13	12	13	15
OAHU TOTAL	33	22	21	21	16	31	30
Maui							
Brown Water Advisory	4	5	0	0	16	18	14
Sewage Spill	0	1	0	1	0	2	1
MAUI TOTAL	4	6	0	1	16	20	15
Kauai							
Brown Water Advisory	4	5	5	6	9	7	5
Sewage Spill	1	1	3	3	1	2	0
KAUAI TOTAL	5	6	8	9	10	9	5
Hawaii Island							
Brown Water Advisory	1	2	0	0	1	2	4
Sewage Spill	1	1	0	0	0	1	2
HAWAII ISLAND TOTAL	2	3	0	0	1	3	6
STATE TOTAL BWA	12	17	6	14	30	45	38

Source: Department of Health, Clean Water Branch, as of Aug 24, 2016

Web source: <http://emdweb.doh.hawaii.gov/cwb/wqd/viewer/Archive.aspx>

Throughout 2015-6, the CWB advised the public of 'Brown Water Advisories' due to heavy rain events after extreme weather, in which runoff can cause coastal water contamination. Detailed information on advisories is now available at:

<http://emdweb.doh.hawaii.gov/cwb/wqd/viewer>

The CWB assesses the number of impaired coastal (beaches, bays, harbors and coastal estuaries) waters by Island. CWB produces a report every two years on their findings. The CWB tests for enterococci, nitrogen, nitrates, phosphorus, turbidity etc. The latest report is from 2012-14. The report shows that across the state there are 389 coastal waters assessed. Of those 389, 264 or 68% are impaired. On Maui 92% of the waters are impaired. On Molokai, only 9%.

Number of Coastal Waters* Assessed** by Island (2012-2014)***

Island	Number of Coastal Waters	Number of Impaired Coastal Waters	Percentage of known Impaired Coastal Waters by Island
Hawaii	83	62	75%
Kauai	64	41	64%
Lanai	12	7	58%
Maui	84	77	92%
Molokai	32	3	9%
Oahu	114	74	65%
TOTAL	389	264	68%

Source: Department of Health, Clean Water Branch

State Year (SY) 2016, CWB enforcement section received 194 complaints, conducted 114 inspections, issued 45 formal field citations, and resolved 15 formal cases. For information on any of the Water Branches visit: <http://health.hawaii.gov/water>



The **Safe Drinking Water Branch (SDWB)** mission is to safeguard public health by protecting Hawaii's drinking water sources (surface and groundwater) from contamination and to assure that owners and operators of public water systems provide safe drinking water to the community. SDWB programs are administered by its four sections: Monitoring & Analysis, Engineering, Compliance & Enforcement and Groundwater Pollution Control.



During 2015-2016, SDWB conducted numerous tests to ensure drinking water systems were safe (below maximum contaminant levels); tracked compliance with safe drinking water rules by public water systems; tracked the number and regularity of sanitary surveys of drinking water systems; and monitored the percentage of underground injection control facilities in compliance with current permits. In August 2015, the branch hosted a Statewide Joint Government Water Conference. This event provided opportunities for federal, state and county government agencies to collaborate and provide input on the 2016 Final State Water Quality Plan and revised Water Quality Maps.

Throughout 2015-6, SDWB provided technical support for groundwater protection of the aquifers below the Red Hill Bulk Fuel Storage Facility (see also SHWB) in Halawa, Oahu. SDWB also ensured that the public had information on the safety of drinking water during storms, prolonged electrical power outages and emergencies such as hurricanes. In response to the dengue outbreak, the SDWB developed a FAQs factsheet for rainwater catchment system owners, see: <http://health.hawaii.gov/docd/files/2015/12/dengue-catchment-fact-sheet.pdf> In January 2016, SDWB completed a survey of water catchment systems.

SDWB, in close cooperation with the EPA and county water departments, continued to distribute millions of dollars in Drinking Water State Revolving Funds (DWSRF) with loan rates of 0-2% loans for drinking water infrastructure throughout the State. In State Fiscal Years (SFY) 2015 and 2016, 20 loans worth over \$104 million were distributed. During SFY 2013-2016, 40 loans, worth over \$164 million, were distributed.

The DWSRF program was established in 1997 using the successful CWSRF program as its model. The DWSRF is responsible for implementing the provisions of the Safe Drinking Water Act Amendments (SDWAA) of 1996 by issuing low interest loans to our public water systems needing improvements. Recently, the EPA Grants Office required the DWSRF Program to meet interim disbursement and commitment targets by January 29, 2016, to receive the balance of the FFY 2015 capitalization grant to support infrastructure improvements in the public water systems for all four counties. The DWSRF Program met the interim disbursement target of \$7.67 million by disbursing more than \$10.36 million in federal and state funds in the last half of 2015.

As of January 4, 2016, the DOH met the interim commitment target of \$28.28 million by executing final loan agreements totaling over \$32.7 million, including over \$21 million for Hawaii County Department of Water Supply and over \$11 million for the Honolulu Board of Water Supply. In SFY 2016, DWSRF executed 12 loan agreements to provide funding totaling more than \$55.5 million and disbursed over \$30 million in loan funds.

Drinking Water State Revolving Fund (DWSRF) SFY 2016		
Project Title	Island	Loan Amount (\$)
Waimea WTP Microfiltration	Hawaii	\$12,896,000
Halaula Well Development Phase 1	Hawaii	\$823,420
Ahualoa-Honokaa Transmission Waterline	Hawaii	\$3,200,000
Laupahoehoe 0.5 MG Reservoir	Hawaii	\$4,158,170
Honolulu BWS Water System Improvements 2	Oahu	\$11,652,948
Wailuku Heights Tank 30 Booster Replacement	Maui	\$1,804,849
Phase 6 Booster Pump Upgrades	Maui	\$4,000,000
Kualapuu MCC Upgrades	Maui	\$500,000
Omapio 2.1 Tank Replacement	Maui	\$4,138,000
Source Gerator Installation - 4 Sites	Maui	\$1,200,000
Kapulena Well Development Phase 2	Hawaii	\$4,388,782
Olaa #6 Production Well and 1.0 MG Reservoir	Hawaii	\$6,829,188
DWSRF SFY 2016 Total for 12 projects		\$55,591,357

For information on SY15 see:

<http://health.hawaii.gov/opppd/files/2015/12/340E-33.pdf>

The **Wastewater Branch (WWB)** protects public health by regulating systems that discharge wastewater into the ground. The WWB, Planning & Design Section, ensures that plans for new wastewater plants comply with regulations. WWB also promotes and regulates land application of treated sludge and the use of recycled wastewater.

Water Reuse			
Calendar Year	Total Wastewater Treated (MGD)*	Wastewater reused (MGD)	Percentage Reused
2013	133	21.12	15.88%
2014	134	22.00	16.42%
2020			20.00%

In 2016, the Branch revised its wastewater reuse guidelines. The new guidelines allow R-1 water to be used for irrigation of single family residential properties and reduce application requirements for proposed water reuse projects (not over a drinking water aquifer).



The Construction & Operations section inspects and monitors public, private and individual wastewater treatment systems to ensure that they operate properly and comply with state laws. In SFY 2015, the section responded to 164 complaints (ranging from sewage odors to overflowing cesspools), conducted 230 inspections, and sent 52 informal warning notices and 31 formal field citations. They continued to track wastewater plant compliance.

Calendar Year	Total Plants	Plants Inspected	Percent in Compliance
2013	190	58	92%
2014	190	82	84%



The Clean Water State Revolving Fund (CWSRF) Federal program was established in 1988 to provide below market interest rate loans in perpetuity, as required by the Clean Water Act of 1987, to state and county agencies for the construction of wastewater treatment facilities. Since inception in Hawaii, in 1991, the program has issued over \$759.4 million in low interest loans, providing significant savings in interest costs to the Counties. The current loan rate is 1.25%. Projects are inspected to monitor construction progress. In SFY14, with support from the EPA, the WWB issued over \$39.4 million in CWSRF loans. In SFY 15, over \$61.4 million in CWSRF loans were issued. In SFY 2016, the CWSRF awarded 7 loans worth over \$30 million, including \$11 million for the Ala Moana Wastewater Pump Station Force Mains.

Clean Water State Revolving Fund (CWSRF) SFY 2016		
Project Title	Island	Loan Amount (\$)
Paia Force Main Replacement	Maui	\$1,850,167
Kihei #10 Force Main Replacement	Maui	\$1,620,000
Wailuku-Kahului Wastewater Reclamation	Maui	\$4,841,700
North Kona Sewer and Effluent Reuse - Phase I	Hawaii	\$3,454,500
Kealahou Wastewater Treatment Plant Upgrade	Hawaii	\$2,371,509
Gas Collection & Control System for Kekaha Landfill	Kauai	\$4,966,746
Ala Moana Wastewater Pump Station Force Mains	Oahu	\$11,000,000
CWSRF SFY 2016 Total for 7 projects		\$30,104,622

For information on SY15 refer to:

<http://health.hawaii.gov/opppd/files/2015/12/342D-82.pdf>



The Solid and Hazardous Waste Branch (SHWB):

- Protects Hawaii's lands from pollution;
- Rehabilitates contaminated lands;
- Ensures environmentally-sound, cost-effective management of all solid and hazardous waste;
- Promotes pollution prevention;
- Encourages waste minimization; and
- Develops proactive partnerships with waste generators and the regulated community.

The SHWB consists of four sections Solid Waste, Hazardous Waste, Underground Storage Tank, and Solid Waste Management. The SHWB runs the, Hi-5 Deposit Beverage Container (DBC) Recycling, and Pollution Prevention and Waste Minimization programs. SHWB oversees hazardous waste facilities; assists in cleanups of leaking underground storage tanks; encourages recycling and proper disposal of solid waste.

In SY16, SHWB responded to 109 complaints, conducted 368 inspections; issued 101 informal waste warning notices; issued 29 formal waste field citations. SHWB also continued to facilitate the Red Hill Task Force and track several key solid waste indicators, including the amount of solid waste recycled and the Hi-5 DBC redemption rate.

In May 2015, the SHWB signed an Administrative Order of Consent with the Navy and EPA to address the 27,000 gallon release (in January 2014) of jet fuel from the Red Hill Fuel Storage Facility. The SHWB continues to work with the Navy, EPA and the Honolulu Board of Water Supply to ensure that one of Oahu's largest drinking water resources is protected from the 186 million gallons of fuel stored in the 20 huge tanks that are over 70 years old. More information is available at: <http://health.hawaii.gov/shwb/ust-red-hill-project-main> <http://health.hawaii.gov/opppd/files/2015/12/SCR-57.pdf>



SHWB continued participation in the Aloha+ Challenge which set recycling goals from 35% in 2010, to 50% in 2020, and 70% by 2030 through source reduction, recycling and bioconversion. SHWB hopes to update the State Solid Waste Master Plan in order to clarify a plan of action to achieve these ambitious goals.

Tons of Solid Waste Recycled				
Year	Generated	Disposed	Diverted	Percent Diverted
2010	1,786,343	1,159,027	627,316	35%
2015	2,417,650	1,377,611	1,040,039	43%
2020 Goal				50%
2030 Goal				70%

Information on Solid Waste Management is available at: https://health.hawaii.gov/shwb/files/2013/06/2016_OSWM_Annual_Report.pdf



SHWB continued cleanup of the 'Waikoloa Maneuver Area,' the single largest site in the nation contaminated with unexploded ordnance. Completing the task will be enormous and expensive. The total costs to clean up the formerly used 'live-fire' training area is estimated to be \$750 million and expected to take decades.

For more information on the Solid and Hazardous Waste Branch, please visit: www.health.hawaii.gov/shwb

Environmental Health Services Division

The **Environmental Health Services Division (EHSD)** consists of two branches and one program. The Food Safety & Sanitation Branch, Vector Control Program and Indoor Radiological Health Branch.

The **Sanitation Branch** is one of the core programs of public health that affects the broadest range of health-related activities. Its programs are established by statutes and administrative rules as statewide programs in the following area:

- Food protection;
- Assessing and assuring that care homes, hospitals and medical facilities meet sanitation requirements;
- Licensing of tattoo artists and embalmers;
- Regulating tattoo shops, swimming pools, barber shops, beauty parlors, massage parlors, tattoo shops, mortuaries, as well as the manufacture and sale of drugs, cosmetics, etc.



Great strides have been made within the **Food Safety Program** over the past few years. A true paradigm shift in the way the DOH regulates the Food Industry in Hawaii is nearing completion. The Food Safety Program, working collaboratively with the food industry, introduced and passed legislation to re-define the HRS. Sanitation and the Environmental Health Special Fund lead to passage of HAR 11-50, which created a 300% increase in revenues in FY15 (\$1.3 million) as compared to FY13 (\$450K) and is projected

to be near \$2.0 million in FY16. This allowed the program to meet three key goals:

- 1) Increase staffing levels closer to FDA recommended levels for “Gold Standard” food safety programs which recommend 1 FTE for every 150 food facilities. Food facility/Staffing ratio went from 650/1 in 2010 to 190/1 currently. Field staff on Oahu increased from 13 to 31 as a result of legislation and HAR changes.
- 2) Implement a best practice restaurant grading system.
- 3) Develop a web-based food safety inspection system. <http://hi.healthinspections.us/hawaii>

In SY 16, Over 10,975 field inspections were completed and 9,636 violation notices were delivered. More information is available at: <http://health.hawaii.gov/san>

The DOH is continuing to investigate a cluster of hepatitis A infections in the State. On August 15, 2016, DOH identified raw scallops served at Genki Sushi restaurants on Oahu and Kauai as the likely source of the ongoing outbreak. The product of concern is Sea Port Bay Scallops (Wild Harvest, Raw Frozen) that originated in the Philippines. The outbreak investigation is ongoing. As of November 2, 2016, there were 292 confirmed cases of Hepatitis A.



For more information please visit:

<http://health.hawaii.gov/docd/hepatitis-a-outbreak-2016>

From September 2015 to March 2016 the **Vector Control Program (VCP)** was overwhelmed by an increasing number of dengue fever cases on the island of Hawaii. In total, there were 264 confirmed cases. The *Aedes aegypti* and *Aedes albopictus* mosquitos can both carry Dengue Fever, Chikungunya and the Zika virus. For information on the outbreak please see: <http://health.hawaii.gov/docd/dengue-outbreak-2015>

In late 2015, a Hawaii Island Dengue Fever Unified Command was established. DOH worked under the leadership of the incident commander, the Administrator of the Hawaii County Civil Defense Agency. The US CDC in a December 2015 report found “The coordination of efforts is one of the best ...

witnessed anywhere”. The report concluded that “The outbreak response is extremely well organized and serves as a model for others.”

In 2016, the State legislature significantly increased vector staff capacity by adding 20 more vector related positions. The Governor and the legislature clearly recognized the need to increase the State’s vector response capacity, given the increase in the spread of diseases and viruses worldwide, including Zika.

The Indoor and Radiological Health Branch (IRHB) strives to promote public health in the community, minimize morbidity and mortality from specific public health hazards, and optimize regulated activities and workplaces. The resources of the IRHB are directed at those problems that pose the greatest risk to optimal public health. There are three sections and one unit in the IRHB for operational implementation; the Radiation, Indoor Air, and Noise Sections and the Air Conditioning and Ventilation Unit. In SY15, IRHB conducted 928 inspections and handed out 85 informal warning notices.

The Radiation Section continues to provide radiological incident response to control release of radioactive materials, licensing of all radiation facilities with electronic products emitting ionizing radiation and/or non-fission radioactive materials, licensing of radiation services such as x-ray equipment installation and medical physics, and providing administrative support to the Radiologic Technology Board’s licensing of radiographers, nuclear medicine technologists, and radiation therapists.

The Department’s Radiological Response Team (DOH RAD), continues to monitor the potential impact from past nuclear disasters, as well as provides preventive radioactive/nuclear detection capabilities and surveillance for high-profile events like the Honolulu Marathon.



The Indoor Air Section protects public health and the environment from exposure to asbestos, lead, and lead-based paint hazards. The section protects and enhances indoor air quality and minimizes public exposure to indoor air pollutants. It maintains the asbestos abatement accreditation, certification, and registration systems for asbestos entities and individuals. The section also maintains the lead abatement accreditation, certification, and registration systems for lead abatement entities and individuals. The section promotes good indoor air quality within schools to provide a safe and healthful educational environment. It investigates public complaints of poor indoor air quality.

The Air Conditioning and Ventilation Unit reviews and approves permits related to mechanical ventilation systems in public buildings and performs as-built, as well as complaint inspections.

The Noise Section implements the community noise program. This includes enforcement of maximum permissible sound levels for stationary noise sources and issuance of permits for agricultural, construction, and industrial activities. In addition to their normal duties, 2015 saw a marked increase in construction activities and its associated noise. Staff members have been working diligently to minimize the impact from these additional sources, specifically with regard to nighttime construction activities for the Honolulu Authority for Rapid Transportation (HART) Rail System.

For more information please visit:
<http://health.hawaii.gov/irhb>

State Laboratories Division

The **State Laboratories Division (SLD)** provides a wide range of public health and environmental analytical services, as well as some oversight of community laboratory quality. It tests for an ever-growing number of known and emerging health risks. Test results are used to protect the public from exposure to dangers and toxins. Analyses conducted under vigorous quality management produce data that ensure that the State can make informed, evidence-based decisions. SLD consists of the Environmental Health Analytical Services Branch, Medical Microbiology Branch, and Laboratory Preparedness and Response Program.



In 2015-6, SLD continued to:

- Monitor air samples (753,600 tests in CY15);
- Test ocean, stream and drinking water;
- Test imported food as needed;
- Test raw agricultural products for improper use of pesticides and herbicides.
- Test fish and fish feed for mercury and selenium;
- Conduct shellfish water and shellfish meat analyses;
- Test for respiratory pathogens, salmonella, avian influenza, norovirus, whooping cough, mercury, and arsenic;
- Provide influenza, measles, dengue fever, chikungunya and Zika virus testing for Hawaii and the U.S. Affiliated Pacific Islands; and
- Create or improve electronic data reporting to the CDC, FDA, EPA, community laboratories and the public.

Air Samples (Tests) Performed (CY14 & 15)

County	CY 2014	CY 2015
Oahu	289,320	289,320
Kauai	52,560	52,560
Maui	105,120	105,120
Hawaii Island	306,600	306,600
TOTAL	753,600	753,600



Ocean Water and Stream Microbiology Tests (CY 2015)

County	CY 2015	%
Oahu	4,239	43%
Kauai	1,572	16%
Maui	2,668	27%
Hawaii	218	2%
Total	8,697	100%

Drinking Water Microbiology Tests by County (CY14 & 15)

County	CY 2014	CY 2015
Oahu	804	1,007
Kauai	211	194
Maui	607	420
Hawaii	444	530
Total	2,066	2,151

SLD continues to prepare and adapt to new health risks. In September 2015, SLD quickly modified operations to expand capabilities to support the Hawaii (Big) Island dengue outbreak. All dengue fever requests in Hawaii were directed SLD, and testing was normally completed within 1-3 business days. Concurrently, SLD established laboratory testing protocols for Zika and currently supports all testing in the U.S. Pacific island jurisdictions, including ongoing transmission and surveillance of pregnant women in American Samoa.

For more information on the State Laboratories Division, please visit: <http://health.hawaii.gov/statelab>

Offices

The **Hazard Evaluation and Emergency Response (HEER) Office** address all aspects of releases of hazardous substances and pollutants, including oil, into the environment. This includes preventing, planning for, and responding to hazardous substance releases as well as known or suspected human exposures to those contaminants. HEER Office accomplishes this mission by addressing contaminated sites with the highest risk to human health and the environment first, preventing contamination rather than cleaning up after the fact, and basing decisions on sound scientific principles and common sense. Three primary functions are emergency preparedness and response, hazard evaluation and site discovery assessment and remediation.

Emergency Preparedness and Response (EPR) plans, prepares for, and responds to releases of hazardous substances that may cause an immediate and substantial threat to human health or the environment. Highly trained State On-Scene Coordinators (SOSCs) are on call 24/7 to address hazardous conditions caused by chemical releases and provide back-up to first responder County HAZMAT teams.



HEER plays a very active role in state preparedness activities through the Hawaii State Emergency Response Commission (HSERC), chaired by DOH Environmental Health Administration Deputy Director. HEER staff oversee mandatory Tier II chemical inventory reporting for nearly 1,000 large volume chemical users statewide. These inventories are used by Local Emergency Planning Committees to support informed emergency preparedness activities statewide.

The Hazard Evaluation (HE) Section evaluates chemical threats to human health and the natural environment, establishes appropriate cleanup levels for contamination, and assists the public with concerns

about the health effects of chemicals. Multiple health and environmental programs throughout the State look to the technical and scientific expertise of the HEER Office to evaluate the potential impact of chemical exposures on community and environmental health.

HEER Office staff toxicologists work across health and environmental programs to identify concerns, and collect, analyze and report health data to the public concerned about health risks from environmental sources in their communities. HEER Office risk assessors have developed state of the art investigation and clean up guidance that is efficient, reproducible and scientifically defensible. To protect Hawaii's unique marine ecosystem, HEER has developed Hawaii specific ecological risk assessment guidance.

Interagency Pesticide Initiative: over the past two years, the HEER Office has worked closely with the Department of Agriculture (DOA) to address public health concerns and potential environmental effects of general and restricted use pesticide applications statewide. The agencies review existing information, identify key environmental data gaps with respect to pesticide occurrence, and engage with stakeholders about their concerns with respect to large agricultural operations and restricted use pesticides. The 2016 Legislature allocated \$500,000 to DOA to address key environmental data gaps with respect to pesticide occurrence, and engage with stakeholders on their concerns about large agricultural operations. In consultation with the HEER Office, DOA has contracted U.S. Geological Survey to complete detailed surface water monitoring on Kauai and Oahu, building on the pilot project conducted by DOH in 2013-2014. The study will investigate off-target impacts of currently used pesticides by measuring pesticide levels in surface water statewide. DOH provides technical and toxicological assistance on study design, site selection and regulatory interpretation of the results.

Site Discovery, Assessment and Remediation (SDAR) is the state equivalent of the federal Superfund Program, overseeing identification, investigation, safe management and cleanup of both brownfields and highly contaminated properties statewide. SDAR currently oversees 938 contaminated sites statewide, including private, public and military properties. Responsible parties and property owners may select from available various cleanup programs to assist them with returning their properties to safe and productive re-use. Where needed to address high priority hazards,

HEER takes a more directive approach to ensure protection of residents and local communities.

Proactive approaches to Prevent Exposure to Chemical Hazards One of the HEER Offices biggest challenges is that a significant majority of newly reported releases are the result of historic industrial and fuel handling activities. These cases tend to occur most frequently in concentrated areas with known area-wide contamination, such as industrial centers, harbors, airports, pipeline corridors and historic chemical use and storage facilities. Managing sites individually as releases are reported means that that the HEER Office used to find out after a problem or release issue had occurred. In 2016, the HEER Office adopted a broad, proactive strategy to the address the discovery, interim management and remediation of sites statewide. The strategy consists of three components:

1. Programmatic/Area-wide Environmental Hazard Management Plans to alert businesses and communities about potential historic hazards that may affect them.
2. In person public outreach and accessible online information and guidance.
3. Online maps and contaminant information for the public via the online iHEER website.

The combination of these components allows the HEER Office to address potential sites before they become issues by providing the public at-large with as much information and guidance as possible about potential hazards before a release occurs. It also provides consistent, publicly available information about area-wide contamination concerns.

Unexploded Ordnance (UXO) Across the Islands Hawaii's military history and legacy of widespread unexploded ordnance presents perhaps the most challenging aspects of the HEER Office's mission to protect human health and the environment. Over the past decade, the HEER Office has overseen multiple US Army Corps of Engineers (USACE) investigations of Formerly Used Defense Site (FUDS) statewide, highlighting the extent and severity of the UXO hazards present. Many of the areas being investigated are high-traffic areas by the public (Maunawili Trail, Hapuna Beach, Goat Island, Ahii Kinau, etc.) As there is no way to guarantee 100% clearance of a UXO site, these sites present a potential danger to the public at-large. Due to this threat, the HEER Office actively partners with USACE and State and local authorities conducting public outreach to inform

the people of the hazards UXO pose, and meeting with affected stakeholders. In November 2016, the HEER Office will host the first State UXO Forum, "Protecting Life and Property from Unexploded Ordnance in the Waikoloa Maneuver Area".



For more information, visit HEER's website at: <http://eha-web.doh.hawaii.gov/eha-cma/Org/HEER>

The **Compliance Assistance Office (CAO)** assists small businesses to understand and comply with the environmental laws and regulations administered by the Department of Health. The CAO is staffed by an Environmental Ombudsman. Services are confidential, free of charge, and provide small businesses with a point of access to government, which facilitates the exchange of information and open communication. As a neutral party and mediator, the CAO can help investigate and resolve disputes, as well as increase the Department of Health's and other agencies' understanding of small business concerns. CAO

- Held meetings with businesses to improve their knowledge of environmental laws;
- Worked with government and business representatives to remove unwarranted hurdles to small businesses;
- Provided regulatory guides and other documents;
- Conducted voluntary site assessments of businesses to determine their compliance with applicable environmental regulations; and
- Assisted businesses that had exhausted readily-available dispute resolution mechanisms.

For more information, please visit the CAO website: <http://health.hawaii.gov/cao>
Call 586-4528 or send an email to CAO@doh.hawaii.gov

The **Environmental Planning Office (EPO)** assists with strategic planning, land use planning, reporting, data collection, legislative activities, coordination and environmental mapping.

The EPO Manager, annually prepares the Environmental Health Management Goals and Objectives Report.

Past copies are available at:

<http://health.hawaii.gov/epo/ehm-report>



EPO gathers a wide variety of statistics and indicators across the environmental health divisions, branches and offices. Including metrics for inclusion in the State Aloha+ Challenge Dashboard:

<https://dashboard.hawaii.gov/aloha-challenge>

EPO reviews, evaluates, disseminates and responds to land use documents on behalf of the DOH. This includes all published HEPA Environmental Assessments (EA) and Environmental Impact Statements (EIS) as well as many National EA's and EIS and numerous City and County of Honolulu EA's.

Land Use Documents* Reviewed by EPO Manager (CY 2012-2016)						
Calendar Year	2012	2013	2014	2015	2015	2016
Land Use Documents reviewed	236	246	275	340	340	404

* Includes PCEA, DEA, FEA, PCEIS, DEIS, FEIS, SEIS, NEPA, Master Plans, +

The EPO manager assists with the coordination of EHA legislative activities. In 2016 this included over 350 bills.

Number of EHA related Legislative Measures (CY 2016*)												
	CAB	CWB	SDWB	WWB	SHWB	SAN	FDB	IRHB	EHSD	HEER	EPO	TOTAL
Testimony	7	16	10	23	50	10	12	5	6	32	1	172
Information	58	9	13	7	19	5	1	9	3	19	40	183
TOTAL	65	25	23	30	69	15	13	14	9	51	41	355

The EPO Manager often represents DOH on various state-wide and /or cross departmental initiatives including the:

- Inter-agency Climate Adaptation Committee (ICAC);
- Hawaii Invasive Species Committee (HISC);
- Aloha+ Challenge and Hawaii Green Growth (HGG);
- Ocean Resources Management Plan (ORMP);
- Marine Sanctuary Advisory Council (NOAA SAC); and
- Promise to Pae’Aina in support of Hokulea (P2P).



The EPO manager regularly collaborates on various Federal, State, county, non-profit and/or public initiatives. The EPO Manager does various presentations to numerous groups on a wide variety of environmental health topics and activities.

EPO provides emergency, health and environmental mapping assistance. The EPO Manager also coordinates the development of various maps

EGIS coordinates and provides much of the Department’s Environmental GIS.



Learn more about EPO at: <http://health.hawaii.gov/epo>
Or send an email to doh.epo@doh.hawaii.gov