

## APPENDIX C

### Agency Profiles and Watershed Programs

There are a number of governmental agencies and non-governmental organizations that are engaged in watershed restoration programs in Hawai'i and on a national level. Many of these entities have recognized the need to operate in partnerships and the practicality of sharing in costs and resources that would otherwise be too substantial for any one group. There are also agencies that participate in programs and projects that fund community groups directed toward watershed improvements. A selected listing of watershed related agencies and a description of their programs is provided below:

#### **U.S. Environmental Protection Agency (EPA)**

The EPA provides federal leadership in environmental science, research, education, and assessment efforts. Working closely with other federal agencies, as well as state and local governments, the EPA develops and enforces regulations under existing environmental laws. The EPA is also responsible for researching and setting national standards for a variety of environmental programs and delegates the responsibility for issuing permits, monitoring, and enforcing compliance to individual states. Where national standards are not met, sanctions may be issued and/or steps might be taken to assist states in reaching the desired levels of environmental quality. The EPA also works with industries and all levels of government in a wide variety of voluntary pollution prevention programs and energy conservation efforts.

The EPA Office of Water is responsible for the Agency's water quality activities, including the development of national programs, technical policies, and regulations relating to drinking water, water quality, ground water, pollution source standards, and the protection of wetland, marine, and estuarine areas. The Office of Water administers, coordinates, oversees, or supports the following programs and legislation:

- Clean Water Act – administers the Act and oversees the State's Nonpoint Source Pollution Management program as called for in Section 319.
- Section 6217, Coastal Zone Act Reauthorization Amendments (CZARA) – provides administrative guidance to states along with the National Oceanic and Atmospheric Administration (NOAA).
- Unified Watershed Assessment, Clean Water Action Plan - calls for all levels of government and the public to identify watersheds with the most critical water quality problems and to cooperatively focus resources and implement effective strategies to reach solutions to those problems. The Watershed Initiative encourages watershed partnerships to protect and restore water resources.

## **Natural Resource Conservation Service (NRCS)**

The NRCS is a part of the United States Department of Agriculture and provides leadership in a partnership effort to help conserve, maintain, and improve natural resources and environment. The NRCS assists private land owners, local, state and federal agencies with conserving their soil, water, and other natural resources through technical assistance, cost-shares, and financial incentives. Participation is voluntary and is done mostly with local partners.

The authorized purposes for these NRCS-assisted watershed projects include: watershed protection, flood prevention, agricultural water management, water based recreation, fish and wildlife habitat improvement, ground water recharge, water quality management, and municipal and industrial water supply. However, program objectives have changed over time in response to legislative direction, environmental concerns, and changing social values. The objectives of many of the original projects were to reduce flooding, improve drainage, and increase irrigation efficiencies. In the 1960s, high priorities were placed on projects that provided jobs to combat poverty and encourage rural development; many of these projects involved establishing recreation areas. In recent years, projects have focused on land treatment measures to solve natural resource problems, such as substandard water quality and loss of wildlife habitat. Funding in fiscal year 1996 for program activities was \$100 million (of which only \$50 million is available for financial assistance).

The NRCS is founded upon an agency vision--"People in Partnership with a Healthy Land." Consistent with this vision, NRCS will administer its watershed program to support: "Local people leading a voluntary, coordinated, and integrated watershed approach to address natural and human resource conservation needs." As NRCS expands and strengthens its national watershed program, the Agency will be guided by key principles in assisting local communities to plan and implement their watershed projects. Within the NRCS is the Watershed Science Institute, whose mission is to incorporate ecological principles into natural resource conservation and accelerate the development and transfer of appropriate technology in response to comprehensive watershed needs and environmental sustainability at the watershed and landscape scales.

- National Conservation Program - national watershed program that assists states, local units of government, tribes, and other sponsoring organizations to address water-related and other natural resource issues, to conduct studies, to develop watershed plans, and to implement resource management systems. The program includes projects carried out under the Watershed Protection and Flood Prevention Act of 1954 (PL 83-566). Over 2,000 plans covering 160 million acres of watersheds in every state, Puerto Rico, and the Pacific Basin have been completed or are underway. Land treatment measures have been applied to more than 30 million acres. More than 15,000 individual measures have been installed and have resulted in substantial contributions to environmental improvement, economic development, and social well-being.

## **U.S. Army Corps of Engineers (COE)**

The COE Civil Works programs include water resource development activities such as flood control, navigation, recreation, and infrastructure and environmental stewardship. The Corps has the authority to assist the states, local governments, and other non-federal entities in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources. The COE is authorized to carry out Civil Works water resources projects for navigation, flood damage reduction, ecosystem restoration, storm damage prevention, hydroelectric power, recreation, and water supply. This is accomplished through special project authorities and continuing project authorities. Additionally, the COE manages portions of the Clean Water and Rivers and Harbors Acts.

### Planning and Engineering Technical Services

- Section 22, 1974 WRDA, Planning Assistance to States – provides technical and cost-share assistance to states, local governments, and other non-federal entities in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources.
- Section 206, 1960 FCA, Flood Plain Management Services – provides information, technical assistance, guidance, and financial funding to states and local communities to reduce flood damages.

### Emergency Operations

- Public Law 84-99 (33USCA 701n), Flood fighting, Rehabilitation, and Other Disaster Relief Operations – allows for flood fighting, rescue operations, emergency relief work, and repair of approved local flood control projects and all COE constructed projects to local and state efforts.

Continuing Authorities Program provides for funding assistance toward addressing certain water resource problems.

- Section 14, 1946 Flood Control Act (PL 79-526), Emergency Bank Protection – provides for cost-share assistance to public entities for emergency stream bank and shoreline erosion protection to highways, bridge approaches, municipal water supply systems, sewage disposal plants, and other essential public works facilities endangered by floods or storms due to bank erosion.
- Section 103, 1962 River and Harbor Act (PL 87-874), Small Beach Protection Projects – provides cost-share assistance to projects that restore and protect coastal shores from erosion caused by natural wave and current action.

- Section 107, 1960 River and Harbor Act (PL), Small Navigation Projects – provides cost-share assistance to ensure safe and efficient use of small navigation projects.
- Section 111, 1968 River and Harbor Act (PL 90-483), Prevention and Mitigation of Shore Damage Caused by Existing Federal Navigation Works – provides cost-sharing assistance for investigation and construction of projects that prevent and mitigate shore damage attributable to federal navigation projects.
- Section 204(a), 1994 Water Resources Development Act, Beneficial Uses of Dredged Material – provides cost-sharing assistance for beneficial uses of material for construction, operation, or maintenance of an authorized navigation project.
- Section 205, 1948 Flood Control Act (PL 80-858), Small Flood Control Projects – provides cost-sharing for studies of small flood control projects for structural and non-structural solutions.
- Section 206, 1996 Water Resources Development Act (PL 104-303), Aquatic Ecosystem Restoration – provides cost-sharing assistance for aquatic ecosystem restoration and protection.
- Section 298, 1954 Flood Control Act (PL 83-780), Snagging and Clearing for Flood Control – provides for cost-sharing assistance for the removal of accumulated snags and other debris and for channel clearing and straightening in navigable streams and tributaries.
- Section 1135, WRDA 1986 (PL 99-662), Environmental Restoration – provides cost-sharing assistance for modifying the structure or operation of a previous COE project to restore fish and wildlife habitat.

General Investigations are funded by specific appropriation to investigate water resource problems. Congressional authorization is required for construction.

- Section 209, 1962 FCA, Rivers and Harbors in Hawaii – authorizes surveys for flood control and associated purposes in harbors and rivers in Hawai'i, with the purpose of determining the advisability of improvements.
- Section 216, 1970 FCA, Modification of Existing Corps Projects – authorizes review of previous COE projects due to significantly changed physical or economic conditions, and to recommend to Congress modifications to their structures or operations for the purpose of improving their function or environmental quality.

Section 404, Clean Water Act is managed by the COE and requires a proponent to obtain a permit for the discharge of dredged or fill material into U.S. waters.

Section 10, Rivers and Harbors Act of 1899 is managed by the COE and requires a proponent to obtain a permit to do any work in, over, or under a navigable water of the United States.

## United States Geological Service (USGS)

Congress created the USGS in 1879 as a bureau of the federal Department of the Interior. The mission of the USGS is to provide reliable and impartial scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life. The USGS has the principal responsibility within the federal government for providing hydrologic information and for appraising the nation's water resources. USGS operates offices in every state to conduct studies in cooperation with local and state governments, and with other federal agencies. A list of principal contacts in each state is available at the USGS website [http://interactive2.usgs.gov/contact\\_us/index.asp](http://interactive2.usgs.gov/contact_us/index.asp):

The USGS achieves its mission by using funding from three distinctly different sources: (1) USGS Federal program funds, which provide 100 percent support for certain efforts; (2) Federal-State Cooperative program funds, which are a combination of federally appropriated funds (up to 50 percent) and funds from cooperating agencies at the state and local level; and (3) reimbursable funds, which are contributed by various partners without any federal match.

Information for the following programs is available at the USGS website <http://www.usgs.gov/programs.html>

- Biological Informatics Program - develops and applies innovative information technologies and practices to the management of biological data, information, and knowledge.
- Contaminant Biology Program - conducts research, assessments, and monitoring to provide information on the exposure, effects, and fate of deleterious substances in the environment.
- Cooperative Research Units Program – a university-based partnership between the USGS, state natural resource agencies, host universities, and the Wildlife Management Institute to conduct research that addresses complex environmental issues. This program provides research, graduate education, and technical assistance.
- Cooperative Water Program - monitors the quantity and quality of water in the nation's rivers and aquifers, assesses the sources and fate of contaminants in aquatic systems, develops tools to improve the application of hydrologic information, and ensures that its information and tools are available to all potential users.
- Fisheries and Aquatic Resources – focuses research on the study of fishes, fisheries, aquatic invertebrates, and their water-based or water-dependent habitats, with special attention to threatened and endangered species.
- Geographic Analysis and Monitoring Program - conducts geographic assessments to improve the understanding of the rates, causes, and consequences of natural and human-induced processes that shape and change the landscape over time.
- Ground-Water Resources Program - provides unbiased scientific information and many tools used by federal, state, and local management and regulatory agencies to make important decisions about ground-water resources.
- Invasive Species Program – researches all significant groups of invasive organisms in terrestrial and aquatic ecosystems to combat invasive species in natural and semi-natural areas.
- Land Remote Sensing - collects, archives, and distributes satellite and aircraft information to provide repetitive coverage that makes it possible to monitor change.
- National Bridge Scour Program – measures the scour of streambeds at highway bridges.

- National Flood Frequency Program – uses estimates of the magnitude and frequency of flood-peak discharges and flood hydrographs for a variety of purposes, such as the design of bridges, culverts, and flood-control structures, and for the management and regulation of flood plains.
- National Research Program - conducts basic and problem-oriented hydrologic research in support of the mission of the USGS.
- National Streamflow Information Program – provides information on the quantity and timing of the stream flow.
- National Water Quality Assessment Program – develops long-term consistent and comparable information on streams, ground water, and aquatic ecosystems to support sound management and policy decisions.
- Status and Trends of Biological Resources Program – monitors and inventories Department of the Interior trust resources on Federal lands.
- Terrestrial, Freshwater, and Marine Ecosystems Program – conducts research to understand the factors which control ecosystem structure, function, condition, and the provision of goods and services.
- Toxic Substances Hydrology Program - provides objective scientific information to improve characterization and management of contaminated sites, to protect human and environmental health, and to reduce potential future contamination problems.
- State Water Resources Research Institute – a federal-state partnership that researches regional water problems, promotes technology transfer and the dissemination and application of research results, provides for the training of scientists and engineers through their participation in research, and provides for competitive grants to be awarded under the Water Resources Research Act.
- Stream Stats – provides stream flow statistics to the public Watershed and River System Management Program - provides a data centered framework for water resources decision making.
- Wildlife and Terrestrial Ecosystems Program – research on waterfowl, songbirds, large mammals, terrestrial plants, amphibians, and their habitats that complement and support the conservation and management efforts of Federal and State wildlife agencies, non-governmental organizations, and international treaties.

Publications providing information about surface-water resources of the nation, including floods and droughts and other stream flow characteristics are available through Abstract Search and other USGS Publications and USGS Fact Sheets. The USGS collects, analyzes, archives, and disseminates data and information describing the surface-water resources of the nation. Historical daily stream flows and suspended-sediment data are available for many of the nation's rivers and streams. Real-time river stage and discharge data are available for more than 3,000 rivers and streams. The USGS operates a Hydraulics Laboratory for the testing of instruments and for hydraulic and sediment transport research. The Hydrologic Instrumentation Facility and the Federal Interagency Sedimentation Project develop, test, and distribute various measurement and sampling equipment.

## **U.S. Fish and Wildlife Service (USFWS)**

The U.S. Fish and Wildlife Service is the main federal agency dedicated to protecting wildlife and their habitat from the harmful effects of pollution, helping to create a healthy world for all living things. The USFWS coordinates and participates in numerous programs, partnerships, and grants, some of which include:

### Environmental Quality Branch

- Environmental Contaminants Program - detecting toxic chemicals; addressing their effects; preventing harm to fish, wildlife, and their habitats; and removing toxic chemicals and restoring habitat when prevention is not possible.

### Branch of Habitat Restoration

- Partners for Fish and Wildlife – voluntary partnership program to restore wetlands and other important fish and wildlife habitat on private property.
- Coastal Program - identifies important coastal resource problems and solutions, seeks partnerships to carry out on-the-ground conservation projects, and encourages public action in 15 of the nation's highest priority coastal areas.
- Coastal Wetlands Conservation Grant Program – provides grants to acquire, restore, and enhance wetlands in coastal states and trust territories

USFWS is also involved in Superfund sites by providing data and guidance to the EPA. The Endangered Species Branch designates “critical habitats” for listed species, which regulates federal-related activities within these designations.

## **National Oceanic and Atmospheric Administration (NOAA)**

NOAA's mission is to describe and predict changes in the Earth's environment, and conserve and wisely manage the nation's coastal and marine resources. NOAA's interest in aquatic environments includes the land areas that drain into rivers, known as watersheds, as well as the rivers themselves. Because aquatic ecosystems are affected by so many different characteristics of the watershed, impact assessment and management can be significantly improved by using a method that shows the geographic relationship between measurements taken at specific places and the characteristics specific to that region.

The NOAA - Coastal Protection and Restoration Division (CPRD) has developed an integrated assessment tool that combines a computer database and database-mapping programs. This approach allows scientists to analyze a variety of data (such as sediment contaminant concentrations, tissue data,

aquatic species occurrence, and habitat characteristics) in combination with a watershed's features and land uses. This information is displayed on maps at various spatial scales, simplifying data presentation and improving our understanding of dynamic aquatic ecosystems. *Query Manager* is a software application used to access sediment chemistry, sediment toxicity, and tissue chemistry data from specific watershed projects. By downloading the associated program, MARPLOT, queried information then can be displayed on maps. Geographic Information Systems is utilized in watershed analysis and to create maps with data types such as sediment toxicity, fish surveys, land use, and aerial photographs. The National Marine Fisheries Service is under NOAA. The NOAA Fisheries strategic plan contains three goals: rebuild and maintain sustainable fisheries, promote the recovery of protected species, and protect and maintain the health of coastal marine habitats.

### **State of Hawai'i Department of Health (DOH)**

The State of Hawai'i Department of Health is the local implementing agency for several EPA initiatives. Also, the DOH Office of Environmental Management has under its direction the Clean Water Branch and Safe Drinking Water Branch. The Clean Water Branch (CWB) protects the public health of residents and tourists who utilize Hawai'i's coastal and inland water resources. The CWB also protects and restores inland and coastal waters for marine life and wildlife. This is accomplished through statewide coastal water surveillance and watershed-based environmental management through a combination of permit issuance, monitoring, enforcement, sponsorship of polluted runoff control projects, and public education. The mission of the Safe Drinking Water Branch of the Department of Health is to safeguard public health by protecting Hawai'i's drinking water sources (surface water and ground water) from contamination and to ensure that owners and operators of public water systems provide safe drinking water to the community. This mission is accomplished through the administration of its programs:

- Safe Drinking Water Program
- Underground Injection Control Program
- Groundwater Protection Program
- Drinking Water State Revolving Fund.

### **Department of Land and Natural Resources (DLNR)**

The State of Hawai'i DLNR manages, administers, and exercises control over public lands and the water resources, ocean waters, navigable streams, coastal areas (excluding commercial harbor areas), and minerals and all other interests therein. Additionally, the DLNR manages and administers the State parks, historical sites, forests, forest reserves, aquatic life, aquatic life sanctuaries, public fishing areas, boating, ocean recreation, coastal programs, wildlife, wildlife sanctuaries, game management areas, public hunting areas, and natural area reserves. There are various divisions within DLNR that are involved in watershed issues in the State of Hawai'i.

The Division of Aquatic Resources manages the State's marine and freshwater resources through programs in commercial fisheries and resource enhancement; aquatic resources protection, enhancement, and education; and recreational fisheries. Major program areas include projects to manage or enhance fisheries for long-term sustainability of the resources, protect and restore the aquatic environment, and protect native and resident aquatic species and their habitat.

The Division of Forestry and Wildlife (DOFAW) manages forest reserves; gathers information regarding forest lands; and develops ways to protect, extend, increase, and utilize the forests and forest reserves, more particularly for protecting and developing the springs, streams, and sources of water supply to increase and to make that water supply available for use.

- Act 152, State Watershed Protection and Management Program - works to protect and improve the condition of forests that benefit our water supply. The objectives of the program are to: 1) help ensure water quality and quantity, 2) prevent rapid run-off of storm flows and soil erosion, 3) improve water infiltration into soil, and 4) encourage forestry activities on private land.
- Landowner Incentive Program - administered at the State level from the USFWS.

The Land Division is responsible for the management of State-owned lands, including submerged lands, rivers, streams, and canals that are not under the jurisdiction of other State departments. The Engineering Branch of the Land Division administers the following programs:

- Water and Land Development Program - promotes economic development and enhances public welfare by developing water supplies and State lands.
- Flood Control Program - manages Hawai'i's flood hazards, prevents loss of life, reduces property damage, and conserves and restores the natural and beneficial resources and functions of State rivers and coastal floodplains.
- Dam Safety Program - ensures the safety and integrity of dams in Hawai'i and protects people and property from the consequences of dam failures. The purpose is to provide for the safe design, construction, operation, and maintenance of dams to protect public safety.

The Commission on Water Resource Management (CWRM) administers the State Water Code, which was created by the 1987 Hawai'i State Legislature. The Water Commission's general mission is to protect and enhance the water resources of the State of Hawai'i through wise and responsible management. The Water Resource Management Division provides administrative, staff, and technical services in support of CWRM. The Water Resource Management Division's primary responsibilities include basic data collection and resource assessment, water resource planning, regulation of water development and use, enforcement and technical support services, and protection of instream uses.

## **Department of Environmental Services (ENV)**

The City and County of Honolulu Department of Environmental Services mission is to protect public health and the environment by efficient and effective management of the wastewater, stormwater, and solid waste systems. Day-to-day management of the storm water program falls under the ENV Engineering Division, who reports to the State DOH and the Federal EPA. As part of this program, the City and County tests and monitors waters to determine the level of pollutants. The ENV monitors storm water discharges from drainage areas near residential and industrial areas. They issue water pollution control guidelines to the private sector, such as construction companies and industrial firms. New guidelines will also be given to managers of high-rise apartments, office buildings, and hotels to ensure their residents and guests are complying with the new law. The City also oversees private connections to our storm sewer system. All new connections will be required to have a permit issued by the Engineering Division. Old connections will be inspected and those with effluent that violates water quality standards will be disconnected. Permits for old connections may have to be reissued to the current property owner with information on current activity.

The City is also conducting a public education campaign on ways to reduce water pollution in residences and businesses. A website has been set up at the address: <http://www.cleanwaterhonolulu.com/> to deliver the City's message.

- Clean Water Program - ensures that the City conforms to the federal National Pollutant Discharge Elimination System (NPDES) rules, designed to protect ground and surface water. The NPDES regulations mandate cities with more than 250,000 residents to keep their municipal storm drains and sewer systems as free of pollution as possible. They also require the City and County to educate the public about the new law's requirements.

## **Honolulu Board of Water Supply**

The Board of Water Supply is a semi-autonomous agency of the City and County of Honolulu. Its mission is to improve the quality of life of our community by providing world-class water services statewide and throughout the Pacific. The BWS water management expertise and services will support the growth of Hawai'i's economy, provide professional development opportunities for BWS staff and benefit our community by maintaining reasonable rates. With a total labor force of about 550 employees, the department services approximately 155,000 customers or about 900,000 people, with an average of 155 mgd of potable water and 10 mgd of recycled water per day, which makes it one of the ten largest water utilities in the country.

The BWS is assuming a leadership role in the environmental stewardship of O'ahu's precious natural resources. BWS is forming community partnerships to protect O'ahu's watersheds and is working with State and City agencies to effectively manage water resources. BWS is also developing

renewable water supplies, like recycled water, seawater desalination, and deep ocean water supplies that will afford a foundation for sustainable economic development.

### **Other City and County of Honolulu Departments**

Several departments within the Honolulu City and County government are involved in watershed issues through their regulatory, development, or maintenance capacities, including the Departments of Planning and Permitting, Facilities Maintenance, and Design and Construction.

### **Non-Governmental Organizations**

There are also several non-governmental organizations that are involved in watershed restoration and management, including The Nature Conservancy. **The Nature Conservancy** is focused on providing fresh water for habitat needs, and recognizes the watershed approach. They have spearheaded the Freshwater Initiative, whose mission is to dramatically increase freshwater conservation in the United States and abroad through learning networks and promoting partnerships in watershed management

**Ducks Unlimited** conserves, restores, and manages wetlands and associated habitats for North America's waterfowl. These habitats also benefit other wildlife and people. Ducks Unlimited is a member of "Taking Wing," a private-public conservation partnership actively working on large-scale watershed restoration projects

The **Center for Watershed Protection (CWP)** is a non-profit, 501(c)3 corporation that provides local governments, activists, and watershed organizations around the country with the technical tools for protecting some of the nation's most precious natural resources: our streams, lakes, and rivers. The CWP has developed and disseminated a multi-disciplinary strategy for watershed protection that encompasses watershed planning, watershed restoration, storm water management, watershed research, better site design, education and outreach, and watershed training

New organizations are continuously being formed around the emerging practice of holistic watershed management.

### **Watershed Partnerships**

Partnerships that are organized with the intent of watershed improvement are a growing trend in environmental restoration across the country. There are several partnerships that have formed in the state of Hawai'i that recognize the importance and magnitude of watershed health, especially on island ecosystems. Neighbor island partnerships include the East Moloka'i Watershed Partnership, the West Maui Mountains Watershed Partnership, the East Maui Watershed Partnership and the Nawiliwili Watershed Partnership. On O'ahu, the Ko'olau Mountains Watershed Partnership (KMWP) was formed in 1999 to collectively address the array of environmental and social issues facing the various

watersheds in that mountain range. The KMWP developed a Management Plan in 2002 modeled after the East and West Maui Watershed Management Plans, but it is considered a unique document due to the specific biophysical and sociocultural contexts. It seeks to balance the varied interests represented by each of the partnership's unique members, with the goal of protecting the forested watershed areas within the Ko'olau Range.

The concept of partnerships extends to agreements between government and community groups. With the reduction in size and budget of government agencies, more and more, the success of government initiatives is through partnering with locally based community organizations. The key for involving community groups is to foster a sense of stewardship for the land on which they live and to impress upon the importance of clean water in the environment. The initiation of non-profit organizations has occurred in several places in Hawai'i, including the West Honolulu Watershed region. These groups seek funding and membership to carry out their organizational objectives from governmental agencies such as the EPA, NRCS, the Department of Health and the City. A community-based initiative actively involves the public and provides a long-term legacy in concert with educational programs to foster continued awareness and improvement in the watershed.

### **South Oahu Soil and Water Conservation District (SOSWCD)**

The South Oahu Soil and Water Conservation District is one of sixteen Conservation Districts formally organized under Chapter 180 of the Hawai'i Revised Statutes. The mission of the SOSWCD is to provide education regarding conservation in an urban setting, serve as an information clearing house regarding community concerns in conservation, and be an advocate for conservation while serving the needs of the agricultural community of South O'ahu. The SOSWCD concentrates on issues such as automotive runoff, household chemical management, and educating agencies, legislators, and the general population regarding soil and water conservation