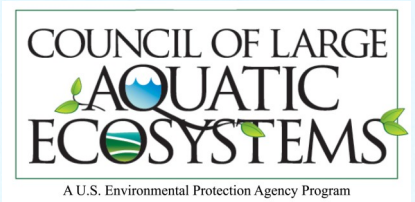


# Pacific Islands

## Large Aquatic Ecosystem (LAE)



The **U.S. Pacific Island territories (American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands)** are home to vibrant cultures, stunning landscapes, and abundant coral reefs, but also face significant environmental and public health challenges. One of the primary challenges is obtaining the necessary resources, both financial and technical, to upgrade aging infrastructure in order to improve environmental health in the islands. The lack of adequate environmental infrastructure, especially for drinking and waste water, is a persistent threat to public health and aquatic ecosystems such as coral reefs.

### Challenges

**American Samoa:** According to the 2000 U.S. Census, 37 percent of households in American Samoa do not have adequate indoor plumbing such as piped water and/or toilet facilities. In addition, seventeen percent of the population have tested positive for *Leptospirosis*, a serious waterborne disease connected with disposing of pig waste into streams; with some cases becoming fatal.

**Guam:** Almost 8 percent of residents did not have access to adequate plumbing such as piped drinking water and/or toilet facilities, over 6.5 times the national average of 1.2 percent according to the 2000 U.S. Census. In addition, Guam's 60-year-old municipal landfill—unlined, uncontrolled, and over-capacity for 20 years—has been leaching chemicals and contaminating the Lonfit River. Adding to Guam's challenges are plans to move thousands of Marines from a military base in Okinawa, Japan to Guam, and to upgrade existing Navy and Air Force facilities. This will increase Guam's population by 25 percent over the next several years, putting additional strain on environmental infrastructure.

**Commonwealth of the Northern Mariana Islands (CNMI):** an economic downturn has strained the resources of the local government to provide adequate infrastructure and environmental protection. Many of Saipan's residents lack access to running water for more than a few hours per day, and the water that does come through the pipes is not drinkable because of its high salt content.

### Priorities

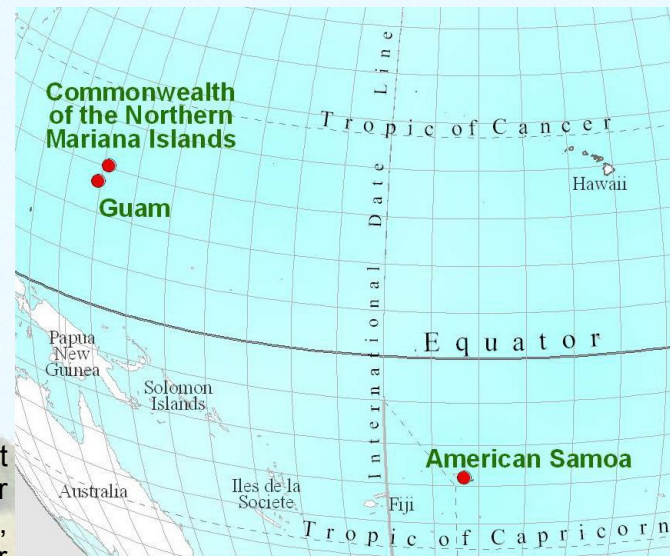
EPA's overarching goals in the U.S. Pacific Island territories are:

- Safeguard the environmental health of the U.S.-affiliated Pacific Islands by addressing environmental priorities such as drinking water and wastewater infrastructure, solid waste and recycling, hazardous waste, and coral reefs.
- Build local environmental protection capacity by providing resources, technical assistance, and training

### Accomplishments

EPA has worked successfully with local governments to improve environmental conditions through increased funding of infrastructure projects, enforcement, and technical assistance. In FY09 and FY10, EPA provided a historic increase in funding to the Pacific Islands, providing more construction funding to the territories in these two years than in the prior 15 years combined. In addition to improving infrastructure, the increased funding allowed for the placement of additional engineers in territorial water utilities, as well as contractor support to improve local engineering capacity.

- **Guam:** Working with EPA's court order, Guam Waterworks Authority (GWA) has nearly eliminated boil water notices and continues to reduce sewage spills. GWA has made over \$100 million worth of physical improvements to the water and wastewater systems. Furthermore, the government of Guam has nearly completed construction of a new, fully compliant municipal landfill.



# Large Aquatic Ecosystems

## Program Offices



The **Pacific Islands** Program Office was designated a member of the US Environmental Protection Agency's Large Aquatic Ecosystem Council (LAE) in 2008. The Pacific Islands Program joins nine other geographic-based efforts that focus on protecting and restoring the health of critical aquatic ecosystems. The LAE Council seeks to merge geographic-based efforts with national water programs to advance the health of the nation's large aquatic ecosystems and strengthen national water programs.

## Accomplishments, continued

**CNMI:** The Commonwealth Utilities Corporation (CUC) has significantly improved the safety of the drinking water system, and, in conjunction with the local Water Task Force, has increased the number of residents with access to 24-hour running water on Saipan from 25 percent of residents in 2005 to 75 percent in 2010.

**American Samoa:** Local government has made great strides in battling the water-borne disease *Leptospirosis* by significantly reducing the amount of waste from small pig farms going into streams. Using funds provided by EPA, American Samoa's "Team Lepto" has conducted over 130 inspections of small pig farms, or piggeries, many of which were located on streams. The team closed 62 non-compliant piggeries, and has worked with 51 owners to bring their pig farms into compliance with local regulations. As a result, "Team Lepto" has reduced nutrient loading from pig waste into the territory's waters by 16,000 pounds, protecting public health and nearby coral reefs. In one watershed alone, bacterial contamination was reduced by over 90 percent. Moreover, American Samoa is working with local pig owners to promote innovative sustainable practices to turn the waste into a resource.

## Future Direction

There is still a long way to go in order to provide the same level of environmental protection in the Pacific territories as is enjoyed in the rest of the United States. A key need remains the infrastructure upgrades required to fully protect the territories' human health and aquatic ecosystems. In Guam, EPA has estimated it will take more than one billion dollars of infrastructure investment in order for the local system to be fully compliant with the Clean Water Act, Safe Drinking Water Act, Guam's own Water Quality Standards, and meet the expected increase in population accompanying the military buildup.

EPA will continue to use all of its resources – including funding, technical assistance, regulatory oversight, and partnerships – to build local capacity and help improve public health and the environment in the U.S. Pacific islands. One near-term focus will be working with the Department of Defense (DOD) and the government of Guam to prevent significant impacts from the military buildup. Another area of focus will include management of non-compliant sewage effluent and storm water which could affect near shore ecosystems, among them coral reefs. EPA's long-term goal is for the territories to enjoy the same standard of environmental protection as the U.S. mainland, specifically to ensure the same levels of safe drinking water, sewage treatment plant compliance, and safe beaches.

## The Pacific Islands Facts

**Watershed Size:** 470 square miles (combined land area of Guam, CNMI, and American Samoa)

**Waterbody Size:** 527,462 square miles (combined EEZ of Guam, CNMI, and American Samoa)

**Population:** 327,322 (July 2008 est.)

**EPA Region:** 9

## LAE Program Web Sites

### Chesapeake Bay Program

[www.chesapeakebay.net](http://www.chesapeakebay.net)

### Columbia River Basin

[www.epa.gov/region10/columbia](http://www.epa.gov/region10/columbia)

### Great Lakes

[www.epa.gov/glnpo](http://www.epa.gov/glnpo)

### Gulf of Mexico Program

[www.epa.gov/gmpo](http://www.epa.gov/gmpo)

### Lake Champlain Basin Program

[www.lcbp.org](http://www.lcbp.org)

### Long Island Sound Study

[www.longislandsoundstudy.net](http://www.longislandsoundstudy.net)

### Pacific Islands Office

[www.epa.gov/region09/islands](http://www.epa.gov/region09/islands)

### Puget Sound - Georgia Basin

[www.epa.gov/pugetsound/index.html](http://www.epa.gov/pugetsound/index.html)

### San Francisco Bay Delta Estuary

[www.epa.gov/region9/water/watershed/sfbay-delta/index.html](http://www.epa.gov/region9/water/watershed/sfbay-delta/index.html)

### South Florida Geographic Initiative

[www.epa.gov/region4/water/southflorida/index.html](http://www.epa.gov/region4/water/southflorida/index.html)

EPA Office of Wetlands, Oceans,  
and Watersheds

[www.water.epa.gov/aboutow/owow/  
programs/large\\_aquatic.cfm](http://www.water.epa.gov/aboutow/owow/programs/large_aquatic.cfm)

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