

# WAHIAWA RESERVOIR

## History

The Wahiawa Reservoir, officially named Lake Wilson, is formed by an earthen dam located just downstream of the convergence of the north and south forks of the Kaukonahua Stream. The reservoir was constructed in 1905 and 1906 by the Waiialua Sugar Company, Inc. and is one of the largest freshwater impoundments in the State, encompassing the town of Wahiawa. The reservoir has a capacity of over 3 billion gallons, a shoreline of roughly 20 miles in length, and a surface area of about 350 acres at maximum pool. The impoundment is owned by Castle and Cooke, Inc., and is presently leased and operated by Dole Food Company, Inc.

In 1957, the Department of Land and Natural Resources, Division of Fish and Game (presently Division of Aquatic Resources) through a cooperative agreement with Castle & Cooke, Inc. has managed Wahiawa Reservoir as a "Public Fishing Area". In 1968, a 14-foot wide concrete boat launching ramp and parking area were constructed by the State for public use at the Wahiawa Freshwater State Recreational Area managed by the Division of State Parks.

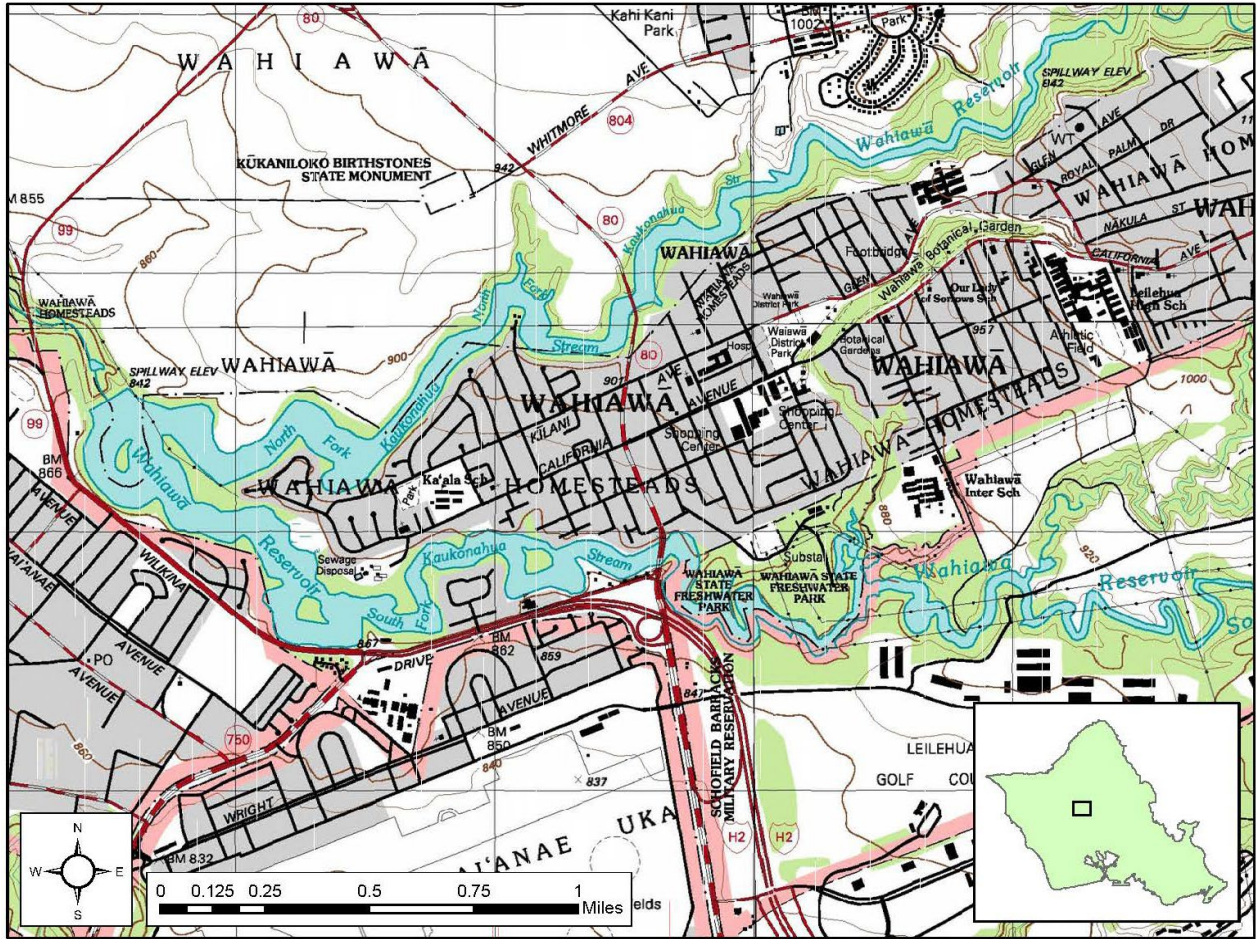
The reservoir was stocked with popular gamefish species such as largemouth and smallmouth bass, bluegill sunfish, Channel catfish, Threadfin shad, tilapia, tucunare (peacock bass), oscar, Chinese catfish, and carp. It is presently estimated that there are 500 tons of fish in the reservoir. It is the responsibility of the Division of Aquatic Resources to manage these gamefish populations within the reservoir for recreational fishing purposes.

## Wahiawa Public Fishing Area

The Wahiawa Reservoir Public Fishing Area (PFA) on the island of Oahu provides one of the few areas for freshwater sport fishing in Hawaii. Therefore, monitoring and maintaining this area is critical to achieving this objective. Wahiawa PFA hosts an entirely exotic fishery composed of species found in combination nowhere else in the world such as peacock bass, largemouth bass, smallmouth bass, channel catfish and bluegill. Creel surveys are conducted to monitor fish populations and to determine if hatchery cultured largemouth bass are making an impact on the existing largemouth bass populations in the reservoir. In addition, surveys are conducted to monitor any new and exotic introductions (flora and fauna). Mitigation measures are also taken to avoid fish population imbalances, outbreaks of fish disease, fish kills or the establishment of invasive species. Oxygen readings are taken in the basin area of the reservoir during summer and fall months to monitor dissolved oxygen levels for potential fish kills. A portable emergency aeration system is available and can be deployed in the event of low dissolved oxygen levels to prevent any potential fish kills due to anoxia.

The Wahiawa Public Fishing Area is a Dingell-Johnson project that is funded annually through the U.S. Fish and Wildlife Services' Sportfish Restoration and Boating Trust funds from excise taxes on fishing equipment, motorboat and small engine fuels, import duties, and interest. These funds are apportioned to States and Territories based on a formula which includes land area, number of paid license holders, minimums and maximums.

The Wahiawa PFA project grant funds cover 75% of the project costs and provides freshwater recreational sportfishing opportunities to the community, Hawaii residents and also tourists from other States and Japan. Freshwater fishing clubs also hold tournaments every month in the reservoir.



Map of Wahiawa Reservoir encompassing town of Wahiawa, Oahu.



Aerial view of the basin and dam area of the reservoir.





Boat ramp at Wahiawa Freshwater State Recreational Area.

Future goals and objectives:

- Continue to manage and improve a more balanced and self-sustainable freshwater fishery in the reservoir.
- Provide more recreational opportunities to public and local fishers along with an enhanced outdoor experience. Such as grading shoreline areas in the State Park to provide more accessible fishing platforms.

**Gamefish and forage fish stocked in Wahiawa Reservoir**



Peacock bass (*Cichlia ocellaris*)



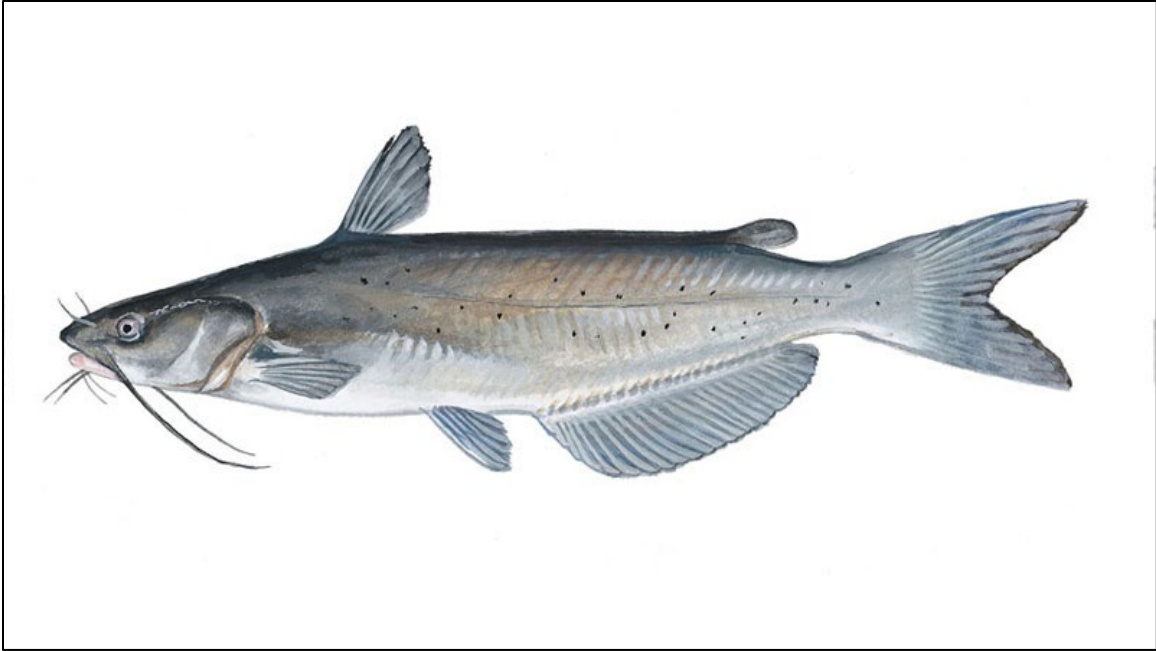
Smallmouth bass (*Micropterus dolomieu*)



Largemouth bass (*Micropterus salmoides*)



Oscar (*Astronotus ocellatus*)



Channel catfish (*Ictalurus punctatus*)



Bluegill sunfish (*Lepomis macrochirus*)



Carp (*Cyprinus carpio*)



Threadfin shad (*Dorosoma petenense*)



## Unintentional introduced fish

Introduced fish have an impact on the desired gamefish by preying on their juveniles, competing for food, habitat, or nesting sites and introducing parasites or disease.



Clown Knife fish (*Chitala chitala*)



Stickfish (*Xenentodon cancilia*)





Snakehead (*Channa striatus*)



Pacu (*Colossoma macropomum*)



Red devil (*Amphilophus citrinellum*/*A. labiatum*)



Long-fin Armored catfish (*Liposarcus multiradiatus*)  
Suckermouth catfish (*Hypostomus* c.f. *watwata*)



Banded Jewel cichlid (*Hemichromis elongatus*)



Jaguar cichlid (*Parachromis managuensis*)





Chinese catfish (*Claris fuscus*)



Red-bellied tilapia (*Tilapia zillii*)

## Invasive aquatic plant introductions

Floating aquatic plants cover the water preventing oxygen absorption at the surface, blocks out sun light for photosynthesis which is utilized by the phytoplankton to produce oxygen, provides breeding areas for mosquitos, and contributes to low dissolved oxygen levels through the decomposition of plant material that sinks to the bottom.



Water hyacinth (*Eichhornia crassipes*)



Water lettuce (*Pistia stratiotes*)





Giant water fern (*Salvinia molesta*) being collected in Wahiawa PFA with aquatic harvester.