

A background image featuring a single water droplet falling from the top center, creating a series of concentric ripples that spread outwards across the entire frame. The droplet is in sharp focus, while the ripples become increasingly blurred as they move away from the center.

Wastewater Reclaim & Pumped-Storage Hydro

Senator Donovan M. Dela Cruz

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The Whitmore Project

AGRIBUSINESS DEVELOPMENT CORPORATION
State of Hawaii

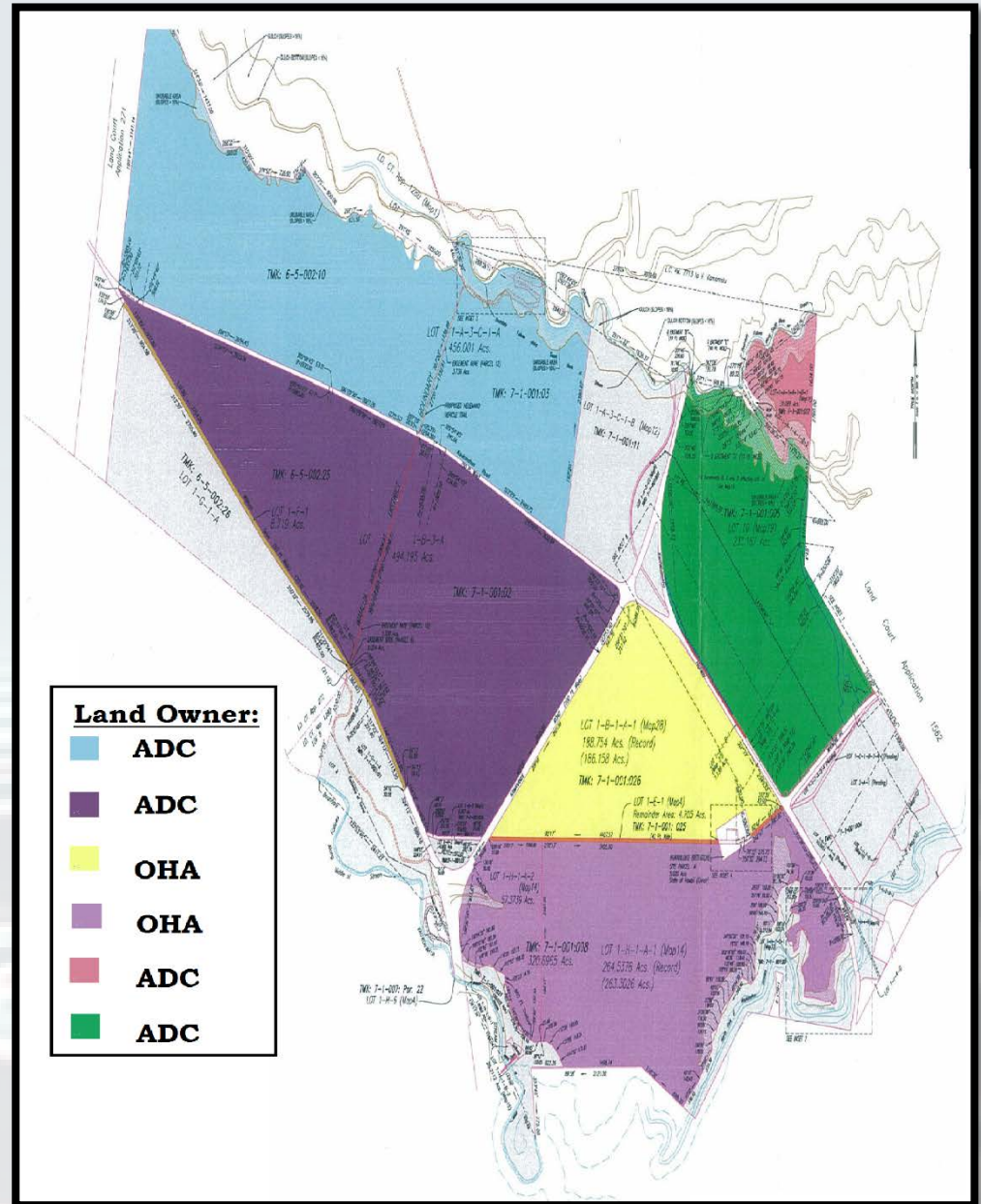
What is The Whitmore Project?

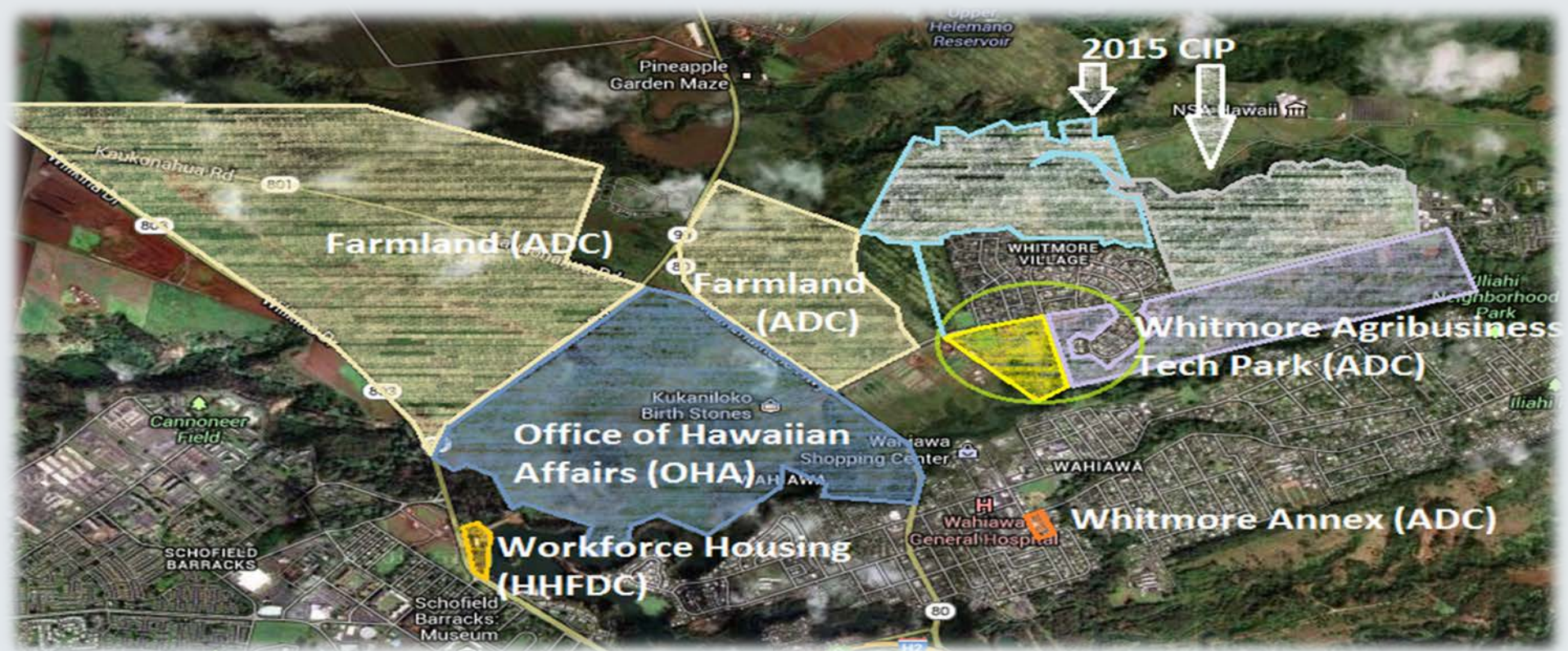
The Whitmore Project is a detailed plan to revitalize our local ag industry by bringing farmers and the state together to **increase local food production, create jobs, engage in partnerships,** and to **provide workforce housing.** The Whitmore Project truly provides a **live, work, and play** environment.

Galbraith Purchase

- State G. O. Bond
 - \$13 million
- Army Buffer
 - \$4.5 million
- City and County Clean Water & Natural Lands
 - \$4 million
- Office of Hawaiian Affairs
 - \$3 million
- Private Donation (D.R. Horton) through TPL
 - \$500,000

TOTAL: \$25 million





Connecting the Whitmore Project:

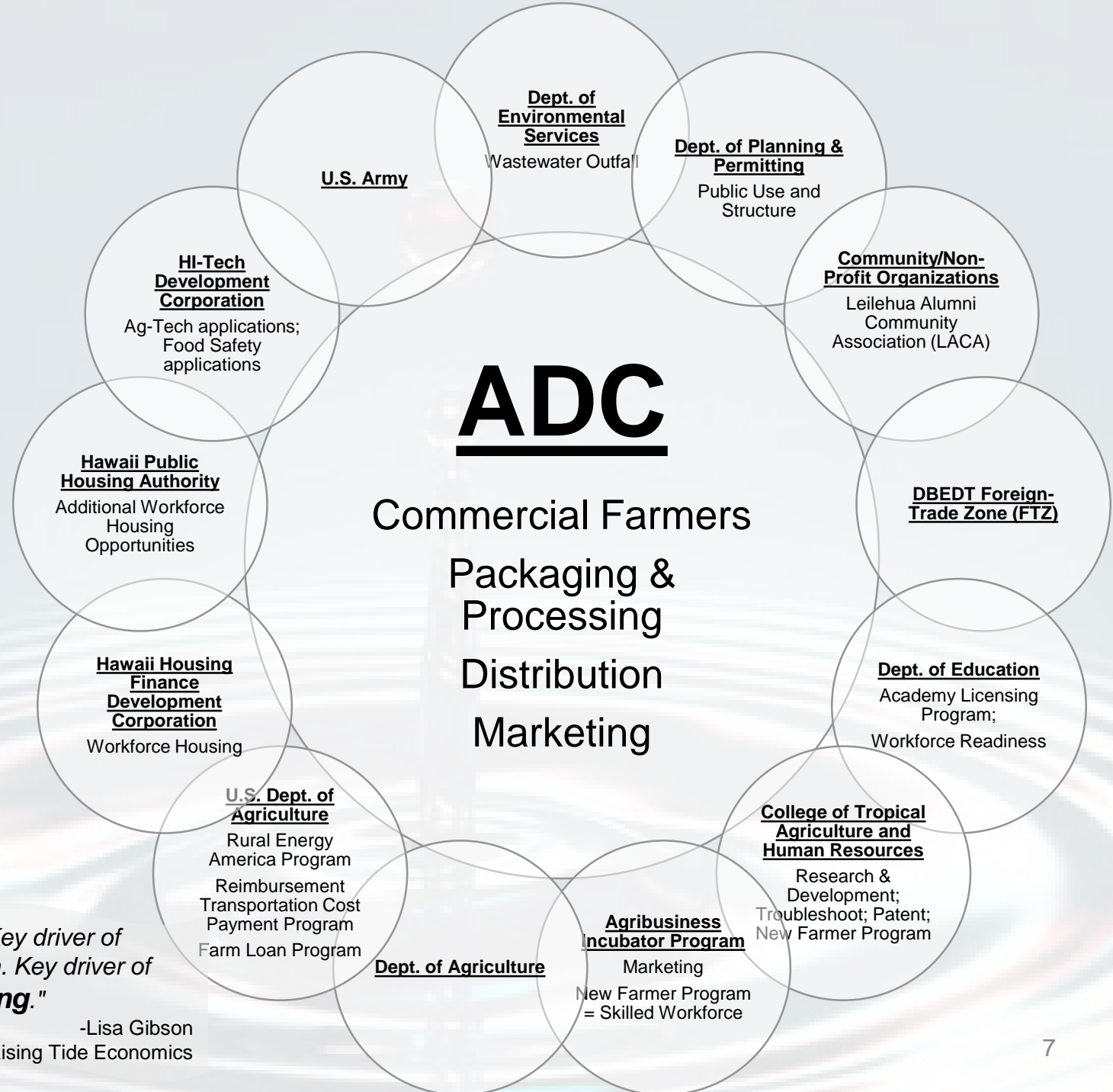
- **Farmland:** 1,200 acres leased to farmers from the Agribusiness Development Corporation.
- **Office of Hawaiian Affairs:** 500 acres of farmland owned by OHA
- **Agricultural Hub:** Ag-Industrial Park will include food safety, packaging and processing facilities, and office space.
- **Warehouse:** Formally the Tamura's Warehouse, this structure will be retrofitted for additional food safety, packaging and processing, storage, and office space.
- **Workforce Housing:** A public-private partnership with the Hawaii Housing Finance Development Corporation (HHFDC) will provide housing for farmers.

Agribusiness Development Corporation

The Agribusiness Development Corporation was established in 1994 to facilitate and provide direction for the transition of Hawaii's agriculture industry from a dominance of sugar and pineapple to one composed of a diversity of different crops.

The agency's main goals are:

- Transition former plantation land and water systems for diversified agriculture.
- Initiate development of facilities and provide support as necessary for successful diversified agriculture.
- Provide solutions to certain bottleneck issues facing the agriculture industry.



*"It's about productivity. Key driver of productivity is innovation. Key driver of innovation is **networking**."*

-Lisa Gibson
President, Rising Tide Economics

Piecing Together the Plan

Completed:

- ✓ Purchase 1,700 acres of Galbraith Estate land
- ✓ Purchase of Tamura Warehouse parcel
- ✓ Purchase of 24-acre Castle & Cooke parcel
- ✓ Purchase of 257-acre Dole Food Company, Inc. parcel
- ✓ Public Use and Structure (Dept. of Planning and Permitting)
- ✓ Public-Public Partnerships with:
 - ✓ High Technology Development Corporation
 - ✓ Hawaii Housing Finance Development Corporation
 - ✓ Agribusiness Incubator Program
 - ✓ Dept. of Education
 - ✓ Wahiawa Community Based Development Organization

Pending:

- Enter into Contractual Agreements with:
 - College of Tropical Agriculture and Human Resources
 - City & County of Honolulu –Dept. of Environmental Services
 - Hawaii Public Housing Authority
- Purchase of Castle & Cooke parcel
- Purchase of Dole Food Co. parcel
- Land Exchange due diligence
- Wahiawa Dam & Reservoir Pumped-Storage Hydroelectricity** ←

Continuing:

- Designing and planning of Ag-Tech Park
- Designing and planning of pump/irrigation systems** ←
- Purchasing available parcels from Dole Food Company, Inc. (or land exchange)
- Identifying and collaborating with various stakeholders
- Expansion of Enterprise Zone No. 2 to include Whitmore Village

Sustainable Alternatives

Wastewater Reclaim System

- Recycle/reuse of 2 million gallons of wastewater
- Provides R-1 water for certain agricultural crops
- Lower rates for water which reduces costs for end-user
- Preservation of Oahu's potable water by providing an alternative water resource for irrigation

Pumped-Storage Hydro

- Supply agricultural industry an alternative option for electricity
- Lower rate source of electricity
- Clean and reliable system for generating energy
- Reduces demand on current grid

Wastewater Reclaim System

Wahiawa Wastewater Treatment Plant

- Current outfall is categorized as R-2 water
- HB1700 (2014): \$2.5 million
 - Plan and design for a new wastewater reclaimed water irrigation system for WWTP
 - Installing a reclaim system creates a primary outfall other than the lake, qualifying the water as R-1
- R-1 water
 - provided at a lower rate than potable water
 - Can be used for certain agricultural and recreational use



2 million gallons of recycled water
results in...

2 million gallons of potable water that is
preserved.



WAHIAWA WASTEWATER TREATMENT PLANT

Tax Map Key: 7-3-007:002
Address: 111 California Ave
Wahiawa, HI 96786

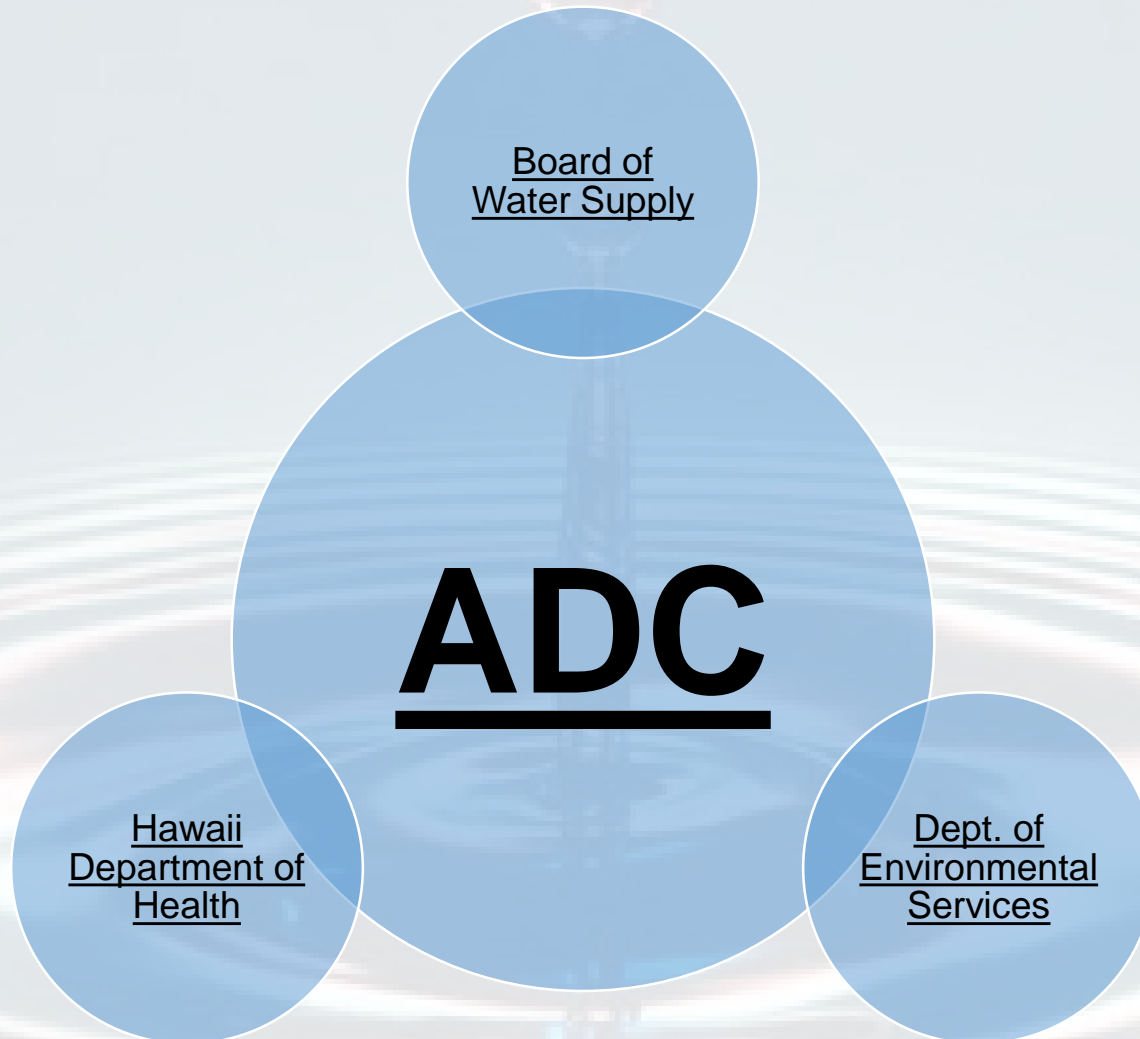
Phone: 768-4547

Supervisor: Clyde Hudson
Supervisor phone: 768-4546
Supervisor cell: NA

Year in service: 1927
Process type:
Design capacity: 2.49 mgd
Avg flow processed: 1.774 mgd (FY 2007)
Mil gals treated: 647.417 (FY 2007)
Serviced laterals: 4,435

WTD number: 020

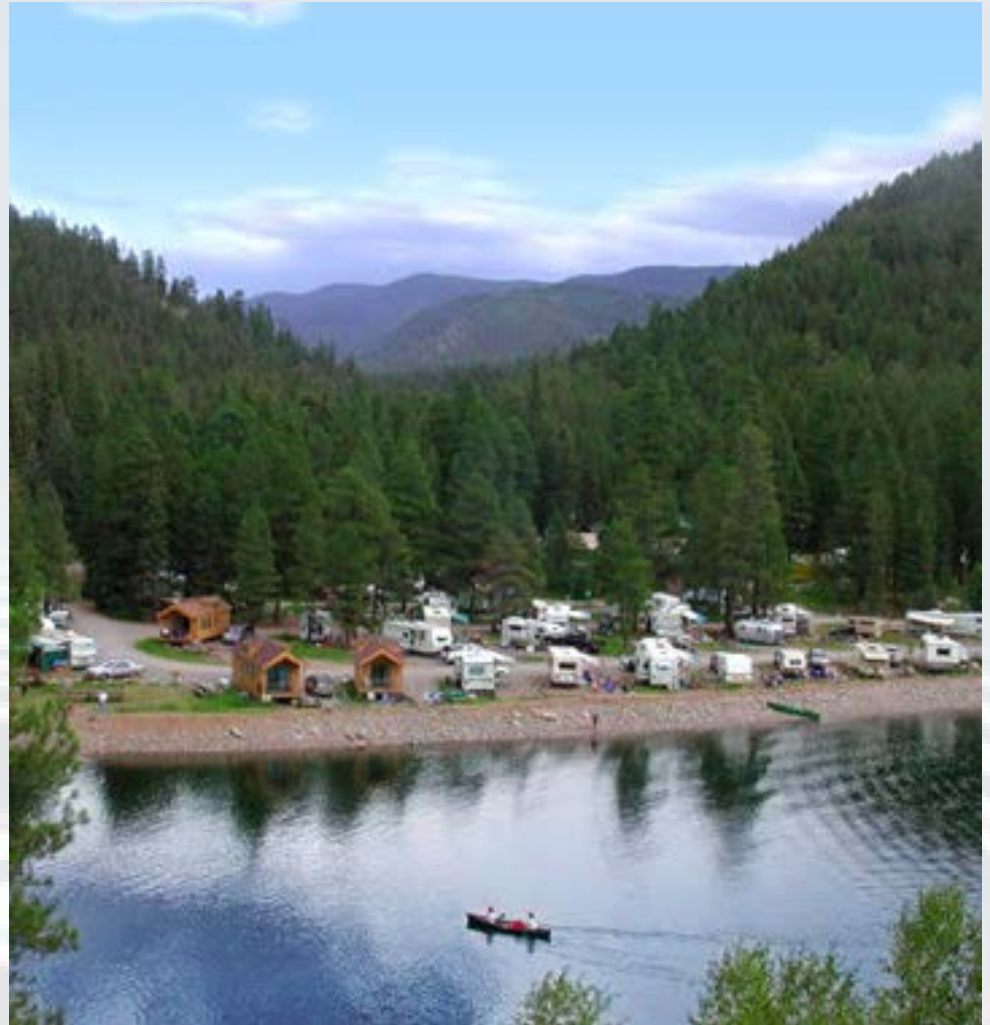
WRS Coordination Grid



Redevelopment of Lake Wilson

Redirecting the wastewater outfall will help clean Lake Wilson turning it into a recreational destination:

- Lodging
- Fishing tournaments
- Recreational activities on both water and land



Redevelopment of Lake Wilson

- **Ecological Benefits**
 - Benefits lakes, rivers, wetlands, and watershed conservation
- **Economic Benefits**
 - Strengthens local economics, funds fisheries and lake management programs, and attracts tourism and angling-related businesses
- **Social Benefits**
 - Communities benefit from a higher quality of life resulting from family and youth involvement in fishing

Economic Impact of Freshwater Fishing by State in 2011

	Retail Sales	Total Multiplier or Ripple Effect	Salaries and Wages	Jobs	Federal Tax Revenues	State and Local Tax Revenues
Alaska†	\$390,455,542	\$580,993,450	\$188,878,215	5,261	\$38,988,480	\$48,168,228
Alabama	\$514,154,996	\$776,012,671	\$231,866,667	7,845	\$51,356,071	\$47,232,865
Arkansas	\$507,855,831	\$725,249,570	\$222,334,267	7,549	\$49,830,096	\$49,462,412
Arizona	\$862,298,181	\$1,456,854,992	\$464,810,603	12,007	\$103,458,290	\$86,916,175
California	\$1,417,629,003	\$2,704,701,141	\$921,946,336	21,515	\$213,770,199	\$198,127,762
Colorado	\$836,049,866	\$1,314,006,542	\$408,940,231	9,942	\$98,445,119	\$81,477,253
Connecticut	\$168,308,427	\$285,969,244	\$101,365,735	2,437	\$25,817,247	\$22,305,922
Delaware	\$12,759,486	\$18,206,232	\$6,146,028	173	\$1,366,397	\$1,347,706
Florida	\$977,018,002	\$1,689,575,866	\$520,689,055	14,040	\$129,932,870	\$97,608,385
Georgia	\$993,650,535	\$1,607,081,758	\$487,200,968	12,536	\$116,498,117	\$87,783,143
Hawaii	\$22,549,618	\$26,394,773	\$7,654,418	202	\$1,555,053	\$1,511,733

Hawaii's recreational fishing market has a total economic impact of **\$330 million**. The increase in **freshwater recreations** can multiply this value and support Central Oahu's local economy.

Pumped-Storage Hydroelectricity

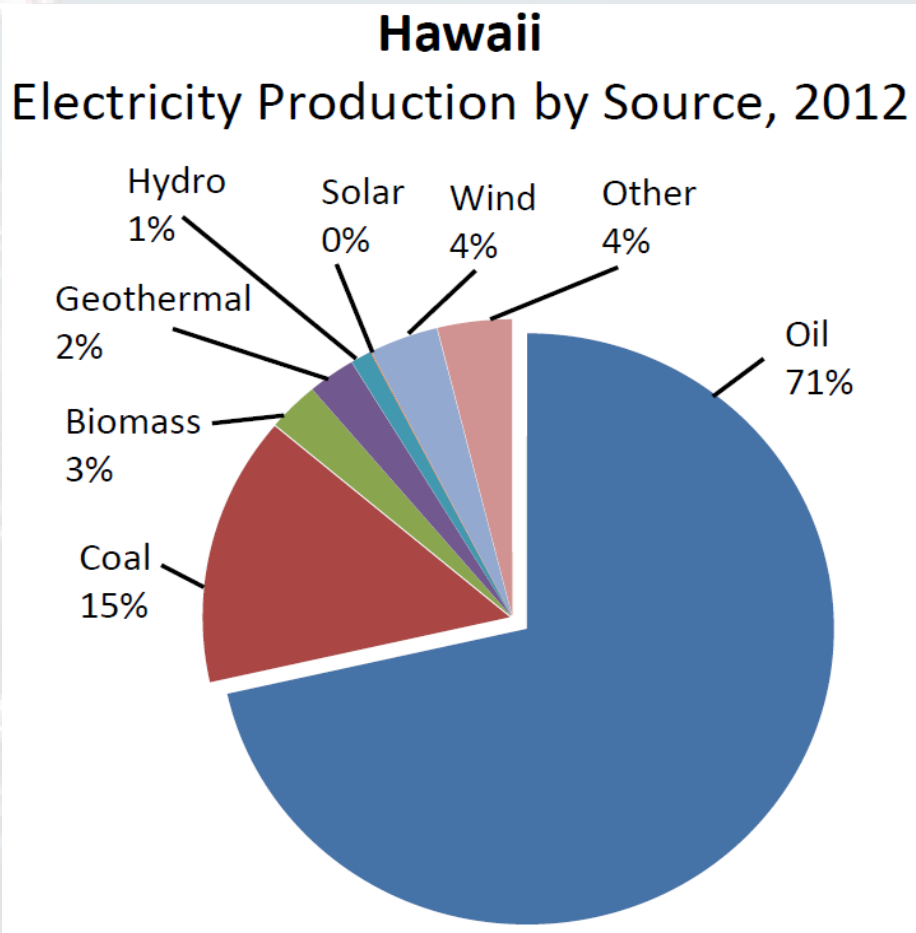
- Pumped-storage hydroelectricity stores energy in the form of gravitational potential energy, pumped from a lower to higher elevation reservoir
- Process is done overnight when electricity demand is at its lowest

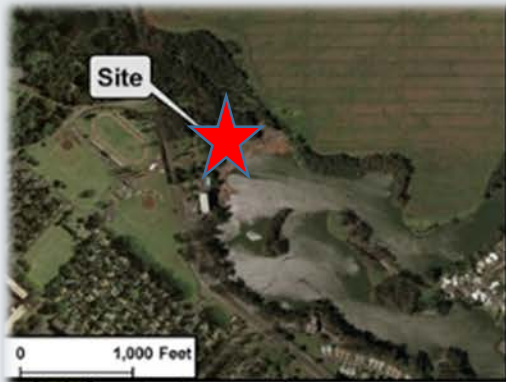
Benefits:

- Electricity can be sold to farmers at lower rates
- Provided a cleaner and alternative source of energy

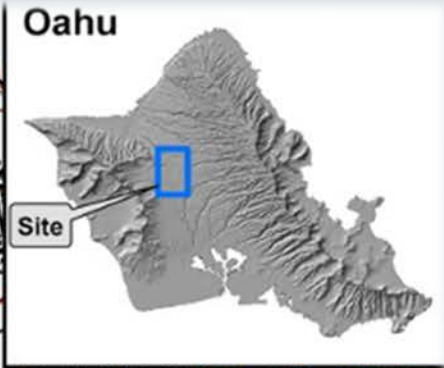
Untapped Resource

- Oahu has 262 dammed reservoirs, many of which can provide power to offset intermittent wind and solar resources
- Potential Sites on Oahu
 - **WAHIAWA: 800,000 KWH OF STORED ENERGY**
 - Nuuanu: 230,000 kWh of stored energy
 - Hoomaluhia: 340,000 kWh of stored energy
 - Kaneohe: 360,000 kWh of stored energy



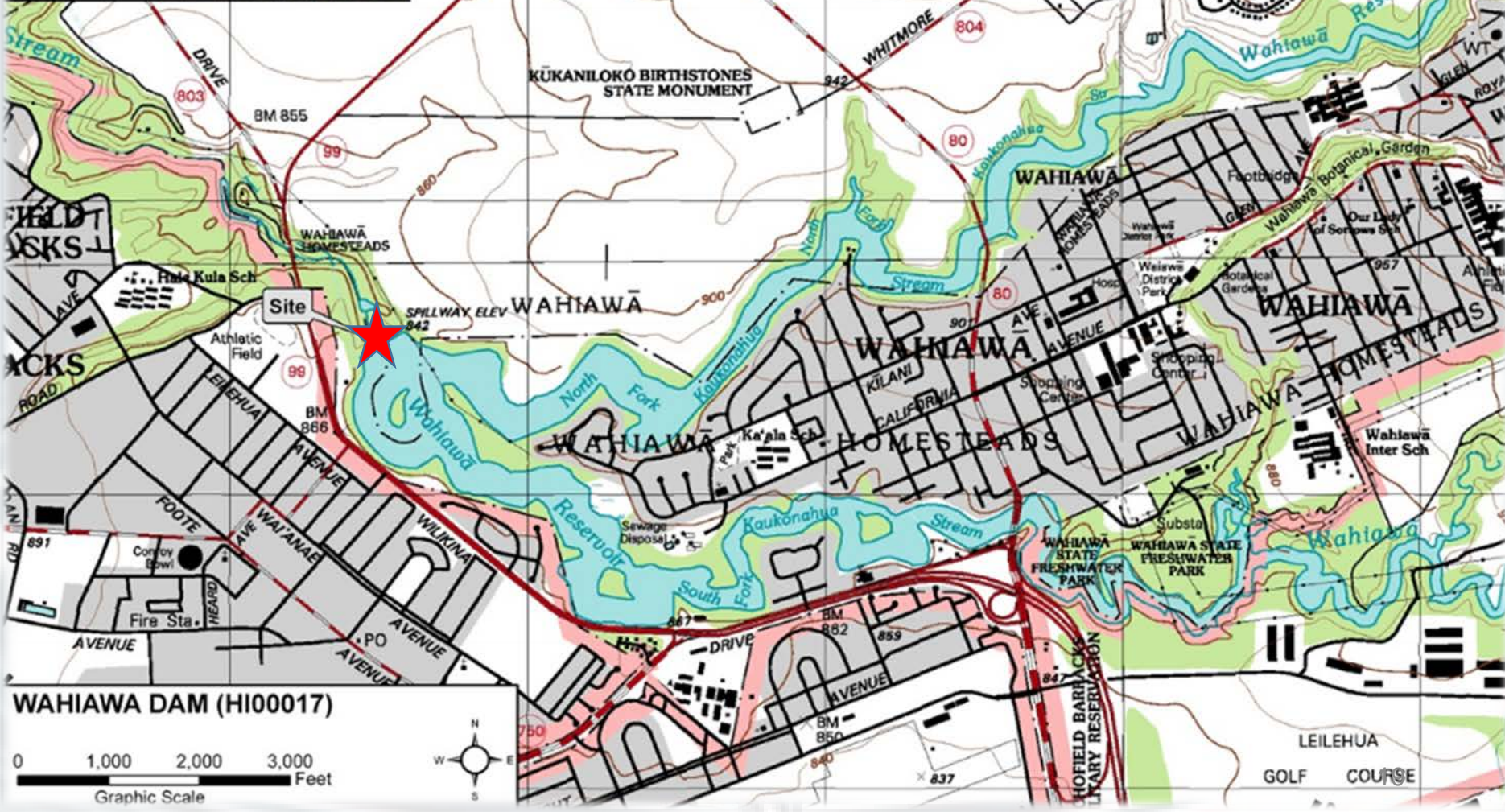


0 1,000 Feet

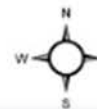


Oahu

Site

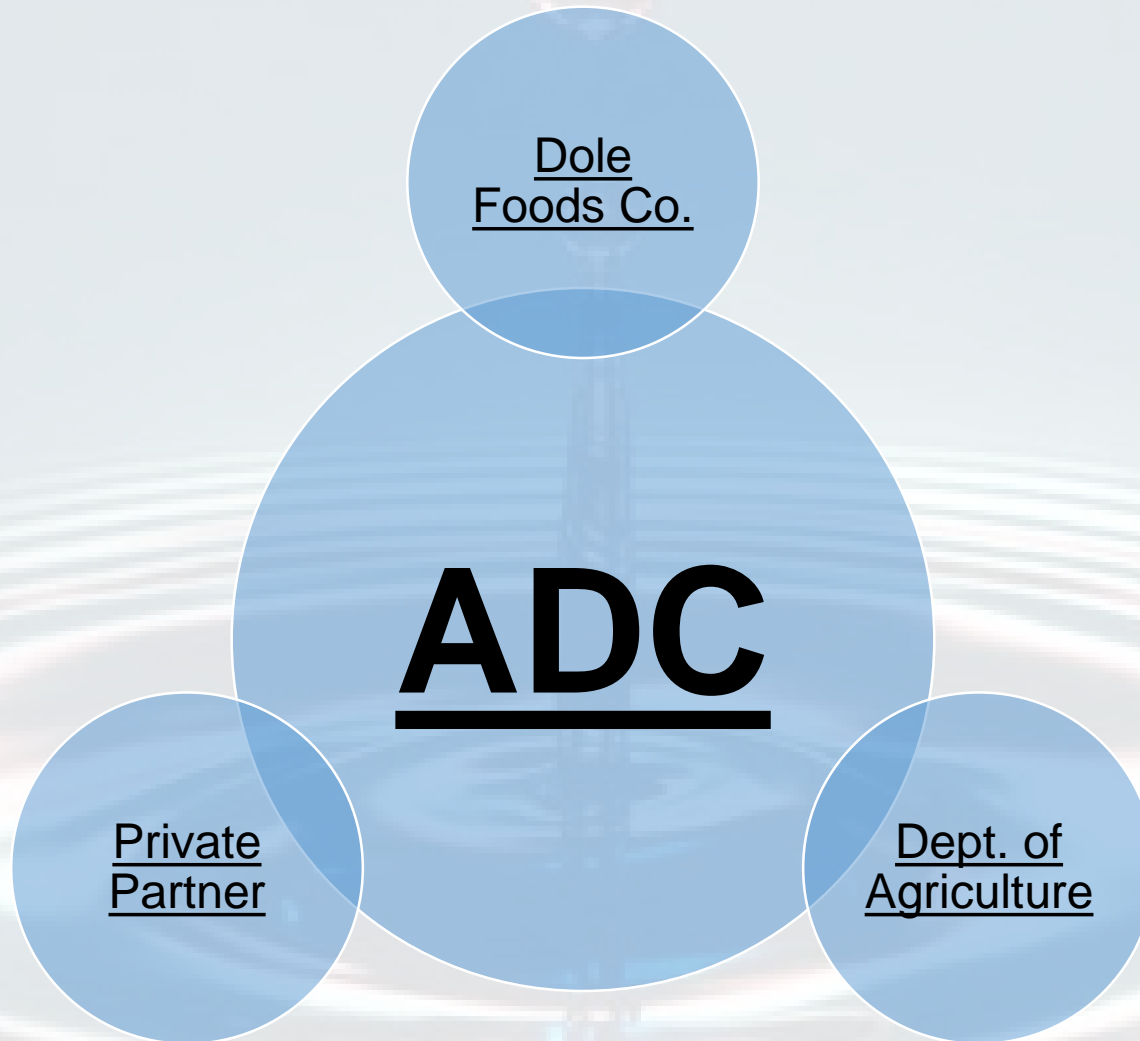


WAHIAWA DAM (HI00017)

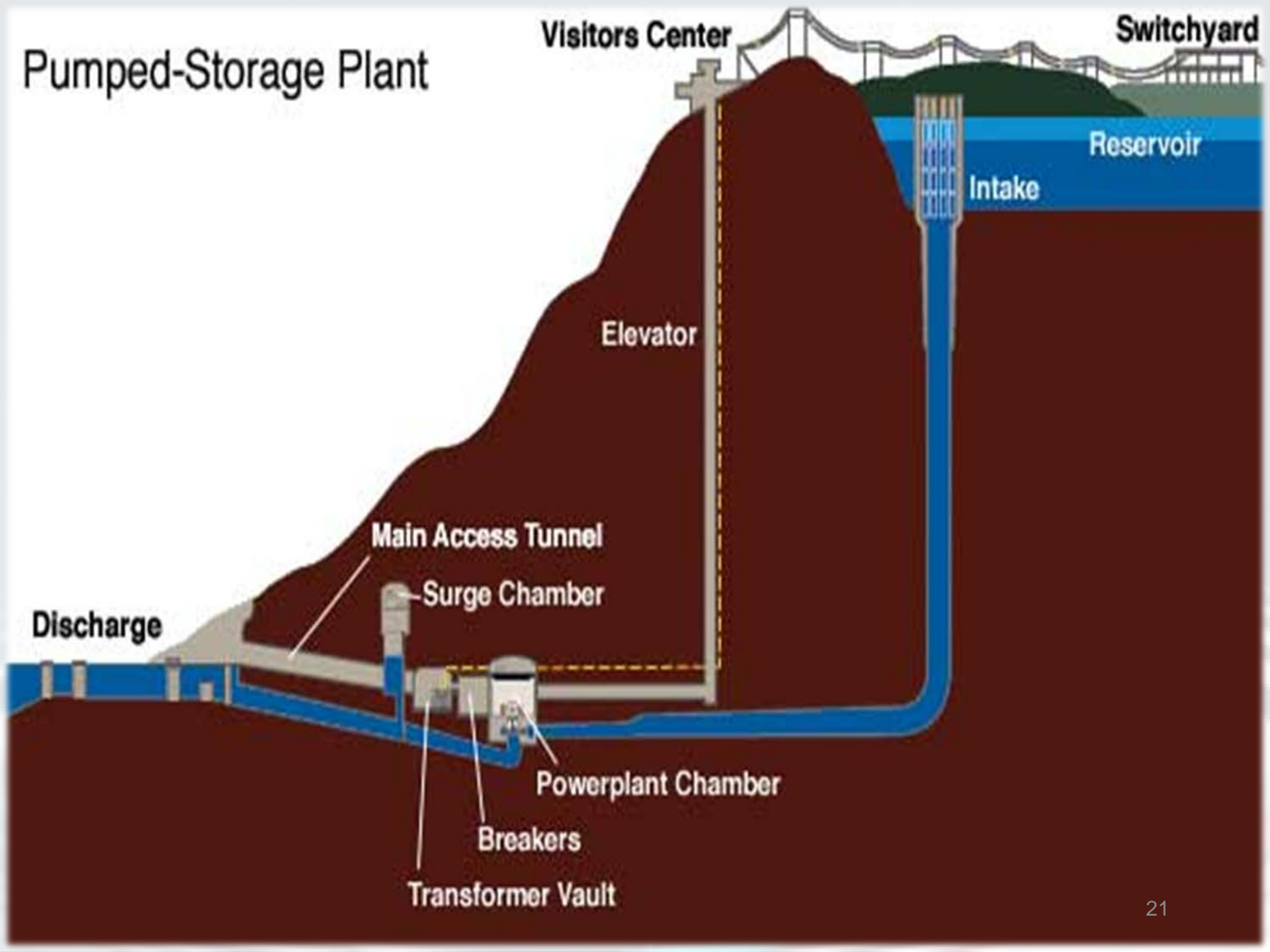


LEILEHUA GOLF COURSE

Pumped-Storage Coordination Grid



Pumped-Storage Plant



Legislation

HB 1700 (2014)

- \$2.5 million for the plan and design for a new wastewater reclaimed water irrigation system at the Wahiawa Wastewater Treatment Plant.

SCR 193 (2015)

- Encouraging the Agribusiness Development Corporation to develop a plan to acquire the dam and spillway of Lake Wilson for pumped-storage hydroelectricity.

Future Steps

- Purchase key assets
 - Land
 - Water
 - Facilities
- Appropriate funds for the construction of the wastewater reclaim system
- Create a pumped-storage hydroelectricity facility

Contact Us

To receive updates on either of these projects
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For more information or if you have questions
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