



HAWAIIAN HOME LANDS
HAWAIIAN HOMES COMMISSION · DEPARTMENT OF HAWAIIAN HOME LANDS

Wai'anae Valley Homestead Cesspool Conversion Information Meeting

**Feb. 3, 2025
6:30 p.m. to 8:30 p.m.**

Meeting Kuleana

- Please let us get through the presentation. If you have questions, write them down and we can answer your questions after the information has been presented.
- Be respectful of the person talking — please do not interrupt.
- Wait for the facilitator to call on you, or you can write your question on the green questions/comments sheets.
- When addressing other participants, be respectful, show aloha, treat others how you would like to be treated.
- Agree to disagree — accept that others may have different perspectives and opinions.
- Have an open mind — take home new ideas and information.
- Let everyone get a chance to ask/speak/comment, before speaking again.



Purpose of Meeting

DHHL to meet with homesteaders without other agencies

1. Make sure DHHL and Wai'anae homesteaders are on the same page:
 - Issues with cesspools—the need for conversions
 - Preliminary cesspool conversion options
2. Share findings and recommendations of our own cesspool assessment
3. Reaffirm DHHL's commitment to work with other agencies to secure funding to help lessees pay for conversions.
4. Answer questions, gather comments and note concerns.



Meeting Agenda

- I. **Wastewater Systems in Hawai'i:**
 - 1) Centralized System-hook up to county sewer system
 - 2) Decentralized Onsite Sewer Disposal System (OSDS)
 - 3) The Problem with Cesspools
- II. **Act 125 (2017)**—New law; new requirements
- III. **DHHL's O'ahu Cesspool Assessment:** Findings, Data and Maps, Preliminary Recommendations
- IV. **DHHL Assistance and Support**
 - A. EPA Technical Assistance and funding to DHHL for Wai'anae Valley Homestead as a pilot project
 - B. DHHL will research and apply for other programs and other funding support
- V. **Questions, Comments, Concerns**
- VI. **Next Steps**

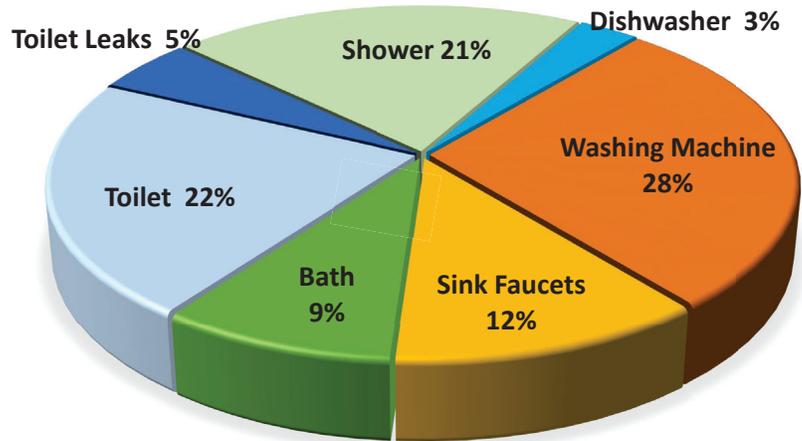


Wastewater Systems in Hawai'i

Wastewater = any water that's been used and discharged.

Sewage = a specific type of wastewater from your house that includes human waste.

Washing Machine	28%
Sink Faucets	12%
Bath	9%
Toilet	22%
Toilet Leaks	5%
Shower	21%
Dishwasher	3%
All Wastewater	100%

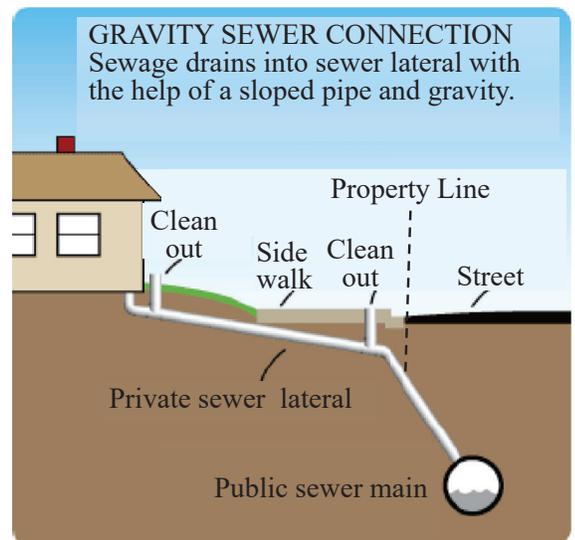


Wastewater Systems in Hawai'i

There are 2 different ways that Wastewater and Sewage are disposed of in Hawai'i

1a. Centralized Sewer System: Gravity Connection

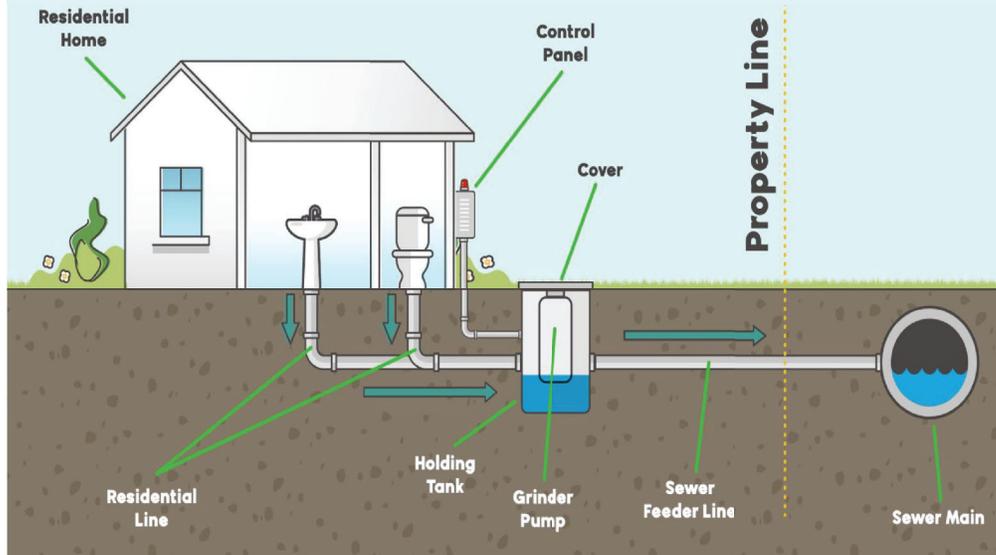
- Homeowner installs a sloped pipe that uses gravity to get the sewage from the house to the City sewer lines. Pipes on the property are the homeowner's responsibility; once it leaves the property, it's the City's kuleana.
- Homeowner becomes a utility customer. Water and sewer fees are calculated separately but they are presented for payment on one bill. Sewer fees are based on the amount of water you use.
- The City collects and transports the sewage to the Wai'anae Wastewater Treatment Plant, which provides secondary treatment. The sludge is digested, dewatered, and converted to energy at H-POWER or disposed of in the Waimanalo Gulch Landfill.
- Treated wastewater is discharged to an ocean outfall located 6,180 feet offshore at an average discharge depth of 107 ft.





Wastewater Systems in Hawai'i

1b. Centralized Sewer System: Low-Pressure Connection



- If your home is lower or on the same level as the main sewer line, there's no slope, so gravity can't move the waste. For these low-pressure situations, a *grinder pump* is needed.
- The *grinder pump* grinds the waste into a fine mix that can easily be pumped through the sewer line to the sewer main.

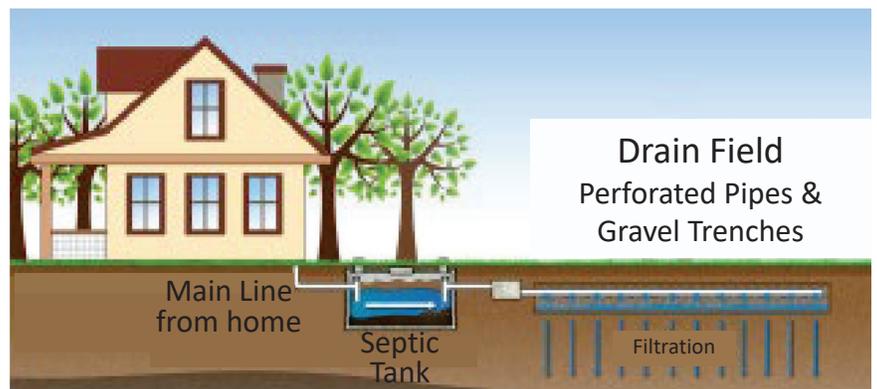


Wastewater Systems in Hawai'i

2. Decentralized Onsite Sewer Disposal System (OSDS)

On-site system that collects, treats, and disperses wastewater generated by a home or business. The wastewater is treated on-site. The system has 2 main parts: a septic tank and a soil absorption system (drain field or leach field). Underground pipes connect the entire system. Septic systems are individually designed for the size of the home, size of the lot, topography, and for the drainage capability of the soil.

- A *septic tank* is a buried, watertight container that holds the wastewater long enough to allow the solids to settle out and the fats, oils, and grease to float to the top.
- It also allows partial decomposition of the solid materials.
- Effluent from the middle layer flows out to *the drain field* for further treatment in the soil.
- Homeowner is responsible for all costs—purchasing the system, installation, and maintenance.





Wastewater Systems in Hawai'i

2. Decentralized Onsite Sewer Disposal Systems (OSDS):

- Dept of Health, Wastewater Branch has approved the following OSDS treatment equipment:

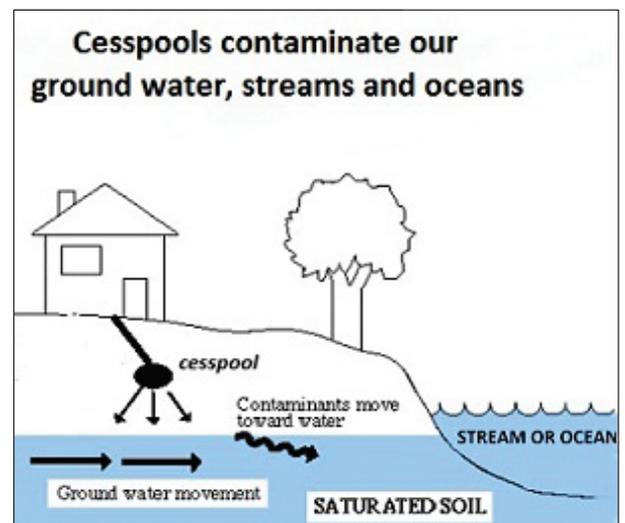
- Septic Tank
- Aerobic Treatment unit
- Bioreactor garden
- Aerobic systems that still require a septic tank
- Composting toilets*
- Incinerator toilets*

* only treats toilet waste — shower and kitchen wastewater still require treatment and disposal.



The Problem with Cesspools

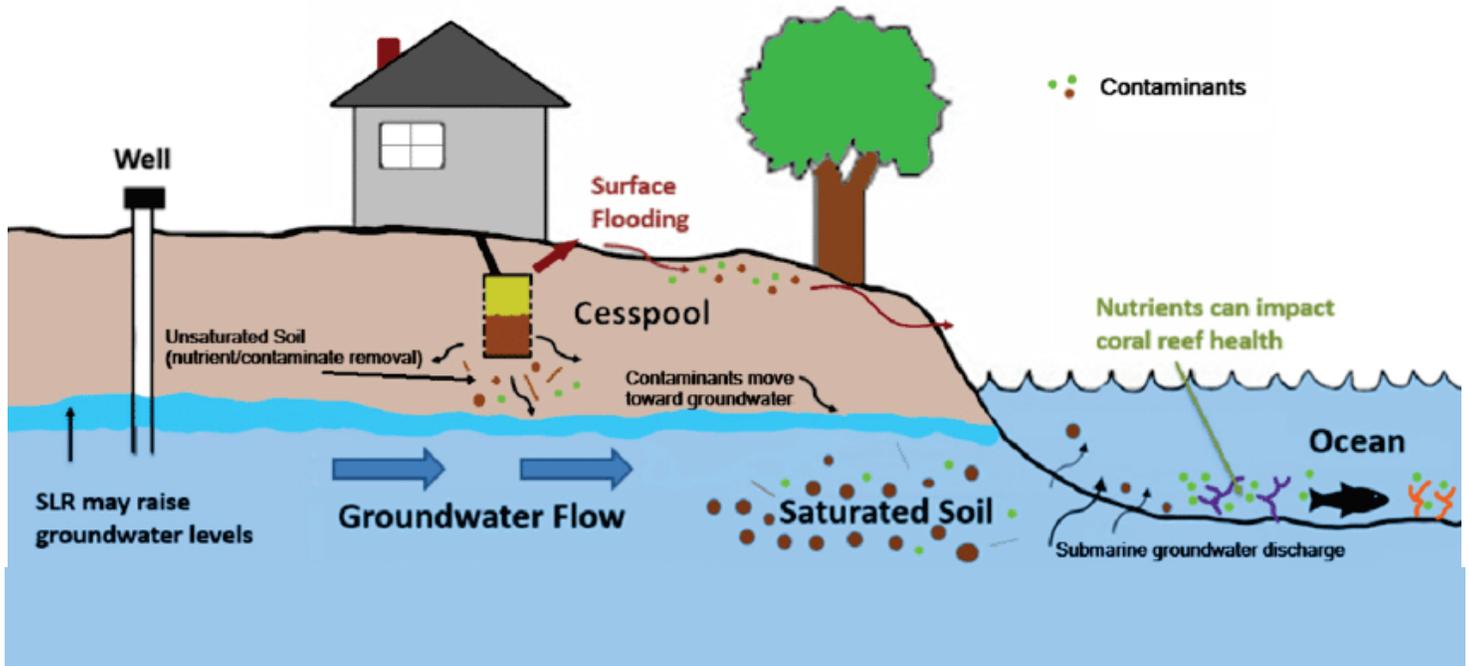
- A cesspool is a hole in the ground, used for the disposal of the sewage from the home.
- It does not filter or treat the waste — it collects the wastes and discharges it into the soil.
- Raw, untreated sewage is discharged directly into the ground where it can contaminate our drinking water, streams, groundwater, and the environment by releasing pathogens and nitrates.
 - Pathogens** are germs (bacteria, viruses, fungi, etc.) that cause diseases.
 - Nitrates** in drinking water can cause respiratory, reproduction, kidney, spleen, and thyroid issues. Nitrates fertilize algae overgrowth that smothers and kills coral reefs.



There are 83,000 cesspools statewide that release 53 million gallons of untreated sewage in the ground every day!



Contamination of our "Icebox"



DEPARTMENT OF HAWAIIAN HOME LANDS – PLANNING OFFICE



Act 125 – New Law, New Requirements

- Act 125 requires the upgrade, conversion, replacement, or sewer connection of all cesspools in the State of Hawai'i before January 1, 2050.
- GOAL: eliminate the negative potential impacts on the environment and human health from existing cesspools.
- It directs the Department of Health (DOH) to include a prioritization method for cesspool upgrades.
- It also directs DOH to work with the Department of Taxation on possible funding options to reduce the financial burden on homeowners.



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O'ahu Cesspool Assessment Report

- DHHL's O'ahu island survey was conducted in 2023 & 2024
- DHHL's O'ahu Assessment Report summarizes the survey results and assesses cesspool conversion options based on these results



Oahu Cesspool Assessment – Wai'anae

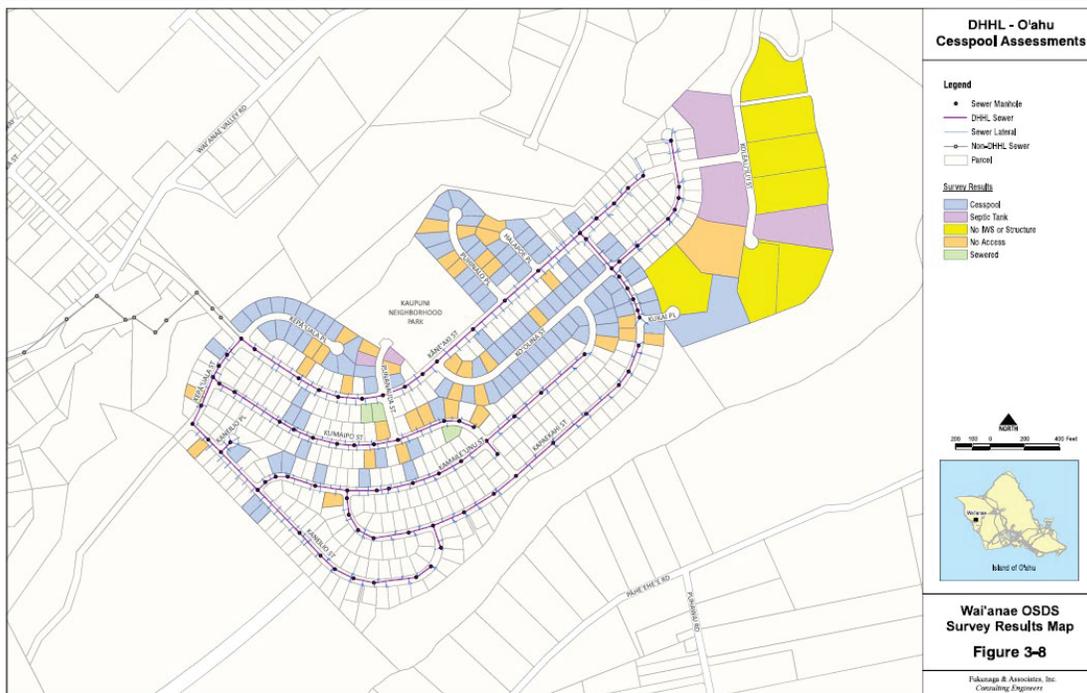
- Conducted by Fukunaga & Associates and Hawai'i Engineering Group
- Identified method of waste disposal for each lot:
 - a) Cesspool
 - b) Connected to sewer; or
 - c) Septic system.
- Investigated conversion and connection options
- Made recommendations



Investigation Map



Survey Results



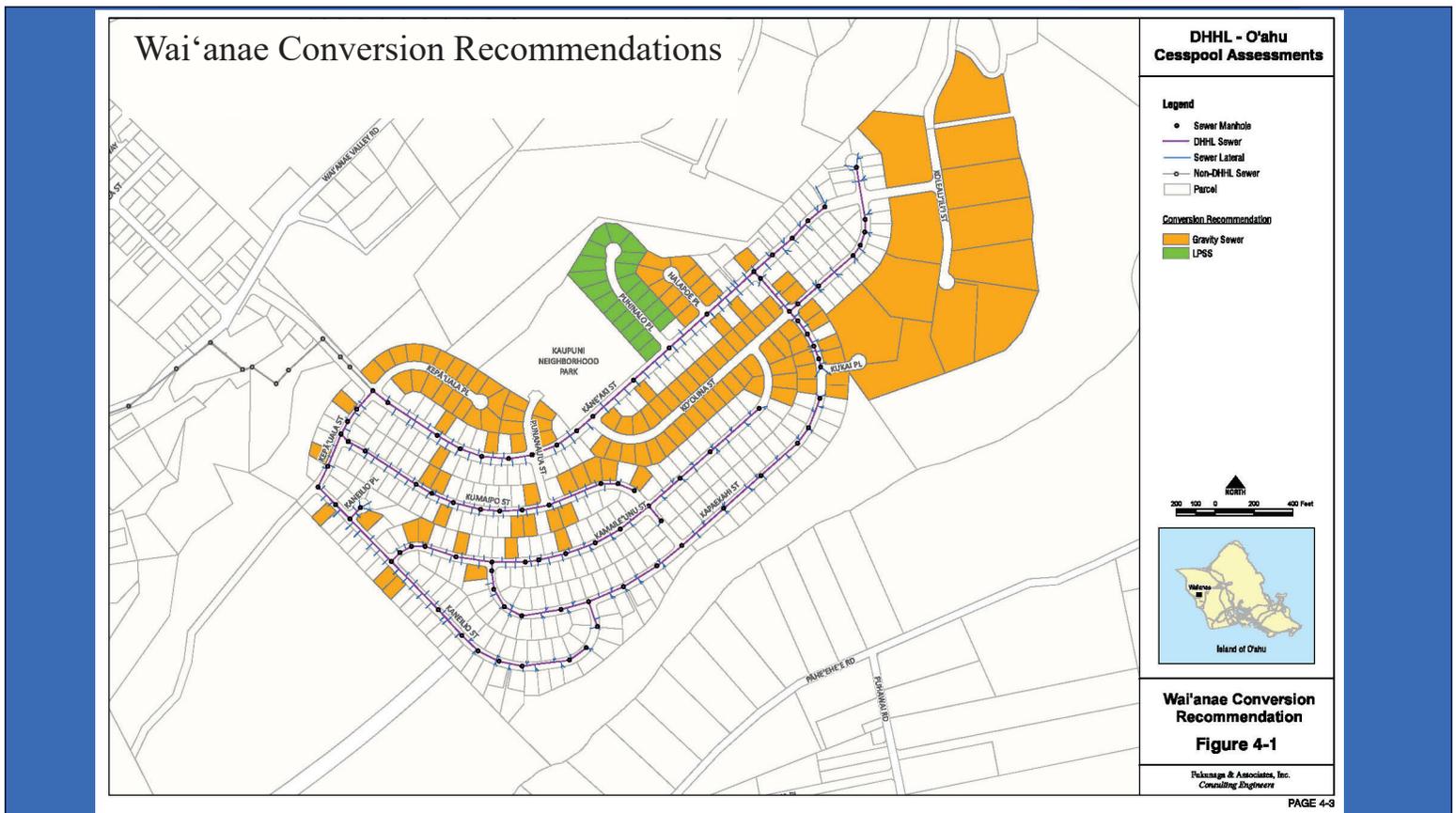
Cesspools: 102
 Septic: 5
 Sewer: 3
 Vacant: 7
 No Access: 37



Conversion Recommendations

- Connect to Gravity Sewer, where available:
 - Pump Station (pump station and force main)
 - LPSS – Low Pressure Sewer System (grinder pump units and small force main)
- Septic Tank System where connection is not feasible
- Alternative systems (such as individual wastewater treatment & disposal or recycle/reuse systems) not included in evaluation

STREET	CONVERSION OPTION	REMARKS
Kepā'uala Place	Gravity Sewer	19 OSDS Lots
Punana'ula Street	Gravity Sewer	7 OSDS Lots
Puhinalo Place	LPSS	20 OSDS Lots. A hybrid system is possible
Halapoe Plae	Gravity Sewer	10 OSDS Lots
Ko'olina Street	Gravity Sewer	32 OSDS Lots
Kamaile'unu Street	Gravity Sewer	4 OSDS Lots
Kōleali'ili'i Street	Gravity Sewer	12 OSDS Lots. A hybrid system is possible



DHHL - O'ahu
Cesspool Assessments

Legend

- Sewer Manhole
- DHHL Sewer
- Sewer Lateral
- Non-DHHL Sewer
- Parcel

Conversion Recommendation

- Orange: Gravity Sewer
- Green: LPSS

200 0 200 400 Feet

Island of Oahu

Wai'anae Conversion Recommendation
Figure 4-1

Palomago & Associates, Inc.
Consulting Engineers



DHHL Assistance and Support

- Work with EPA and other agencies to secure Technical Assistance and funding for Wai'anae Valley Homestead conversions
- Research and apply for programmatic and funding support related to cesspool conversions.

RESOURCES

- State, Dept. of Health, Wastewater Branch
<https://health.hawaii.gov/wastewater/>
- Assessment of Cesspools on HHLs Website at:
<https://dhhl.hawaii.gov/po/cesspools/>
- DHHL Planning Office email: dhhl.planning@hawaii.gov



Next Steps

- Attempt to re-schedule EPA Site Visit, Interagency Meeting, and Homestead Community Meeting.
- Update the Cesspool webpage on DHHL's website.
dhhl.hawaii.gov/po/cesspools
- Continue participation in the Closing America's Wastewater Gap (CAWAG) initiative.
- DHHL to continue to work with EPA, DOH, and City and County of Honolulu, Department of Environmental Services to secure funding and technical assistance and coordinate our efforts.
- Schedule future meetings with Wai'anae Valley homestead as new information is available.



Cesspool Conversion Summary

WHO	Only Lessees with Cesspools
WHAT	Close cesspool, convert to IWS or hook up to sewer system
WHERE	All HHLs, Wai'anae Valley Pilot Project
WHEN	Pilot first; then by priority ranking
WHY	Stop polluting drinking water sources, groundwater, oceans, streams, protect coral reefs.
HOW	Access Technical Assistance and Funding for conversions