Department of Health
Healthy People • Healthy Communities • Healthy Islands

State of Hawaii
Department of Health

Cesspools in Kahalu’u

TOPICS OF DISCUSSION

- Ground Rules
- Opening Remarks
- What is a Cesspool and Septic System
- Overview of the Report
- Prioritization Method and Priorities
- Kahalu’u
- Question and Answer Session
- Next Steps

Opening Remarks:

- Act 125 – Required DOH to evaluate cesspools and develop a prioritization method for cesspool upgrades.
- Spent months analyzing existing data on existing cesspools
- Report identifies 14 areas in the state that are priorities for cesspool upgrades to protect public health and environment.
- Highest priority for action is located in Kahalu’u and Upcountry Maui
- Introduction of Team

What is a Cesspool?



Cesspools are little more than holes in the ground;

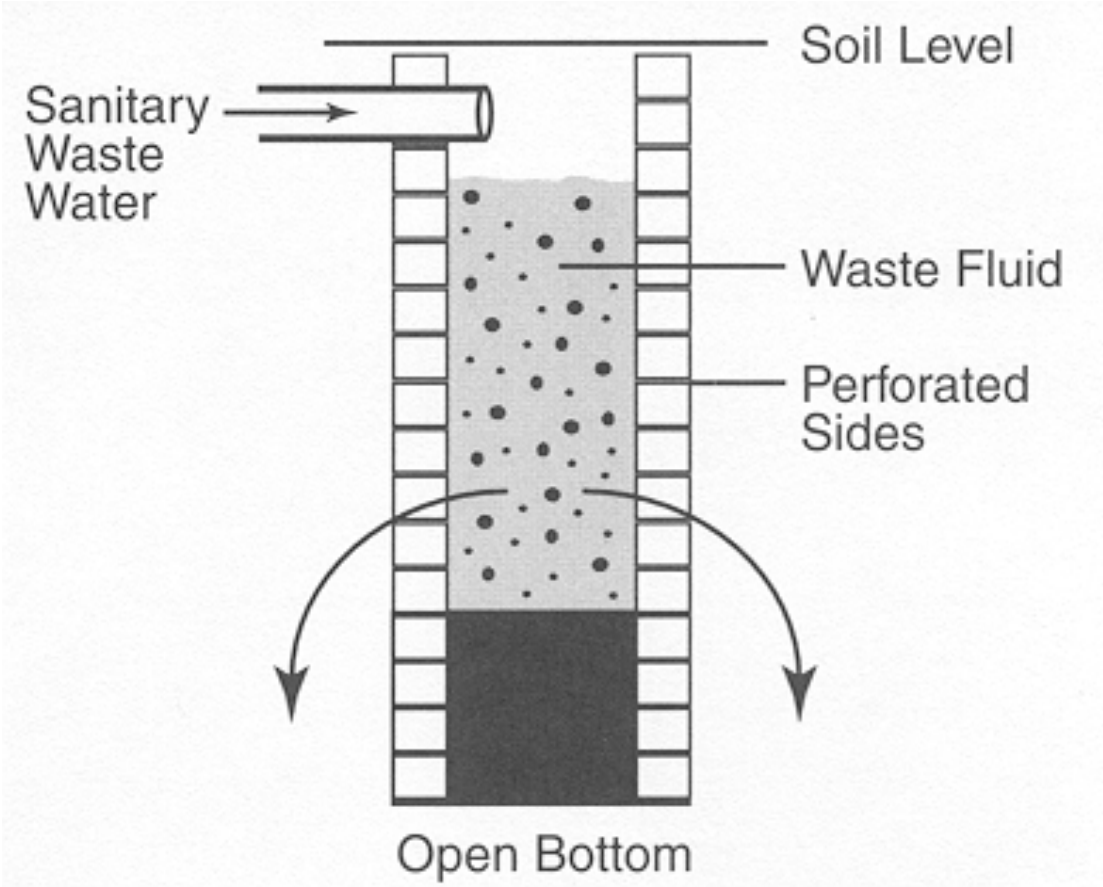
Cesspools discharges raw, untreated human waste into the subsoil;

Cesspools can contaminate ground water, drinking water sources and the ocean;

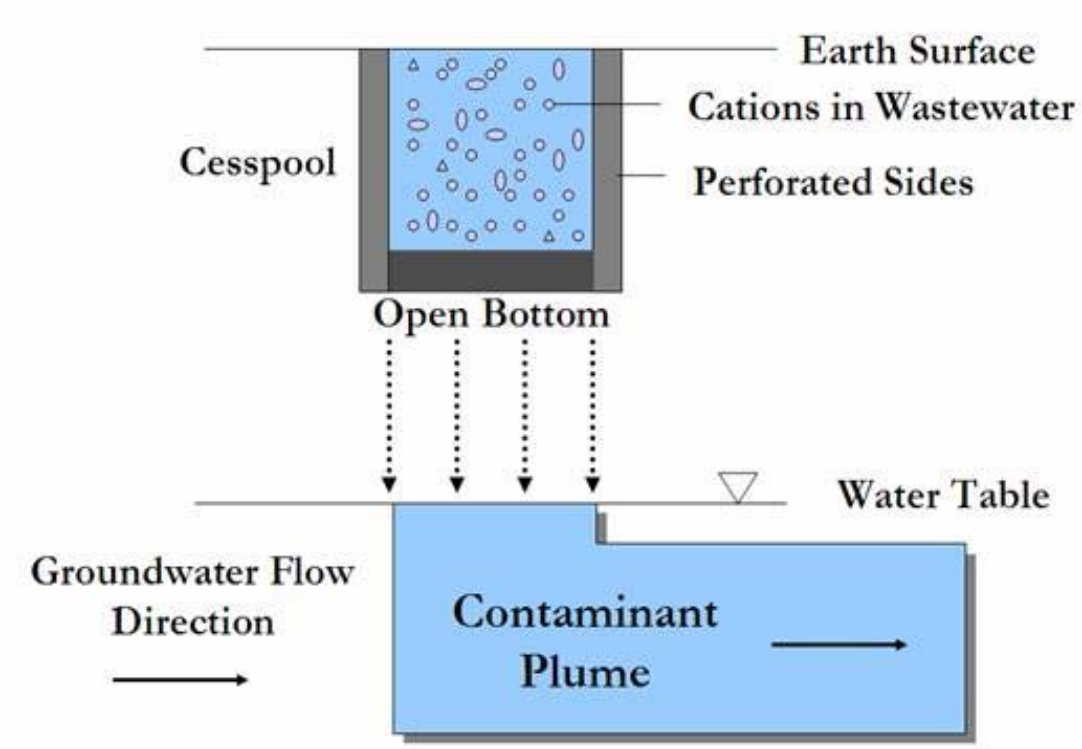
Present risks to human health and the environment; and

Contains high concentrations of nitrogen, phosphorus, and fecal coliform bacteria than septic tank systems.

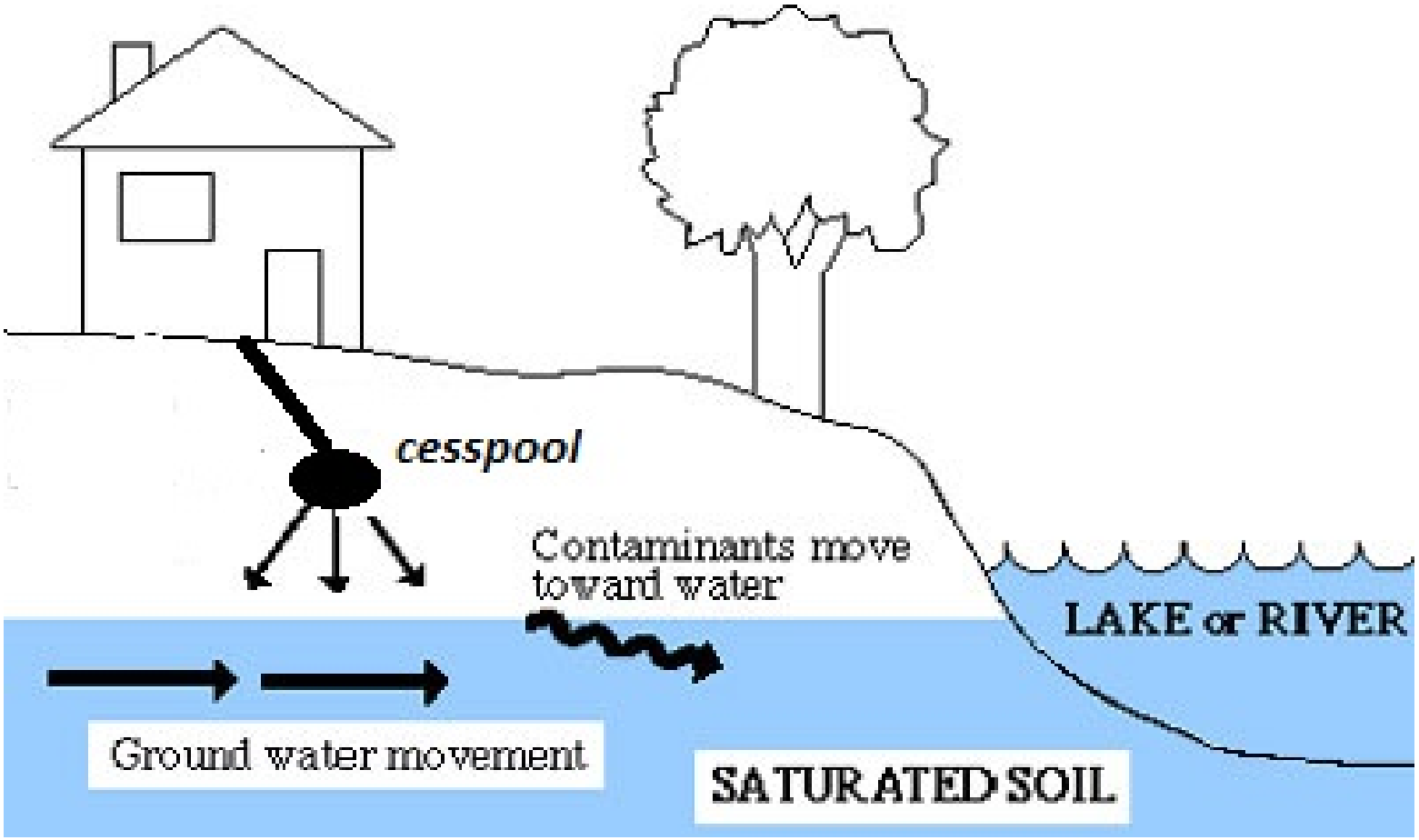
Cesspools discharges raw, untreated human waste into the subsoil



Cesspools contaminate Groundwater



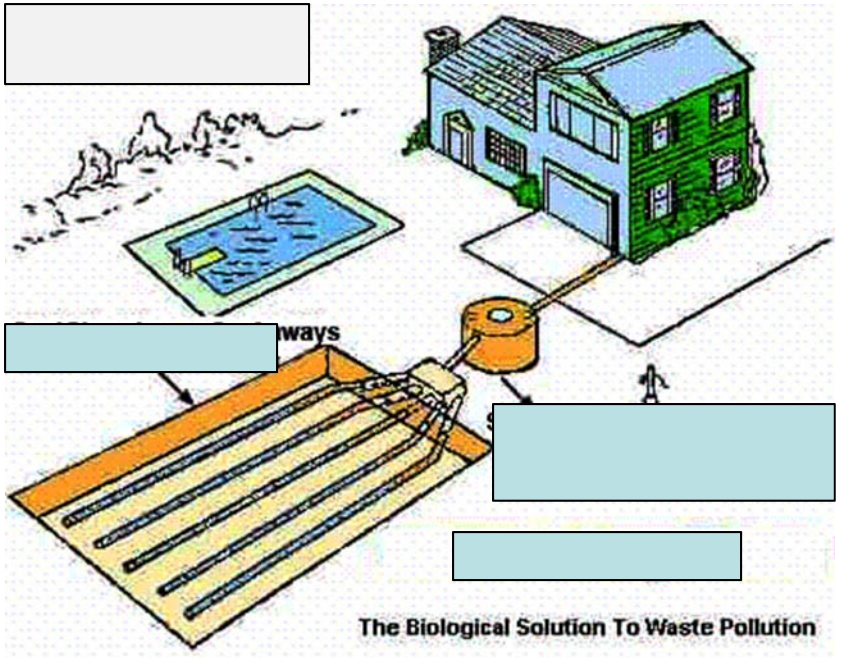
Cesspool contaminates ground and surface waters

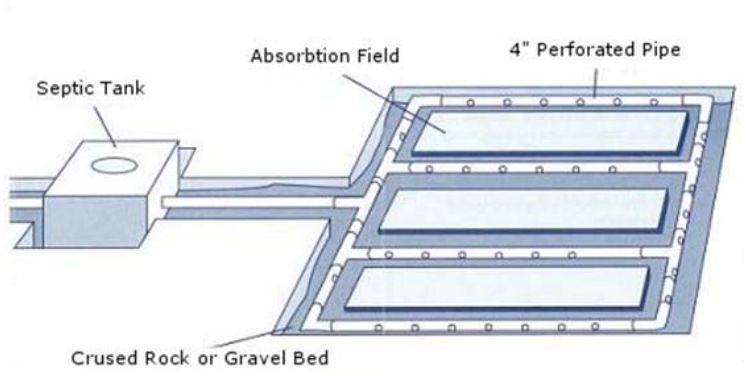


Septic Tank Systems



Polyurethane tank





Septic tank with leach field

Overview of the Report

- Cesspools are a major source of water pollution in Hawaii
- 88,000 cesspools that discharges 53 million gallons of raw sewage
- Public health depends on clean drinking water.
- Report identifies 14 areas in the state that are priorities for cesspool upgrades to protect public health and environment.
- 43,000 cesspools located in the 14 areas

Prioritization Method and Priorities

- **DOH analyzed data collected**
- **Report identifies 4 priority categories**

Priority 1

Areas where cesspools present a Significant Risk of Human Health Impacts, Drinking Water Impacts, or Draining to Sensitive Waters

Two areas identified:

- Upcountry Maui: 7,400 cesspools
- Kahalu'u: 740 cesspools

Priority 2

Areas where cesspools present a Potential to Impact Drinking Water.

Three areas identified:

Kea'au – Island of Hawai'i

Kapaa/Wailua and Poipu/Koloa – Island of Kauai

Priority 3

Areas where cesspools have the potential to impact sensitive waters in our state.

Nine areas identified:

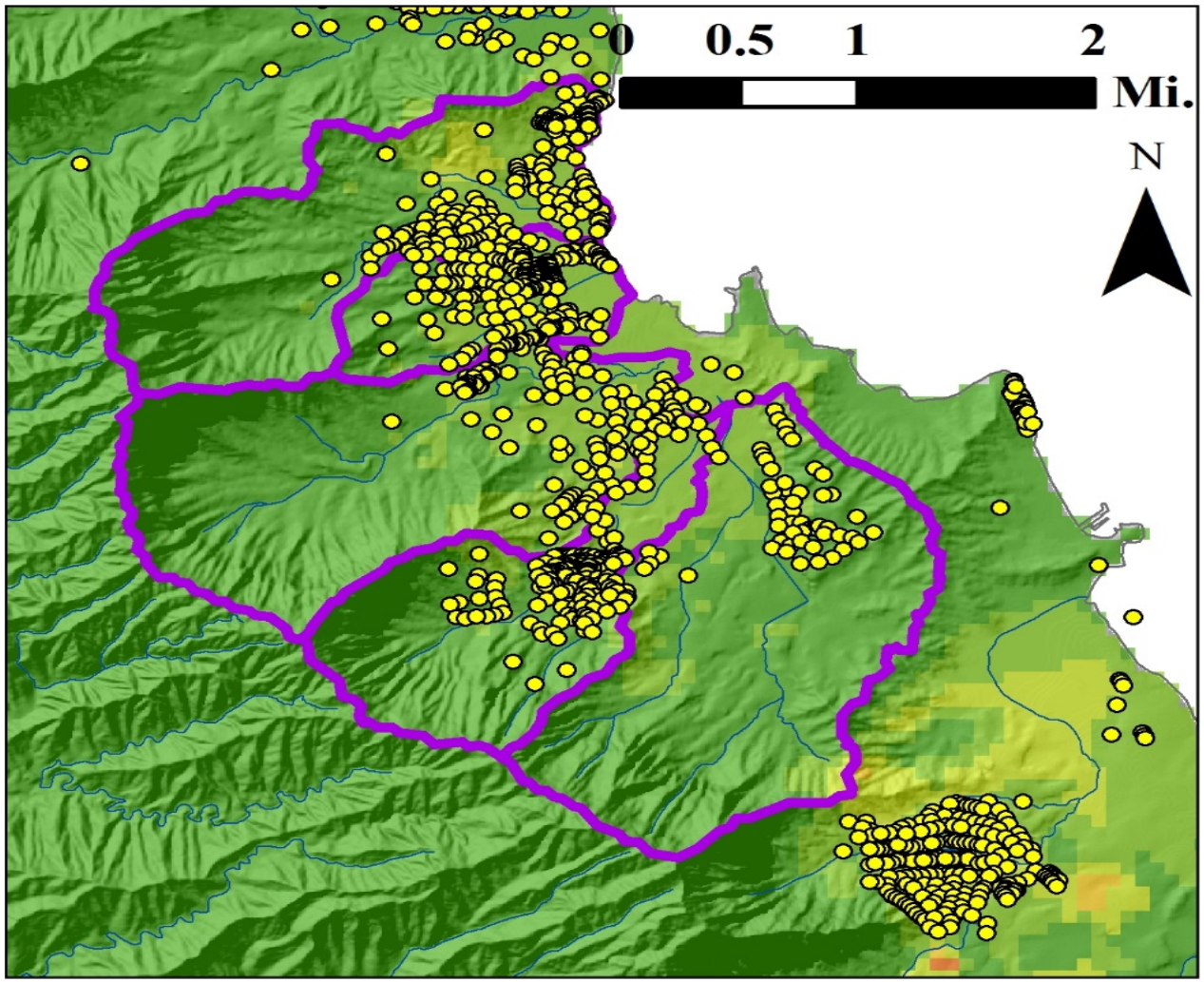
- Hilo Bay, Coastal Kailua/Kona, Puako and Kapoho of Hawaii
- Hanalei of Kauai
- Diamond Head, Ewa, Waialua and Waimanalo of Oahu

Priority 4

Placeholder for all cesspools whose impact we have yet to fully analyze, which are the remainder of cesspools in the state.

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Kahalu'u – 740 cesspools



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- **September 2014 – July 2015:** DOH Clean Water Branch began sampling Kahalu'u Lagoon, channel leading to Kaneohe Bay, and other sites within the Kahalu'u Watershed.

- High levels of indicator bacteria found in water

- A total of 470 samples were collected from 19 sites.

- The water quality standard for indicator bacteria exceeded at all but one sampling site.

Caution signs posted advising the public to stay out of Kahalu'u Lagoon, the channel leading to Kaneohe Bay and streams/drainage emptying into Kahalu'u Lagoon.



- 740 cesspools contribute to high bacteria counts and coral-harming nutrients in the surface water.

- Many cesspools are located near perennial streams and subject to overflow due to the wet climate and shallow depth to groundwater.

Questions?

Next steps:

- Upgrades are expensive, average about $20,000
- Cost to upgrade 88,000 cesspools - $1.75 billion
- Partnerships and need for early collaboration with communities.
- Complex problem that will involve multiple solutions
- DOH to work with communities, legislators, state and county agencies and stakeholder groups to find solutions.



Contact Us

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Mahalo!