



## **Administrative Rules, Title 11, Chapter 62, Wastewater Systems Rationale for Prohibiting New Cesspools and Requiring Upgrades of Existing Cesspools on Sale of Property**

### **Why is the Department of Health proposing the new changes to these rules?**

The Department of Health seeks to protect public health and preserve our natural resources by proposing in these rules that no new cesspools be permitted and existing cesspools be upgraded to sewers or septic systems within six months after the sale of a property.

Cesspools are considered substandard systems. They don't treat wastewater, they merely dispose of it. Cesspools concentrate the wastewater in one location, often deep within the ground and in direct contact with groundwater, causing groundwater contamination. This groundwater flows into drinking water wells and surface waters contributing to adverse public health and environmental impacts.

### **What are cesspools?**

- Cesspools are little more than holes in the ground that discharges raw, untreated human waste.
- Cesspools can contaminate ground water, drinking water sources, streams and oceans with disease-causing pathogens.
- Untreated wastewater from cesspools contains pathogens such as bacteria, protozoa and viruses that can cause gastroenteritis, Hepatitis A, conjunctivitis, leptospirosis, salmonellosis and cholera.

### **How many cesspools do we have in Hawai'i?**

- There are approximately 90,000 cesspools in the State, with nearly 50,000 located on the Big Island, almost 14,000 on Kauai, over 12,000 on Maui, over 11,000 on Oahu and over 1,400 on Molokai.
- Hawaii is the only state in the US that still allows construction of new cesspools.
- Approximately 800 new cesspools are approved for construction each year.

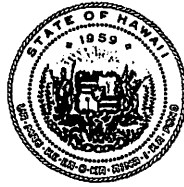
### **How many cesspools pose a risk to our water resources and how do they impact our environment?**

- There are 87,000 cesspools that pose a risk to our water resources.
- There are approximately 6,700 cesspools that are located within 200 feet of a perennial stream channel throughout the State. There are approximately 31,000 cesspools that are located within the perennial watersheds on the islands of Hawai'i, Kauai, Maui, and Molokai.
- Cesspools in Hawai'i release approximately 55 million gallons of untreated sewage into the ground each day.

- Cesspools in Hawai'i release as much as 23,700 pounds of nitrogen and nearly 6,000 pounds of phosphorus into the ground each day each day, which can stimulate undesirable algae growth, degrade water quality, and impact coral reefs.
- Maui has the highest number of on-site systems within the specified zones of contributions for drinking water wells, especially in up-country, but also in the Iao and Waihee Aquifer Sectors. There are elevated risks in coastal zones in Kaanapali, Kihei to Makena, Waihee/Waiehu and the coastal area fronting the northwest slope of Haleakala. On Molokai, there is elevated risk near the coast fronting the unsewered areas near Kaunakakai.

### **Why is DOH proposing that cesspools should be upgraded upon the sale of a building?**

Requiring cesspool upgrades when property is sold makes sense because the cost of the upgrade can be shared between the buyer and seller at a time when sellers, with proceeds from the sale, are better able to afford upgrading costs and buyers, who are usually borrowing already for their purchase, may obtain additional financing for eliminating a cesspool. Other states, including Iowa, New Jersey, and Massachusetts, require cesspools to be upgraded to septic systems whenever property ownership changes.



## FAQS ABOUT MAUI'S CESSPOOLS

- There are approximately 16,883 individual wastewater systems on Maui. Of these, **12,242** or 73 percent are cesspools.
- The area of greatest concern is Upcountry Maui where cesspool densities exceed 800 units per square mile. The Makawao-Paia district has an IWS density at about 111 units per square mile. Other districts that exceed the 40 units per square mile include Haiku-Pauwela and Wailuku.
- Cesspools on this island discharge an estimated **8.468 million gallons per day** (MGD) of effluent, containing 1,869 kg of nitrogen and 554 kg of phosphorus.

In comparison, wastewater treated at County wastewater treatment plants:  
Kihei Wastewater Reclamation Facility (WRF) treats **3.6 MGD** of wastewater;  
Lahaina WRF treats **3.9 MGD** of wastewater; and  
Wailuku-Kahului WRF treats **4.6 MGD** of wastewater.

A total of **12.1 MGD** of wastewater is treated at the three reclamation facilities.

The amount of untreated wastewater from cesspools discharged to the ground is greater than the combined wastewater flows that are being treated at both the Kihei and Lahaina WRFs.

- Drinking Water SWAP Zones and potential contamination of drinking water sources.

There are approximately **4,300** cesspools that are located within the drinking water zones of contribution. An estimated **3.8 MGD** of effluent is discharged into the zones of contribution creating a potential for pathogen contamination of drinking water sources.

At about 2,100 units, Maui has the greatest number of cesspools within the drinking water zones of contribution. Most of the cesspools that lie within the capture zone delineation are in the Waihee/Waiehu area or in upcountry Maui.

- Impacts to surface waters and perennial watersheds.

There are approximately 3,100 cesspools that are in the perennial watersheds of Maui. These cesspools discharge about 3.3 MGD of untreated wastewater and about 510 and 154 kg of nitrogen and phosphorus, respectively, into the environment each day.

There are approximately 3,800 cesspools that pose a threat to surface waters. These cesspools discharge about 4.9 MGD of effluent and about 620 and 190 kg/d of nitrogen and phosphorus.

The areas that have the greatest potential to be negatively impacted by cesspools are: West Maui between Kaanapali and Lahaina; Central Maui from Waihee to Wailuku; East Maui from Kihei to Makena; and East Maui from the isthmus to the northernmost extent of Haleakala.

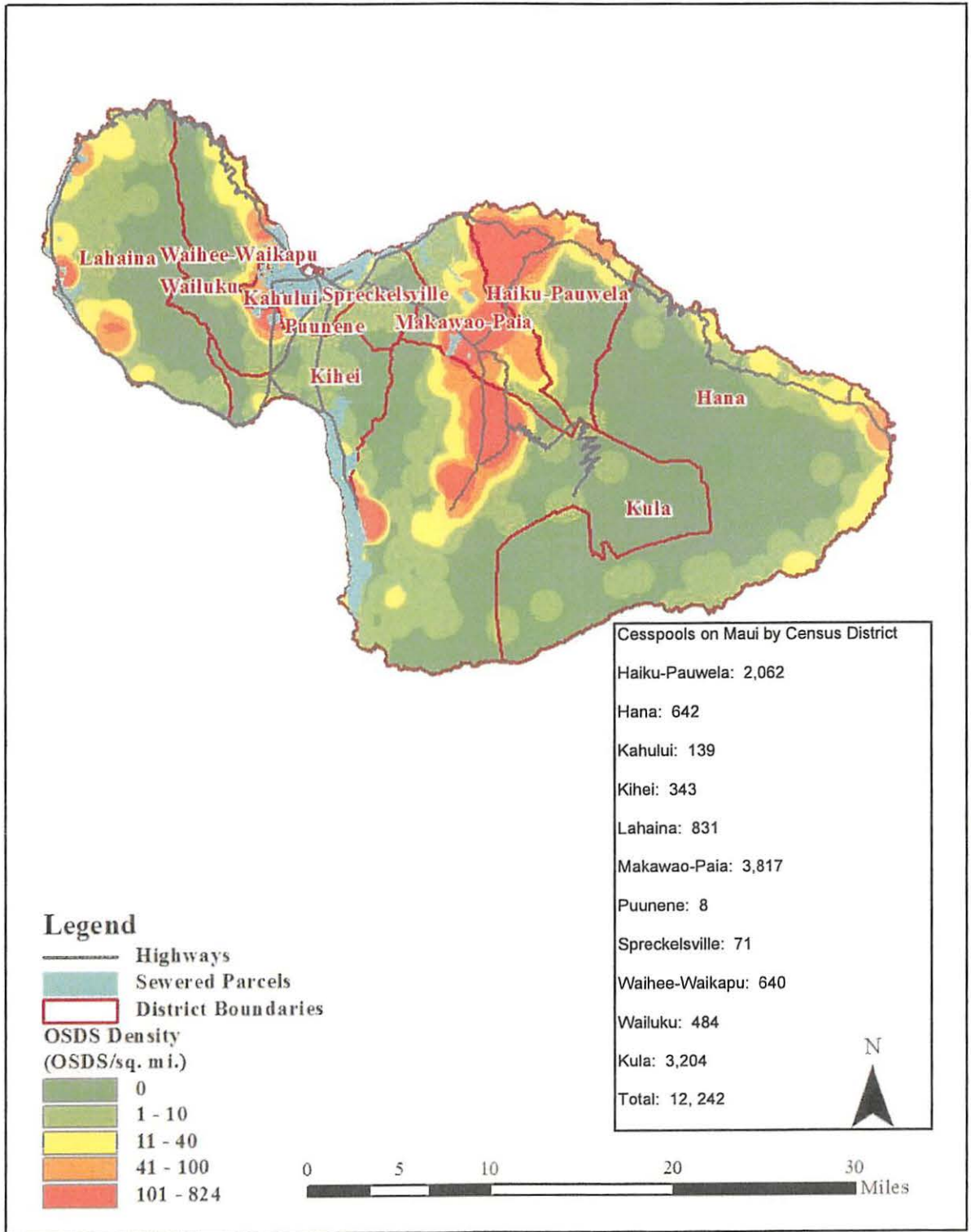


Figure 3-3. The OSDS density and sewer coverage on Maui

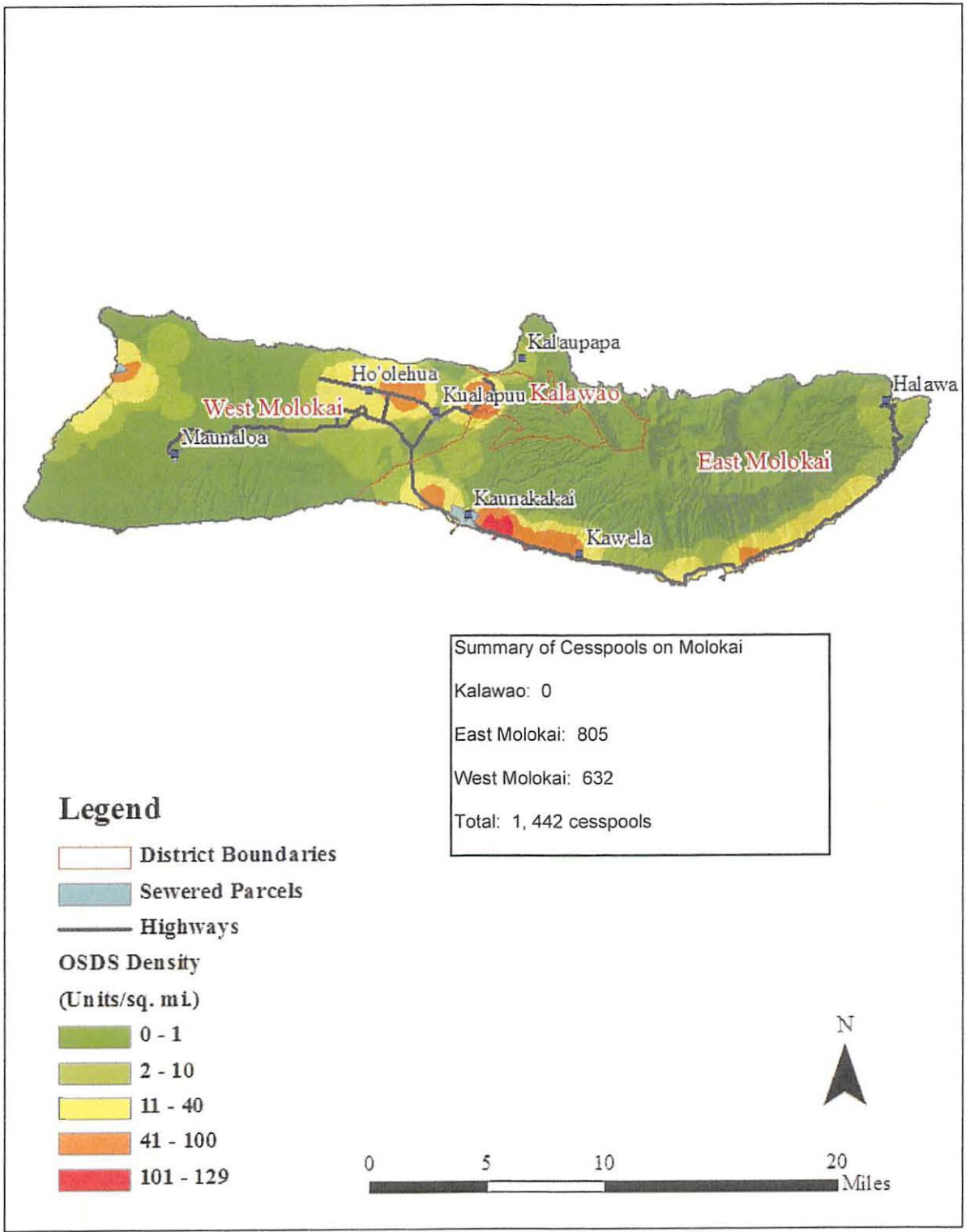
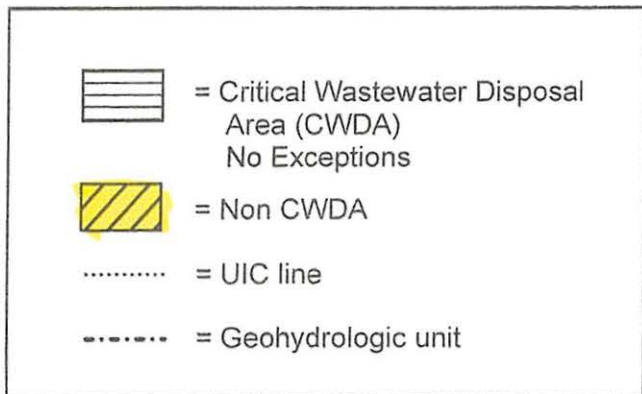
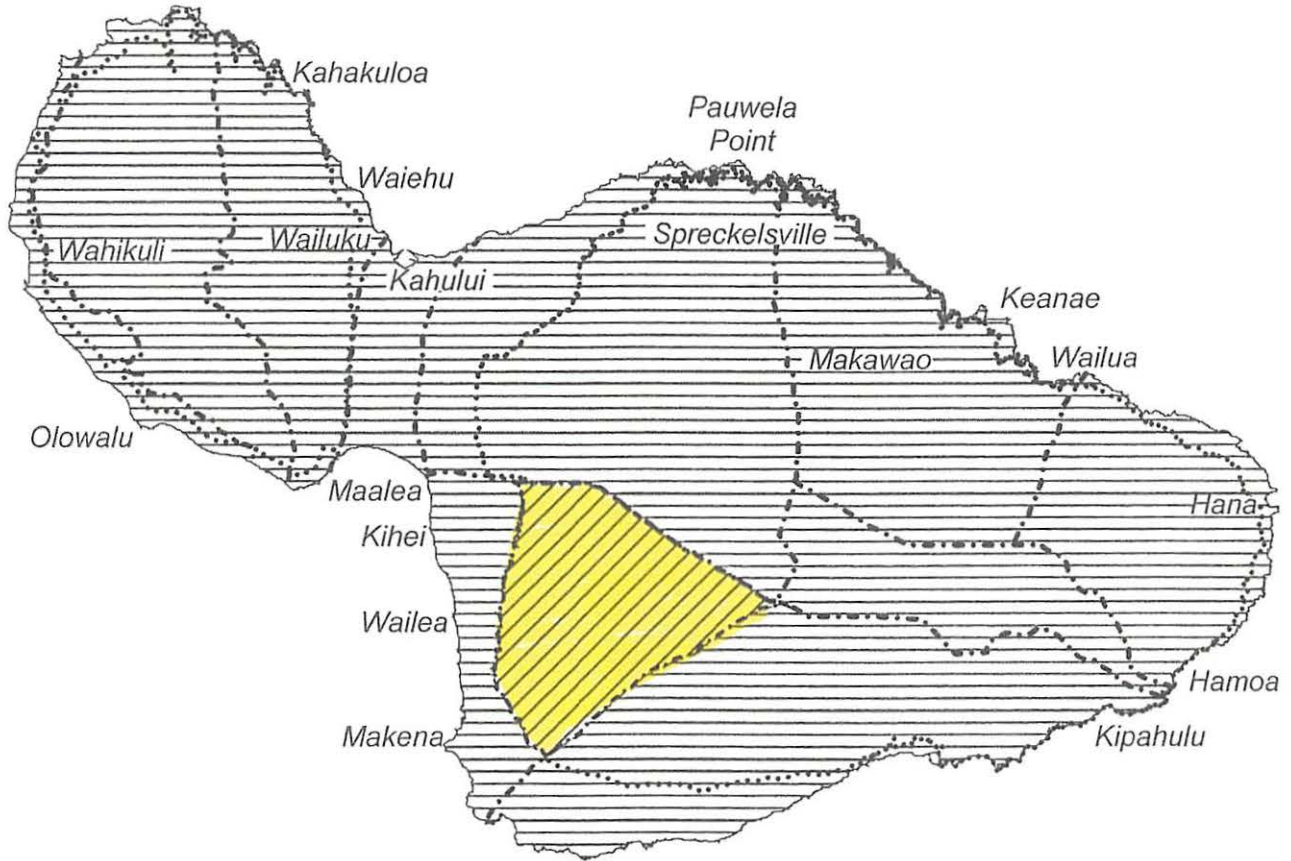


Figure 3-4. The OSDS density and sewer coverage on Molokai

*Island of Maui*  
*Critical Wastewater*  
*Disposal Areas*

Created March 16, 1990  
Revised April 15, 1997





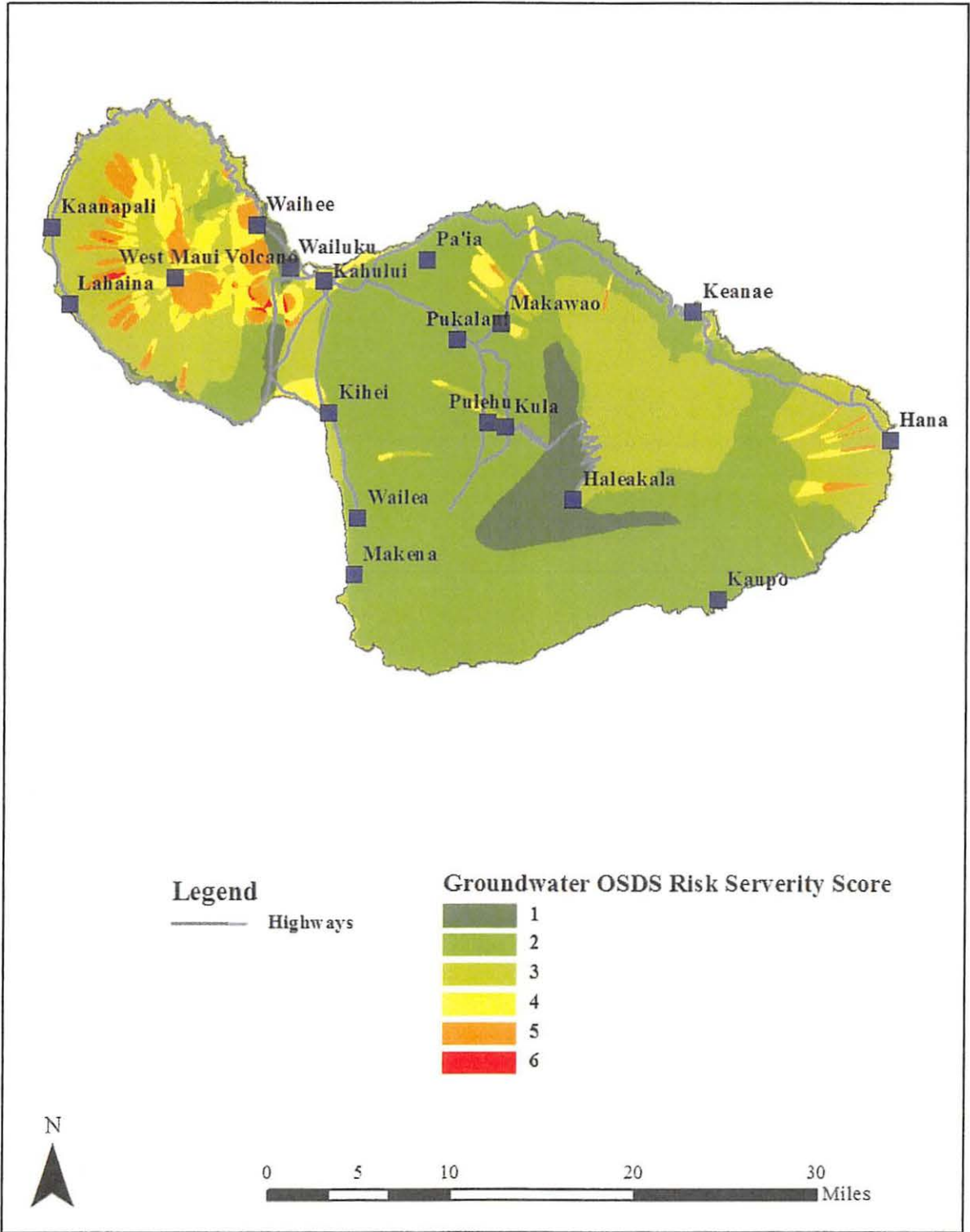


Figure 4-3. A map of the susceptibility of groundwater and drinking water to OSDS contamination on Maui