June 2023 Update

HAWAII STATE DEPARTMENT OF HEALTH

Hazard Evaluation and Emergency Response 2385 Waimano Home Road Pearl City, Hawaii 96782

FACT SHEET

Lead-Impacted Soil Response Action for Hakalau Beach Park Hakalau, Hawai‘i

County of Hawaii TMK: (3) 2-9-002:080
HDOT ROW TMK: (3) 2-9-002:999
Marian Land Company (3) 3-1-001:001
Maria and Steve Wolf (3) 3-1-001:002, (3) 2-9-002:025

Introduction

This fact sheet provides information about the lead-impacted soil at Hakalau Beach Park. It also describes plans for management via the State of Hawai‘i Department of Transportation (HDOT) Lead-Impacted Soil Response Action. Under the oversight of the Hawai‘i Department of Health (HDOH) Hazard Evaluation and Emergency Response Office (HEER Office), a response action has begun for lead-impacted soil found below and around the Hakalau Stream Bridge and within Hakalau Beach Park. The County Department of Parks and Recreation closed public access to the park in 2017 after initial soil sampling found lead-impacted soil.

Site Description and Previous Uses

The primary affected area is located beneath and adjacent to the Hakalau Stream Bridge onto the County of Hawaii Beach park and privately held parcels. Hakalau Stream bisects the site from west to east. Access to the Park is via Old Mamalahoa Highway.

Like the other Hamakua bridges, Hakalau Stream Bridge was originally constructed for a railway in the 1900s. The original footings remain, but it was rebuilt after the 1946 tsunami as a highway bridge. The lead-based paint used on the metal support structure flaked and dispersed into the soil below causing the contamination. The lead paint on the bridge was removed in 2000.

How Severe is the Lead Contamination?

Lead was found in soils at concentrations exceeding the 200 mg/kg lead screening action level established in Hawai‘i for unrestricted land use at residential areas and public parks in the County park parcel, HDOT ROW, and between 70 to 200 ft west and east from the ROW within privately owned parcels.

The County of Hawaii Beach Park Parcel had sample results which exceeded the HDOH Tier 1 Environmental Action Levels (EALs) for unrestricted land use (200 mg/kg for lead). Sample results in this parcel did not exceed 800 mg/kg for lead (Construction/Trench Worker EAL). The concentrations of lead in the soil in the County Park parcel are comparable to results found at some schools along the Hamakua Coast.

Lead results within and adjacent to the HDOT ROW exceeded the HDOH Construction/Trench Worker Scenario EALs.

Six decision units (DUs) also exceeded the gross contamination EAL of 1,000 mg/kg for lead. All of the DUs which exceeded gross contamination levels were located within the HDOT ROW. Several DUs in the area also failed Toxicity Characteristic Leaching Procedure (TCLP) which assesses leaching in a landfill. Soil from these DUs requires out-of-state disposal.

The high concentration of lead in the soil below the bridge and the known use of lead-based paint on the Hakalau Bridge identify this as the source of the lead contamination.

Accidentally swallowing or inhaling lead-impacted soil or very small lead-containing paint chips is the primary route of potential exposure in the park. The potential for harmful health effects from swallowing the lead-impacted soil or lead-containing paint chips depends upon the levels of lead in the soil and paint, how much soil and paint were ingested, and how often.

Is the Lead-Impacted Soil Hazardous?

Soil containing lead could potentially pose a health risk to young children who play in the park and construction/trench workers performing maintenance and/or soil-disturbing activities.

Lead can be harmful to children who accidentally eat small amounts of lead-impacted soil or lead-containing paint chips. Lead is more harmful to children than adults because it can accumulate and persist in their bodies. Lead is particularly toxic to the developing brains and neurologic systems of young children.

Lead results exceeded the HDOH construction/trench worker scenario and USEPA RSL for occupational exposure within the HDOT ROW and adjacent privately owned parcels. This indicates that the exposure risk is elevated for workers who may inhale dust or experience direct contact with soil.

The screening levels used by the HDOH and USEPA are designed to protect people using the area. The screening levels

assume that areas, where children play, will have exposed soil and that workers will return regularly to the site to perform work.

What Will be Done to Solve the Problem?

Six long-term remedial options have been evaluated and are as follows: (1) Recycle or Reuse, (2) Destruction or Detoxification, (3) Separation, Concentration, or Volume Reduction, (4) Immobilization of Hazardous Substances, (5) On-site or Off-site Disposal, Isolation, or Containment, and (6) Institutional Controls or Long-Term Monitoring.

Based on recommendations from the site environmental consultant, as well as a review of the site investigations and remedial alternatives reports, HDOT has identified the fifth remedial option, On-site or Off-site Disposal, Isolation, or Containment as the preferred long-term solution.

The County and HDOT have chosen to remove all soil which exceeds 200 mg/kg for lead in the open park area, HDOT ROW, and privately owned parcels. The soil will be replaced with clean fill (Figure 1). This option will achieve substantial risk reduction, remove the source of contamination, eliminate the need for an environmental hazard management plan for these areas, and remove the possibility of lead-impacted soil or sediment from becoming exposed during flooding/erosion in the future.

This option will result in long-term cost-effectiveness as there will be a permanent reduction in volume of contamination on-site. Additional monitoring and soil cap maintenance will not be needed. After the cleanup has taken place, the park can be opened for use by the public, site workers, and construction/trench workers.

Next Steps and Community Involvement

HDOT and HDOH HEER Office encourage members of the public to review and comment on the proposed remedy for this project during the comment period that ends on **June 29, 2023. The public is encouraged to comment** on the proposed remedy. Written comments should be e-mailed or mailed (by **July 29, 2023**) to Thomas Gilmore at:

thomas.gilmore@doh.hawaii.gov, by phone at 808-586-4353, or at the following address:

Hawaii Department of Health
Office of Hazard Evaluation and Emergency Response,
Hawai‘i Department of Health,
2385 Waimano Home Rd, #100
Pearl City, HI 96782

This fact sheet will be updated should additional information become available. The public is encouraged to comment on or ask questions regarding the site's response actions.

Information Repository

Portions of the Administrative Record for this are available for review at the Hilo Public Library located at 300 Waianuenue Ave., Hilo, HI 96720 until **July 29, 2023**. This includes the Draft Response Action Memorandum (with the proposed remedy), and copies of recent investigations and risk assessments at the site. The complete record for the site is available for review upon request to HDOH.

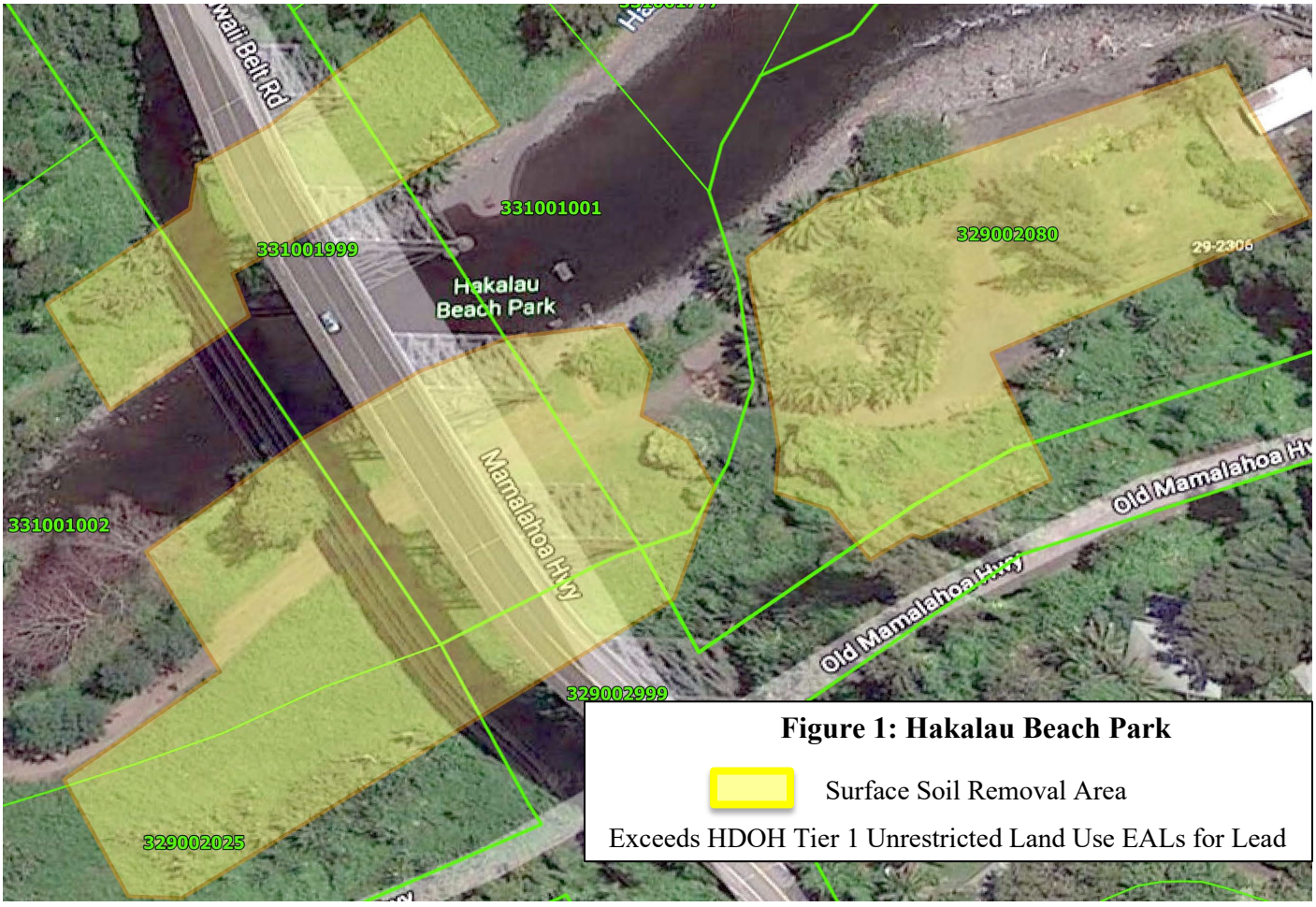

Figure 1: Hakalau Beach Park

Surface Soil Removal Area

Exceeds HDOH Tier 1 Unrestricted Land Use EALs for Lead