

County regularly updates their Multi-Hazard Mitigation Plan, which is a requirement to be eligible for Federal Emergency Management Funds.

### 9.4.3 Closed Landfills

#### 9.4.3.1 Kailua-Kona

The Kailua-Kona Landfill was a municipal solid waste landfill that operated from the late 1970s until it was closed in 1993. The landfill occupies approximately 20 acres and is located east of the Queen Ka'ahumanu Highway approximately 3 miles north of Kailua-Kona in the North Kona District. Subsurface fires from waste material have been documented at the landfill since 1991. During final closure of the landfill, a final cover system of 30-mil polyvinyl chloride (PVC) geomembrane liner and 2 feet of cover soil were installed in 1993. The cover has undergone damage from subsurface fires and intrusive investigations to evaluate options for extinguishing the fires. Temperature and gas monitoring occur periodically as part of the post-closure monitoring.

Subsurface waste combustion continues to be a concern at the landfill. The County and its engineering consultants are monitoring the current condition and extent of the subsurface fires and developing options for subsurface fire suppression.

The once rural setting surrounding the landfill is being developed including a Hawai'i County Police Department (HCPD) station, Kealakehe High School, West Hawai'i Civic Center, State Judiciary Complex, and Kealakehe Recycling and Transfer Station. There are also plans for an affordable housing neighborhood in the future. A regional park is in the draft NEPA environmental assessment phase. Although there have been no recent complaints from neighbors since the County began proactively managing the site, long-term management plans for the landfill are being evaluated by the County. Management plans being considered include:

- Relocation of the Waste: The waste could be relocated to West Hawai'i Sanitary Landfill; however, there are major health and safety concerns with digging into the landfill and moving the waste. While this alternative is extremely expensive, it is considered clean closure and will no longer require post-closure monitoring and maintenance, and the land can be used for another purpose.
- Construction of a New Engineered Cap: Construction of an engineered cap could limit oxygen infiltration into the waste mass and limit the current "chimney effect" that is occurring at the landfill now. This alternative would not eliminate post-closure monitoring; however, it would lessen maintenance costs.
- Implementation of a New Technology: The County is currently looking into technology being used to extinguish subsurface coal fires. The technology works by injecting a foam mixture into the waste mass. The foam consists of a biodegradable fire retardant and is injected using nitrogen gas. The foam wets and cools the area of combustion. This is considered interim mitigation.

#### 9.4.3.2 Waimea

The Waimea Landfill is in Lālāmilo, in the South Kohala district, and consists of a single, unlined landfill cell. The landfill was established in the late 1960s at a former quarry site, has an area of approximately 9.28 acres, and is located on land parcels owned by the State and the County. Landfilling activities ceased during 1986, and the landfill was closed in 1987. A cover of several feet of fine soil was placed over the top of the landfill. Records indicate that the quarry was originally excavated to an approximate depth of 30 feet, and that approximately 35 feet of rubbish was landfilled at the site.