

Management Concerns Summaries

During the first phase of the West Kauaʻi Community Vulnerability Assessment (Assessment), background research and interviews were conducted with asset managers and community members to discuss climate change risks in West Kauaʻi. This research identified categories of management concerns for sea level rise and other coastal hazards on the west side. These management concerns will be further refined, verified and explored through Phase II of the Assessment, a series of facilitated participatory sessions open to all who live and work on the west side. Below are summaries of the management concerns.

Transportation & Evacuation Routes

Much of the community of West Kauaʻi is connected by Kaunaliʻi Highway and access will be limited in the future due to sea level rise, coastal erosion, and flooding. The rising sea levels pose a threat to vital roads and bridges that serve as the main transportation and evacuation routes for all of the westside.

Drainage & Levees

To make land viable for growing sugar cane in West Kauai, a series of ditches, canals, and pumps were installed, which have kept the naturally wet areas dry for over a century. These are still used today. Many of the drained areas where communities have settled are low-lying and are prone to flooding. Heavy rains and marine inundation (high tides and waves) can cause increased flooding when the existing drainage canals or levees are backed up and are not functioning correctly.

On the banks of both the Hanapēpē and Waimea Rivers, levees protect the communities from flooding. Both rivers are prone to flooding and experience changes in water level during times of rain and without the protection of the levees, the communities would be flooded.

Critical Infrastructure

Electrical, telecommunication, water supply, and wastewater infrastructure could be threatened in the future due to climate related hazards such as a rising water table, salt water intrusion, and flooding.

Beaches and Coastal Properties

Sea level rise, and its accompanying flooding, erosion, and wave inundation impacts, threatens to diminish many of the beaches on the west side. While some of the beaches already experience seasonal erosion and accretion, the overall trend over the last century is erosion. Many of the coastal public and private lands and homes along the shoreline are subject to increased inundation from marine flooding, heavy rains, and erosion due to climate change. The potential loss of coastal homes and properties poses challenges for housing and the economy. . Traditional engineering methods to protect homes from hazards, such as shoreline armoring with seawalls or revetments have been shown to result in significant beach loss. Therefore, the community is faced with important choices regarding how to adapt to the impacts of sea level rise.

Cultural Resources

West Kauaʻi is rich with significant cultural and historical resources, and many of the significant areas are located along the coast. Areas that hold cultural significance in West Kauaʻi, such as the loʻi paʻakai of ʻUkula at Hanapēpē (Salt Pond), historical Japanese and Hawaiian cemeteries, iwi kupuna, and subsistence agriculture, including loʻi patches are already being impacted by marine flooding and erosion.

Agriculture

Agriculture has transformed the communities and the landscape of West Kauaʻi. Before the introduction of sugar cane to West Kauaʻi, the area was mostly covered by wetlands and there are stories of people paddling canoes across the Mānā Plain. Today, the area is drained by ditches and canals and kept dry by pumps. As we move into the coming decades, as sea levels rise, it will be increasingly challenging to maintain the infrastructure that keeps these wet areas dry, due to marine flooding, rising water table, and saltwater intrusion combined with rainfall. Modern day agriculture, currently seed corn production, faces challenges to adapt to these conditions.