

## Hawaii Volcanoes National Park Traffic and Parking: Current Issues, Future Solutions

Hawaii Volcanoes National Park (HAVO) is experiencing increased visitor use and congestion/overcrowding in specific sites at certain times of day. Although the fee station at the park entrance collects data on those entering the park, no study has been done to record how visitors distribute over time and space once they have passed through the park's entrance. Baseline data is necessary to understand the distribution of visitors over time and space, and to develop feasible alternatives for future transportation planning. All funding applications for transportation funds require recorded data. This project will provide the baseline for securing future funds and all transportation planning. HAVO is beginning a General Management Plan (GMP). This is a planning document that is expected to take up to five years to complete, but will provide guidance for the park over the next 20-30 years. Alternative transportation is an integral part of this planning effort.

The existing infrastructure within the park is circa 1930's. It was not designed or meant for the heavy traffic volume or vehicle weights being imposed by current use. The substructure of the pavement is not sufficient for heavy trucks and tour buses. The lane widths do not adequately accommodate large tour buses and there are no bike lanes. Parking lots are either underutilized at less popular sites, and/or congested at primary visitor sites. Expansion of facilities is not desired due to two reasons: Hawaiian culture views the landscape surrounding Kilauea Crater as the most sacred of Hawaiian sites, and Crater Rim Drive is eligible as a National Historic Landmark because it holds a high degree of integrity and original design depicting a 1930s park road system.



Both natural and cultural resources are affected by the current conditions of overuse and congestion. Rare and endangered plant and animal species are impacted by illegal parking and congestion. Archeological sites often exist immediately adjacent to road shoulders where informal parking can cause impacts. Data collection and analysis are imperative to record congestion, illegal parking, and provide baseline information for development of better transportation systems in the future.

Visitor safety and overall experience is greatly affected by the transportation system within the park. Deficiencies in the system cause visitor frustration, disorientation, and unsafe practices. This project will record and analyze these issues. NPS staff and University of Hawaii-Manoa engineering students will have the potential to follow the project from the data collection stage, through analysis, and understand how their contributions would improve both safety and visitor experience.

The primary project is the data collection, and analysis of the traffic circulation and parking data that are contemporaneously and consistently collected, analyzed and compared with those collected by the park fee station, and with other historical data.