

## Center for Safety Equity in Transportation

*If you have a right to get there, you have a right to get there safely.*

March 2020

### CSET Research Showcase

#### Traffic Problems at Popular Rural Tourist Attractions

While some congestion is expected at rural attractions such as national parks, theme parks, special sporting events, scenic points and the like, there are locations along the rural highway network that nearby attractions cause substantial congestion and/or unusually elevated traffic safety risk. This paper presents the case of two very popular tourist attractions on the North Shore of the Island of Oahu in the State of Hawaii: Laniakea Beach and Shark's Cove. These locations are within five miles of each other, and are served solely by the 2-lane rural Kamehameha Highway. These two locations have been congestion black spots for over a decade, and local opposition to more development and tourism has been substantial.

A team of students in civil engineering at the University of Hawaii at Manoa has been meeting with the local communities and has collected a number of sample data to substantiate the extent of the problem. Several discussions were had, where mitigation proposals have been presented and discussed. This paper summarizes both the history of this problem, and the various data collected such as vehicular, and pedestrian volumes, travel times and queue lengths. It also presents a list of

proposed mitigations. There is a multitude of problems with most of the proposals including cost, appeal (they are not context sensitive), difficulty with agency jurisdictional bounds, community acceptance and risk from waves and long-term sea level rise.

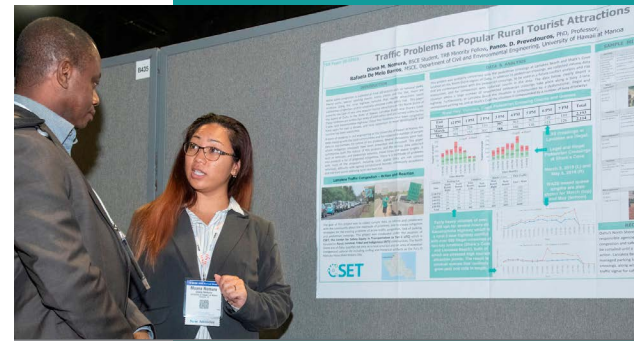
The goal of this project was to collect sample data, to inform and collaborate with the community about the multitude of problems, and to create mitigation strategies for the existing problems of acute traffic congestion, lack of parking, and pedestrian crossings. This project was conducted under the auspices of CSET, the Center for Safety Equity in Transportation (a Tier-1 UTC) which is focused on Rural, Isolated, Tribal and Indigenous (RITI) communities. The North Shore area of Oahu qualifies not only as a rural area but also an area of Hawaiian (indigenous) cultural life including surfing and historical artifacts at the Pu'u O Mahuka Heiau State Historic Site.

Oahu's North Shore will benefit by the quick action of the responsible agencies to lessen the current levels of traffic congestion and safety risk. Additional development should be curtailed until a plan

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### Announcements

CSET has positions open for post-doctoral researchers, graduate and undergraduate students interested in RITI transportation equity and safety research. Please contact us at [cset.utc@alaska.edu](mailto:cset.utc@alaska.edu).



Diana M. Nomura, BSCE Student at UHM, TRB Minority Fellow, discussing her research on traffic problems at popular rural tourist attractions at the TRB Annual Meeting in Washington, D.C.



Traffic back up at Laniakea Beach.

CSET has been funded through the 2016 University Transportation Center Program by the US Department of Transportation as part of the FAST Act at approximately \$1.4 million in each of the next five years.





Jason Garron grooms the ski trails on the UAF campus via snowmobile.

Approximately 88% of active snowmobilers are male.

Nationally, 20% of snowmobilers use their machine for work or transportation.

Alaska is a unique state in that many residents live in villages located in remote areas where travel by ATV and snow machine is common. Likely due in part to their use in everyday Alaskan life, ATVs and snow machines were responsible for 26% of serious transportation-related injuries on average between 2012 and 2016 (Alaska Department of Health and Social Services. Alaska Injury Facts Report – 2019. Anchorage, Alaska: Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services; February 2019).

# Snowmobile Safety

There are over 1.2 million snowmobiles registered in the United States. Alaska has 67,450 registered snowmobiles, Idaho has 26,443 and Washington has 23,292. The average age of a snowmobile user is 45 and they ride 1250 miles per year. Excess speed, alcohol and driver inexperience are the leading causes of accidents.

Basic snowmobile safety concepts save lives:

- 1) Always be prepared for the unexpected.
- 2) Wear a helmet and dress appropriately for the weather conditions.
- 3) Don't snowmobile alone.
- 4) Never assume another driver sees you. Make eye contact with drivers to make sure you are seen.
- 5) Be visible at all times. Wear bright clothing during the day, and wear reflective materials at night.
- 6) Avoid alcohol and drugs; they impair your abilities and your judgement.
- 7) File a plan with family and friends so others know where to look if you are overdue.

## Tourist Attractions (continued from page 1)

to provide reasonable LOS is set in action. Laniakea Beach would benefit by a having a managed parking lot with fencing to discourage arbitrary crossings, along with a temporary, pedestrian-actuated traffic signal for safe pedestrian crossing at a single point.

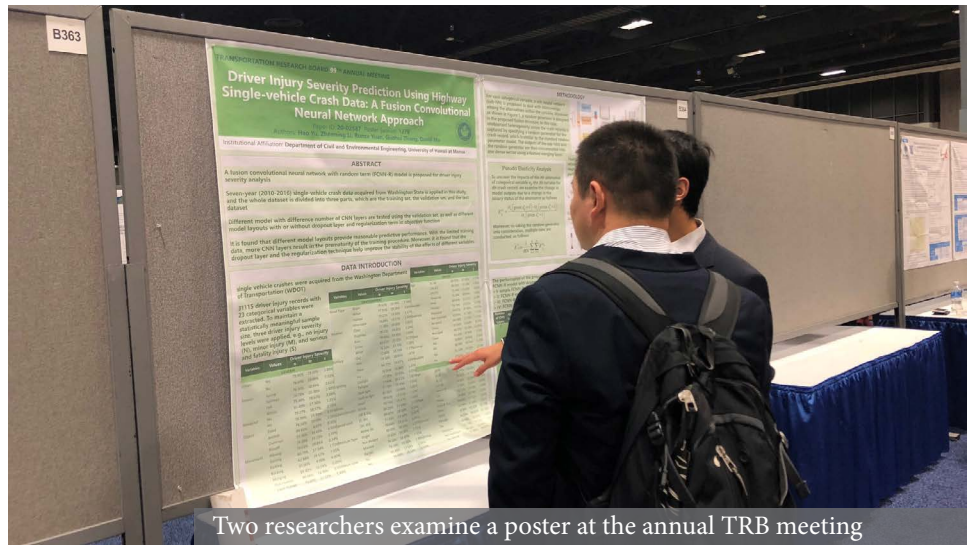
UPDATE: In response to a pedestrian injury in fall 2019, continued community pressure and this preliminary report by the UH team, the Hawaii state DOT proposed mitigations in January 2020 (<https://www.staradvertiser.com/2020/01/25/hawaii-news/state-explores-realignment-options-for-kamehameha-highway-at-laniakea/>).



CSET presented a road building and safety activity at the Pearl Creek Elementary School STEM Night, January 30, 2020

## UAF Come study with us!

The University of Alaska Fairbanks is actively seeking graduate students interested in research related to rural, isolated, tribal and indigenous transportation safety. Civil engineering is preferred, but also looking for interdisciplinary and Alaskan Native students. For more information contact Nathan Belz at [npbelz@alaska.edu](mailto:npbelz@alaska.edu).



Two researchers examine a poster at the annual TRB meeting presenting the results of research funded by CSET.