HAWAI'I ISLAND VISIONZERO ACTION PLAN



TSUNAM

FINAL, September 2020

POLICE



What is Vision Zero?

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.

- VisionZeroNetwork.org

COUNTY OF HAWAI'I PROCLAMATION

WHEREAS, the life and health of Hawai'i County's residents are our utmost priority; and

WHEREAS, Vision Zero is the concept that there is no acceptable number of traffic deaths and serious injuries on our roadways; and

WHEREAS, people walking and bicycling, who are often children or elderly, represent a disproportionate number of injuries and fatalities; and

WHEREAS, the likelihood of pedestrians surviving a crash are 15% if hit by a vehicle moving 40 mph; and

WHEREAS, the County of Hawai'i continues to invest in Complete Streets and Safe Routes to Schools to encourage safe and active transportation in support of healthier communities; and

NOW, THEREFORE, I, HARRY KIM, Mayor of the County of Hawai'i, have the distinct honor of proclaiming that the County of Hawai'i adopts the goal of:

VISION ZERO: ELIMINATE TRAFFIC DEATHS ON HAWAI'I ISLAND

BE IT FURTHER RESOLVED that a Vision Zero Safety Task Force will be formed to advise the Mayor's Office and County Council on the development and implementation of a Vision Zero Safety Action Plan; and shall be comprised of agencies and organizations with expertise in transportation, enforcement, education, public health, emergency response, equity, transit, biking, walking, and vehicles.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the County of Hawai'i to be affixed hereto.

DONE at Hilo, Hawaiʻi, Hawaiʻi On this 1st day of February, 2019

HARRY KIM Mayor, County of Hawaiʻi

ACRONYMS

BAC: Blood Alcohol Content

COH: County of Hawai'i

DCCA: Department of Commerce and Consumer Affairs

DLC: Hawai'i County Department of Liquor Control

DOE: Hawai'i State Department of Education

DOH: Hawai'i State Department of Health

DPW: Hawai'i County Department of Public Works

DRE: Drug Recognition Expert

DUI: Driving Under the Influence

ER: Emergency Room

FARS: Fatality Analysis Reporting System

HCC: Hawai'i Community College

HDOT: Hawai'i State Department of Transportation

HFD: Hawai'i County Fire Department

HIPHI: Hawai'i Public Health Institute

HMC: Hilo Medical Center

HPD: Hawai'i County Police Department

IT: County of Hawai'i Information Technology

KCH: Kona Community Hospital

LED: Light Emitting Diode

MALAC: Mayor's Active Living Advisory Committee

MTA: Hawai`i County Mass Transit Agency

NHCH: North Hawai'i Community Hospital

NHTSA: National Highway Traffic Safety Administration

NCSA: National Center for Statistics and Analysis

PATH: Peoples Advocacy for Trails Hawai'i

PSA: Public Service Announcement

SRTS: Safe Route to School

UH Hilo: University of Hawai'i at Hilo

VMT: Vehicle Miles Traveled

VZ Task Force: Vision Zero Task Force

ACKNOWLEDGEMENTS

The Vision Zero Action Plan was assembled under contract with Peoples Advocacy for Trails Hawai'i (PATH), in collaboration with the County of Hawai'i (COH) Planning Department, which helped assemble and lead the year-long efforts of the Vision Zero Task Force. SSFM International performed data analysis, mapping and preparation of the Action Plan document as a consultant to PATH. Credit for the photos used in this publication goes to individuals at PATH and SSFM.

VISION ZERO TASK FORCE

The Vision Zero Task Force was created by the Hawai'i County Council in February 2019 with the goal of bringing multiple perspectives to how Hawai'i County can improve traffic safety. The following departments, agencies, community groups, and individuals participated in the Vision Zero Task Force. In addition, Peter Koonce served as a consultant to the Task Force.

Community Groups

(Commissions, Councils, Committees, Coalitions)

- Blue Zones Project
- Liquor Commission
- MALAC
- PATH

Hawai'i State Agencies:

- Department of Education
- Department of Health
- Department of Transportation
- University of Hawai'i

Hawai'i County Departments:

- EMS Fire Department
- Information Technology
- Liquor Department
- Mass Transit Agency
- Planning Department
- Police Department
- Public Works Department





Yee

COH Planning

Michael



HALI'A ALOHA

Kānāwai Māmalahoe

E nā kānaka, E mālama 'oukou i ke akua A e mālama ho'i ke kanaka nui a me kanaka iki; E hele ka 'elemakule, ka luahine, a me ke kama A moe i ke ala 'A'ohe mea nāna e ho'opilikia. Hewa nō, make.

IN LOVING REMEMBRANCE

Law of the Splintered Paddle Oh people, Honor thy god; respect alike [the rights of] people both great and humble; May everyone, from the old men and women to the children Be free to go forth and lie in the road Without fear of harm. Break this law, and die.



HAWAI'I ISLAND VISION ZERO ACTION PLAN

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MISSION STATEMENT

Working together, we can eliminate all traffic fatalities and severe injuries while increasing *SAFE*, *HEALTHY*, and *EQUITABLE MOBILITY* for all.



1) WHY VISION ZERO?¹

For too long, we've considered traffic deaths and severe injuries to be inevitable side effects of modern life. While often referred to as "accidents," the reality is that we can prevent these tragedies by taking a proactive, preventative approach that prioritizes traffic safety as a public health issue.

The significant loss of life exacts a tragic toll, extending beyond personal loss to deep community impacts, including personal economic costs and emotional trauma to those suffering; and significant taxpayer spending on emergency response and long-term healthcare costs. And because so many fear for their safety on our streets, there is no true freedom of mobility, and, as a result, we compromise our public health with increasing rates of sedentary diseases and higher carbon emissions

The Hawai'i Island Vision Zero Action Plan establishes a road map to eliminate traffic deaths on its streets. It represents a shift in transportation philosophy to prioritize the preservation of human life over the convenience of travelling quickly on streets across our island. While these changes won't always be easy, we are guided by the determination to save lives and reduce injuries for all Hawai'i Island residents and families.

Traditional Approach

- > Traffic deaths are INEVITABLE
- > PERFECT human behavior
- > Prevent CRASHES
- > INDIVIDUAL responsibility
- > Saving lives is EXPENSIVE

VISION ZERO¹

- > Traffic deaths are **PREVENTABLE**
- > Integrate HUMAN FAILING in approach
- Prevent FATAL AND SEVERE CRASHES
- > SYSTEMS approach
- > Saving lives is NOT EXPENSIVE

WHAT IS VISION ZERO?

Vision Zero is a transportation safety philosophy that was developed in Sweden in the late 1990s to eliminate traffic deaths and serious injuries in the transportation system. Through its Vision Zero efforts, Sweden has reduced traffic fatalities by half, making it one of the safest places to travel in the world.

A central tenet of Vision Zero is that people should not be killed or seriously injured as a consequence of mobility. Vision Zero recognizes that humans make mistakes and therefore the transportation system be designed to minimize the consequences of those errors. Cities, counties and states across the U.S. have adopted Vision Zero goals and developed plans for eliminating traffic deaths. While Vision Zero efforts in the U.S. share common principles with Sweden's policy, each agency has adapted the approach to their unique circumstances and needs¹.

The federal government and many states, including the Hawai'i Department of Transportation, have also committed to a goal of reducing traffic fatalities, providing additional support for this initiative.

FUNDAMENTAL PRINCIPLES OF A MEANINGFUL VISION ZERO COMMITMENT

These principles are core to successful Vision Zero efforts.

- **1.** All people deserve access to safe, healthy, sustainable transportation.
- 2. Traffic deaths and severe injuries are acknowledged to be preventable.
- 3. Human life and public health are prioritized within all aspects of the transportation system.
- 4. Acknowledgment that human error is inevitable, and transportation systems should be forgiving.
- 5. Safety work should focus on systems-level changes above influencing individual behavior.
- 6. Mitigation of speed is recognized and prioritized as the fundamental factor in crash severity.
- 7. Solutions should be prioritized in areas with the most vulnerable populations.
- 8. Communities should have a voice in defining issues and developing solutions for their community, with particular focus on engaging disadvantaged and vulnerable populations.

(Source: Adapted from VisionZeroNetwork.org)

1 VisionZeroNetwork.org

For the past several years, Hawai'i County has had the highest percentage of traffic fatalities per capita in the state (see Figure 1). The number of fatal traffic crashes on Hawai'i Island has remained steady as Vehicle Miles Travelled across the state increased over the years (see Figure 2). However, a significant reduction in traffic fatalities was realized in a corresponding timeframe where Vehicle Miles Travelled dipped, showing a correlation between a reduction in passenger vehicle travel and lives lost.





FOR THE PAST SEVERAL YEARS, HAWAI'I COUNTY HAS HAD THE HIGHEST PERCENTAGE OF TRAFFIC FATALITIES PER CAPITA IN THE STATE.







2) CURRENT SITUATION

Acknowledging the need for a systems-based, data-driven, approach to Vision Zero, the most recent historical traffic crash data was sought for analysis and to create an understanding of the current situation on Hawai'i Island.

Collaboration with the Hawai'i County Police Department (HPD) and the State Department of Health (DOH) yielded data on all traffic crashes and fatalities on Hawai'i Island roads. However, limitations in the breadth of the data did not allow for a meaningful analysis of potential solutions to the traffic fatality epidemic. Additional data was sought through the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS) which included specifics regarding factors associated with each crash (i.e., location, speed, time, mode) as well as the individuals involved (i.e., impairment, age, gender, race). This allowed for a more thorough analysis of historical crash data which yielded the results herein.

It is acknowledged that as a rural island with a relatively small, spread-out, residential population, the number of traffic fatalities per year is low which increases the margin of error year-to-year. To address this, a minimum of five years of historical data was sought where possible to help identify trends versus outliers. This data analysis served as the starting point for developing this action plan. For a more in-depth assessment of the factors associated with these crashes, additional data was sought and obtained from the NHTSA National Center for Statistics and Analysis (NCSA), to provide a comparison of results for the State of Hawai'i and the entire United States (U.S.). The latest demographics associated with each community were obtained from the U.S. Census Bureau.

DATA SOURCES

Where available, fatal traffic crash data from the years 2013-2019 was analyzed in a systems based approach in an effort to identify correlations in data so as to inform those working to prevent traffic deaths.

Maps and figures herein were prepared using the following data sources:

1. Hawai'i County Police Department

Years 2014 through 2018 data included location, when provided, of major motor vehicle traffic crashes. Details on the cause or results of the traffic crash were not provided with this data. At times, locations were represented only by the road and nearest town in which the crash occurred, with no reference to cross-street or road mile post. Year 2019 data was limited to the date and general location of the fatal traffic crash which were used to research additional information from online news articles.

2. Hawai'i Department of Transportation

Miles of roadway owned by the State of Hawai'i, County of Hawai'i, Federal Government, or "other" (often less-used roads, reflective of private roads or roads in limbo).

3. NHTSA Fatality Analysis Reporting System

Years 2013 through 2018 data included the specific locations of fatal motor vehicle traffic crashes with pedestrians, bicycles, or other motor vehicles. Data included demographics of persons involved in the crash, transportation modes involved, day and time of crash, and potential factors associated with the crash (i.e., drugs, alcohol, speed) notated by the crash report.

4. NHTSA National Center for Statistics and Analysis

Years 2013 through 2017 data included the average percentage of traffic related fatalities within the State of Hawai'i and nationally, associated with speed, alcohol use, and time of day.

5. U.S. Census Bureau

American Community Survey Five-Year Estimates, from the years 2013 through 2017, included race, population, and commuter mode share estimates per county.

EQUITY

Equity is a commitment to acknowledging, evaluating and repairing the disparate impact of historic oppression and exclusion on vulnerable communities. This plan acknowledges that streets and highway investments have not always been multimodal and that some investments have resulted in disproportionately adverse effects on minority and low-income communities¹. Vision Zero principles recognize the right of all people to access safe, healthy, sustainable transportation, and the need to address inequities through prioritizing the needs of vulnerable populations. To facilitate this, the DOH provided the following list (see Figure 3) of Hawai'i island "Communities of Concern" based on household income, language, unemployment, and education. The highest ranked communities are those with the greatest socioeconomic disparities, as identified in the Hawai'i Island SocioNeeds Index, and therefore should be prioritized in addressing identified inequities in the COH system and transportation network.

FIGURE 3. HAWAI'I ISLAND COMMUNITY SOCIONEEDS INDEX

Community	Zip Code	Index	Community	Zip Code	Index	
Pahoa	96778	5	Kapaau	96755	3	
Pahala	96777	5	Volcano	96785	3	1
Kurtistown	96760	5	Paauilo	96776	3	
Naalehu	96772	5	Honokaa	96727	3	2
Papaaloa	96780	5	Holualoa	96725	2	3
Ookala	96774	5	Hilo	96720	2	
Mountain View	96771	5	Hawi	96719	2	4 ↓
Contain Condu	00704		Hakalau	96710	2	
Captain Cook	96704	4	Honomu	96728	2	Greater 5 Nord
Pepeekeo	96783	4	Kailua Kona	96740	2	Need
Keaau	96749	4	Kealakekua	96750	1	(highest index
Laupahoehoe	96764	4	Kamuela	96743	1	values are estimated
Papaikou	96781	4	Waikoloa	96738	1	socioeconomic need)

Source: 2019 SocioNeeds Index, Hawaii Department of Health

Retrieved from http://www.hawaiihealthmatters.org/index.php?module=indicators&controller=index&action=socioneeds



1. https://www.transportation.gov/transportation-policy/environmental-justice/environmental-justice-strategy

COMMUNITIES OF CONCERN

When analyzing the residing zip codes of motorists involved in fatal traffic crashes, it was found that the majority (87%) of those involved are residents of Hawai'i Island (see Figure 4). This means that fatal traffic crashes have a reverberating impact throughout the community, affecting family, friends, and neighbors of those who fell victim to these senseless traffic deaths. Delving further into the data on the race of the deceased, it was found that Native Hawaiians and Pacific Islanders are three times more likely to be killed on Hawai'i Island roads than whites (see Figure 5).

Map 1 identifies the cumulative residing zip codes of the Hawai'i Island resident drivers involved in a fatal traffic crash between the years 2013 and 2019. Included on the map are the location of all fatal traffic crashes during that time period. Communities of concern and the location of available police stations and hospitals have been delineated as well.



FIGURE 4. RESIDING ZIP CODE OF MOTORIST INVOLVED IN FATAL TRAFFIC CRASHES

NATIVE HAWAIIANS AND PACIFIC ISLANDERS ARE THREE TIMES MORE LIKELY TO BE KILLED ON HAWAI'I ISLAND ROADS THAN WHITES.

FIGURE 5. COMPARISON OF POPULATION AND FATALITIES FOR DIFFERENT RACES (YEARS 2013-2017)





VULNERABLE ROADWAY USERS

Over the past seven years, people traveling by foot, bicycle, or motorcycle/moped have a much greater likelihood of being killed than those in automobiles (see Figure 6). Pedestrians are eight times more likely to be killed on Hawai'i Island roads than drivers (see Figure 7). Hawai'i has historically reported a disproportionately high number of pedestrian deaths for elderly adults as compared to national results¹. However, results from Hawai'i Island suggest that the percentage of elderly pedestrians killed is roughly proportional to the percentage of elderly adults in the total population.

Map 2 identifies the location of each fatal traffic crash by mode between the years 2013 and 2019. Map 3 identifies the location of these High Fatality Corridors and High Fatality Locations in addition to the location of each fatal traffic crash by mode between the years 2013 and 2019. Communities of concern, roadway ownership, and the location of available police stations and hospitals have been delineated as well.



FIGURE 6. HAWAI'I ISLAND FATAL TRAFFIC CRASHES BY TRAVEL MODE

PEDESTRIANS ARE EIGHT TIMES MORE LIKELY TO BE KILLED ON HAWAI'I ISLAND ROADS THAN DRIVERS.

FIGURE 7. HAWAI'I COUNTY COMMUTER TRAVEL MODE (YEAR 2017)



1. Dangerous by Design Hawai'i (Smart Growth America, 2014)

* Includes driving alone, carpooling and taxi Source: Census Bureau's API for American Community Survey, 2017



HIGH FATALITY NETWORK

The High Fatality Network is a collection of roadway corridors and "hot-spot" locations that have the largest concentration of traffic related fatalities on Hawai'i Island roads. Focusing Vision Zero efforts on the deadliest roads and in the most vulnerable communities is a fiscally responsible use of limited personnel and funding. While the State of Hawai'i owns only 28% of all linear-miles of roadway on Hawai'i Island, 67% of all fatal traffic crashes occurred on these state-owned roads (see Figure 8).

High Fatality Corridors are reflective of continuous roadway segments with the highest percentage of fatal traffic crashes per mile on Hawai'i Island. End points were chosen at likely termini such as intersections or changes in road typology/geometrics. Where clusters of fatal traffic crashes were found to be isolated from all major traffic crashes, the area was considered a High Fatality Location. In general, the roadways with the highest percentage of fatal traffic crashes per mile also had the highest density of major traffic crashes. These tended to be on the high-speed, high-volume arterials. However, there were some exceptions, which are likely to be more a result of roadway geometry or topography.

Map 3 identifies the location of these High Fatality Corridors and High Fatality Locations in addition to the location of each fatal traffic crash by mode between the years 2013 and 2019. From this, it was derived that 14% of state-owned linear miles of road and 1% of County-owned linear miles of road fell along a high fatality corridor. Communities of concern, roadway ownership, and the location of available police stations and hospitals have been delineated as well.

14% OF STATE-OWNED LINEAR MILES OF ROAD AND 1% OF COUNTY-OWNED LINEAR MILES OF ROAD FELL ALONG A HIGH FATALITY CORRIDOR.

FIGURE 8. HAWAI'I ISLAND FATAL TRAFFIC CRASHES VS. ROADWAY OWNERSHIP

Source: NHTSA Fatality Analysis Reporting System (FARS), 2013-2018; County of Hawai'i Police Department, Fatal Traffic Collisions Data, 2019

FATAL TRAFFIC CRASH FACTOR: MOTOR VEHICLE SPEED

Traffic crashes where speed was considered a factor for Hawai'i County is in line with the State of Hawai'i, however both are significantly higher than the national average, as 41% of Hawai'i Island's fatal traffic crashes involved excessive vehicle speed (see Figure 9). The majority of these speed-related traffic crashes occurred on roads with a posted speed limit of 35 mph or less which is lower than the national average (see Figure 10). This data is misleading as faster motor vehicle speeds can be correlated with a higher likelihood of a pedestrian dying if hit.

Map 4 identifies the location of speed-related fatal traffic crashes. Communities of concern, roadway ownership, and the location of available police stations and hospitals have been delineated as well

FIGURE 9. HAWAI'I ISLAND FATAL TRAFFIC CRASHES BY SPEED

41% OF HAWAI'I ISLAND'S FATAL TRAFFIC CRASHES INVOLVED EXCESSIVE MOTOR VEHICLE SPEEDS. THE MAJORITY OF THESE SPEED-RELATED TRAFFIC CRASHES OCCURRED ON ROADS WITH A POSTED SPEED LIMIT OF 35 MPH OR LESS.

FIGURE 10. HAWAI'I ISLAND SPEED RELATED FATAL TRAFFIC CRASHES BY POSTED SPEED Posted Speed Limit

FIGURE 11. IMPACT SPEED & A PEDESTRIAN'S RISK OF SEVERE INJURE OR DEATH

Source: Impact Speed and a Pedestrian's Risk of Severe Injury or Death, Brian Tefft, AAA Foundation for Traffic Safety, 2011

FATAL TRAFFIC CRASH FACTOR: DRIVER IMPAIRMENT

Driver impairment (alcohol and/or drugs) was a factor in 56% of all fatal traffic crashes on Hawai`i Island (see Figure 12). Of those fatal traffic crashes where alcohol and/or drugs were a factor, speed was also considered a factor in 43%. Of the drugs identified in the system of the drivers involved in fatal traffic crashes, the most likely types were stimulants (e.g., methamphetamine) and cannabinoids (e.g., marijuana) (see Figure 13).

Map 5 identifies the location of driver impaired fatal traffic crashes. Communities of concern, roadway ownership, and the location of available police stations and hospitals have been delineated as well

FIGURE 12. HAWAI'I ISLAND FATAL TRAFFIC CRASHES BY IMPAIRMENT

DRIVER IMPAIRMENT (ALCOHOL AND/OR DRUGS) WAS A FACTOR IN 56% OF ALL FATAL TRAFFIC CRASHES ON HAWAI'I ISLAND.

FIGURE 13. HAWAI'I ISLAND FATAL TRAFFIC CRASHES SOURCE OF DRUG IMPAIRMENT

FATAL TRAFFIC CRASH FACTOR: ROADWAY VISIBILITY

The majority (51%) of fatal traffic crashes on Hawai'i Island occurred at nighttime (see Figure 15) which is in line with national averages (47%). The likelihood increases for vulnerable users as 64% of all fatal traffic crashes with pedestrians or bicycles occurred at night. Hawai'i County is faced with a number of factors that limit its ability to increase roadway visibility, including limitations on streetlight luminescence levels and hundreds of miles of rural, unlit roadways.

Map 6 identifies the location of fatal traffic crashes that occurred during night and day. Communities of concern, roadway ownership, and the location of available police stations and hospitals have been delineated as well.

FIGURE 14. HAWAI'I ISLAND FATAL TRAFFIC CRASHES BY DAY/NIGHT

64% OF ALL FATAL TRAFFIC CRASHES WITH PEDESTRIANS OR BICYCLES OCCURRED AT NIGHT.

FATAL TRAFFIC CRASH FACTOR: PEAK TRAFFIC HOURS

Peak traffic hours are the periods of time where the majority of commuters are on the roads, resulting in higher traffic volumes and congestion. During these periods, more vehicles are on the road, however motor vehicle speeds are typically slower due to congestion. Details on the time of day of the fatal traffic crashes shows that the highest number of crashes occurred outside of peak traffic hours, specifically between 1-4 pm and 7-10 pm (see Figure 15).

Map 7 identifies the location of fatal traffic crashes that occurred during the AM and PM peak periods. Communities of concern, roadway ownership, and the location of available police stations and hospitals have been delineated as well.

FIGURE 15. HAWAI'I ISLAND FATAL TRAFFIC CRASHES BY PEAK/OFF-PEAK HOURS (YEARS 2013-2018)

FATAL TRAFFIC CRASH FACTOR: AGE / GENDER

Age and gender were analyzed as potential factors for both drivers and victims involved in fatal traffic crashes. It was found that the 20-24 year-old age group had the highest number of fatalities and drivers associated with fatal traffic crashes on Hawai`i Island (see Figures 16 and 17 respectively). In comparison to females, males were overwhelmingly more likely to be the fatality or the driver involved in fatal crashes. Traffic crash fatalities by mode showed less of a correlation for pedestrians, bicycles, or motorcycles/mopeds (see Figure 18).

Population (x1000) -- . Total Fatalities

FIGURE 16. TRAFFIC CRASH FATALITIES BY AGE/GENDER (YEARS 2013-2018)

MALES, AGE 20-24 YEARS-OLD, HAD THE HIGHEST LIKELIHOOD OF BEING THE FATALITY OR DRIVER INVOLVED IN FATAL TRAFFIC CRASHES.

----- Male

FIGURE 17. DRIVERS OF FATAL TRAFFIC CRASHES BY AGE/GENDER (YEARS 2013-2018)

FIGURE 18. TRAFFIC CRASH FATALITIES BY AGE/MODE (YEARS 2013-2018)

FATAL TRAFFIC CRASH FACTOR: DISTRACTED DRIVING

Distracted driving refers to the act of driving while engaging in other activities which distract the driver's attention away from the road. It was found that 25% of all fatal traffic crashes between the years 2013-2018 involved distracted driving (see Figure 19).

FIGURE 19. HAWAI'I ISLAND FATAL TRAFFIC CRASHES BY DISTRACTED DRIVING

FATAL TRAFFIC CRASH FACTOR: ROADSIDE CRASHES

Roadside crashes are those in which a motor vehicle collides with a stationary object outside of the travelway. It was found that 28% of all fatal traffic crashes between the years 2013-2018 involved a roadside crash (see Figure 20).

FIGURE 20. HAWAI'I ISLAND FATAL TRAFFIC CRASHES BY ROADSIDE ELEMENTS

FATAL TRAFFIC CRASH FACTOR: MOTOR VEHICLE TYPE

The motor vehicle body type involved in the highest number of fatal traffic crashes were light trucks and vans (see Figure 21). However, observationally, with a relatively low number of motorcycles on the road as compared to all other vehicle types, the percentage of motorcycles (13%) involved in fatal traffic crashes is high.

FIGURE 21. HAWAI'I ISLAND FATAL TRAFFIC CRASH MOTOR VEHICLE BODY TYPE

Type of Motor Vehicles involved in Fatal Crashes (Years 2013-2018)

FATAL TRAFFIC CRASH FACTOR: MOTOR VEHICLE MODEL YEAR

Improvements to motor vehicle design for safety over time have contributed to a decrease in motorist fatalities. Over that same time, the number of pedestrian deaths have increased (see Figure 22). However, a large percentage of motor vehicles involved in fatal traffic crashes on Hawai'i Island from 2013 through 2018 were over 10 years old (see Figure 23), thus not fully benefiting from the advancements in motor vehicle safety.

FIGURE 22. NATIONAL TRAFFIC FATALITY TRENDS (YEARS 2008-2017)

FIGURE 23. HAWAI'I ISLAND FATAL TRAFFIC CRASHES BY MOTOR VEHICLE MODEL YEAR (YEARS 2013-2018)

3) ROAD MAP TO CHANGE

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Following a proclamation by Mayor Harry Kim in February 2019, the COH took action by establishing a Vision Zero Task Force to develop an action plan for decreasing and eventually eliminating fatalities on Hawai`i Island's roadways.

This effort coincides with others underway at the County, such as the update of long-range regional planning documents, the General Plan updates of the Community Development Plans, and adoption of the Downtown Hilo Multimodal Master Plan. The COH is simultaneously undertaking the development of a complete streets program, including an updated COH Street Design Manual.

Complete Streets & Vision Zero Policy Efforts on Hawai'i Island

The State of Hawai'i adopted the Hawai'i Complete Streets Act (Act 54) in 2009. It required each County to adopt a complete streets policy that results in a balanced, multimodal transportation network, which meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation.

The COH responded to Act 54 by adopting Resolution 171-11 on October 19, 2011, supporting the establishment of a Hawai'i County Complete Streets Policy. The COH produced a Complete Streets Program White Paper dated October 2015 that provided an overview of how the COH is approaching complete streets. The COH is currently moving forward with establishment of a complete streets program, including an updated Street Design Manual and other program documents.

In May 2019, the State Legislature passed HB 757, which calls for HDOT and the County transportation departments to "adopt a Vision Zero policy that seeks to prevent and ultimately eliminate all traffic fatalities through a combination of engineering, enforcement, education, and emergency response strategies that focus on equity."

HB 757 clearly articulates the relationship of complete streets and Vision Zero: "The National Complete Streets Coalition endorses a Vision Zero approach in pursuit of the objective to design streets that prevent traffic injuries and fatalities, particularly for the most vulnerable road users. Over one thousand two hundred jurisdictions in the United States have, through an adoption of complete streets policies, committed to design and operate their streets to provide for the needs of all users of the road, regardless of age, ability, income, or mode of transportation. Vision Zero strategies can be easily integrated into existing complete streets programs." Counties across Hawai'i are working to integrate Vision Zero into complete streets initiatives, as described in this report.

The Bill also requires the State Highway Safety Council, in collaboration with each of the County traffic or highway safety councils, to develop a Vision Zero Action Plan, and to report findings to the legislature on or before January 1, 2020. A final report must be presented to the legislature in 2021.

In February 2019, Hawai'i County's Mayor Harry Kim released a proclamation announcing the formation of a Vision Zero Task Force to develop the County's Action Plan. The Task Force was comprised of agencies and organizations with expertise in transportation, enforcement, education, public health, emergency response, equity, transit, biking and walking. The Task Force met quarterly and prepared the action items for Engineering, Enforcement, Encouragement, Education, and Evaluation, that are included in this Action Plan. These 5 "E's" of traffic safety provide the basis for a safe systems approach to reducing traffic fatalities.

Engineering

Develop and implement infrastructure policies to reduce traffic fatalities and injuries.

Education

Educate neighbors of all ages and abilities on best practices to safely use streets.

Enforcement

Improve traffic safety enforcement policies and practices.

Encouragement

Promote and encourage behavioral change and participation through new and existing resources, public outreach, and special events.

Evaluation

Collect data to measure the successes of the multiple strategies being used to help reduce traffic-related fatalities as outlined in Vision Zero.

4) TAKING ACTION

s Plent

Kids Safe

Vision Zero requires bold action to reach a bold goal. Eliminating deaths and life-changing injuries on the transportation system is no small feat. Reaching that goal will take actions not just from COH staff in many different departments, but also from partners and agencies such as HDOT, DOE, DOH, civic groups, as well as Hawai'i Island residents and visitors.

TAKING ACTION

The actions presented here were developed in concert with partners who will be responsible for helping to execute and support them, including COH departments, partner agencies, institutions and civic groups.

Many actions will be on-going. Changing the design of the island's streets is not a one-time step. It must happen consistently over years redesigning existing streets and with construction of new streets. Other actions, such as amending state law regarding BAC limits, may take sustained effort, but they will have a concrete end.

Actions are organized into three time frames: short-term (two-year), mid-term (five-year) and long-term (ten-year) actions; this is representative of two, five, and ten year budget cycles respectively. These categories allow for a given action to be completed (one-time actions) or started (on-going actions) within that time frame. Annual reports should be developed to assess the progress made and success of these actions.

Reduce Potential for Conflict Between Users

Encourage Safer Practices Among People Driving, Walking and Bicycling

Slow Motor Vehicle Speeds

Improve Data Collection Processing and Analysis

Reduce Driving, Bicycling and Walking Under the Influence

Support an Institutional Commitment to Vision Zero

EVALUATION

OBJECTIVE: COLLECT DATA TO MEASURE THE SUCCESSES OF VISION ZERO STRATEGIES BEING USED TO HELP REDUCE TRAFFIC-RELATED FATALITIES.

KEY IMPLEMENTERS

- DPW
- IT
- HDOT
- DOE
- Mayor's Office
- HPD

- HFD
- Hawai'i Judiciary
- Hawai'i Legislature
- Hawai'i County Council
- Trauma
- PATH

GOAL: IMPROVE CRASH DATA QUALITY AND MANAGEMENT PRACTICES.

SHORT TERM	
۱	 Create and maintain a comprehensive public website to share crash data and progress on Action Plan Strategies, and solicit feedback on safety concerns, projects and strategies.
۱	 Assess Hawai'i Island's transportation network to further refine treatments needed to target safety improvement as part of a speed management program.
(11)	 Define what is a serious injury crash so that crash audit can be done along with fatal crash audits.
۱	 Further analyze crash data against data on vulnerable populations and communities of concern, including homeless populations, to better understand impacts and prioritize equitable solutions.

GOAL: REPORT BACK TO THE COMMUNITY ABOUT VISION ZERO PROGRESS.

SHORT TERM	
۱	 Produce an annual Vision Zero Report that includes what engineering work was done in the past year.
MID TERM	
۱	 Establish an official crash data source to be used by all County agencies and to provide consistent reporting to the media and in County publications.
	 Complete updates semi-annually on ongoing projects.
(ili)	• Provide up-to-date data about traffic fatalities and serious crashes.
LONG TERM	
۱	• Develop a Countywide atlas that highlights importance of equity metrics.

• ENGINEERING

OBJECTIVE: CREATE SAFE AND CONVENIENT ENVIRONMENTS TO DRIVE, BIKE, AND WALK THROUGH THE IMPLEMENTATION OF THE COMPLETE STREETS POLICY AND OTHER TRANSPORTATION INITIATIVES.

KEY IMPLEMENTERS

- Planning
- DPW
- HDOT
- PATH
- DOE
- HPD

- Prosecutor's Office
- Hawai'i County Council
- MTA
- DCCA
- AT&T

GOAL: DEVELOP AND IMPLEMENT INFRASTRUCTURE POLICES TO REDUCE TRAFFIC FATALITIES AND INJURIES.

SHORT TERM	
	• Update Street Design Guidelines to include best practices for safety.
 Image: Image: Image:	 Prioritize the safety of school aged children by working with Safe Routes to School teams on engineering solutions.
	 Define and prioritize multimodal safety improvements in communities of concern.
LONG TERM	
	• Develop and adopt a policy to prioritize safety of pedestrian, bicyclist and transit riders.

EMERGING TECHNIQUES FOR IMPROVING SAFETY IN THE COUNTY.
 Require DPW, Planning, Police officials and legislative representatives to attend Vision Zero training.
• Assess opportunities for automated enforcement and assess effectiveness of existing manual enforcement to improve safety.
• Earmark County Gas Tax funds for Vision Zero Project.
 Plan for necessary telecommunication coverage around the island to enable better response during crashes.

LONG TERM	
۱	 Develop carpool/alternative transportation program that increase incentives to encourage mode change.
۲	 Plan for connected/automated vehicles that includes appropriate requirements that will improve safety.

GOAL: IMPLEMENT SAFETY TREATMENTS ON KEY CORRIDORS THROUGHOUT THE COUNTY. SHORT TERM

(;)	• Evaluate street design treatments from Complete Street Program toolbox.
	 Review resurfacing and restriping maintenance projects with the safety of all users in mind, prioritize roadway maintenance projects on the High Fatality Network and evaluate lane widths to help reduce speed before completing striping.
	 Work with HDOT to reduce speeding at high crash areas utilizing street design changes and enforcement when possible.
۲	 Conduct safety reviews of the transportation networks in school areas and communities of concern on a four year cycle. Develop education and engineering recommendations to improve safety for all modes of school travel and prioritize sidewalk infill and maintenance in urban areas.
MID TERM	
6 3	 Add traffic calming measures and informative signage to message safe speeds, reduce speed, increase compliance with traffic laws and inform drivers of enforcement in urban areas.
	 Develop lighting guidelines and improve quality of lighting through implementation of LED (while reducing uplight).
LONG TERM	
۱	 Create a speed management program by performing a Countywide evaluation of speed limits, considering context to explore ways to make changes, developing methodology for data collection, street design changes, etc.

EDUCATION AND ENCOURAGEMENT

OBJECTIVES:

- EDUCATE NEIGHBORS OF ALL AGES AND ABILITIES ON BEST PRACTICES TO SAFELY USE STREETS.
- PROMOTE AND ENCOURAGE BEHAVIORAL CHANGE AND PARTICIPATION THROUGH NEW AND EXISTING RESOURCES, PUBLIC OUTREACH AND SPECIAL EVENTS.

KEY IMPLEMENTERS

- Planning
- DPW
- DLC
- DMV
- IT
- HDOT
- DOH
- DOE

- Mayor's Office
- MALAC
- PATH
- HPD
- HFD
- Hawai'i Judiciary
- Media
- Trauma

GOAL: DEVELOP STANDARD LANGUAGE REGARDING VISION ZERO AND TRAFFIC SAFETY FOR USE BY ALL COUNTY PARTNER AGENCIES WHEN INTERACTING WITH THE MEDIA AND WITH THE PUBLIC DIRECTLY.

SHORT TERM	
	 Provide training for Public Information Officer staff in relevant departments, such as HPD, DPW, and the Mayor's Office.
	 Promote opportunities for local media to learn from other cities to more accurately report traffic crashes to avoid victim-blaming.
	• Have local HPD, ER and First Responder staff featured in safety messages.
۱	 Support a culture of safety and community engagement through events and projects at schools and in communities. Work with schools to develop safety PSAs.
۵	 Support statewide effort to revise Drivers Ed curriculum and testing to address all modes of transportation, driving under the influence and distracted driving.
	 Develop branded Vision Zero signage and a traffic safety messaging campaign to be utilized with Vision Zero infrastructure projects and enforcement activities.
	 Provide educational materials in multiple languages and distribute them through public libraries and social service organizations.

MID TERM	
۱	 Develop partnerships with transit, taxi transportation network companies like Uber and Lyft, to reduce driving under the influence.
۱	 Deliver "safe server training" for bars and restaurants to promote awareness of safe alternatives to impaired driving.

GOAL: INCREASE AMOUNT SPENT, AND PROGRAMS OFFERED FOR SRTS COORDINATION FUNDING WITHIN DPW TO EXPAND BICYCLE AND PEDESTRIAN EDUCATION PROGRAMS FOR STAFF, STUDENTS, AND FAMILIES.

SHORT TERM	
۵	 Provide bicycling education programs, including a school program to reinforce and encourage safe cycling to school and a program for adult cyclists at all skill levels.
	 Encourage events such as National Walk to School Day.
	 Create a self-guided activity toolkit that allows community members to host their own meeting to discuss safety, rate their neighborhood based on their discussion, identify opportunities and solutions, and report back to COH staff.
MID TERM	
	 Work with HCC and UH Hilo to create walking, biking and driving safety campaigns.
LONG TERM	
	 Explore establishing grant programs for communities and non-profits to advance Vision Zero in their communities, prioritizing grant awards to communities of concern.

GOAL: ESTABLISH A COUNTY OF HAWAI'I WEBSITE FOR VISION ZERO.

SHORT TERM	
	 Complete updates semi-annually on ongoing projects.
۱	• Provide up-to-date data about traffic fatalities and serious crashes.
۱	 Identify opportunities for education (bike safety, etc).
۱	 Create a Vision Zero concerns map that encourages the public to contribute information about crashes, near misses, and locations with perceived safety issues.
MID TERM	
۱	• Develop a Countywide atlas that highlights importance of equity metrics.

ENFORCEMENT

OBJECTIVES:

- IMPROVE TRAFFIC SAFETY ENFORCEMENT POLICIES AND PRACTICES.
- BUILD CAPACITY FOR IMPROVED DATA COLLECTION AND SHARING.
- CREATE LAWS FOR IMPROVED SAFETY OF MOTORISTS, PEDESTRIANS, AND BICYCLISTS.
- INCORPORATE AUTOMATED ENFORCEMENT.

KEY IMPLEMENTERS

- HPD
- Hawai'i Judiciary
- DPW
- HDOT
- DOH
- Mayor's Office

- HFD
- Hawai'i Legislature
- Hawai'i County Council
- Trauma
- PATH

GOAL: ADVOCATE FOR CHANGES AT LEGISLATURE TO ADDRESS ISSUES AROUND INTOXICANTS.

SHUKI IEKIVI	
۱	 Monitor O'ahu study of Red-Light Running cameras.
MID TERM	
۲	 Lower BAC limit to .05 especially with repeat offenders.
🔬 🕑 🧼	 Eliminate time limit for obtaining BAC.
۱	 Develop a program to test e-warrant system in order to reform DUI standards related to BAC, arrest and adjudication process.
1	 Purchase tools to ascertain evidence of impairment.
🔬 🕑 🧆	 Support funding of testing labs around the state.

SHORT TERM	
	 Increase partnership between police and trauma personnel to identify and report impairment at hospitals.
۱	 Establish a multi-disciplinary review team that activates as soon as possible after the event to identify potential actions the County can take at that or other similar locations to address safety issues. The team should look at all possible causal factors and present findings to the public, and direct enforcement and educational resources to the location.
()	 Establish and share crash map information between departments.
	• Provide training to officers on existing and new bike and pedestrian laws.
	 Provide bicyclist and pedestrian awareness training to officers.
	 Work with PD PIO to prepare media reports that align with Vision Zero communications and messaging.
MID TERM	
۲	 Research and pilot diversion program in lieu of fines to address equity concerns and encourage safe behaviors.
	 Implement dashboard cameras program for police vehicles.
۲	 Educate Judges, Police and Prosecutors regarding new safety priorities. Develop evaluation metrics and safeguards against pretextual or discriminatory enforcement.
	 Focus traffic enforcement on high crash network and on behaviors contributing to fatal and serious injuries vs less serious infractions.
۱	 Bring Drug Recognition Expert (DRE) training to Hawai'i County in order to train more officers.
۱	 Collect and make available geographic and demographic data on traffic stops and citations to support equity and safeguard against bias in policing.
	 Explore expansion of community policing and provide education on community members' role in social norming and community policing.
LONG TERM	
	• Increase number of traffic enforcement positions in Hawai'i County.

GOAL: IMPROVE TRAFFIC SAFETY ENFORCEMENT POLICIES AND PRACTICES.

