

# PSRC Tribal Safety Analysis Training

November Training Recording 2025



Puget Sound Regional Council



*We are leaders in the region to realize equity for all. Diversity, racial equity and inclusion are integrated into how we carry out all our work.*

[psrc.org/equity](http://psrc.org/equity)

# Agenda

- Introduction
- Land Acknowledgement
- Objectives of the Training
- Training Outline
  - The Safe System Approach (2-3 pages)
  - PSRC Regional Safety Action Plan
  - Tribal communities
  - Tribal Areas Crash Analysis

-----Break-----

- Using the HCL Tool



# Introductions

- Gary Simonson – PSRC
- Erika Harris – PSRC
- Ling Chen – WSP
- Jeanne Acutanza – WSP
- HollyAnna Littlebull – WSP



# Land Acknowledgement

Puget Sound is a part of a larger area that is the traditional territory of the Coast Salish peoples, who have lived here since time immemorial and ceded land under duress. While each Tribe is unique, all share in having a deep connection with and legacy of respect for the land and natural resources.

These Sovereign Tribal nations continue to enrich the region through environmental stewardship, cultural heritage, economic development, and collaboration on local and regional initiatives. With gratitude, we honor the land, the water, and its peoples and work to uphold Tribal sovereignty, as well as inherent and treaty rights, in order to enhance collaboration.



# Objectives of the Training

- Reintroduce the Safe System Approach and PSRC's Regional Safety Action Plan (RSAP) framework.
- Review key safety trends and analysis methods for the PSRC region and Tribal areas.
- Compare crash contributing factors, crash types, and target zero areas between the PSRC region and Tribal areas.
- Strengthen understanding of crash data interpretation and safety priorities.
- Demonstrate use of a Crash (HCL) Countermeasure Toolkit for targeted strategies.



# Training Outline

- The Safe System Approach
  - USDOT and FHWA
  - Terms and Vocabulary
- PSRC Regional Safety Action Plan
  - Data Analysis
  - Countermeasure Toolkit
  - Safety Reporting for Regional Funding
- Tribal Communities
  - Tribal Areas
  - Outreach and Engagement
- Tribal Areas Crash Analysis
  - Geographic Boundaries
  - Crash Trend (2010-2024)
  - Crash Analysis (2017-2024)
  - HIN



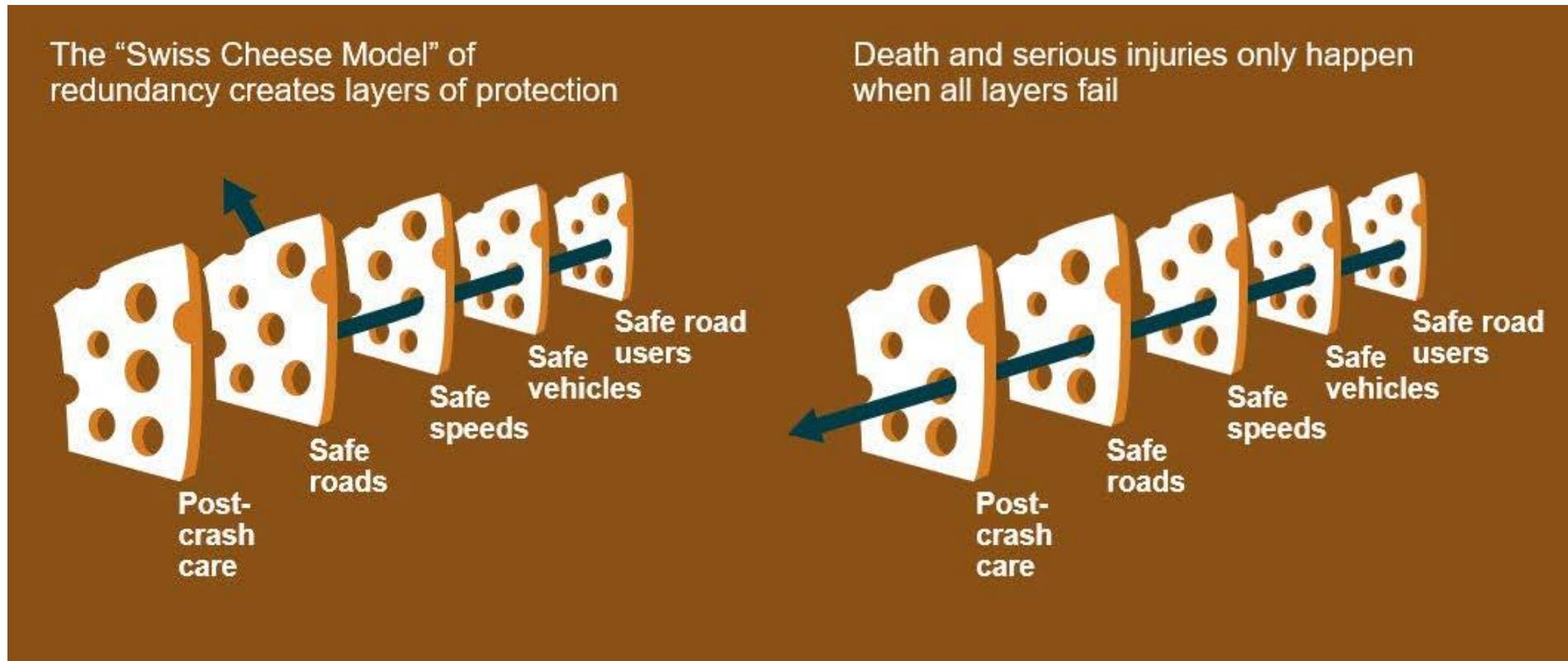
# The Safe System Approach

## Principles



# The Safe System Approach

## Swiss Cheese Model



# The Safe System Approach

## Terms and Vocabulary

- KABCO:

Refers to all crashes, including those with fatalities, serious injuries, minor injuries, or no injuries.

- KABC:

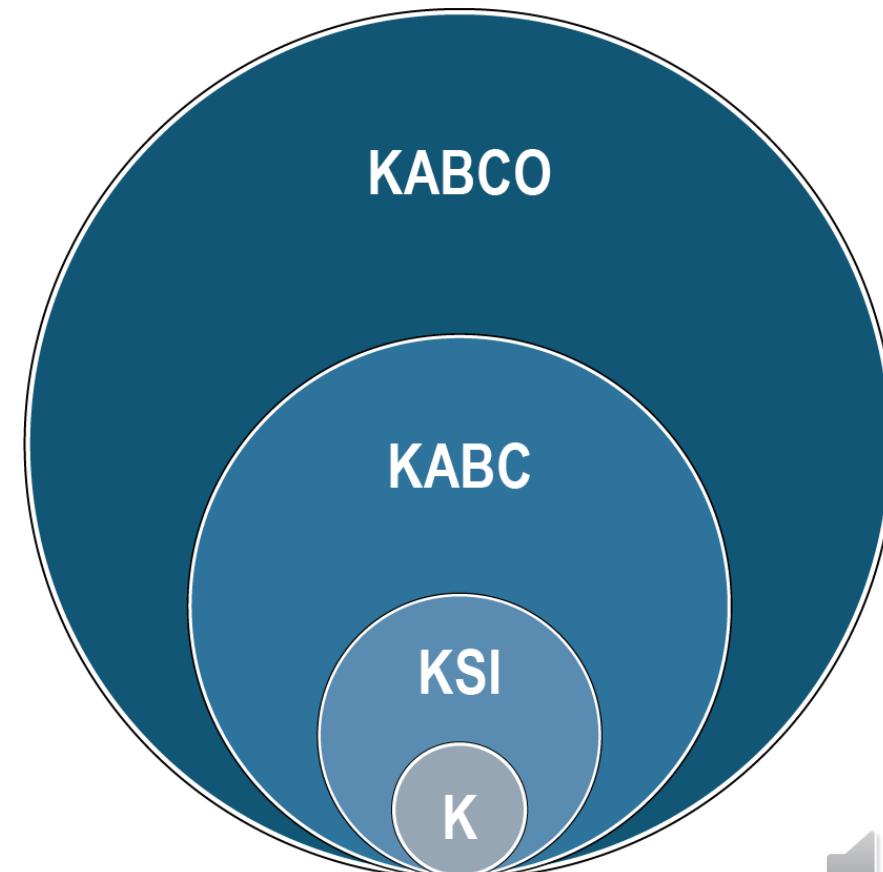
All injury and fatal crashes

- KSI/KA

Serious injury crash and fatal crash

- K:

Fatal crashes



# The Safe System Approach

## Terms and Vocabulary

- High Crash Locations
- High Injury Network



# PSRC Regional Safety Action Plan

## High Injury Network (HIN)

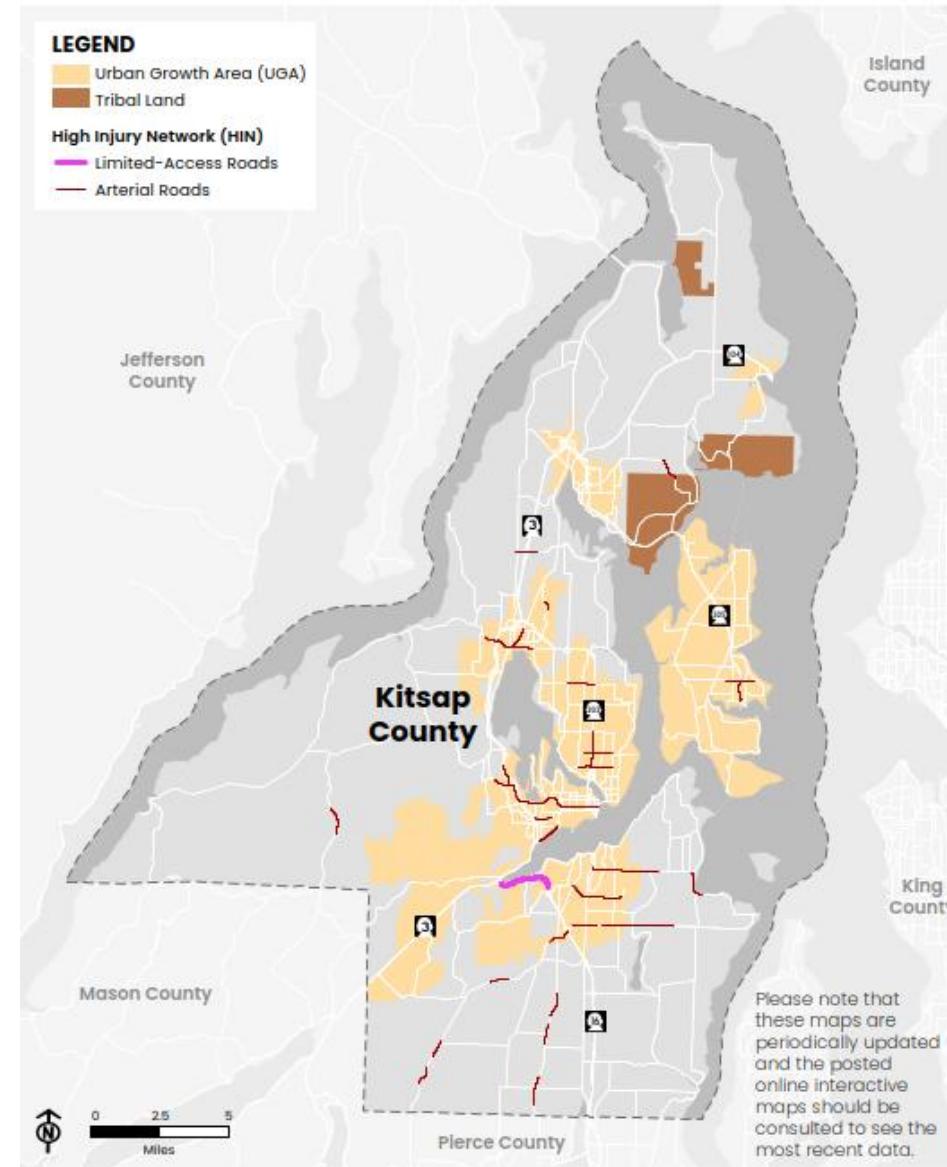
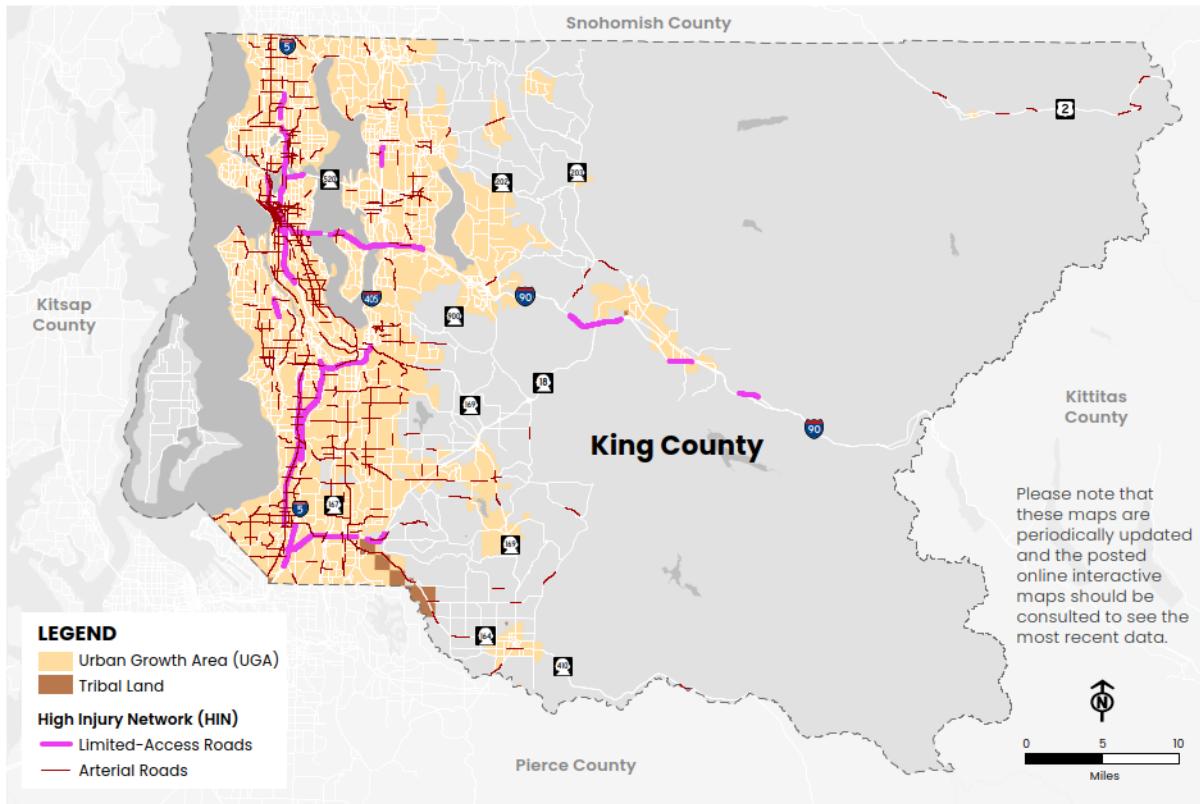
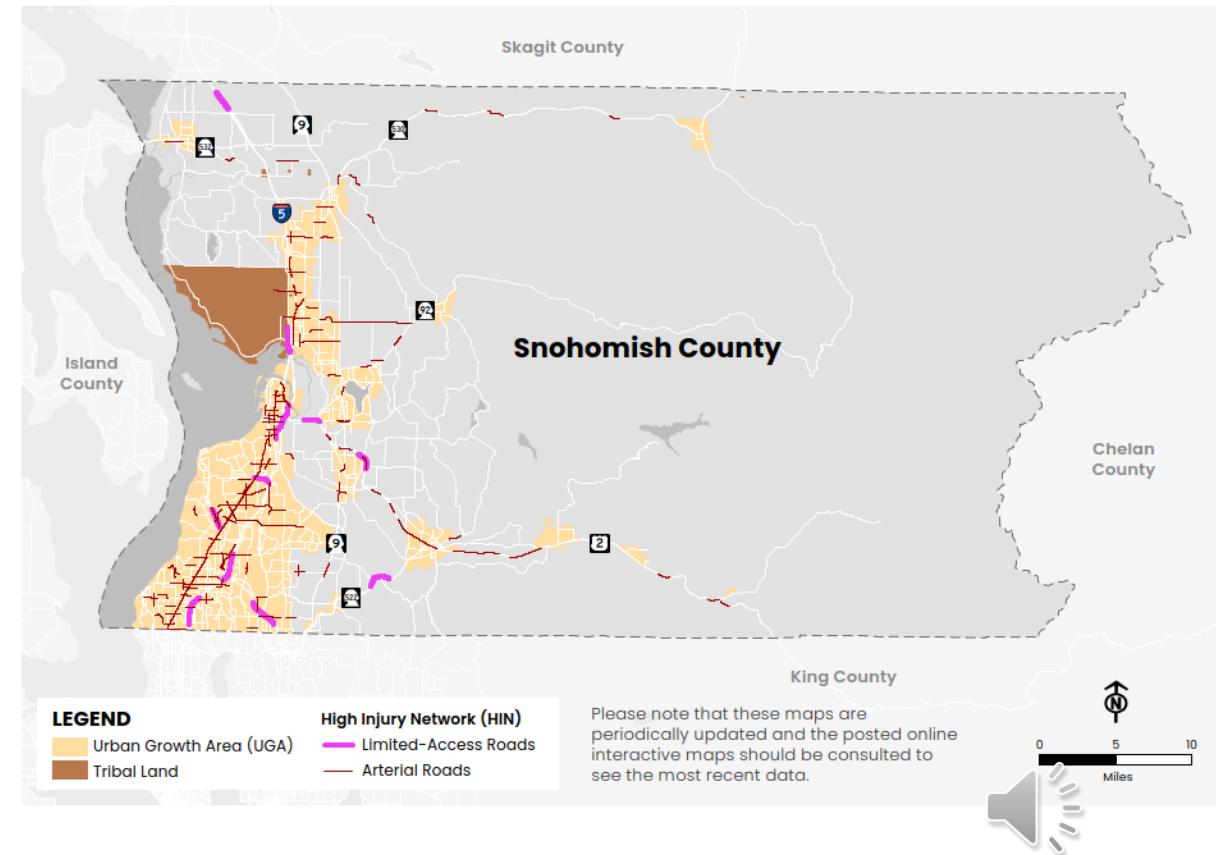
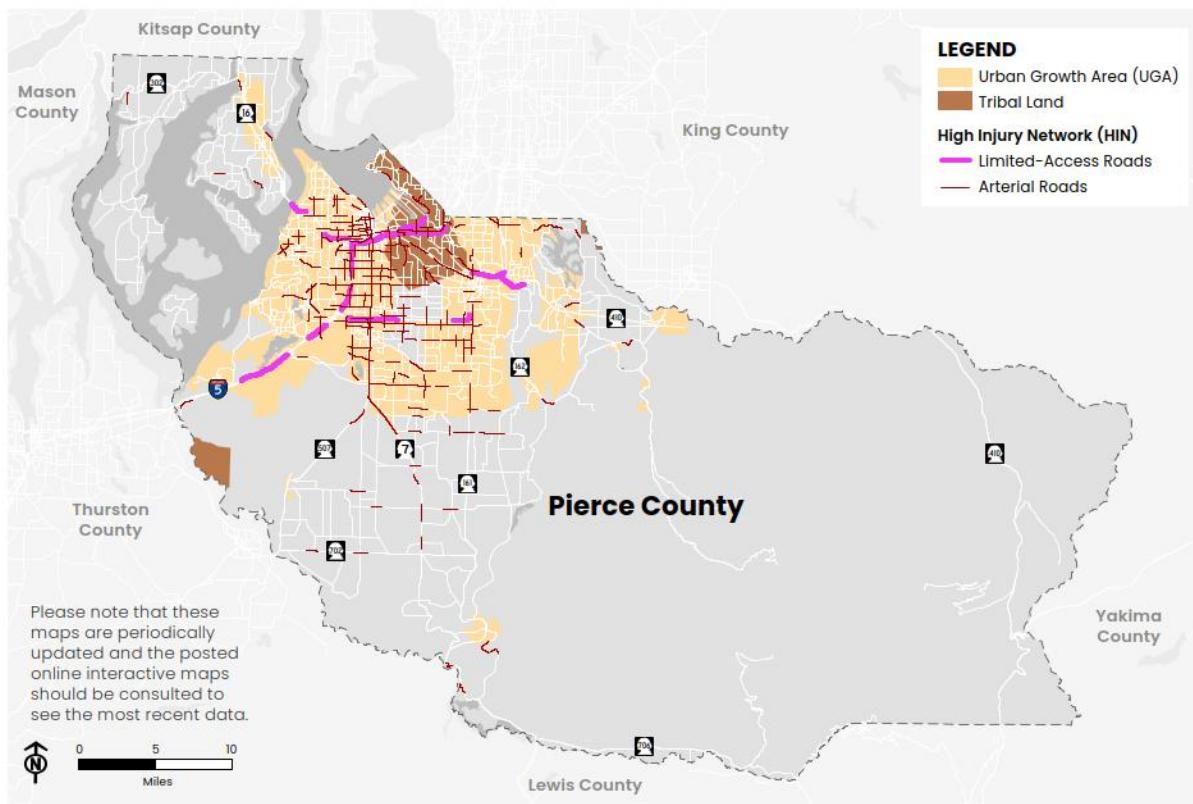


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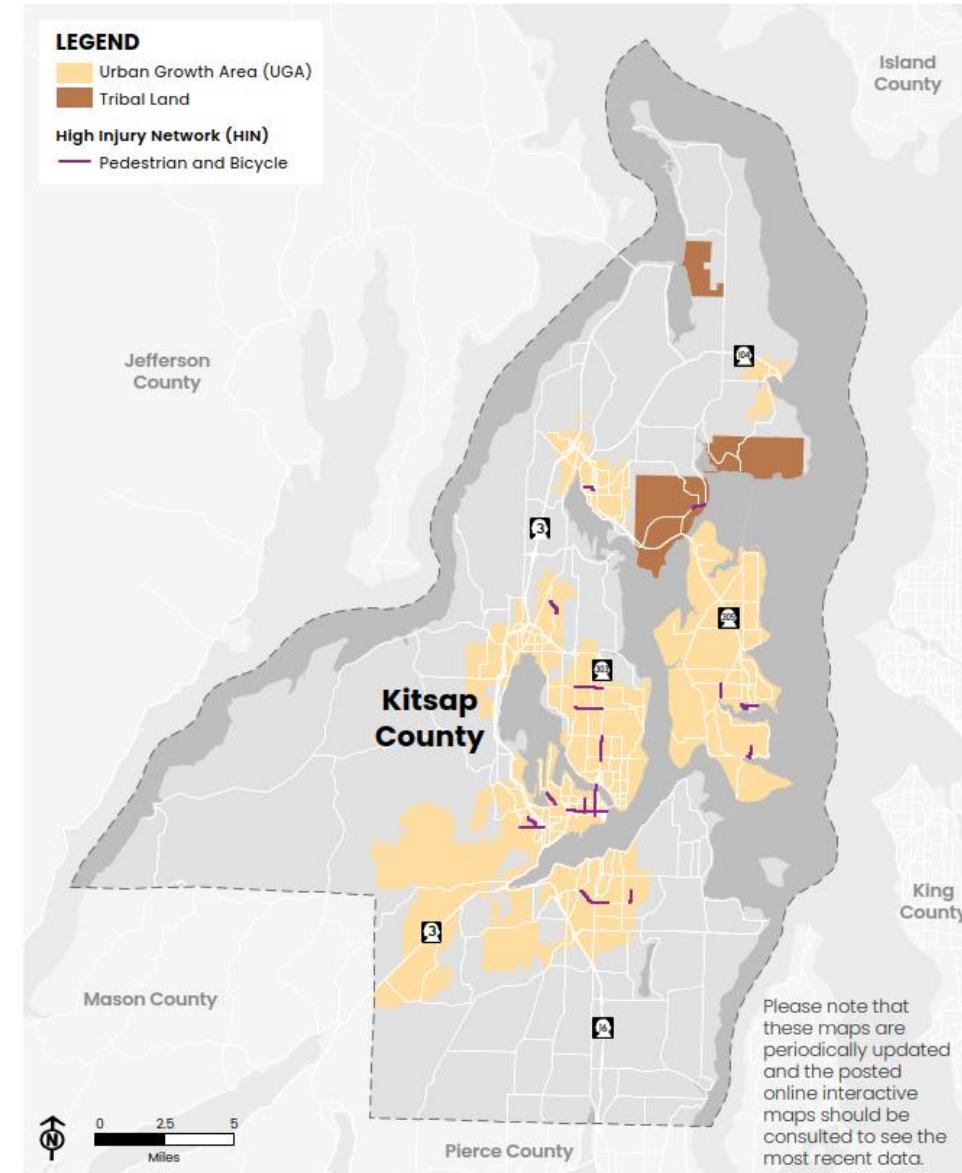
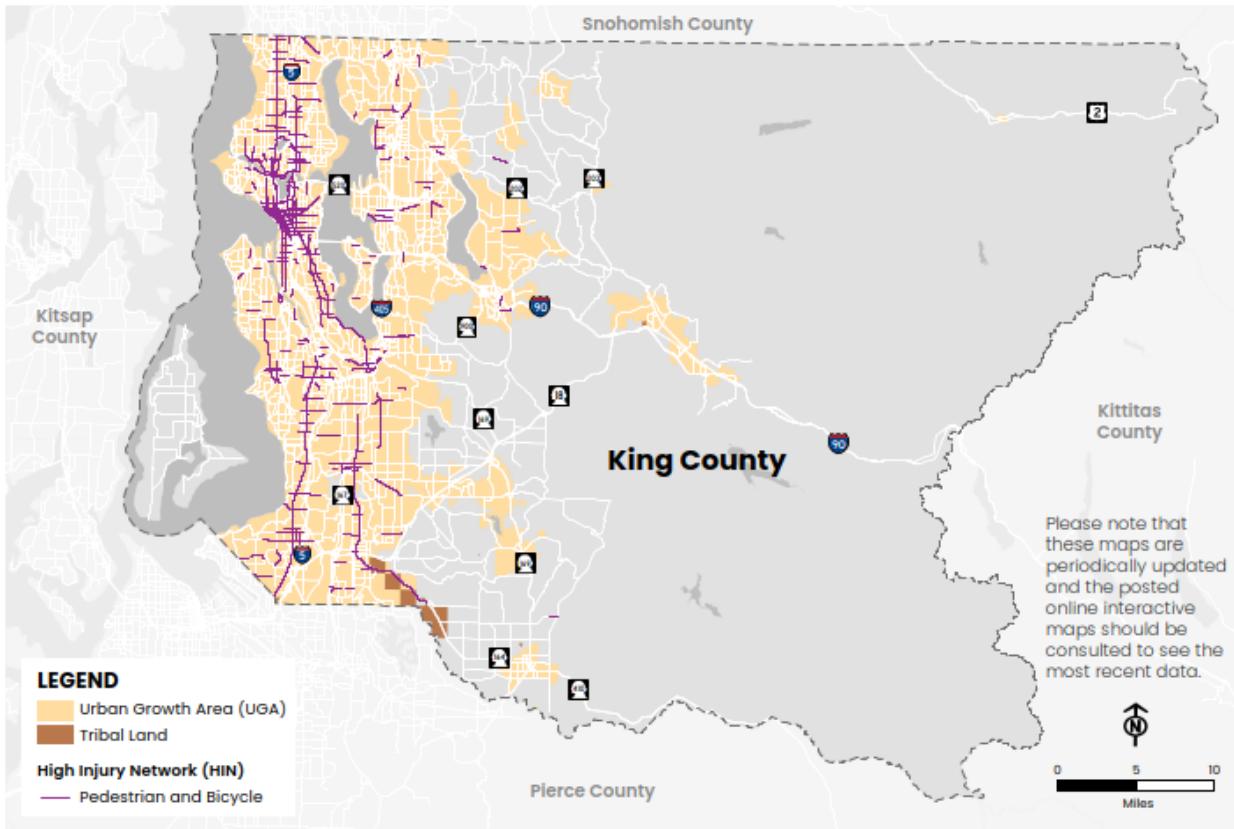
# PSRC Regional Safety Action Plan

## High Injury Network (HIN)



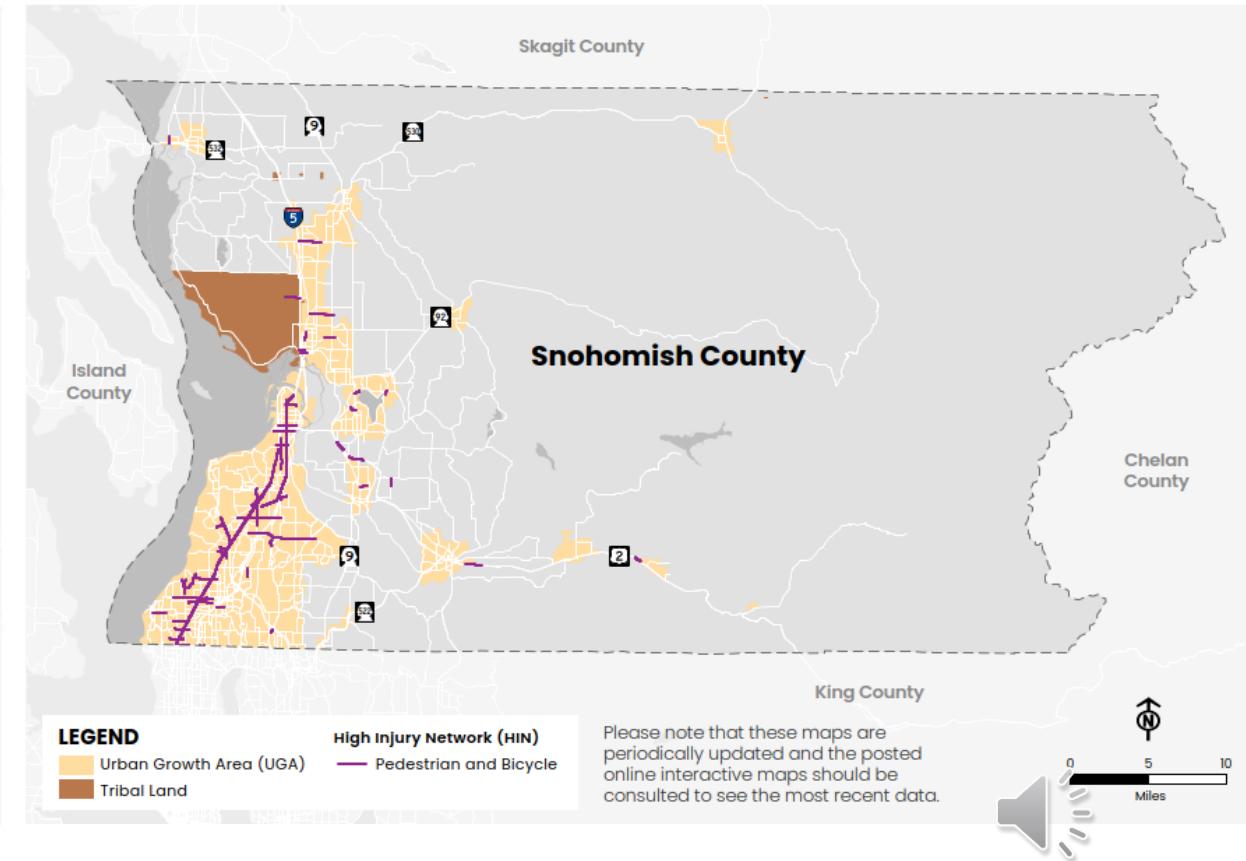
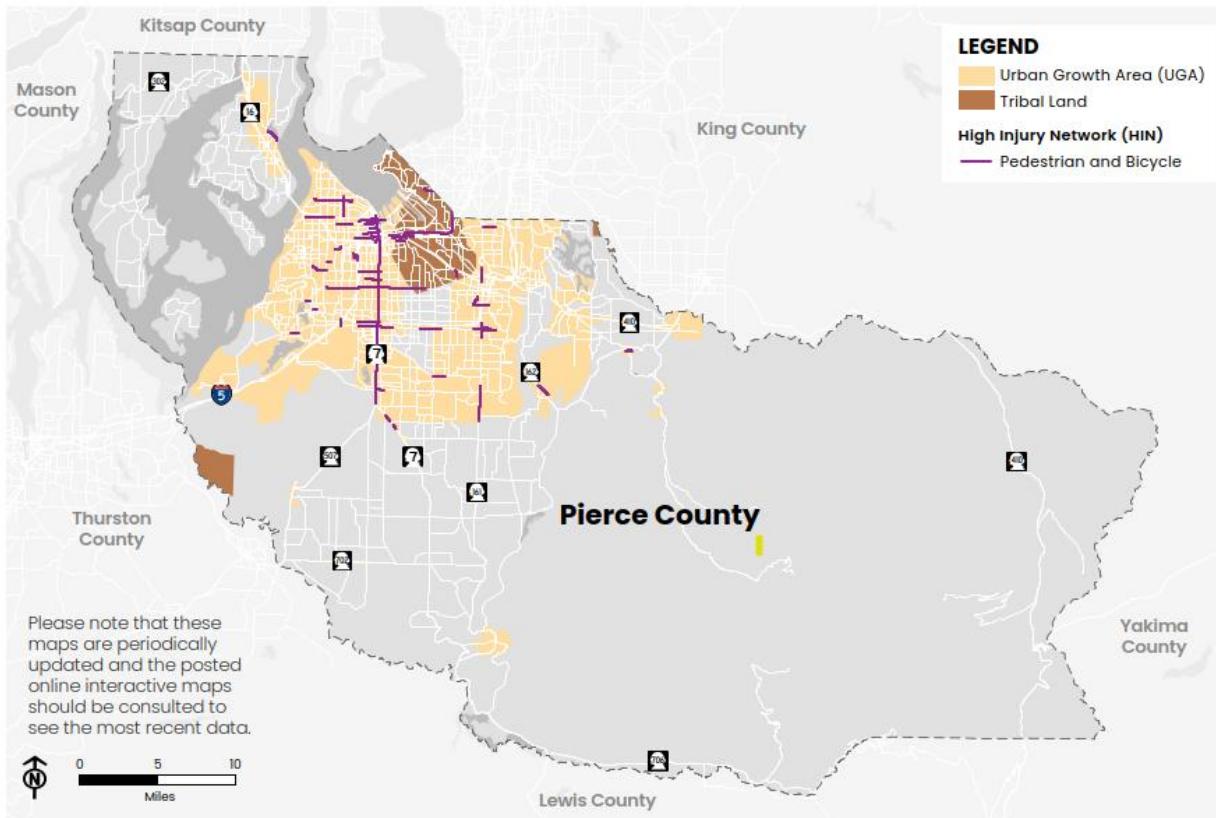
# PSRC Regional Safety Action Plan

## Vulnerable Road Users(VRU)



# PSRC Regional Safety Action Plan

## Vulnerable Road Users(VRU)



# PSRC Regional Safety Action Plan

## High Crash Location (HCL)

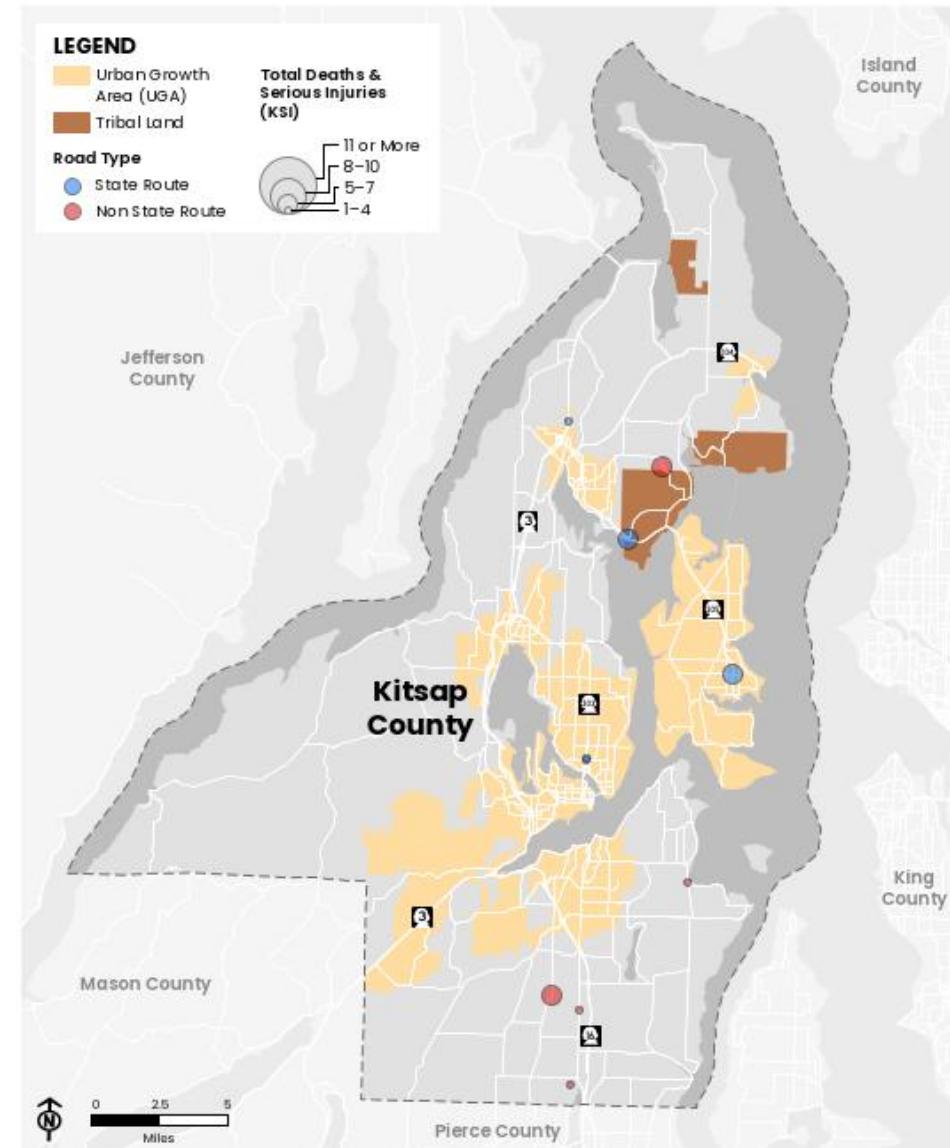
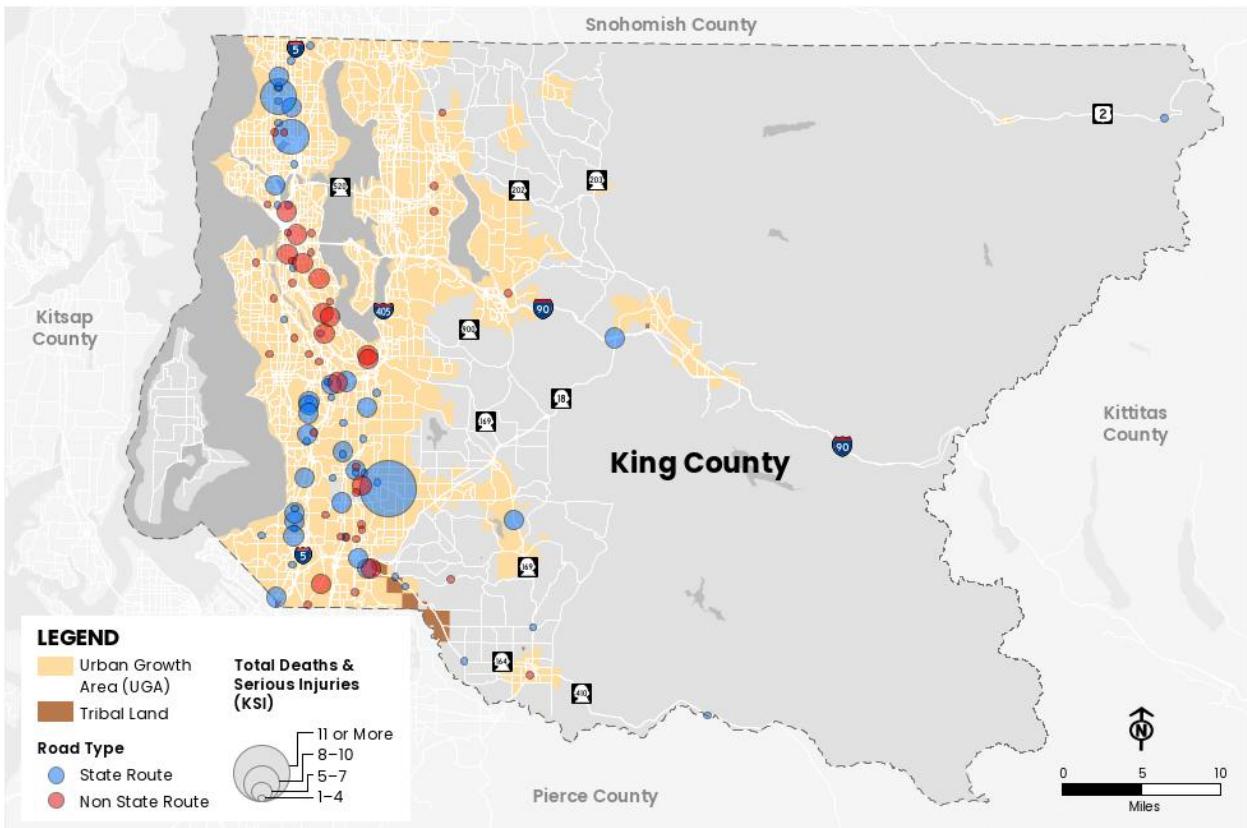
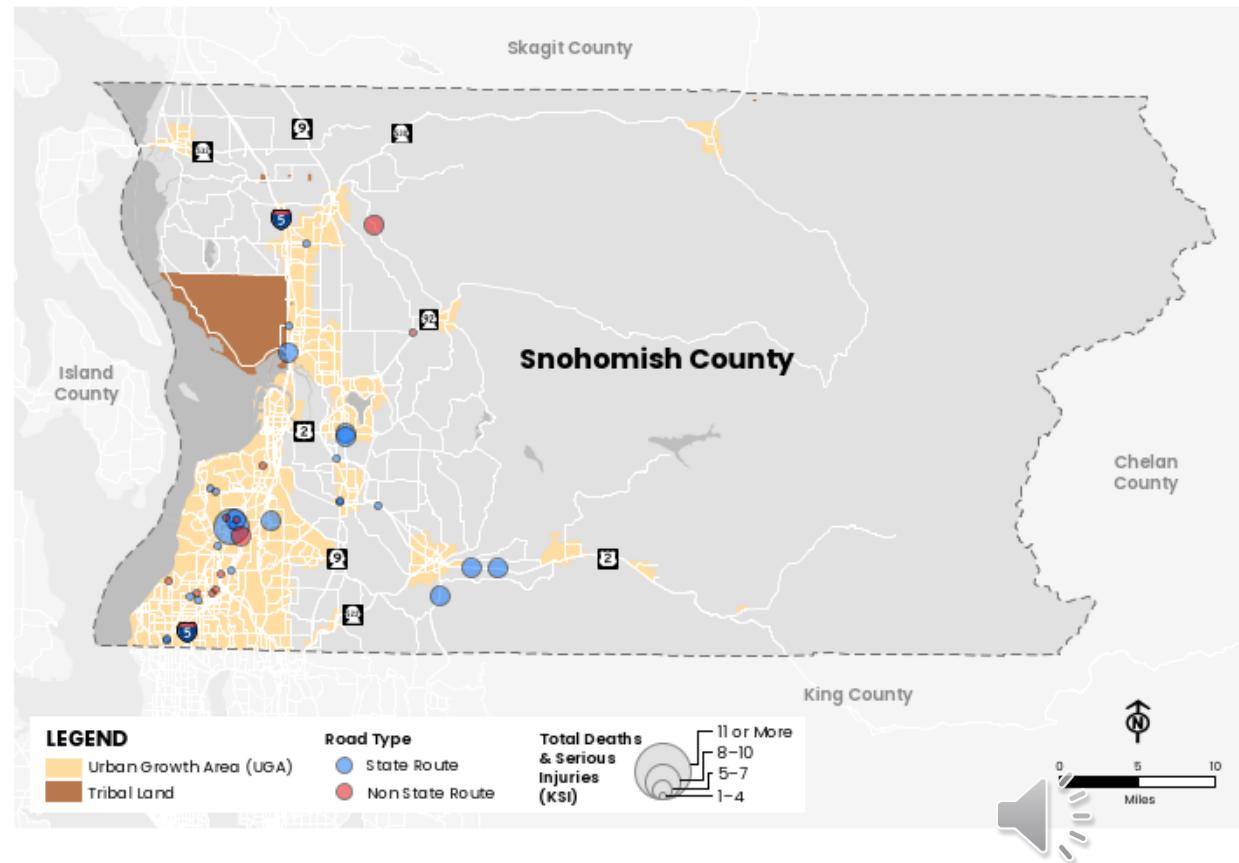
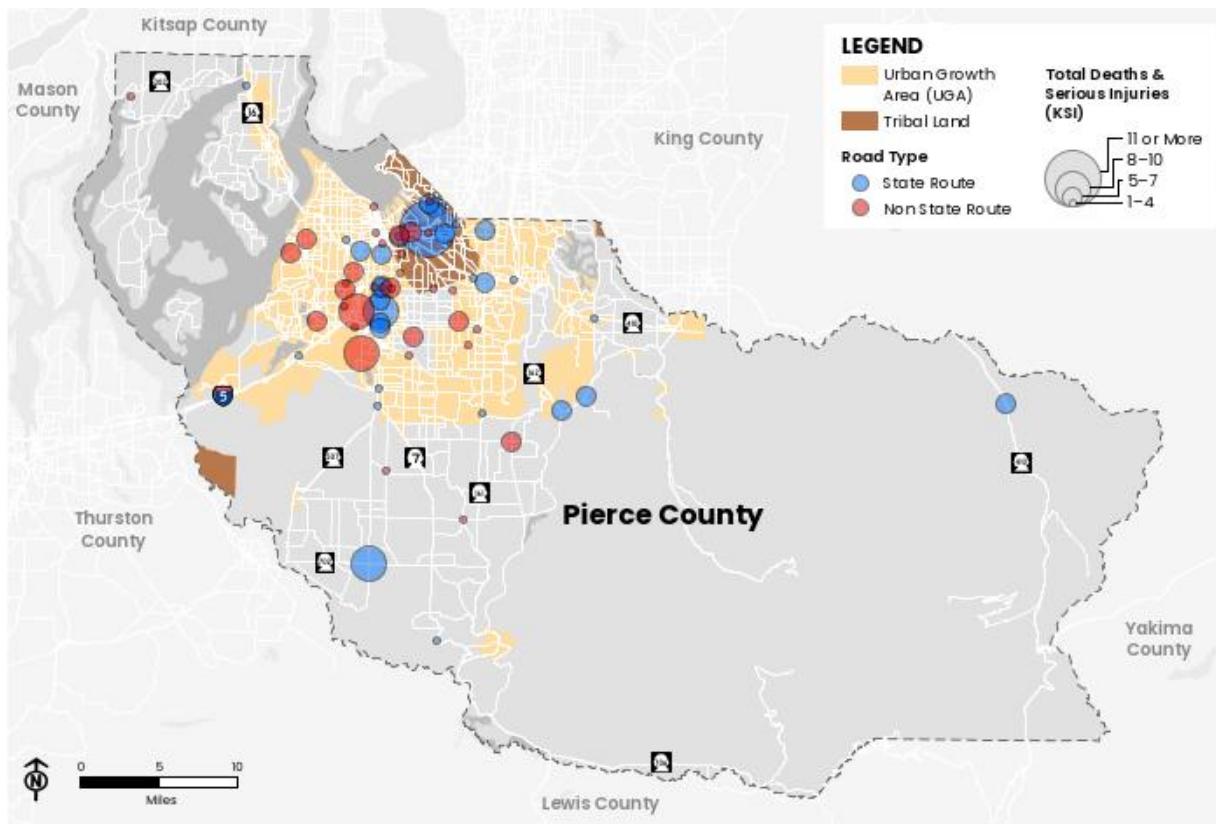


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# PSRC Regional Safety Action Plan

## High Crash Location(HCL)



# PSRC Regional Safety Action Plan

## Emphasis Areas

- Urban Multilane Arterials
- Rural Highways
- Tribal Areas
- Frequent Transit Stations
- Areas of Lower Income



2016-2023 Tribal Lands Crash Severity Compared to the Central Puget Sound Region

	Deaths & All Injuries per 100k people	Deaths & All Injuries per 100k people compared to the PSRC Region	Deaths & Serious Injuries per 100k people	Deaths & Serious Injuries per 100k people compared to the PSRC Region	Deaths per 100k people	Deaths per 100k people compared to the PSRC Region	Ratio of Deaths to All Injuries	Ratio of Deaths & Serious Injuries to All Injuries	Ratio of Deaths to Deaths & Serious Injuries
All Tribal Areas	8,672	182%	703	235%	155	313%	1 in 56	1 in 12	1 in 5
Not on Tribal Areas	4,705	99%	291	98%	48	96%	1 in 99	1 in 16	1 in 6



# PSRC Regional Safety Action Plan

## Countermeasure Toolkit

- Strategies to Address Pedestrian Crashes

The table identifies strategies to address pedestrian crashes in the region. Strategies identified by a “✓” in the matrix target the emphasis areas and contributing factors shown in each column.

Local context and conditions will be critical in determining which countermeasures may be appropriate for a given roadway or location.

	Emphasis Areas					Contributing Factors			
	Urban, Multilane Arterials	Rural Highways	Tribal Areas	High-Frequency Transit Stations	Areas of Lower Income	Speeding	Impairment	Distraction	Failure to Yield
<b>Design / Engineering Strategies</b>									
Advance Stop Lines	✓	-	✓	✓	✓	-	-	-	✓
Floating Transit Island	-	-	-	✓	-	✓	✓	-	-
Hardened Centerline/Turn Hardening	✓	✓	✓	✓	✓	✓	✓	✓	✓
High-Visibility Crosswalks	✓	✓	✓	✓	✓	-	-	-	✓
Lane Reduction or Reconfiguration	✓	-	✓	-	✓	✓	✓	-	-
Leading Pedestrian Intervals	✓	-	✓	✓	✓	-	-	-	✓
No Right on Red	✓	-	-	✓	-	-	-	-	✓
Pedestrian Hybrid Beacons (PHB)	✓	-	✓	✓	✓	-	-	-	✓
Pedestrian Walkways	-	✓	✓	-	-	-	-	-	-
Protected Crossing Islands	✓	-	✓	-	-	✓	-	-	-
Protected Signal Phasing	✓	-	-	✓	-	-	-	-	✓
Raised Crossings	-	-	-	-	-	✓	-	-	-
<b>Planning, Policy, and Program Strategies</b>									
Consistent Transit Treatments	-	-	-	✓	-	-	-	-	✓
Improve Connections Across Arterials, Highways, and Interstates	✓	✓	✓	✓	✓	-	-	-	-
Improve Lighting	✓	✓	✓	✓	✓	-	-	-	✓
Low-Cost, Quick-Build Strategies	✓	✓	✓	-	✓	✓	✓	-	✓
Reduce Vehicle Speeds and Speed Limits on Arterials	✓	✓	✓	✓	✓	✓	✓	-	-



# Tribal Communities

## Tribal Areas:

- Muckleshoot Indian Tribe
- Port Gamble S'Klallam Tribe
- Puyallup Tribe of Indians
- Snoqualmie Indian Tribe
- Stillaguamish Tribe of Indians
- Suquamish Tribe
- Tulalip Tribes
- Nisqually Indian Tribe
- Sauk-Suiattle Indian Tribe

## Outreach and Engagement:

- Met with Port Gamble S'Klallam Tribe on August 26, 2025
- Draft version of the Supplemental Tribal Safety Analysis will be released in October 2025 for Tribal review

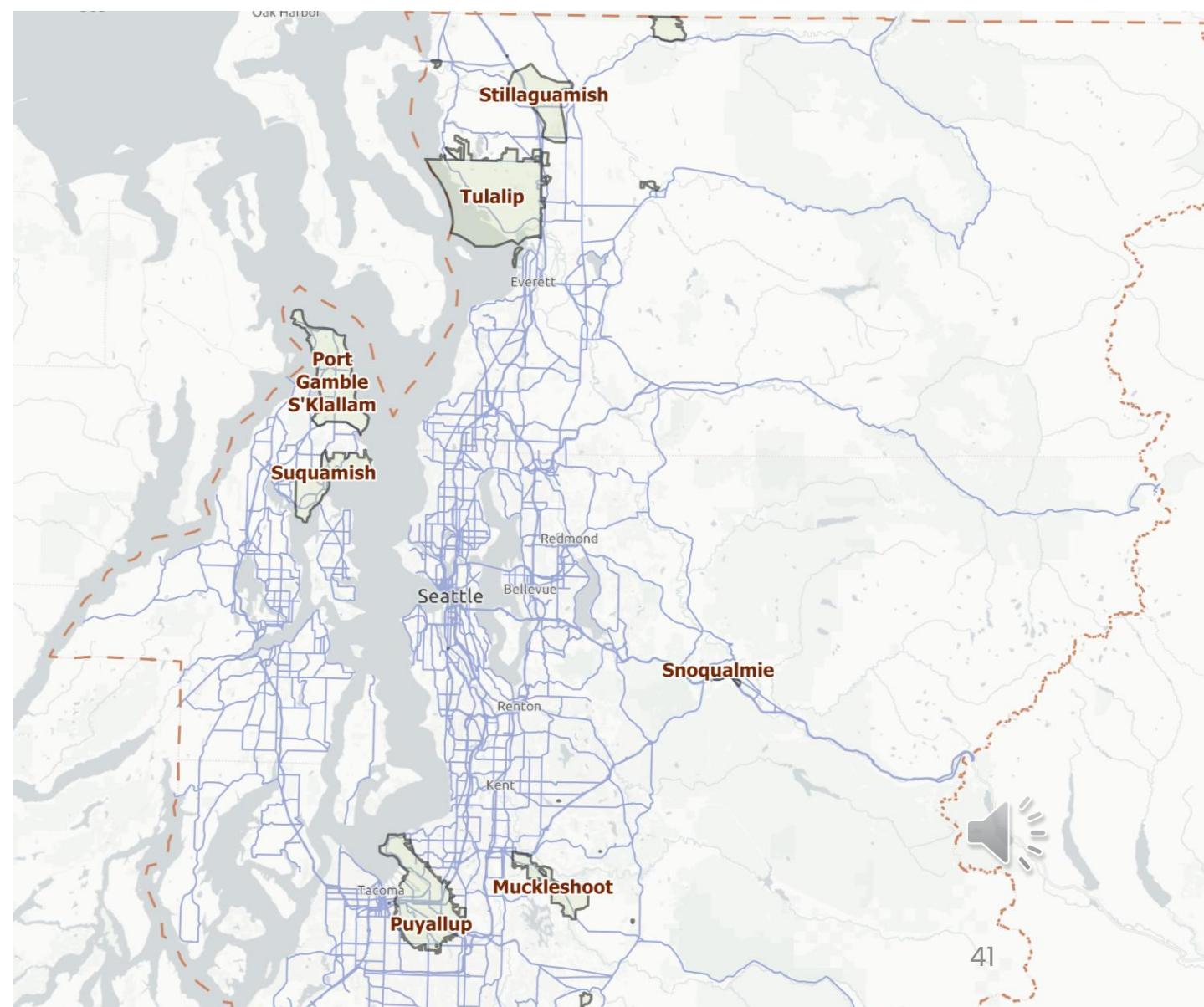


# Tribal Areas Crash Analysis

## Geographic Boundaries

Combined Boundary integrates-

- PSRC-defined Tribal area
- the Washington State Department of Ecology (DOE) Tribal boundary
- the Bureau of Indian Affairs (BIA) boundary
- U.S. Census Tribal Tracts from the American Community Survey
- top 20 percent of census blocks with the highest Native American population in the PSRC region that are adjacent to all Tribal areas.



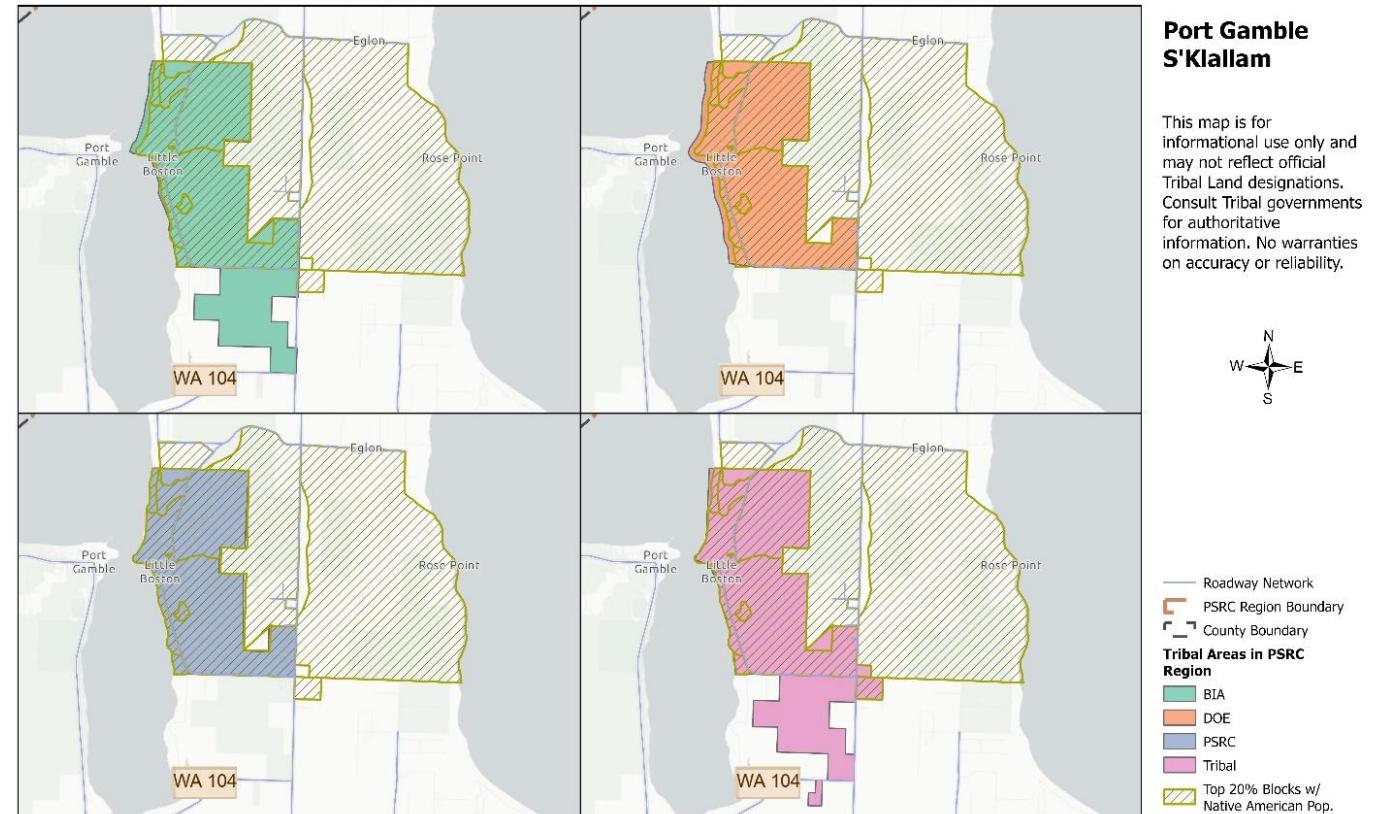
# Developing the Combined Boundary

## – Port Gamble S'Klallam Tribe

### Geographic Boundaries

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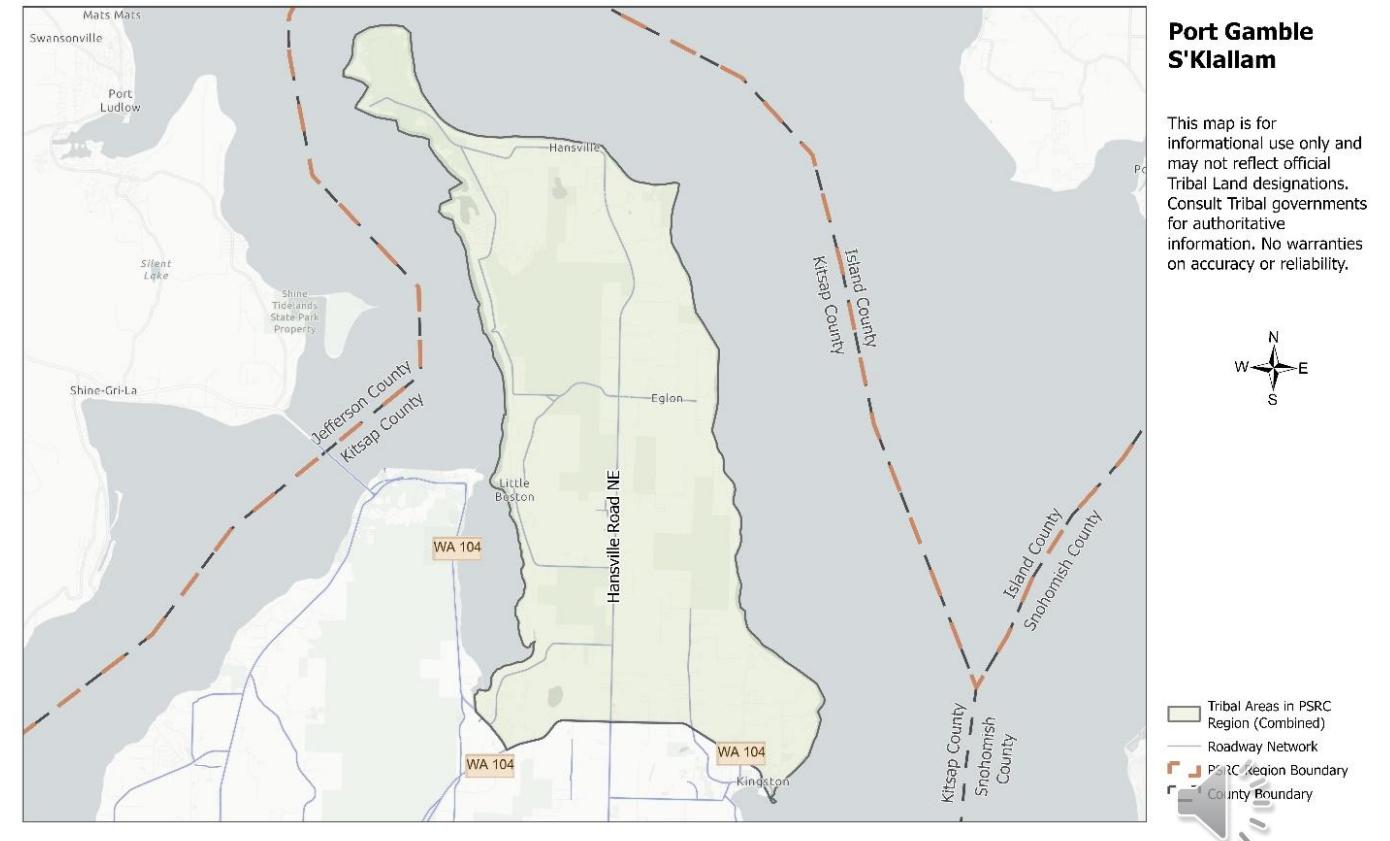


# Developing the Combined Boundary

## – Port Gamble S'Klallam Tribe

### Geographic Boundaries

Conversations with Port Gamble S'Klallam suggested a broader look at roadways Tribal members use on a regular basis



# Questions so far?

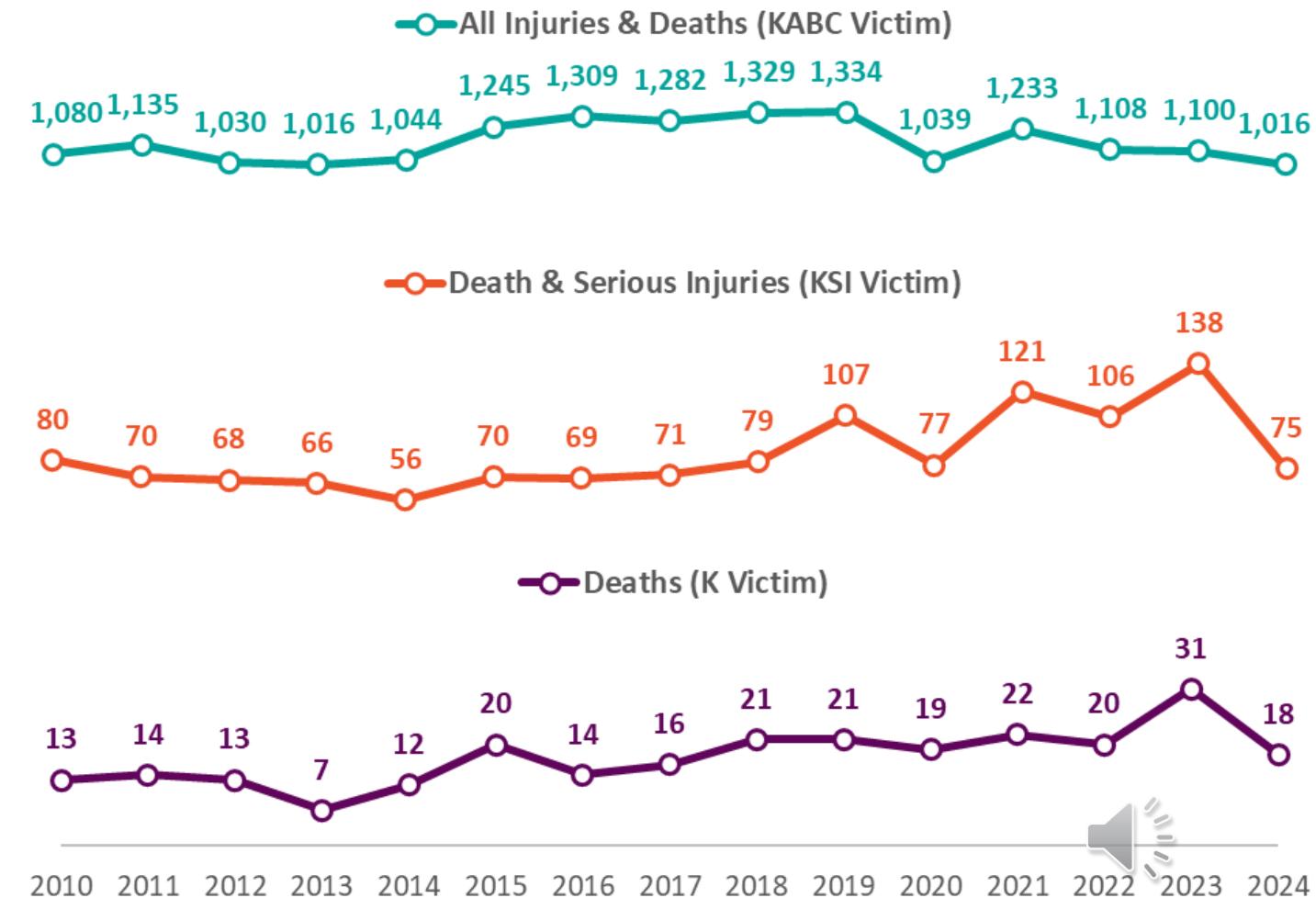
QA about Supplemental Tribal Safety Analysis



# Tribal Areas Crash Analysis

## Crash Trend (2010-2024)

- According to the State of Safety in the Region Report, crash severity is disproportionately higher in Tribal areas compared to the region overall.
- The fatality rate in tribal areas has nearly tripled since 2010.
- All injury and fatality outcomes declined in 2024.



# Tribal Areas Crash Analysis

## Top 5 Contributing Factors in PSRC Region Tribal Areas, 2017–2024

Contributing Factor	Total All Injuries	Share of All Injuries	Total Fatalities & Serious Injuries	Share of Fatalities & Serious Injuries	Total Fatalities	Share of Fatalities	Ratio of Serious Injuries & Fatalities to All Injuries	Ratio of Fatalities to All Injuries	Ratio of Fatalities to Serious Injuries & Fatalities
Distracted	2,451	26%	159	21%	27	16%	1:15	1:91	1:6
Speeding	1,882	20%	223	29%	52	31%	1:8	1:36	1:4
Follow Too Closely	1,649	17%	13	2%	2	1%	1:127	1:825	1:7
Failure to Yield to Vehicle	1,570	17%	99	13%	14	8%	1:16	1:112	1:7
Impaired	901	10%	165	21%	36	21%	1:5	1:25	1:5 



# Tribal Areas Crash Analysis

## Top Crash Types in PSRC Region Tribal Areas, 2017-2024

Crash Type	Total All Injuries	Share of All Injuries	Total Fatalities & Serious Injuries	Share of Fatalities & Serious Injuries	Total Fatalities	Share of Fatalities	Ratio of Serious Injuries & Fatalities to All Injuries	Ratio of Fatalities to All Injuries	Ratio of Fatalities to Serious Injuries & Fatalities
Rear End	3,345	35%	67	9%	11	7%	1:50	1:304	1:6
Angle	2,862	30%	202	26%	37	22%	1:14	1:77	1:5
Fixed Object	1,965	21%	286	37%	76	45%	1:7	1:26	1:4
Sideswipe	685	7%	53	7%	8	5%	1:13	1:86	1:7
Same Direction – Other	529	6%	42	5%	5	3%	1:13	1:106	1:8
Rollover	538	6%	91	12%	24	14%	1:6	1:22	1:4
Pedestrian/ Bike	448	5%	134	17%	36	21%	1:3	1:12	1:4
Head-on	259	3%	72	9%	11	7%	1:4	1:24	1:7



# Tribal Areas Crash Analysis

## Top Target Zero Areas in PSRC Region Tribal Areas, 2017–2024

Target Zero Area	Total All Injuries	Share of All Injuries	Total Fatalities & Serious Injuries	Share of Fatalities & Serious Injuries	Total Fatalities	Share of Fatalities	Ratio of Serious Injuries & Fatalities to All Injuries	Ratio of Fatalities to All Injuries	Ratio of Fatalities to Serious Injuries & Fatalities
Driver Age 16–25	2,984	32%	229	30%	34	20%	1:13	1:88	1:7
Distracted Involved Person	2,492	26%	176	23%	34	20%	1:14	1:73	1:5
Speeding Driver	1,882	20%	223	29%	52	31%	1:8	1:36	1:4
Driver Age 65+	1,638	17%	139	18%	28	17%	1:12	1:59	1:5
Hit and Run	938	10%	66	9%	15	9%	1:14	1:63	1:4
Single Vehicle on Surface Streets	967	10%	162	21%	41	24%	1:6	1:24	1:4
Impaired Involved Person	954	10%	185	24%	42	25%	1:5	1:23	1:4 



# Tribal Areas Crash Analysis

## High Injury Network(HIN) in PSRC Region Tribal Areas, 2016-2023

Tribe	Population	Area (Sq. Mile)	HIN Mile	HIN Corridors Count	HIN Mile Average	HIN miles per Square Mile	HIN Miles per 100k Pop.	Percent of Network Covered by HIN
Muckleshoot Tribal Areas	9,226	9.8	10.6	9	1.2	1.1	115.2	47%
Port Gamble S'Klallam Tribal Areas	8745	25.5	0	0	0	0	0	0%
Puyallup Tribal Areas	6,1716	33.5	34.8	32	1.1	1.0	56.4	15%
Snoqualmie Tribal Areas	253	1.2	0	0	0	0	0	0%
Stillaguamish Tribal Areas	6,341	21.2	3.5	5	0.7	0.2	54.9	8%
Suquamish Tribal Areas	8,687	14.5	0.3	1	0.3	0	3.5	1%
Tulalip Tribal Areas	14,218	57.1	8.4	12	0.7	0.2	59.1	12% 



# Let's take a break!

Next Part is How to use the HCL Tool



Puget Sound Regional Council



*We are leaders in the region to realize equity for all. Diversity, racial equity and inclusion are integrated into how we carry out all our work.*

[psrc.org/equity](http://psrc.org/equity)



# High-Crash Locations (HCL) Tool



## Welcome!

Welcome to the central Puget Sound region Tribal Areas' **High-Crash Location (HCL) Dashboard** – a tool to help communities better understand roadway safety within Tribal boundaries.

*Developed by the Puget Sound Regional Council (PSRC) and WSP.*

## Tribal Areas

Tribes are sovereign nations, and each Tribe has its own government with its own governing charter or constitution and set of general laws. The federal government currently recognizes nine Tribal nations in the PSRC region: **Muckleshoot, Nisqually, Port Gamble S'Klallam, Puyallup, Sauk-Suiattle, Snoqualmie, Stillaguamish, Suquamish, and Tulalip**. However, the **Nisqually** Indian Tribe spans both Thurston and Pierce counties, and the **Sauk-Suiattle** Indian Tribe spans Skagit and Snohomish counties. Based on the state-of-the-practice review conducted for each Tribe, no reportable crashes were identified within the PSRC portion of the Nisqually and Sauk-Suiattle Tribal area territories between 2017 and 2024. Additionally, conversations with regional planning organizations (Thurston Regional Planning Council and Skagit Council of Governments) indicated those Tribal areas of the **Nisqually** and **Sauk-Suiattle** have more roadways and essentially all serious injury crashes in those counties outside the central Puget Sound region. Accordingly, these two Tribes are excluded from the present analysis but will be addressed in the Skagit Council of Governments and Thurston Regional Planning Council Safety Action Plans.

## What you can do with this Dashboard

This dashboard helps you explore and understand crash hot-spots within Tribal boundaries.

- See where high-crash locations are on an interactive map.
- Learn about the most common crash factors and collision types.
- View design and engineering countermeasures suggested by the Regional Safety Action Plan (RSAP) Strategies Toolbox to address safety issues.

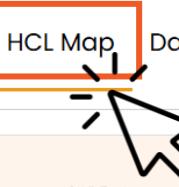


# High-Crash Locations (HCL) Tool

 Puget Sound Regional Council

High-Crash Locations Tribal Areas | 2017-2024

Welcome **HCL Map** Data Center



## Overview

The High-Crash Locations (HCL) Map highlights safety concerns within Tribal areas in the PSRC region. Using crash data from 2017–2024, the map identifies hot-spot locations with frequent or severe collisions. A clustering method groups crashes that occur within 45 meters (about 148 feet) of one another, treating them as a single crash hot-spot. Suggested design and engineering countermeasures from the RSAP Strategies Toolbox are also provided. A 100-meter (about 328 feet) buffer is applied to capture crashes within or near each Tribal area boundary.

**Note:** This map is for informational use only and may not reflect official Tribal area designations. Consult Tribal governments for authoritative information. No warranties on accuracy or reliability.

 [How to Use This Map >](#)

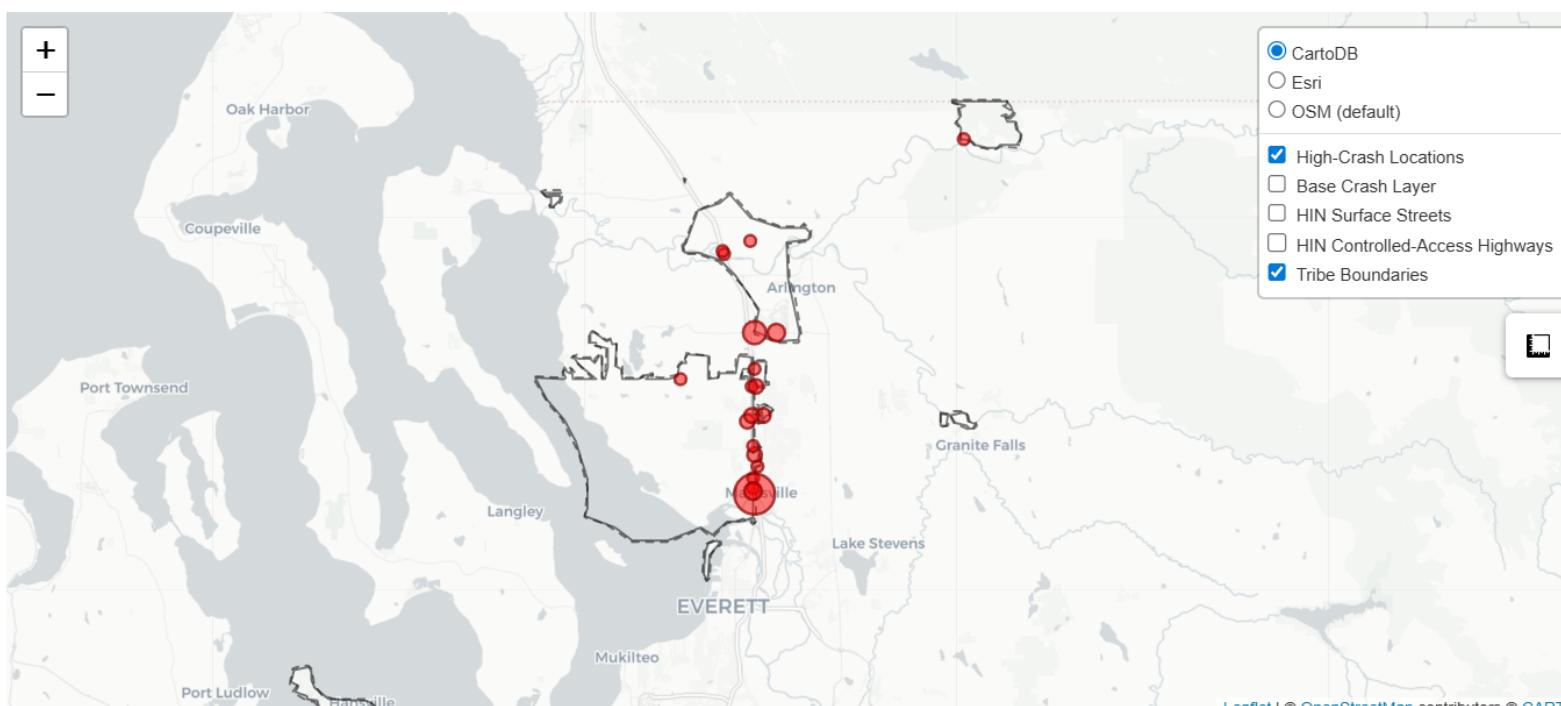
## HCL Filters

Contributing Factor Filter locations by the contributing factor reported

Collision Type Filter locations by the type of collision (e.g., rear-end, angle, sideswipe)

**Disclaimer**

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a federal or state court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.



Leaflet | © OpenStreetMap contributors © CARTO



# High-Crash Locations (HCL) Tool

 High-Crash Locations Tribal Areas | 2017-2024 Welcome HCL Map **Data Center**



**Overview**

The Data Center brings together key summaries of crashes and safety concerns within each Tribal area boundary. It helps you understand not only where crashes occur, but also what factors contribute to them and what countermeasures may help improve safety.

**What You'll Find**

- Crash Summaries by Tribal Areas:** Explore the number of crashes, collision types, and contributing factors.
- Countermeasures:** Review design and engineering countermeasures suggested by the [RSAP Strategies Toolbox \(pg. 3-15\)](#) for each Tribal area.
  - Note: Although not mentioned in this dashboard, RSAP Strategies Toolbox also details on the planning, policy, and program strategies. See [RSAP Strategies Toolbox \(pg. 16-34\)](#).
- High-Injury Network (HIN) Summary by Tribal Areas:** See a breakdown of HIN corridors and crash concentrations for each Tribal area (2016-2023).
- Interactive Tools:** Filter, explore, and download tables for your own analysis or reporting.

**Crash by Tribal Areas** **Countermeasure by Tribal Areas** **HIN by Tribal Areas**

Tribe Name	KABC Crash Cnt	KSI Crash Cnt	K Crash Cnt	Total KABC	Total KSI	Total K	Bicyclist KABC	Bicyclist KSI	Bicyclist K	Pedestrian K
All	All	All	All	All	All	All	All	All	All	All
Muckleshoot	650	68	16	935	91	20	13	1	1	1
Port Gamble	207	15	2	272	18	2	5	1	0	0
Puyallup	4017	395	95	5536	466	104	63	7	1	1
Snoqualmie	103	9	2	126	10	2	1	1	0	0
Stillaguamish	637	51	12	866	58	13	11	0	0	0
Suquamish	180	31	8	239	37	8	4	0	0	0
Tulalip	1078	84	19	1467	94	19	14	4	0	0

Showing 1 to 7 of 7 entries



# High-Crash Locations (HCL) Tool

## How to use the map tool?

### High-Crash Locations (HCL)

Hover over a point to see crash and victim counts. Click for more details, including a Google Maps link to the location and tables summarizing contributing factors, collision types, and the top 10 countermeasures.

### Base Crash

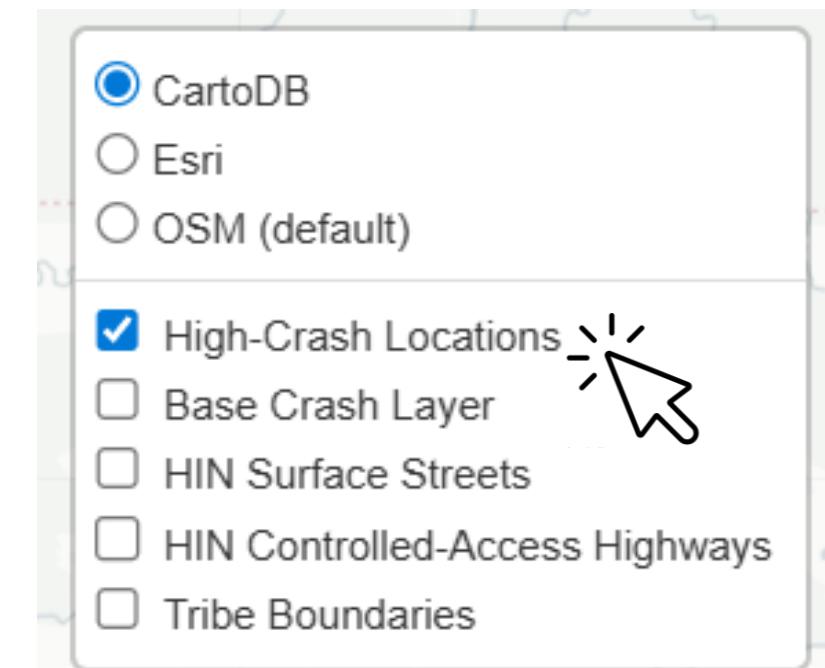
Displays all traffic collisions with injuries and fatalities (2017–2024). Hover for victim counts. Click for a direct Google Maps link to the crash location.

### High-Injury Network (HIN)

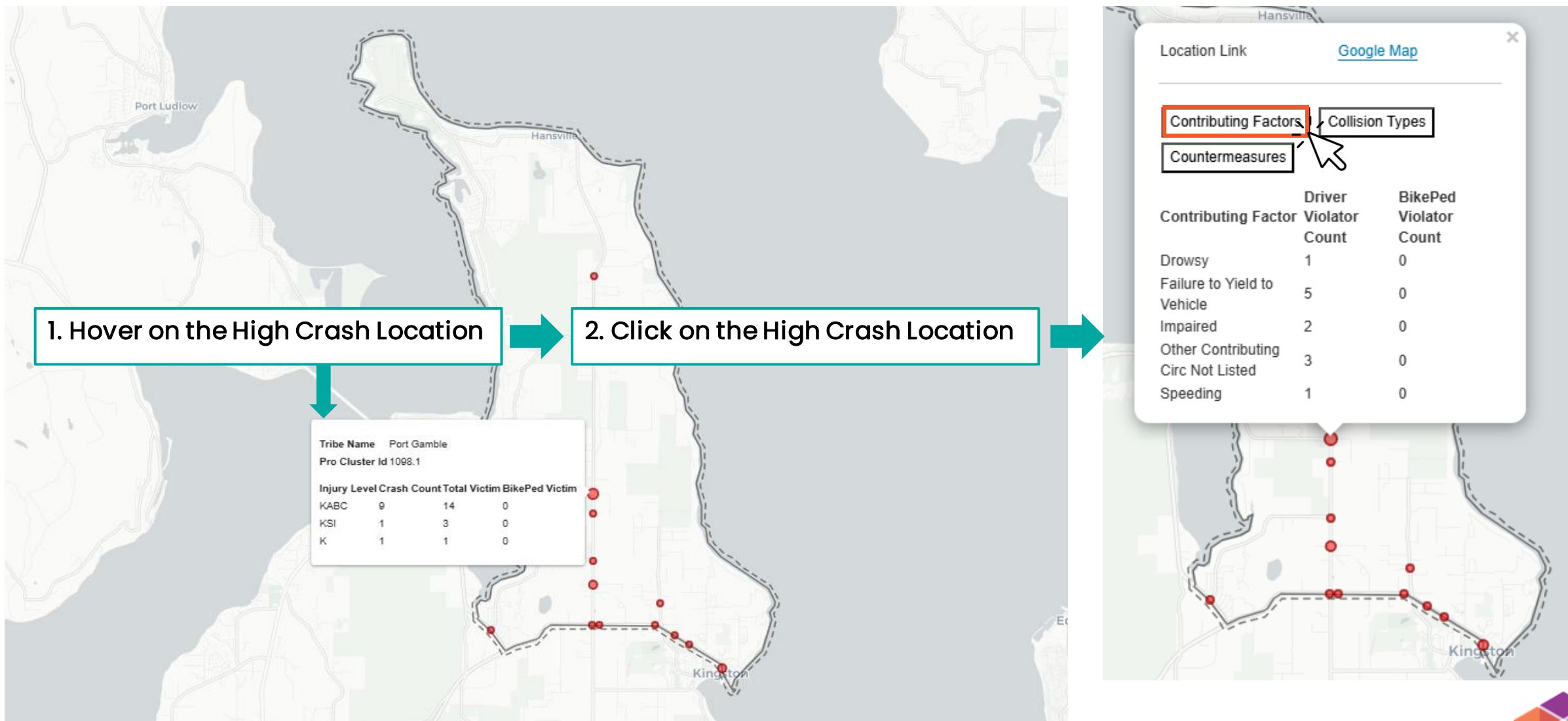
Shows the corridors with the highest concentration of serious injuries and fatalities in the central Puget Sound region (2016–2023).

### Tribal Boundaries

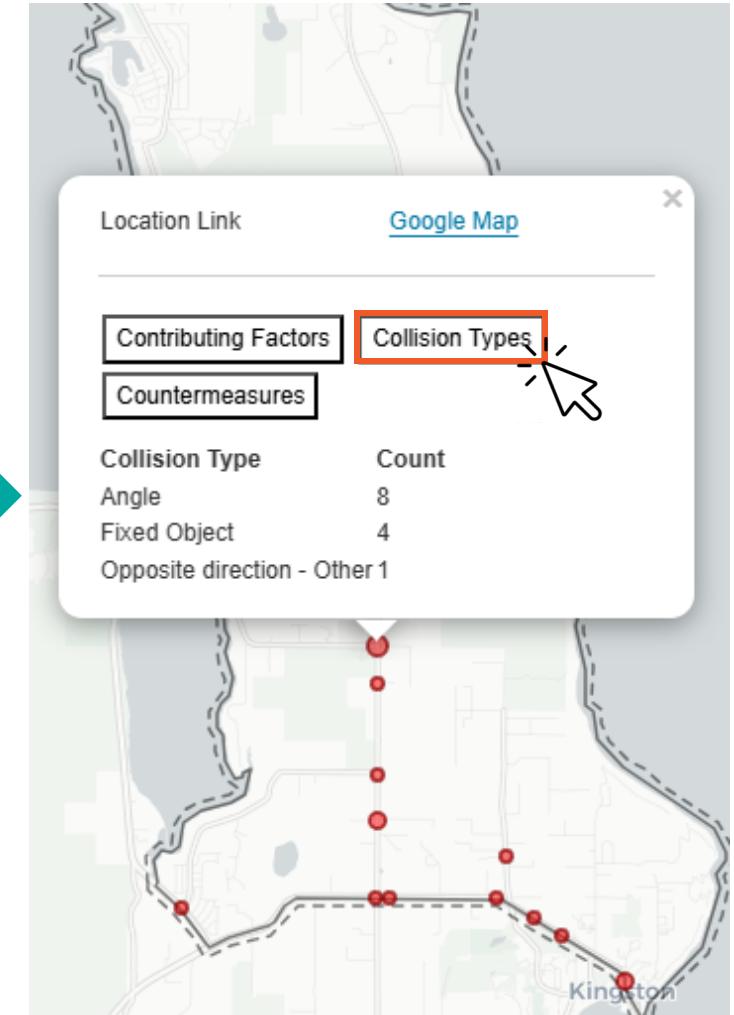
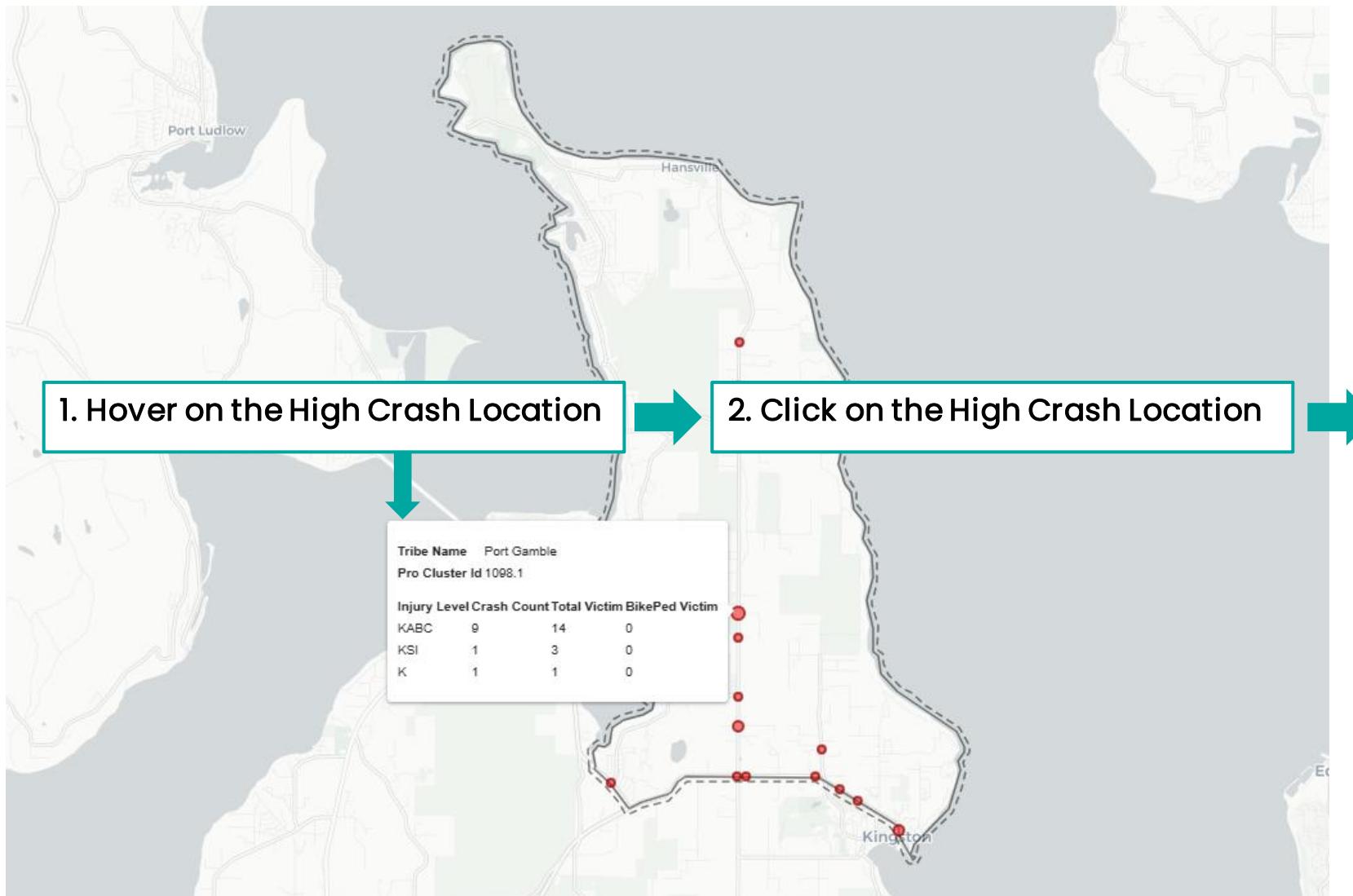
Hover over a boundary to see crash and victim count by Tribal areas.



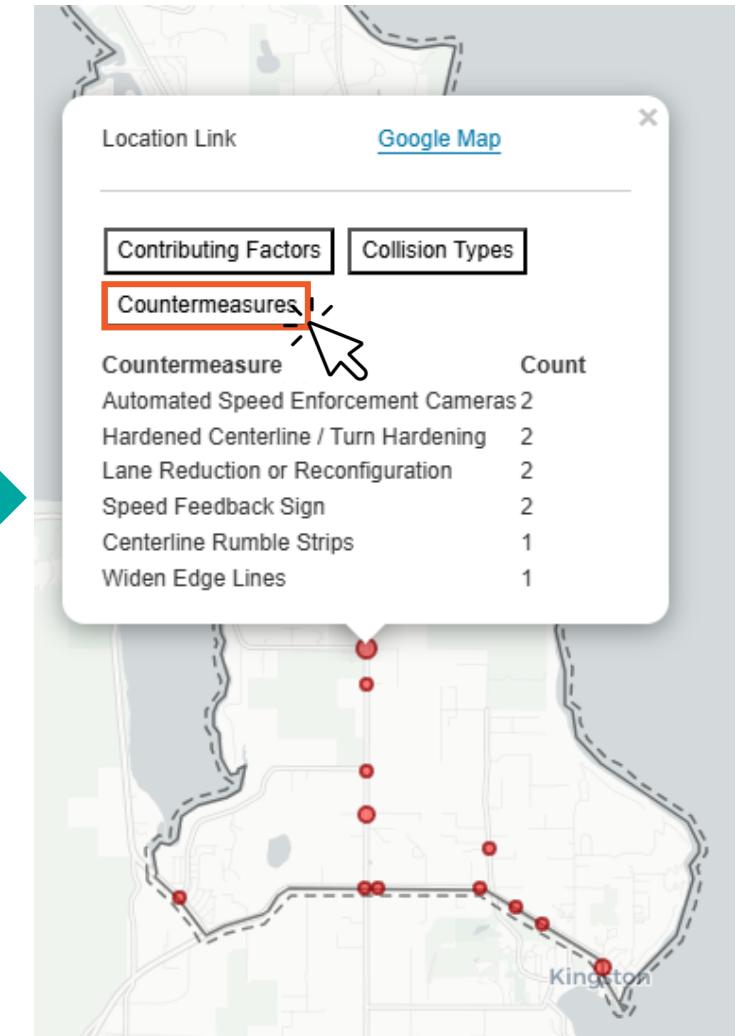
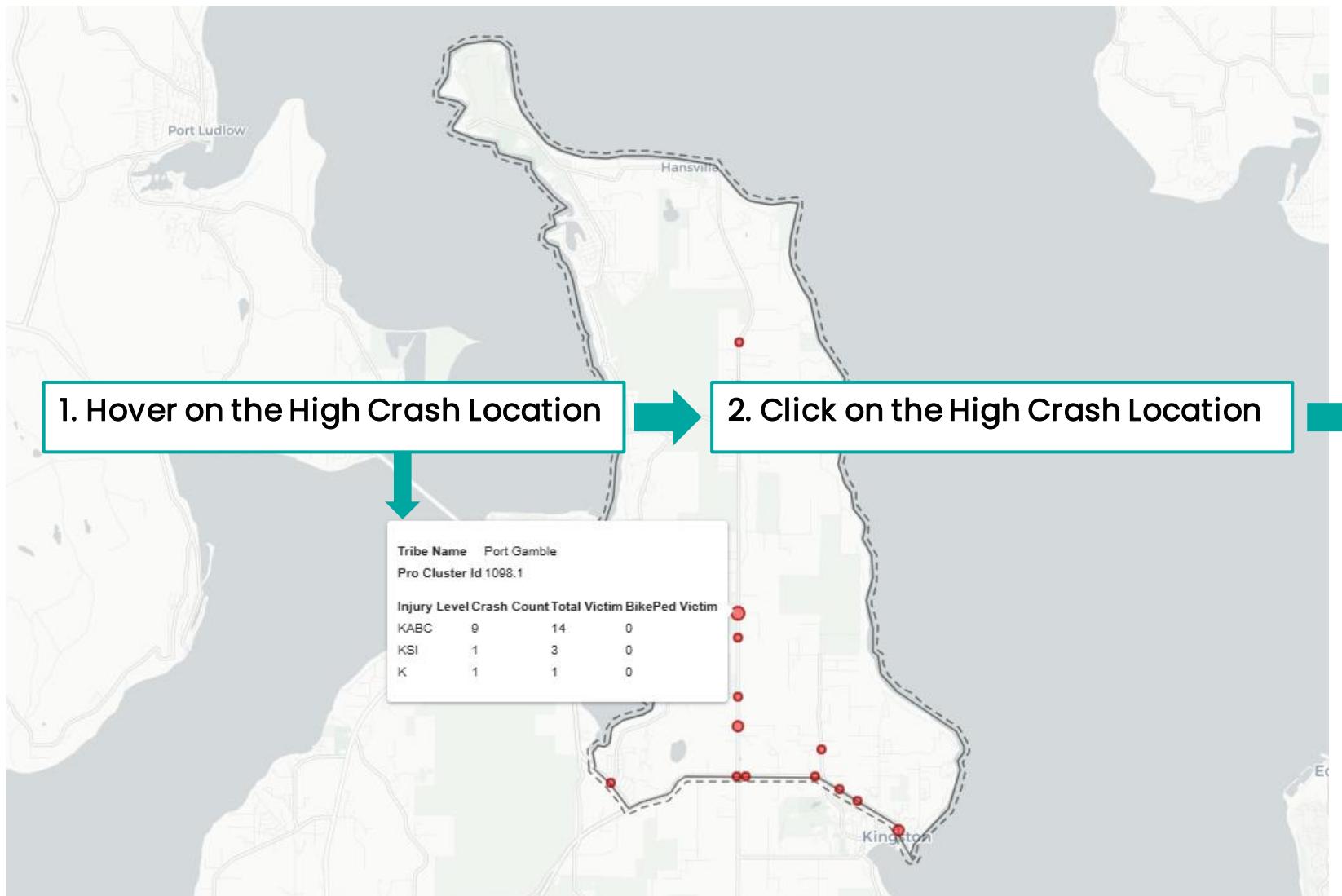
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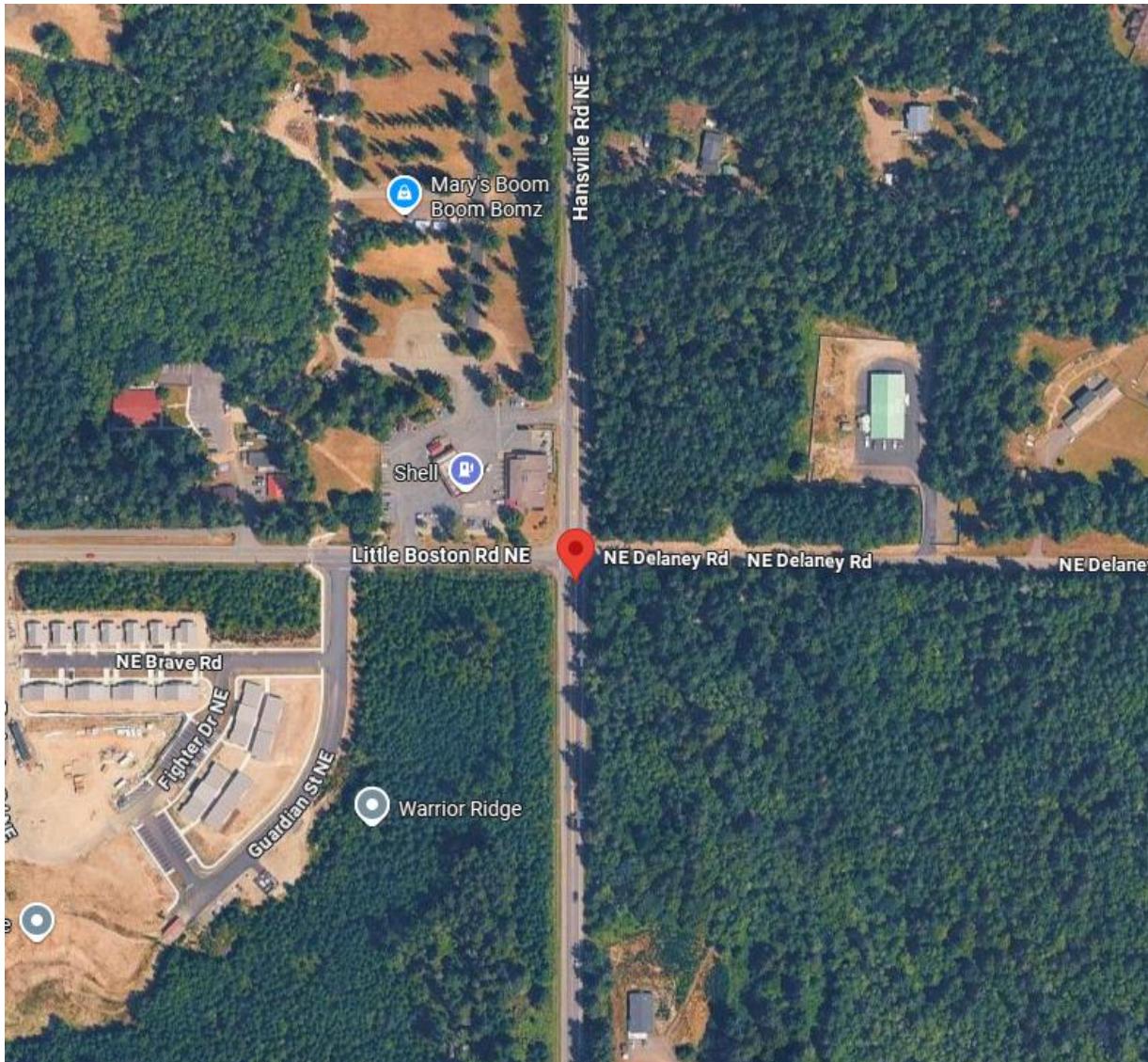
# High-Crash Locations (HCL) Tool



# High-Crash Locations (HCL) Tool



# High-Crash Locations(HCL) Tool



It will navigate to the location on google map



Location Link [Google Map](#)

Contributing Factors Collision Types

Countermeasures

Countermeasure	Count
Automated Speed Enforcement Cameras	2
Hardened Centerline / Turn Hardening	2
Lane Reduction or Reconfiguration	2
Speed Feedback Sign	2
Centerline Rumble Strips	1
Widen Edge Lines	1



# High-Crash Locations (HCL) Tool

**HCL Filters**

Contributing Factor Filter locations by the contributing factor reported

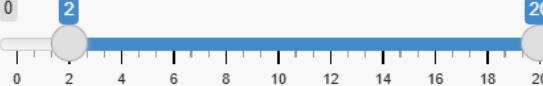


Collision Type Filter locations by the type of collision (e.g., rear-end, angle, sideswipe)

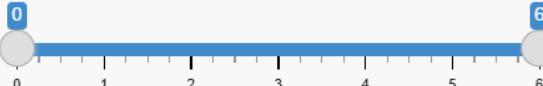
Countermeasure Filter locations by countermeasures, targeted to the collision types and contributing factors

Crash at Intersection Filter locations by whether they occur at intersections vs. midblock locations

Total Deaths & Serious Injuries Filter locations by the total number of people killed or seriously injured



Pedestrian/Bicyclist Deaths & Serious Injuries Filter locations by the number of pedestrian or bicyclist victims killed or seriously injured



**HCL Filters**

Contributing Factor Filter locations by the contributing factor reported

Failure to Yield to Non Motorist

(All)

Disobey Signal or Stop Sign

Distracted

Drowsy

Equipment

Failure to Use Due Care / Reckless

Failure to Use Xwalk

Failure to Yield to Vehicle

**Filter Locations by the Contributing Factor Reported!**



# High-Crash Locations (HCL) Tool

**HCL Filters**

Contributing Factor Filter locations by the contributing factor reported

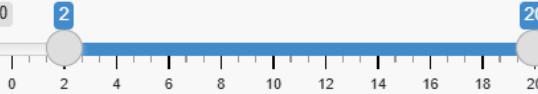
Collision Type Filter locations by the type of collision (e.g., rear-end, angle, sideswipe)



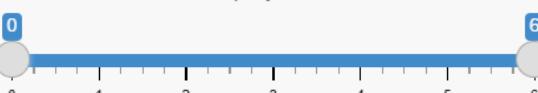
Countermeasure Filter locations by countermeasures, targeted to the collision types and contributing factors

Crash at Intersection Filter locations by whether they occur at intersections vs. midblock locations

Total Deaths & Serious Injuries Filter locations by the total number of people killed or seriously injured



Pedestrian/Bicyclist Deaths & Serious Injuries Filter locations by the number of pedestrian or bicyclist victims killed or seriously injured



**Collision Type** Filter locations by the type of collision (e.g., rear-end, angle, sideswipe)

Fixed Object |

- (All)
- Angle
- Head-on
- Opposite direction - Other
- Other
- Parked car
- Pedestrian/Bike
- Rear End

**Filter Locations by the Collision Type Reported!**



# High-Crash Locations (HCL) Tool

**HCL Filters**

Contributing Factor Filter locations by the contributing factor reported

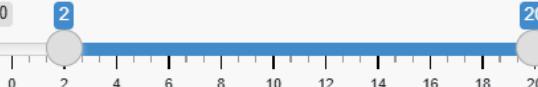
Collision Type Filter locations by the type of collision (e.g., rear-end, angle, sideswipe)

Countermeasure Filter locations by countermeasures, targeted to the collision types and contributing factors

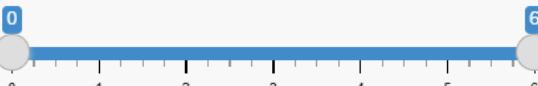
 

Crash at Intersection Filter locations by whether they occur at intersections vs. midblock locations

Total Deaths & Serious Injuries Filter locations by the total number of people killed or seriously injured



Pedestrian/Bicyclist Deaths & Serious Injuries Filter locations by the number of pedestrian or bicyclist victims killed or seriously injured



Countermeasure Filter locations by countermeasures, targeted to the collision types and contributing factors

- High-Visibility Crosswalks
- (All)
- Advance Stop Lines
- Automated Red Light Running
- Enforcement Cameras
- Automated Speed Enforcement Cameras
- Bike Boxes / Two-Stage Turn Box
- Bike Lane: Conventional
- Centerline Buffer Area

**Filter Locations by Countermeasures, targeted to the collision types and contributing factors!**



# High-Crash Locations (HCL) Tool

**HCL Filters**

Contributing Factor Filter locations by the contributing factor reported

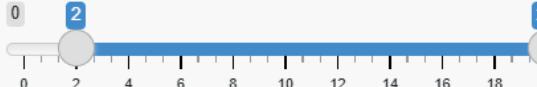
Collision Type Filter locations by the type of collision (e.g., rear-end, angle, sideswipe)

Countermeasure Filter locations by countermeasures, targeted to the collision types and contributing factors

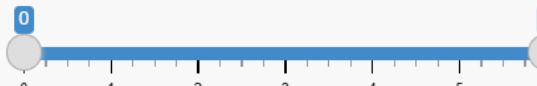
**Crash at Intersection** Filter locations by whether they occur at intersections vs. midblock locations



Total Deaths & Serious Injuries Filter locations by the total number of people killed or seriously injured



Pedestrian/Bicyclist Deaths & Serious Injuries Filter locations by the number of pedestrian or bicyclist victims killed or seriously injured



**Crash at Intersection** Filter locations by whether they occur at intersections vs. midblock locations

Yes

(All)

No

**Filter Locations by whether they occur at intersections vs. midblock locations!**



# High-Crash Locations (HCL) Tool

**HCL Filters**

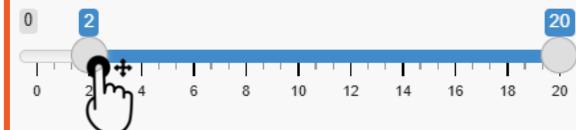
Contributing Factor Filter locations by the contributing factor reported

Collision Type Filter locations by the type of collision (e.g., rear-end, angle, sideswipe)

Countermeasure Filter locations by countermeasures, targeted to the collision types and contributing factors

Crash at Intersection Filter locations by whether they occur at intersections vs. midblock locations

**Total Deaths & Serious Injuries** Filter locations by the total number of people killed or seriously injured



0 2 4 6 8 10 12 14 16 18 20

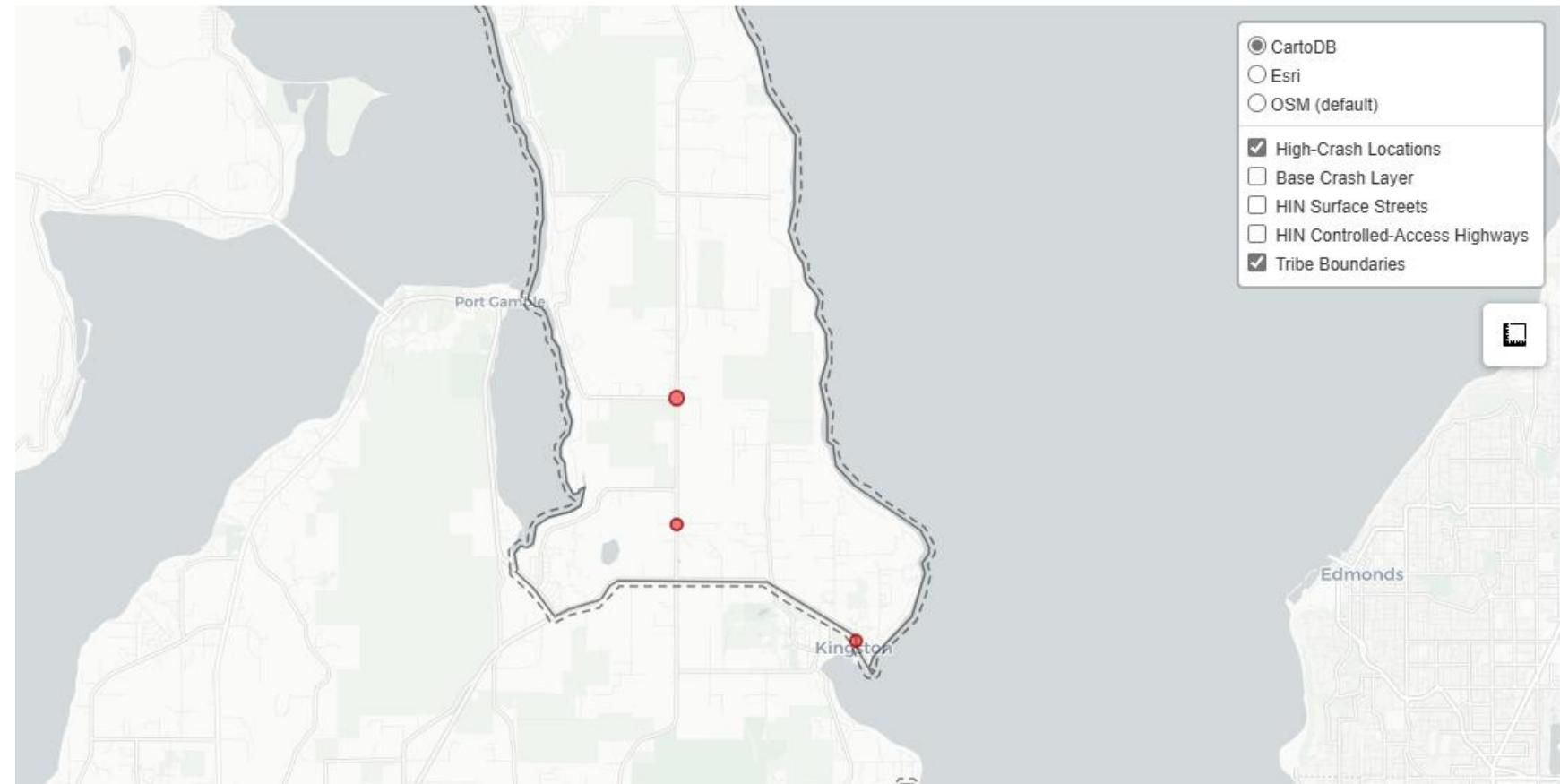
Pedestrian/Bicyclist Deaths & Serious Injuries

Filter locations by the number of pedestrian or bicyclist victims killed or seriously injured



0 1 2 3 4 5 6

Filter Locations by the total number of people killed or seriously injured



76



# High-Crash Locations (HCL) Tool

## HCL Filters

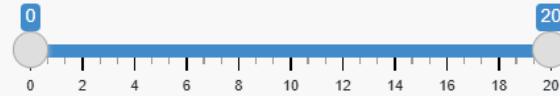
Contributing Factor Filter locations by the contributing factor reported

Collision Type Filter locations by the type of collision (e.g., rear-end, angle, sideswipe)

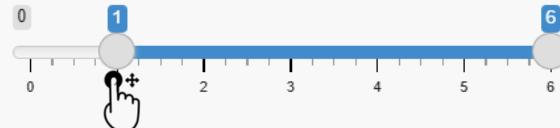
Countermeasure Filter locations by countermeasures, targeted to the collision types and contributing factors

Crash at Intersection Filter locations by whether they occur at intersections vs. midblock locations

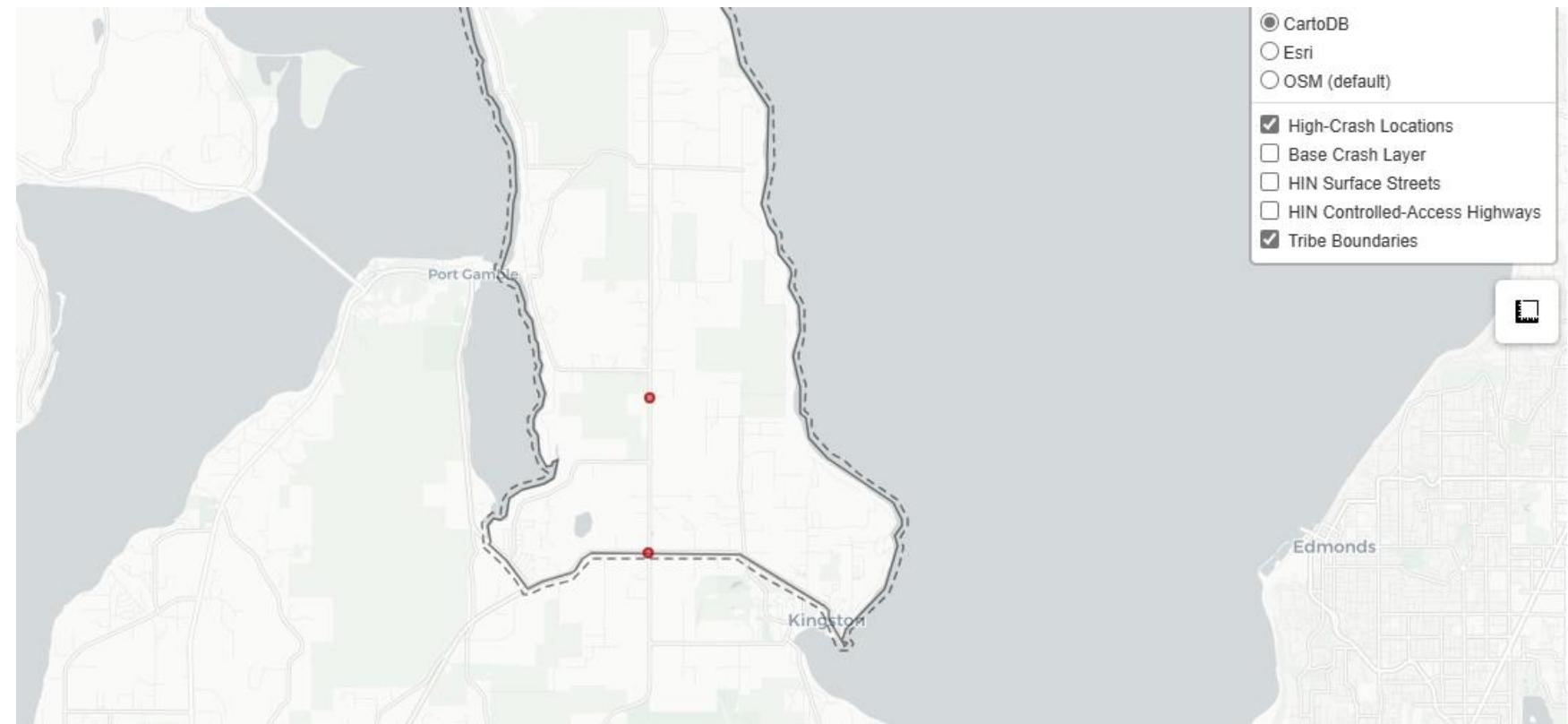
Total Deaths & Serious Injuries Filter locations by the total number of people killed or seriously injured



Pedestrian/Bicyclist Deaths & Serious Injuries Filter locations by the number of pedestrian or bicyclist victims killed or seriously injured



Filter locations by the number of pedestrian or bicyclist victims killed or seriously injured



# High-Crash Locations (HCL) Tool

## How to use the map tool?

### High-Crash Locations (HCL)

Hover over a point to see crash and victim counts. Click for more details, including a Google Maps link to the location and tables summarizing contributing factors, collision types, and the top 10 countermeasures.

### Base Crash

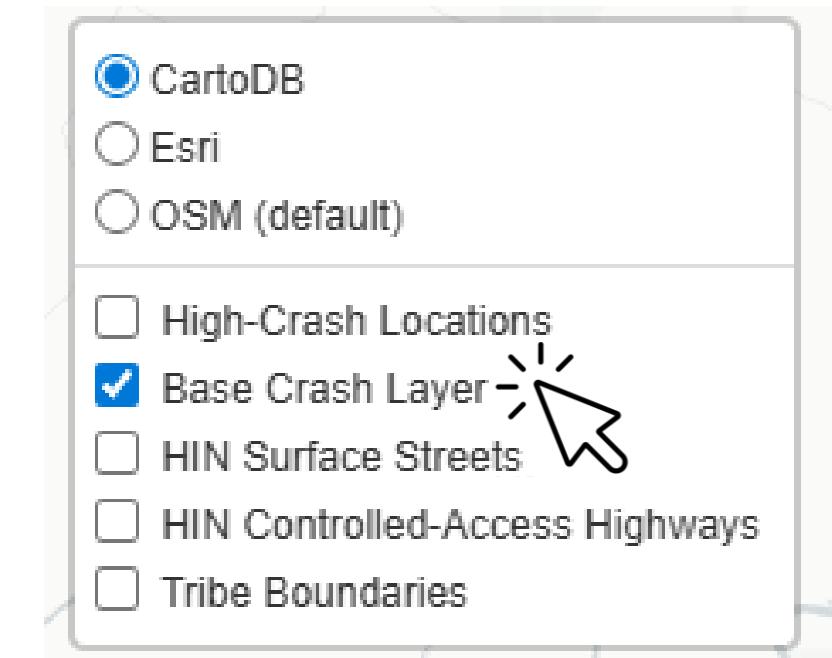
Displays all traffic collisions with injuries and fatalities (2017–2024). Hover for victim counts. Click for a direct Google Maps link to the crash location.

### High-Injury Network (HIN)

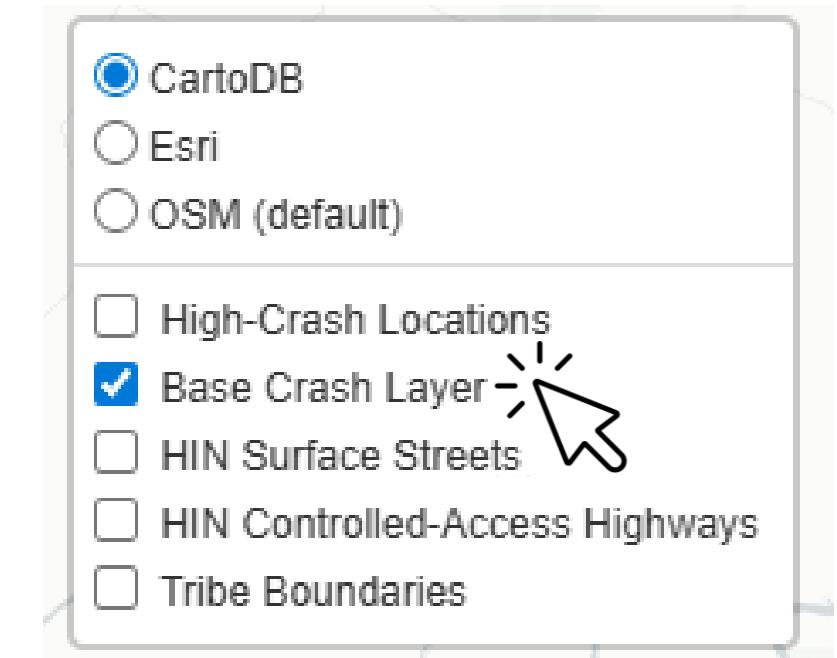
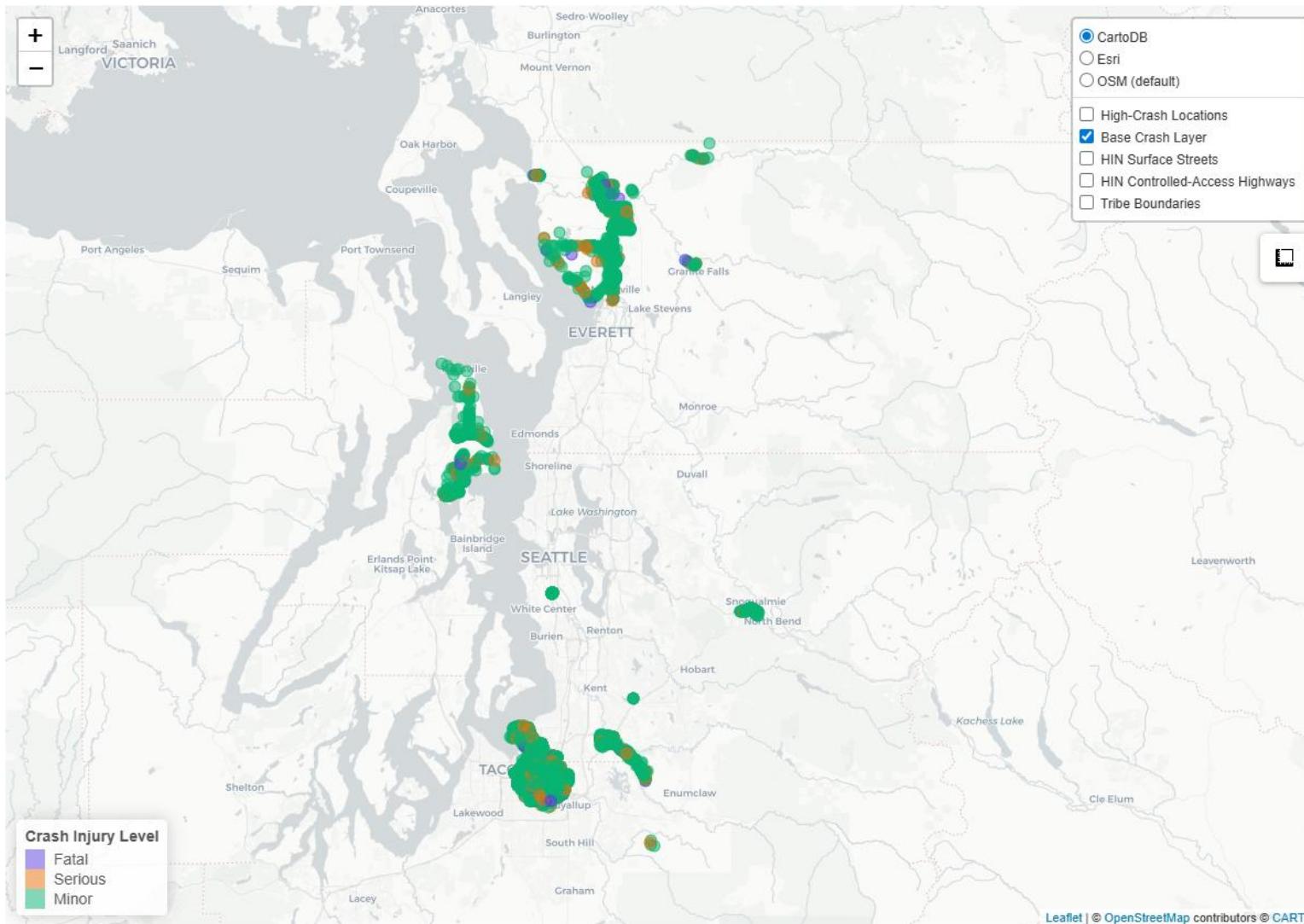
Shows the corridors with the highest concentration of serious injuries and fatalities in the central Puget Sound region (2016–2023).

### Tribal Boundaries

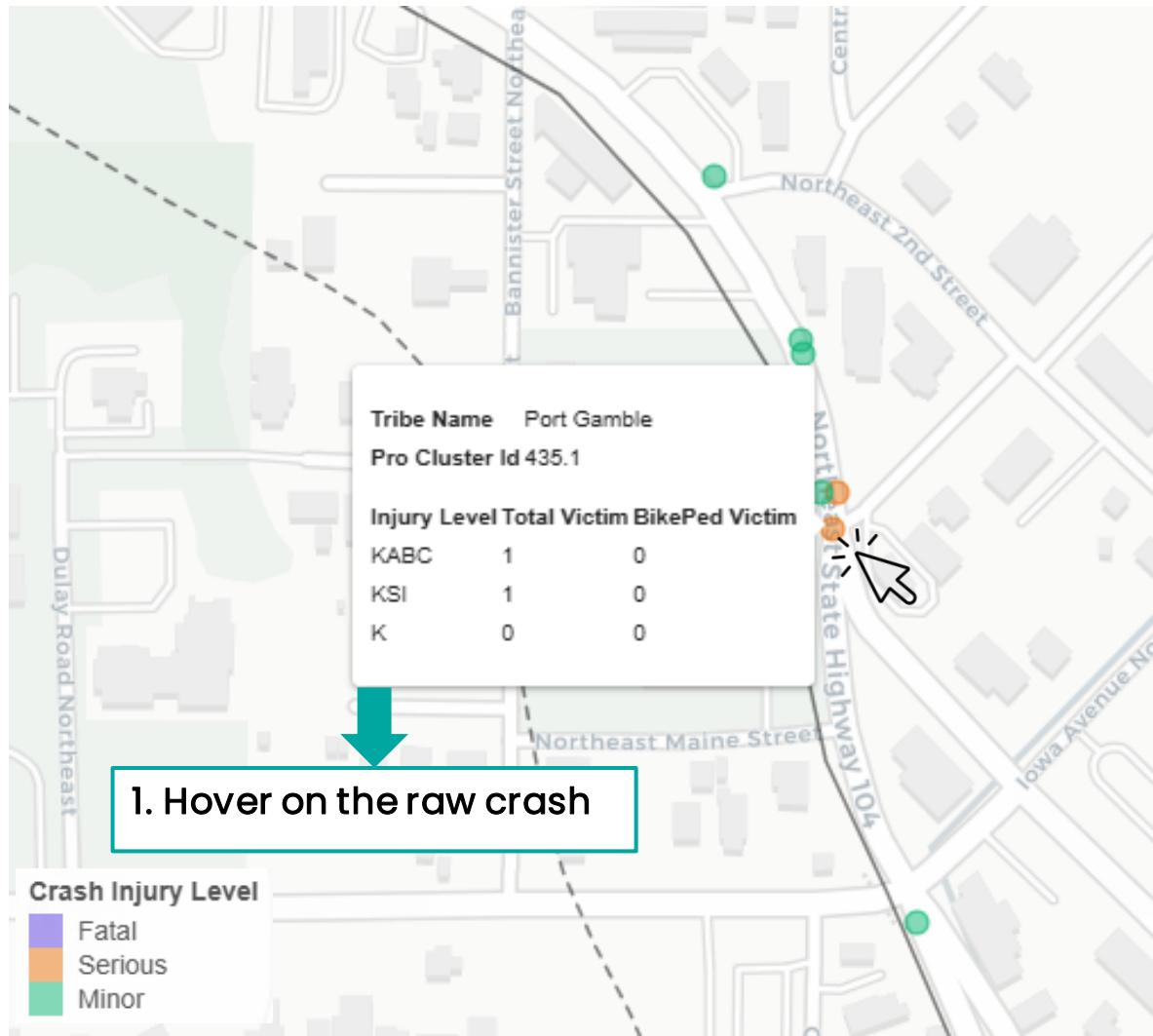
Hover over a boundary to see crash and victim count by Tribal areas.



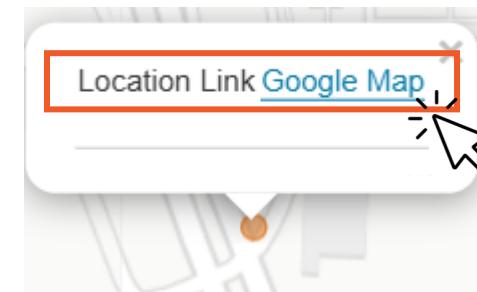
# High-Crash Locations (HCL) Tool



# High-Crash Locations (HCL) Tool



2. Click on the raw crash



3. Click on the Google Map link to view the location on Google Map



# High-Crash Locations (HCL) Tool

## Base Crash Filters

Most Serious Injury Level Filter raw crashes by the most severe level of injury

Crashes Involving Pedestrian or Bicyclist Victims Filter raw crashes by whether it includes pedestrian or bicyclist victims



Filter raw crash layer by the most severe level of injury

## Base Crash Filters

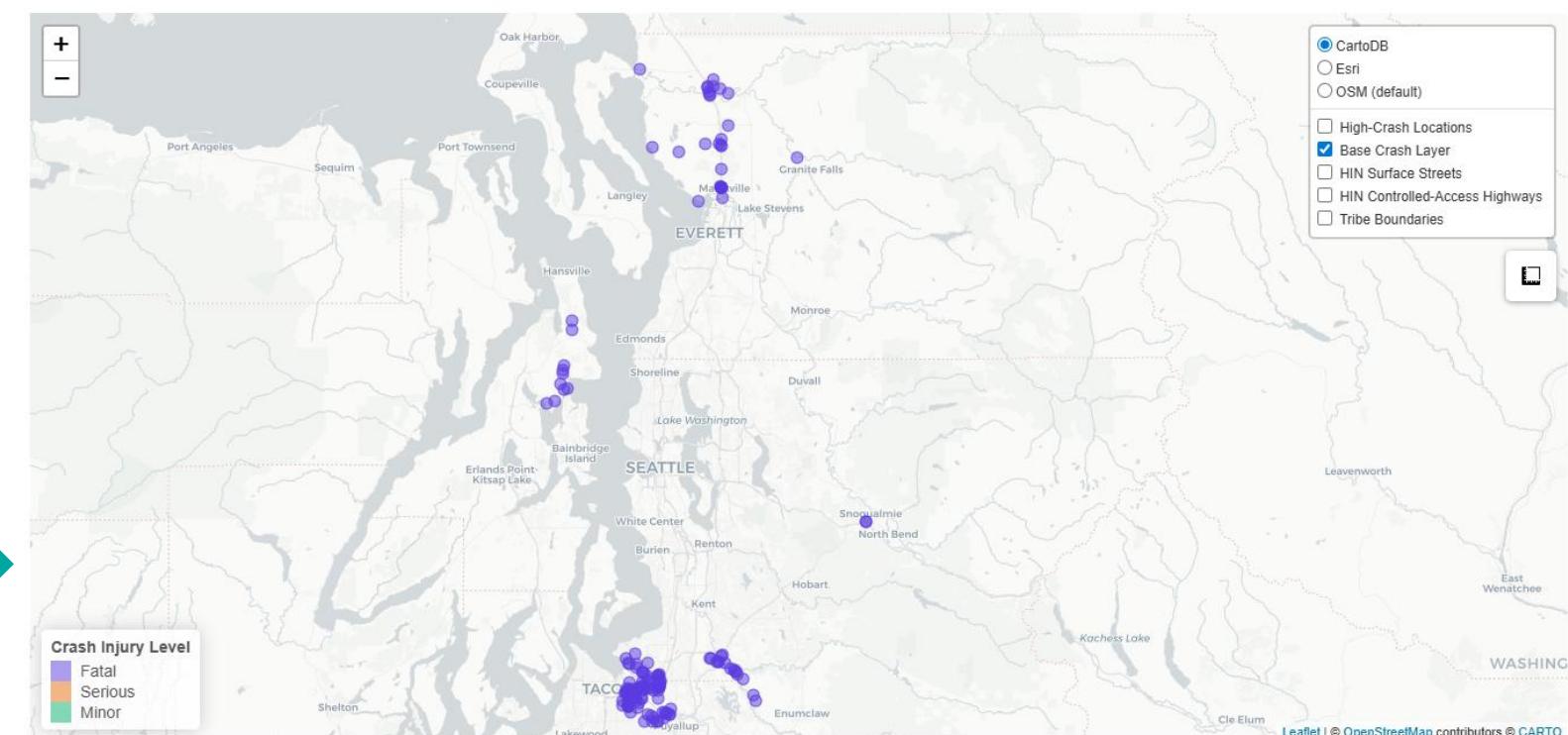
Most Serious Injury Level Filter raw crashes by the most severe level of injury

Fatal

All

Serious

Minor



# High-Crash Locations (HCL) Tool

## Base Crash Filters

Most Serious Injury Level Filter raw crashes by the most severe level of injury

Crashes Involving Pedestrian or Bicyclist Victims Filter raw crashes by whether it includes pedestrian or bicyclist victims

Filter raw crash layer by whether it includes pedestrian or bicyclist victims

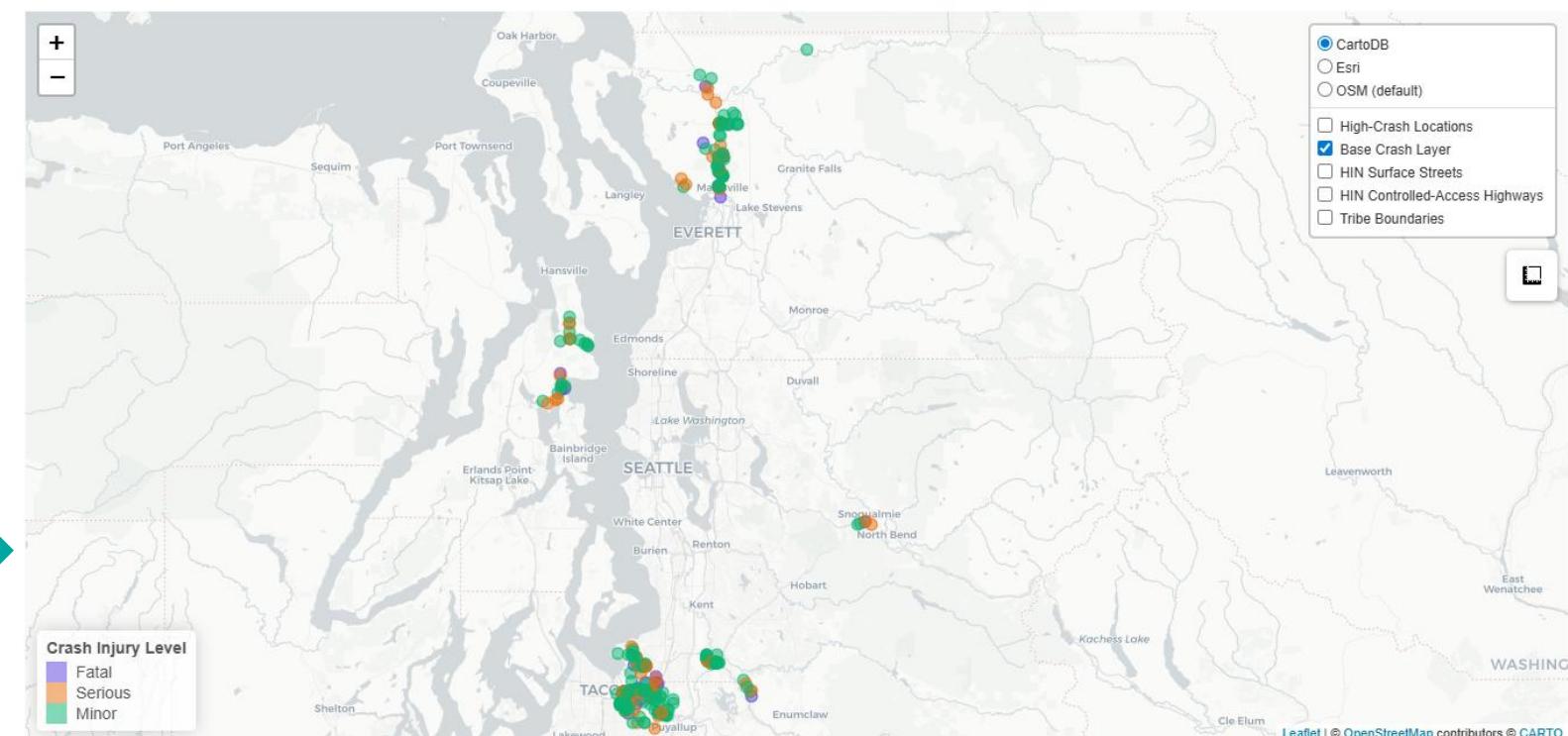


Crashes Involving Pedestrian or Bicyclist Victims Filter raw crashes by whether it includes pedestrian or bicyclist victims

Yes

(All)

No



# High-Crash Locations (HCL) Tool

## How to use the map tool?

### High-Crash Locations (HCL)

Hover over a point to see crash and victim counts. Click for more details, including a Google Maps link to the location and tables summarizing contributing factors, collision types, and the top 10 countermeasures.

### Base Crash

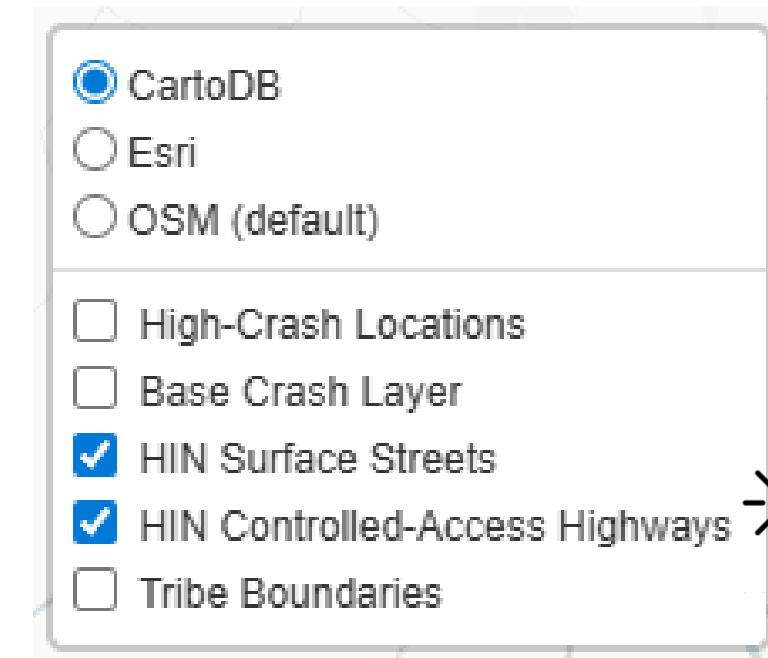
Displays all traffic collisions with injuries and fatalities (2017–2024). Hover for victim counts. Click for a direct Google Maps link to the crash location.

### High-Injury Network (HIN)

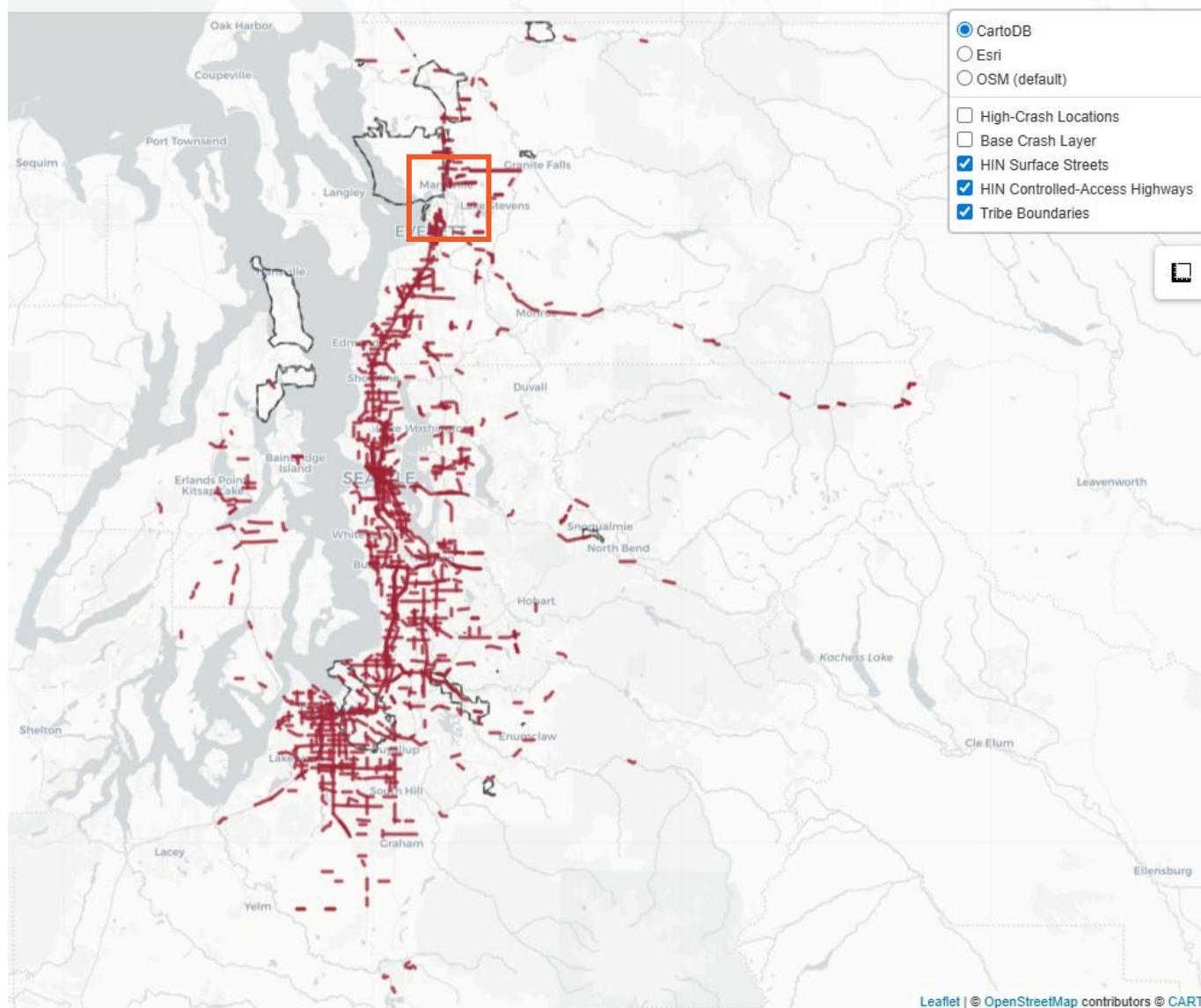
Shows the corridors with the highest concentration of serious injuries and fatalities in the central Puget Sound region (2016–2023).

### Tribal Boundaries

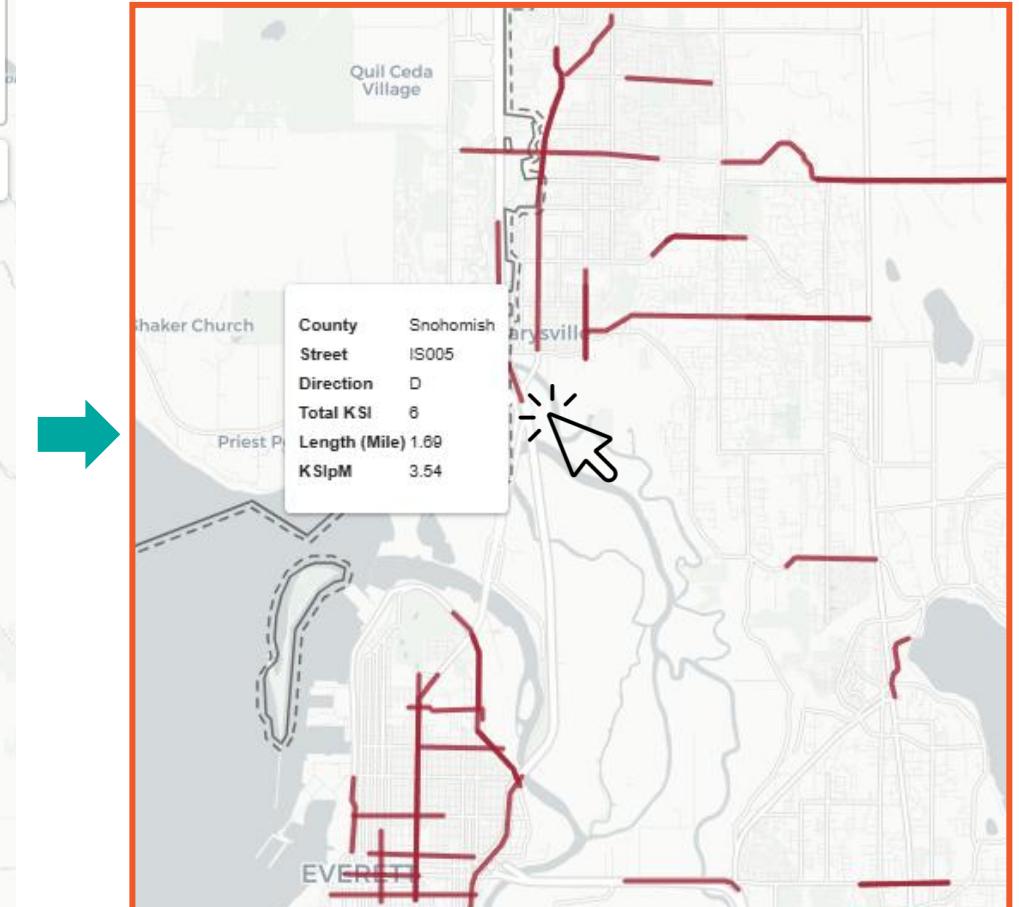
Hover over a boundary to see crash and victim count by Tribal areas.



# High-Crash Locations (HCL) Tool



Hover on any of the HIN Segments for detailed statistics



# High-Crash Locations (HCL) Tool

## How to use the map tool?

### High-Crash Locations (HCL)

Hover over a point to see crash and victim counts. Click for more details, including a Google Maps link to the location and tables summarizing contributing factors, collision types, and the top 10 countermeasures.

### Base Crash

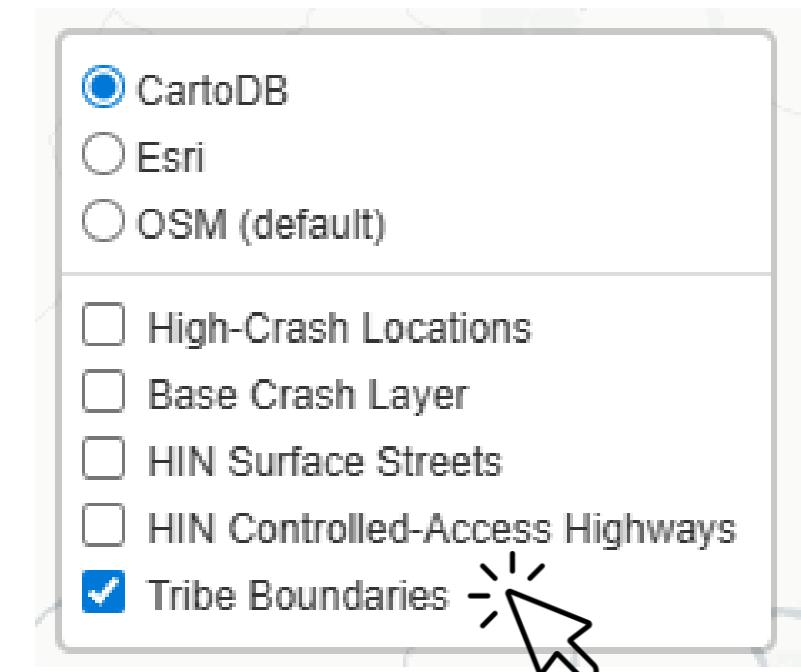
Displays all traffic collisions with injuries and fatalities (2017–2024). Hover for victim counts. Click for a direct Google Maps link to the crash location.

### High-Injury Network (HIN)

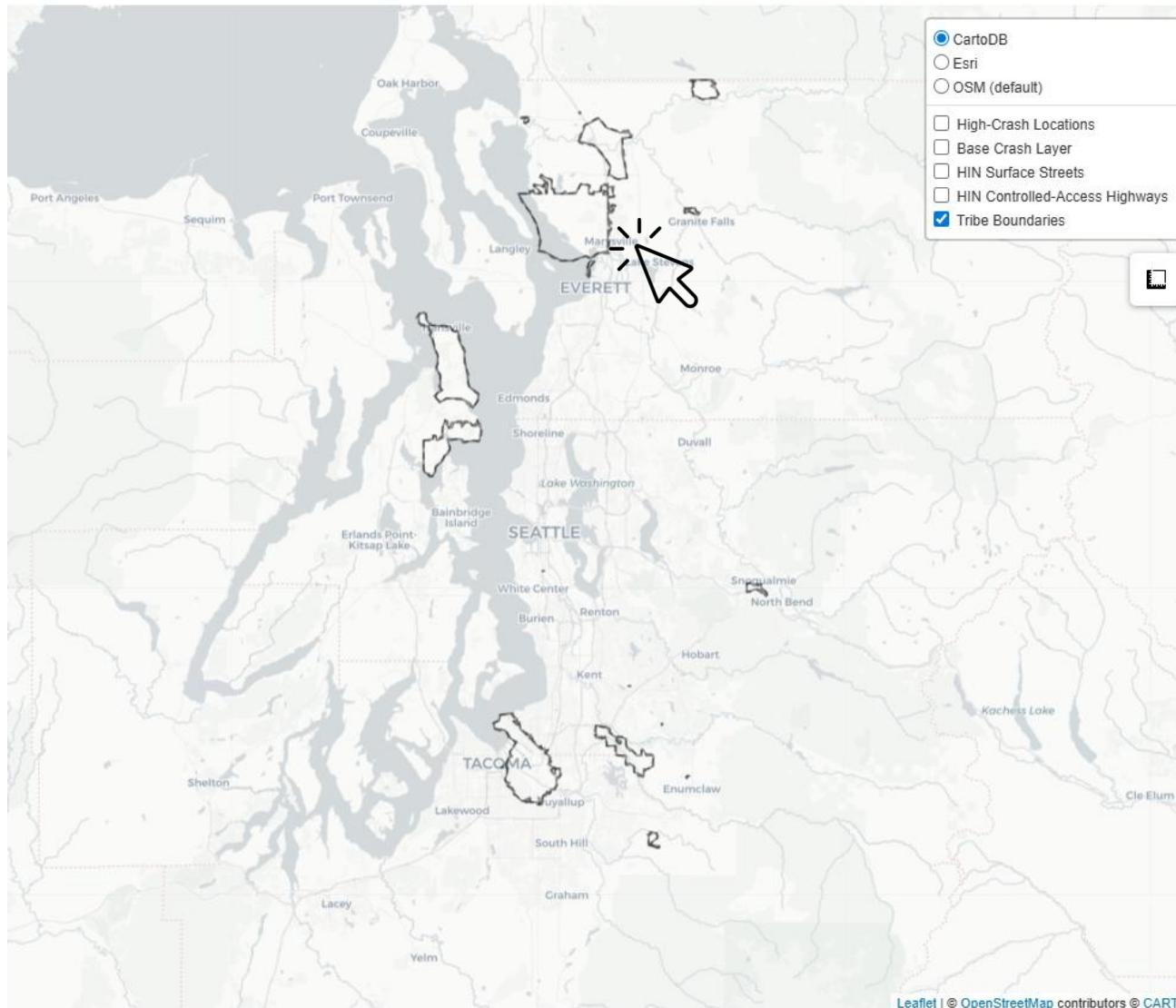
Shows the corridors with the highest concentration of serious injuries and fatalities in the central Puget Sound region (2016–2023).

### Tribal Boundaries

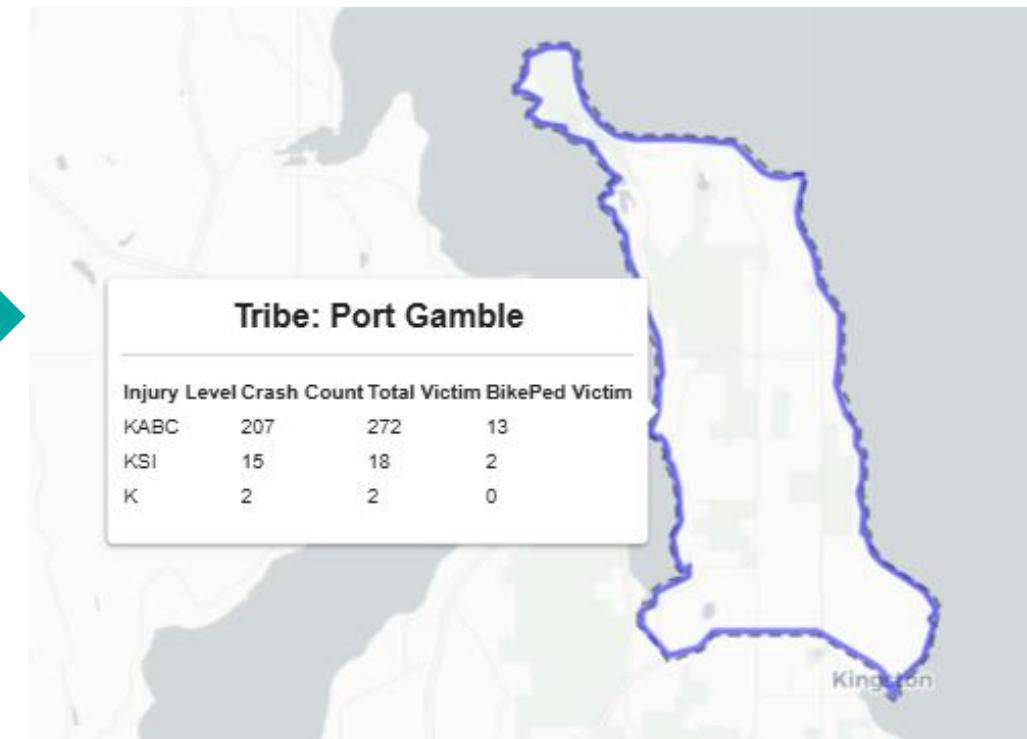
Hover over a boundary to see crash and victim count by Tribal areas.



# High-Crash Locations (HCL) Tool



Hover on any of the boundary for the Tribal Area's level crash statistics



# High-Crash Locations (HCL) Tool

 High-Crash Locations Tribal Areas | 2017-2024 Welcome HCL Map **Data Center**



**Overview**

The Data Center brings together key summaries of crashes and safety concerns within each Tribal area boundary. It helps you understand not only where crashes occur, but also what factors contribute to them and what countermeasures may help improve safety.

**What You'll Find**

- Crash Summaries by Tribal Areas:** Explore the number of crashes, collision types, and contributing factors.
- Countermeasures:** Review design and engineering countermeasures suggested by the [RSAP Strategies Toolbox \(pg. 3-15\)](#) for each Tribal area.
  - Note: Although not mentioned in this dashboard, RSAP Strategies Toolbox also details on the planning, policy, and program strategies. See [RSAP Strategies Toolbox \(pg. 16-34\)](#).
- High-Injury Network (HIN) Summary by Tribal Areas:** See a breakdown of HIN corridors and crash concentrations for each Tribal area (2016-2023).
- Interactive Tools:** Filter, explore, and download tables for your own analysis or reporting.

**Crash by Tribal Areas** **Countermeasure by Tribal Areas** **HIN by Tribal Areas**

Tribe Name	KABC Crash Cnt	KSI Crash Cnt	K Crash Cnt	Total KABC	Total KSI	Total K	Bicyclist KABC	Bicyclist KSI	Bicyclist K	Pedestrian K
All	All	All	All	All	All	All	All	All	All	All
Muckleshoot	650	68	16	935	91	20	13	1	1	
Port Gamble	207	15	2	272	18	2	5	1	0	
Puyallup	4017	395	95	5536	466	104	63	7	1	
Snoqualmie	103	9	2	126	10	2	1	1	0	
Stillaguamish	637	51	12	866	58	13	11	0	0	
Suquamish	180	31	8	239	37	8	4	0	0	
Tulalip	1078	84	19	1467	94	19	14	4	0	

Showing 1 to 7 of 7 entries



# High-Crash Locations(HCL) Tool

Crash by Tribal Areas  Countermeasure by Tribal Areas HIN by Tribal Areas

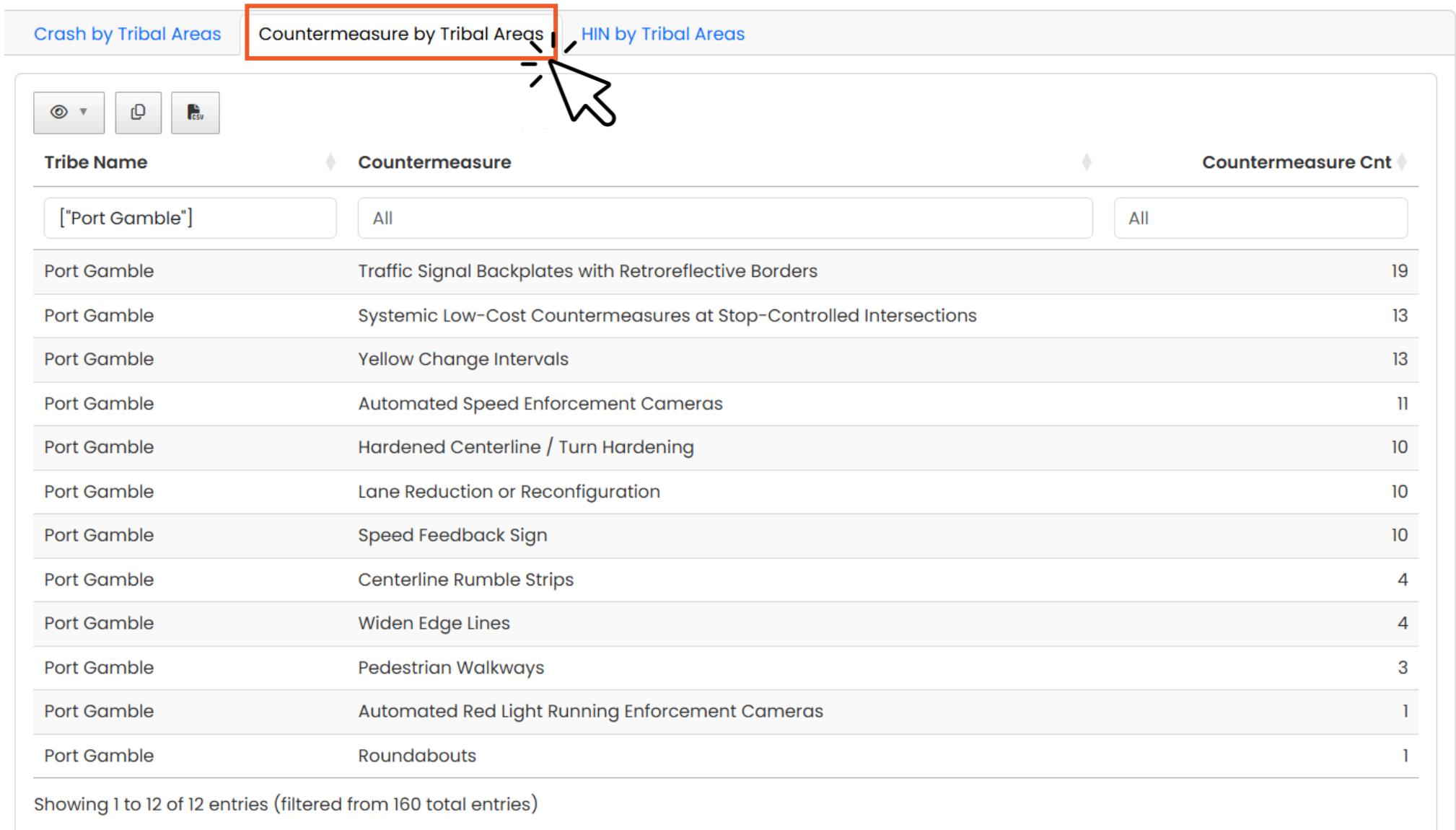


Tribe Name	KABC Crash Cnt	KSI Crash Cnt	K Crash Cnt	Total KABC	Total KSI	Total K	Bicyclist KABC	Bicyclist KSI	Bicyclist K	Pedestrian KABC	Pedestrian KSI	Pedestrian K
All	All	All	All	All	All	All	All	All	All	All	All	All
Muckleshoot	650	68	16	935	91	20	13	1	1	44	17	3
Port Gamble	207	15	2	272	18	2	5	1	0	8	1	0
Puyallup	4017	395	95	5536	466	104	63	7	1	183	67	19
Snoqualmie	103	9	2	126	10	2	1	1	0	4	2	0
Stillaguamish	637	51	12	866	58	13	11	0	0	33	9	2
Suquamish	180	31	8	239	37	8	4	0	0	11	9	3
Tulalip	1078	84	19	1467	94	19	14	4	0	41	13	6

Showing 1 to 7 of 7 entries



# High-Crash Locations(HCL) Tool



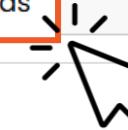
Tribe Name	Countermeasure	Countermeasure Cnt
["Port Gamble"]	All	All
Port Gamble	Traffic Signal Backplates with Retroreflective Borders	19
Port Gamble	Systemic Low-Cost Countermeasures at Stop-Controlled Intersections	13
Port Gamble	Yellow Change Intervals	13
Port Gamble	Automated Speed Enforcement Cameras	11
Port Gamble	Hardened Centerline / Turn Hardening	10
Port Gamble	Lane Reduction or Reconfiguration	10
Port Gamble	Speed Feedback Sign	10
Port Gamble	Centerline Rumble Strips	4
Port Gamble	Widen Edge Lines	4
Port Gamble	Pedestrian Walkways	3
Port Gamble	Automated Red Light Running Enforcement Cameras	1
Port Gamble	Roundabouts	1

Showing 1 to 12 of 12 entries (filtered from 160 total entries)



# High-Crash Locations(HCL) Tool

Crash by Tribal Areas   Countermeasure by Tribal Areas   **HIN by Tribal Areas**



Tribe Name	Population	Area Sqmile	Hin Mile Sum	Hin Corridors Count	Hin Mile Avg	Hin Mile Density	Hin Pop 100k	Hin Mile Per Network
All	All	All	All	All	All	All	All	All
Muckleshoot	9226	9.85	10.65	9	1.18	1.08	115.43	0.47
Port Gamble	8745	25.46	0	0	0	0	0	0
Puyallup	61716	33.54	34.88	32	1.09	1.04	56.52	0.15
Snoqualmie	253	1.2	0	0	0	0	0	0
Stillaguamish	6341	21.21	3.49	5	0.7	0.16	55.06	0.08
Suquamish	8687	14.48	0.3	1	0.3	0.02	3.5	0.01
Tulalip	14218	57.27	8.4	12	0.7	0.15	59.1	0.12

Showing 1 to 7 of 7 entries



An aerial photograph of a coastal city, likely Bremerton, Washington. The city is situated on a peninsula, with a large industrial and port area on the west side. A marina with many boats is visible on the left. A long bridge spans a deep blue waterway. The city is surrounded by green hills and mountains in the background.

Thank you!



Puget Sound Regional Council