



Appendix A: Collision Analysis Technical Report

Final Collision Analysis Technical Report

King County Road Services Division Traffic Safety Action Plan

December 2025

Prepared for King County Road Services Division by:

Parametrix

Consistent with 23 U.S.C. 148 and 23 U.S.C. 407 reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossing, or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds, shall not be 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.

Contents

Introduction	1
Study Area and Methodologies	1
Safety Analysis.....	5
Reported Crash History	5
Total Crashes	5
Fatal and Serious Injury Crashes	6
Pedestrian- and Bicyclist-Involved Crashes	10
Emphasis Area Analysis	14
HIN Analysis	16
Methodology.....	16
HIN Intersections.....	17
HIN Roadway Segments	17
Systemic Network Analysis.....	23
Intersection Systemic Analysis	23
Roadway Segment Systemic Analysis	28
Project Identification.....	33
Location Prioritization.....	33
Potential Countermeasure Identification	38
Project Details.....	38
Prioritized Potential Project Location List.....	39
References.....	43
Appendices	44

List of Figures

Figure 1. King County Safety Analysis Study Area	2
Figure 2. King County Study Area: North and South Map Extents	3
Figure 3. King County Urban and Rural Areas	4
Figure 4. 2014–2023 Total and Combined Fatal and Serious Injury Crashes by Year	6
Figure 5. 2014–2023 Fatal and Serious Injury Crashes: North	8
Figure 6. 2014–2023 Fatal and Serious Injury Crashes: South.....	9
Figure 7. 2014–2023 Pedestrian- and Bicyclist-Involved Crashes: North	12
Figure 8. 2014–2023 Pedestrian- and Bicyclist-Involved Crashes: South.....	13

Figure 9. HIN Intersections: North	19
Figure 10. HIN Intersections: South	20
Figure 11. HIN Roadway Segments: North	21
Figure 12. HIN Roadway Segments: South.....	22
Figure 13. Intersection Systemic Analysis: North	26
Figure 14. Intersection Systemic Analysis: South	27
Figure 15. Roadway Segment Systemic Analysis: North	31
Figure 16. Roadway Segment Systemic Analysis: South.....	32
Figure 17. Consolidated Demographic Index for King County Census Tracts (King County 2025).....	34
Figure 18. Project Locations: North.....	36
Figure 19. Project Locations: South	37

List of Tables

Table 1. 2014–2023 Total Crashes by Severity and Year	5
Table 2. 2014–2023 Crashes by Crash Type: Fatal and Serious Injury vs. Total Crashes.....	6
Table 3. 2014–2023 Crashes by Contributing Factor: Fatal and Serious Injury vs. Total Crashes.....	7
Table 4. 2014–2023 Pedestrian-Involved Crashes by Severity.....	10
Table 5. 2014–2023 Bicyclist-Involved Crashes by Severity	10
Table 6. Washington State Emphasis Areas	14
Table 7. County and State Fatal and Serious Injury Crashes by Emphasis Area.....	15
Table 8. Systemic Intersection Categories	25
Table 9. Systemic Analysis Intersection Rubric.....	24
Table 10. Systemic Segment Categories	30
Table 11. Systemic Analysis Segment Rubric.....	29
Table 12. Summarized Prioritization Rubric	35
Table 13. Planning Level Cost Estimate Ranges	38
Table 14. Timeframe Definitions	39
Table 15. Prioritized Potential Project Location List	40

Introduction

King County was awarded a U.S. Department of Transportation Safe Streets and Roads for All grant to develop a comprehensive Traffic Safety Action Plan (hereafter referred to as the *Plan*) for unincorporated King County. The Plan must include the following components:

- Leadership commitment and goal setting for reducing roadway fatalities and serious injuries.
- A task force engaged in the development, implementation, and monitoring of the Plan.
- Data-driven safety analysis focused on fatalities and serious injuries.
- Engagement and collaboration with the public and relevant community partners.
- Policy and process change review.
- Strategy and project selections.
- Progress tracking and transparency.

This report documents the process and results of the safety analysis portion of the Plan, as well as the strategies and projects identified from the analysis. The analysis and results of this report will be summarized in the final Plan.

The safety analysis encompassed multiple components, including an overview of historical crashes across unincorporated King County, a comparison of county and Washington state crash trends, the development of a high-injury network (HIN), and a systemic analysis. These analyses are detailed in the subsequent sections, followed by a summary of the proposed strategies and prioritized projects list.

Study Area and Methodologies

The study area consisted of all roadways within unincorporated King County under the County's jurisdiction. Short county roads that are isolated in incorporated areas and roads with King County jurisdiction over only a portion of the road width were included in the analysis. King County's nearly 1,500-mile road network reaches through much of the 1.1 million acres of unincorporated area. The study area is shown in Figure 1. Due to the size of the county, the King County study area has been divided into north and south areas for mapping purposes. The north and south map extents are shown in Figure 2. Urban and rural areas in King County are shown in Figure 3.

High-level methodologies for each portion of the analysis are included in the corresponding section of the report. For more detailed information regarding assumptions and methodologies, see Appendix A for the Collision Analysis Methodology Memorandum.

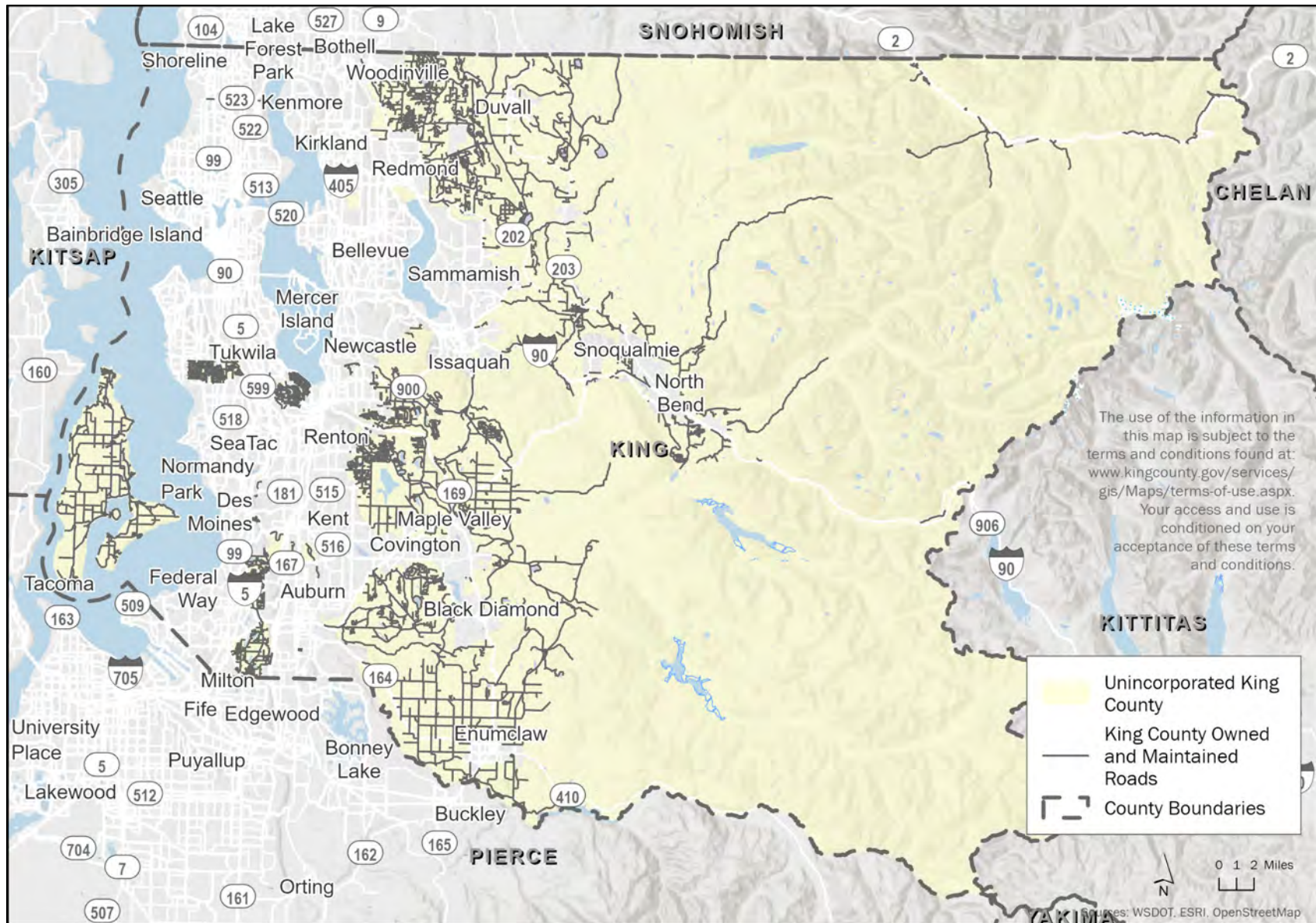


Figure 1. King County Safety Analysis Study Area

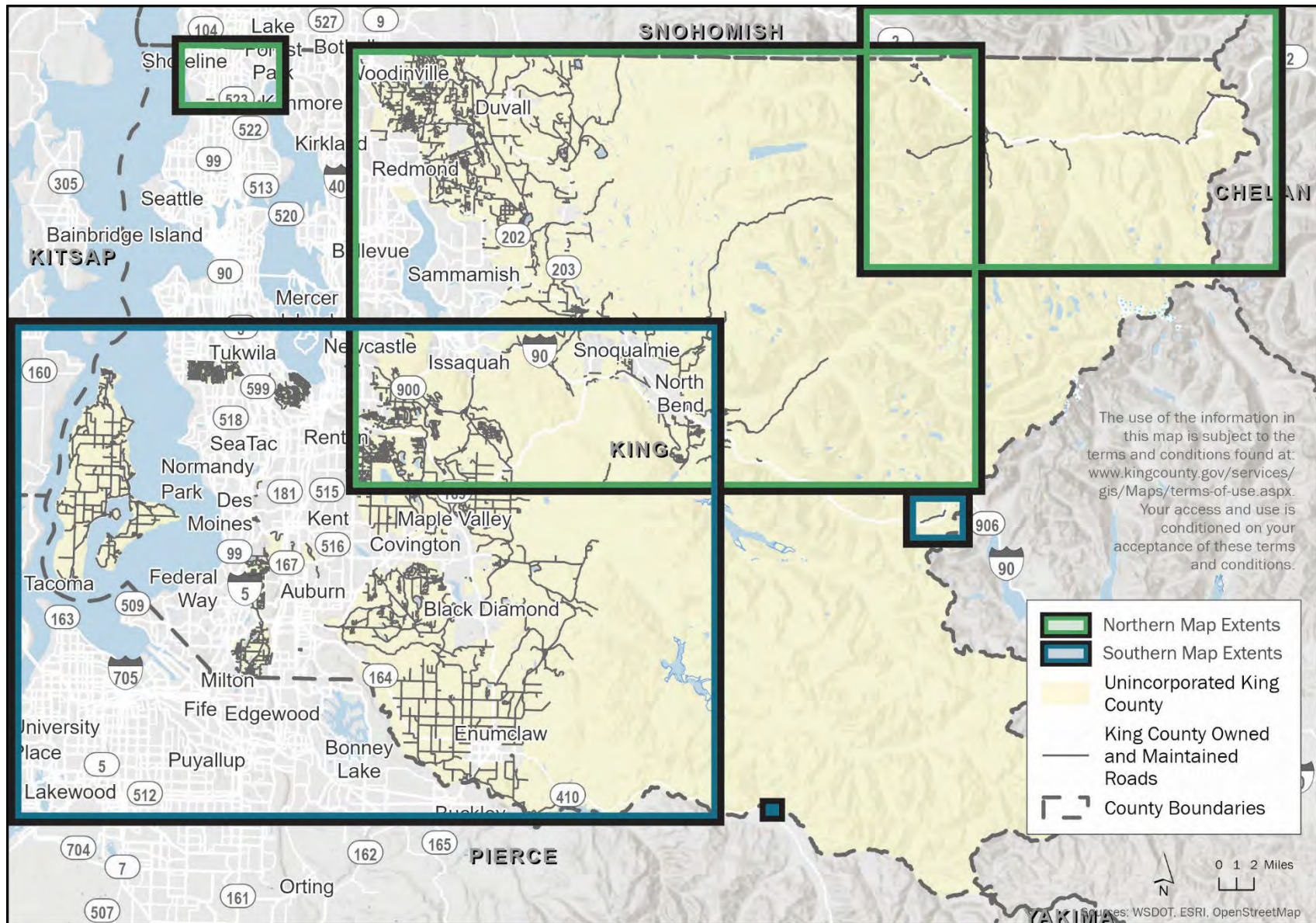


Figure 2. King County Study Area: North and South Map Extents

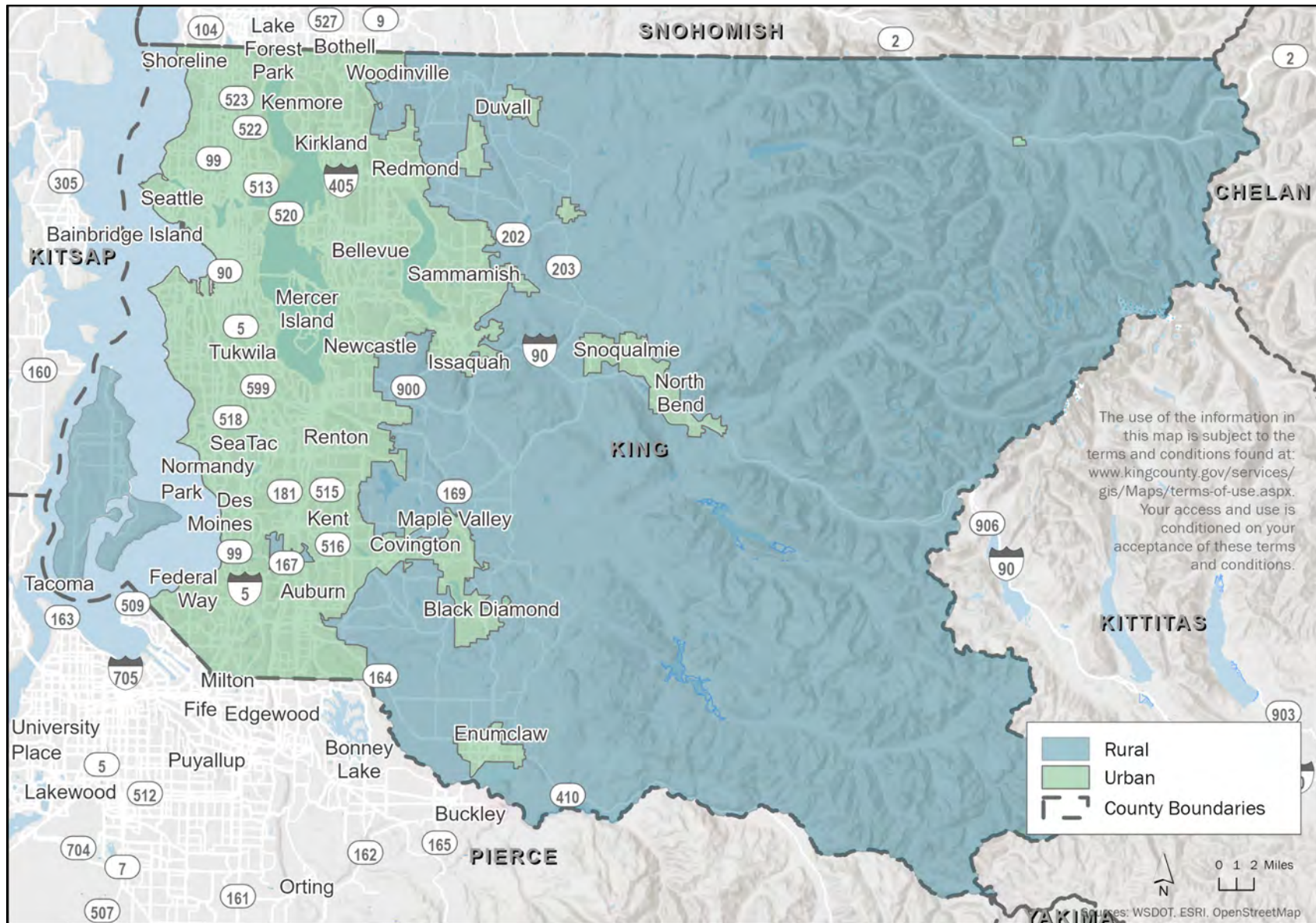


Figure 3. King County Urban and Rural Areas

Safety Analysis

Reported Crash History

Total Crashes

Crash data were obtained for the most recent complete 10 years of available data (2014–2023) from the Washington State Department of Transportation for all unincorporated King County roadways.

Between 2014 and 2023, 17,324 crashes occurred on unincorporated King County roads, including 132 fatal crashes and 413 serious injury crashes. Table 1 summarizes the total study period crashes by severity and year. Figure 4 shows the total and combined fatal and serious injury crashes by year over the same period. Detailed, zoomed-in maps of crashes by severity are included in Appendix B.

Table 1. 2014–2023 Total Crashes by Severity and Year

Year	Crashes by Severity					Total
	<i>Fatal</i>	<i>Serious Injury</i>	<i>Minor Injury</i>	<i>Possible Injury</i>	<i>No Injury</i>	
2014	11	36	183	321	1,129	1,680
2015	17	45	169	380	1,268	1,879
2016	14	42	194	446	1,328	2,024
2017	11	47	177	414	1,426	2,075
2018	11	27	155	355	1,321	1,869
2019	11	30	137	397	1,220	1,795
2020	15	39	150	234	950	1,388
2021	12	49	202	224	1,062	1,549
2022	21	40	217	195	963	1,436
2023	9	58	246	199	1,117	1,629
Total	132	413	1,830	3,165	11,784	17,324

Source: WSDOT, 2025a, Crash Data, 2014–2023, King County.

Crash trends have varied over the 10-year period. Total crashes increased from 2014 to 2017, decreased from 2017 to 2020, then increased again from 2020 to 2023. Combined fatal and serious injury crashes were relatively constant from 2015 to 2017, decreased in 2018 and 2019, and increased after 2019.

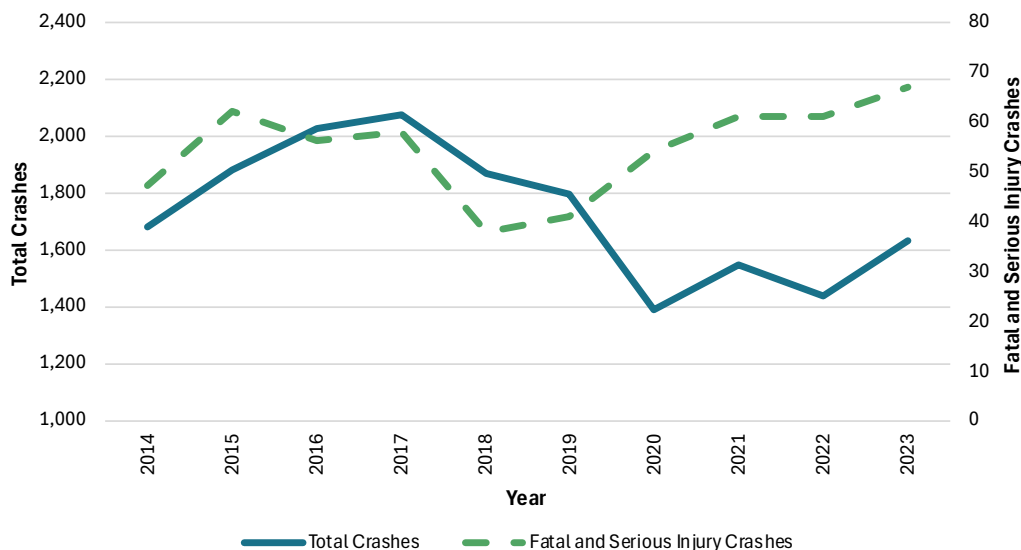


Figure 4. 2014–2023 Total and Combined Fatal and Serious Injury Crashes by Year

Fatal and Serious Injury Crashes

Between 2014 and 2023, 545 fatal and serious injury crashes occurred on unincorporated King County roads. Fatal and serious injury crashes are shown by crash type in Table 2 and by contributing factor in Table 3.

Table 2. 2014–2023 Crashes by Crash Type: Fatal and Serious Injury vs. Total Crashes

Crash Type	Fatal and Serious Injury Crashes	Percentage of Fatal and Serious Injury Crashes	Percentage of Total Crashes
Fixed object	190	35%	28%
Angle	100	18%	26%
Pedestrian	62	11%	2%
Head-on	40	7%	1%
Noncollision ^a	38	7%	3%
Bicycle	32	6%	1%
Rear-end	31	6%	19%
Other ^b	19	4%	4%
Sideswipe, opposite direction	13	2%	2%
Parked	11	2%	9%
Sideswipe, same direction	4	<1%	4%
Animal	3	<1%	1%
Other object	2	<1%	1%

Source: WSDOT, 2025a, Crash Data, 2014–2023, King County.

Yellow cells indicate crash types with a higher percentage of fatal and serious injury crashes than total crashes.

^a Includes incidents where a vehicle is damaged and/or occupants are injured, but the first harmful event did not involve striking a vehicle, object, or person (e.g., overturned vehicle, jackknife, etc.).

^b Includes all other crashes that do not fall into one of the other categories.

Table 3. 2014–2023 Crashes by Contributing Factor: Fatal and Serious Injury vs. Total Crashes

Contributing Factor ^a	Fatal and Serious Injury Crashes	Percentage of Fatal and Serious Injury Crashes	Percentage of Total Crashes
Speeding	165	30%	15%
Improper driving behavior	96	18%	10%
Distracted	82	15%	16%
Failure to yield	81	15%	15%
Alcohol and/or drugs	54	10%	5%
Inattention	43	8%	15%
Ill/asleep/fatigued	22	4%	4%
Wrong-way driving	12	2%	1%
Defective equipment	10	2%	2%
Following too closely	8	1%	8%
None ^b	250	46%	62%
Other ^c	107	20%	22%

Source: WSDOT, 2025a, Crash Data, 2014–2023, King County.

Yellow cells indicate contributing factors involved in a higher percentage of fatal and serious injury crashes than total crashes.

^a Represents contributing factors that were attributed to at least one driver in the crash. One crash may include multiple contributing factors for one or more drivers. Therefore, totals do not sum to 100%.

^b No factors contributing to the crash were identified.

^c Includes all other contributing factors that do not fall into one of the other categories.

Fixed object crashes accounted for the highest number of fatal and serious injury crashes (190), and accounted for a greater percentage of fatal and serious injury crashes than total crashes (35% vs. 28%). Similarly, pedestrian crashes, head-on crashes, noncollision crashes, and bicycle crashes all had a higher percentage of fatal and serious injury crashes than total crashes.

Speeding was the most common contributing factor for fatal and serious injury crashes (30%) and represented a higher percentage of fatal and serious injury crashes than total crashes. Improper driving behavior, alcohol and/or drugs, and wrong-way driving also represented a higher percentage of fatal and serious injury crashes than total crashes.

Fatal and serious injury crashes in the north and south county areas are shown in Figure 5 and Figure 6, respectively. More detailed, zoomed-in maps of fatal and serious injury crashes are included in Appendix B.

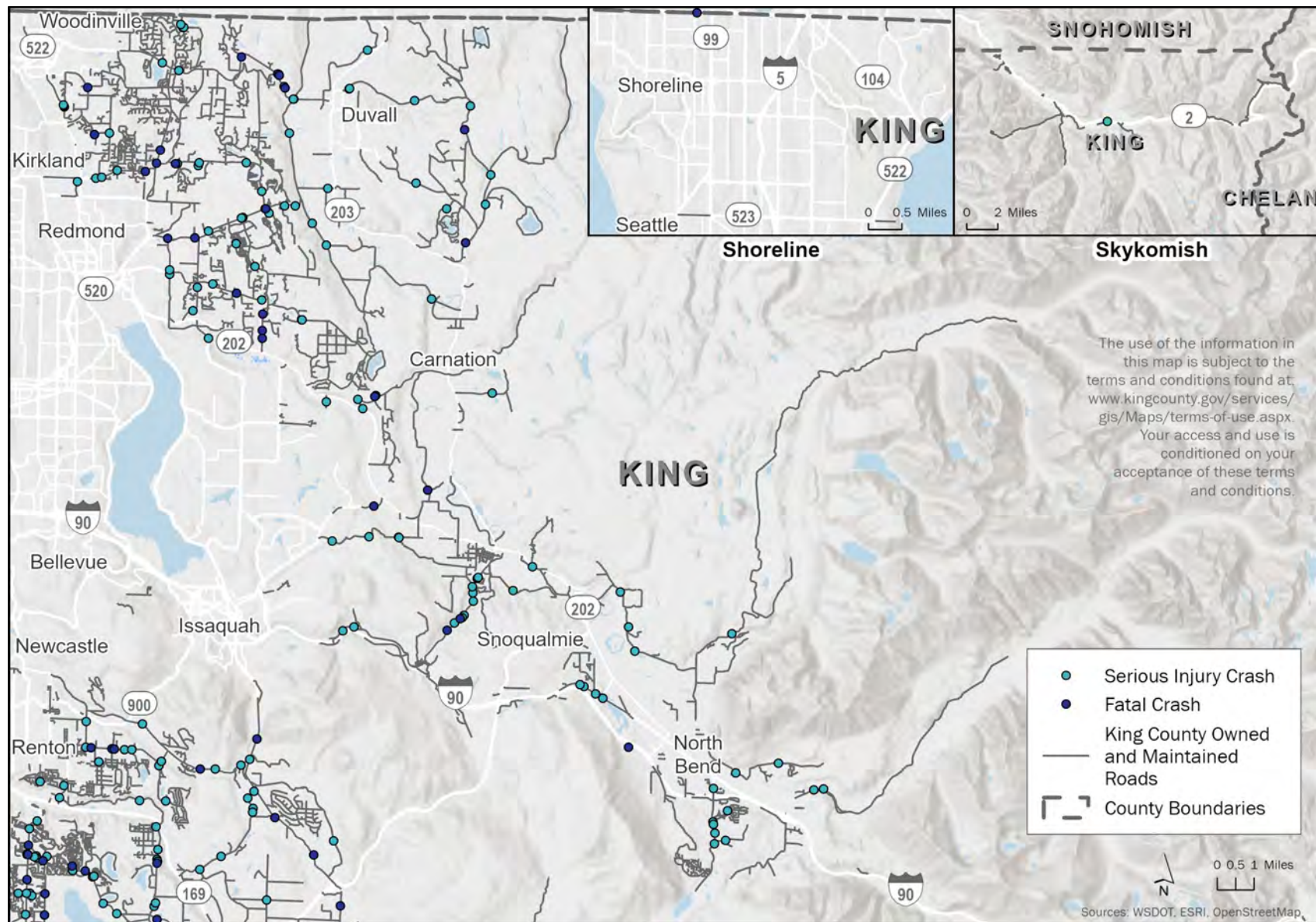


Figure 5. 2014–2023 Fatal and Serious Injury Crashes: North

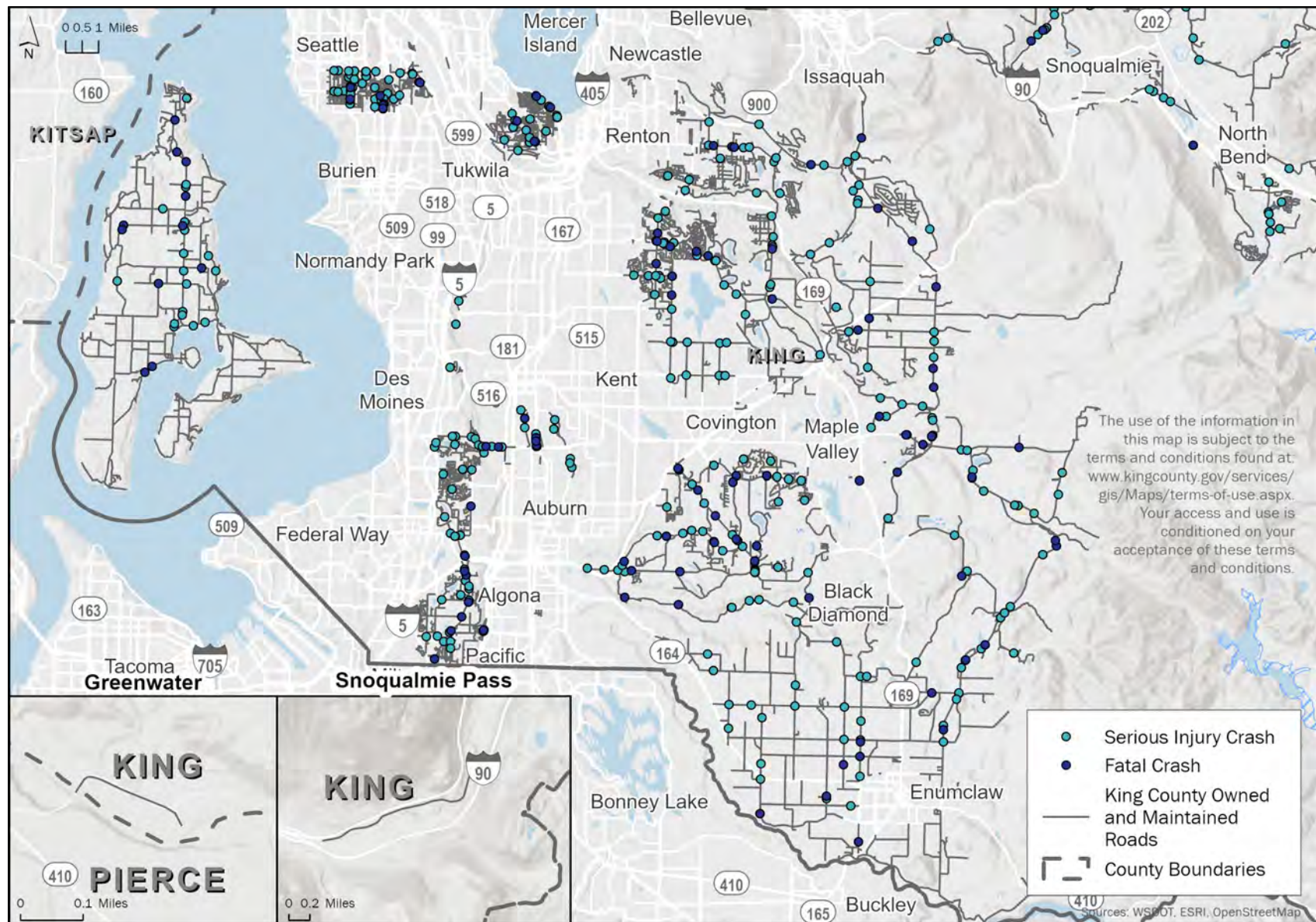


Figure 6. 2014–2023 Fatal and Serious Injury Crashes: South

Pedestrian- and Bicyclist-Involved Crashes

Between 2014 and 2023, 276 pedestrian-involved crashes and 160 bicyclist-involved crashes occurred on unincorporated King County roads. Pedestrian-involved crashes are shown by severity in Table 4. Bicyclist-involved crashes are shown by severity in Table 5.

Table 4. 2014–2023 Pedestrian-Involved Crashes by Severity

Year	Pedestrian-Involved Crashes by Severity					Total
	<i>Fatal</i>	<i>Serious Injury</i>	<i>Minor Injury</i>	<i>Possible Injury</i>	<i>No Injury</i>	
2014	3	6	9	13	3	34
2015	3	6	11	11	2	33
2016	2	4	13	16	2	37
2017	1	4	11	11	3	30
2018	0	3	6	12	1	22
2019	1	7	5	12	2	27
2020	4	3	7	8	2	24
2021	1	5	8	6	2	22
2022	4	3	14	4	1	26
2023	1	3	10	3	4	21
Total	20	44	94	96	22	276

Source: WSDOT, 2025a, Crash Data, 2014–2023, King County.

Table 5. 2014–2023 Bicyclist-Involved Crashes by Severity

Year	Bicyclist-Involved Crashes by Severity					Total
	<i>Fatal</i>	<i>Serious Injury</i>	<i>Minor Injury</i>	<i>Possible Injury</i>	<i>No Injury</i>	
2014	0	2	9	5	0	16
2015	0	3	8	6	3	20
2016	2	3	7	5	1	18
2017	0	3	9	6	0	18
2018	1	5	4	2	1	13
2019	0	0	4	6	4	14
2020	0	2	9	6	1	18
2021	0	4	9	0	0	13
2022	0	3	7	2	0	12
2023	0	4	11	3	0	18
Total	3	29	77	41	10	160

Source: WSDOT, 2025a, Crash Data, 2014–2023, King County.

The number of pedestrian-involved crashes has generally trended downward; 2023 had the lowest annual frequency in the last 10 years. When pedestrian-involved crashes do occur, they are more likely to result in a fatality or a serious injury than crashes without pedestrians; almost 24% of pedestrian crashes resulted in a fatality or serious injury, while less than 3% of crashes without pedestrians did. Overall, bicycle-involved crashes have fluctuated between 12 and 20 crashes annually over the last 10 years. As with pedestrian crashes, reported bicycle crashes are more likely to result in a fatality or serious injury than crashes without bicycles; 20% of bicycle crashes resulted in a fatality or serious injury while less than 3% of crashes without bicycles did.

Pedestrian- and bicyclist-involved crashes in the north and south county areas are shown in Figure 7 and Figure 8, respectively. More detailed, zoomed-in maps of pedestrian- and bicyclist-involved crashes are included in Appendix B.

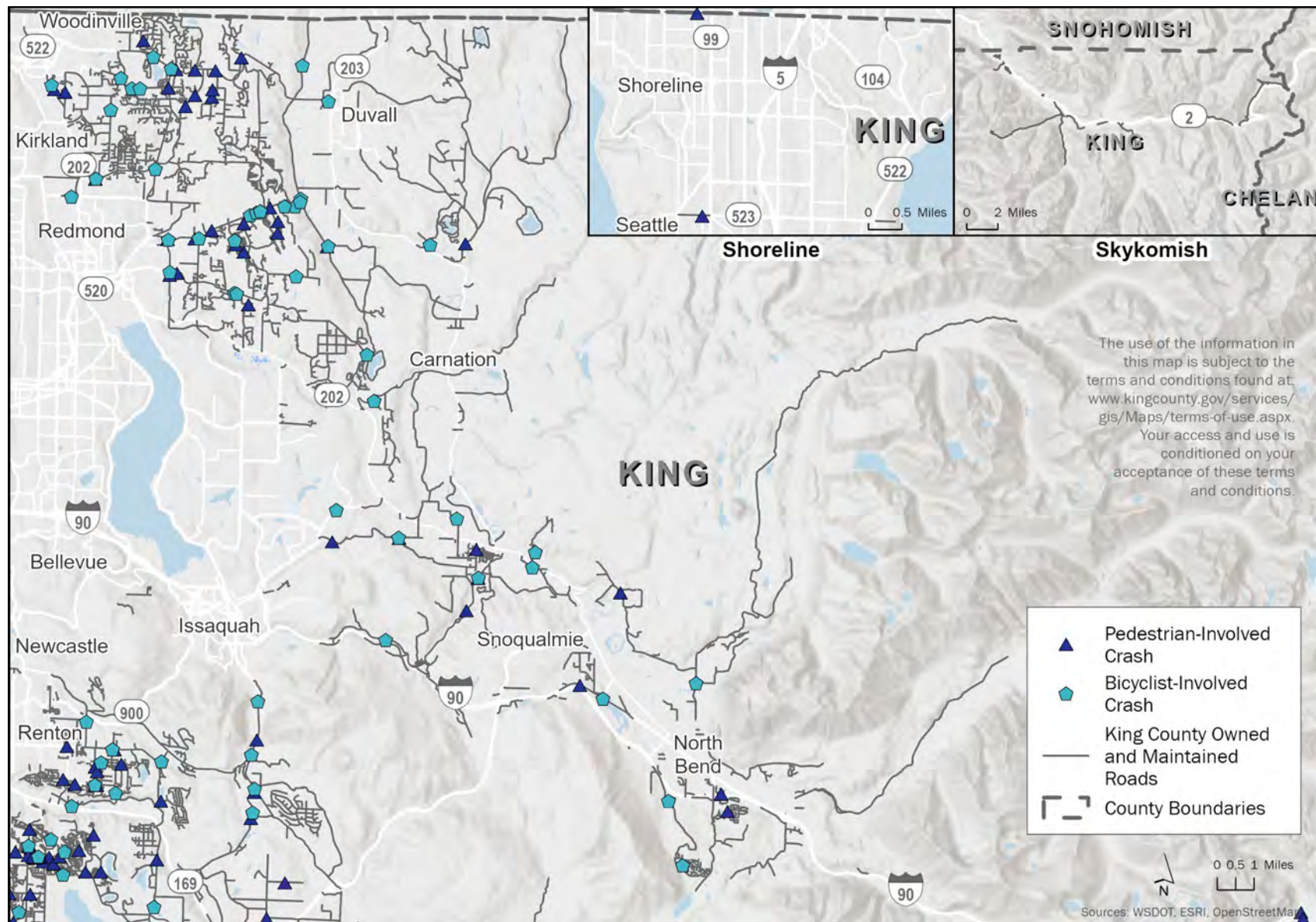


Figure 7. 2014–2023 Pedestrian- and Bicyclist-Involved Crashes: North

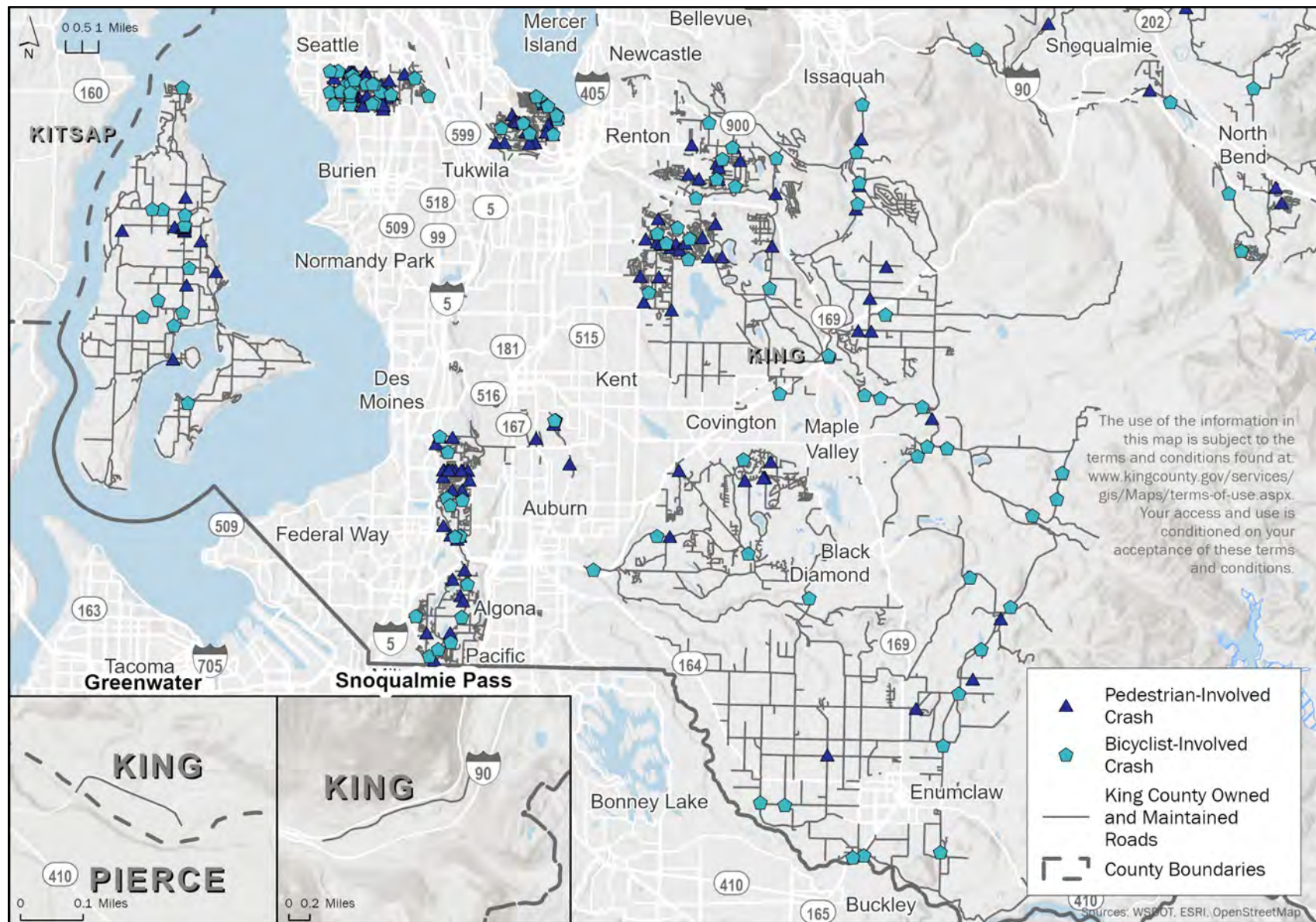


Figure 8. 2014–2023 Pedestrian- and Bicyclist-Involved Crashes: South

Emphasis Area Analysis

Emphasis areas provide a framework for focusing the development and implementation of safety strategies. The 2024 Washington State Strategic Highway Safety Plan (SHSP) (WSTC 2024) identifies 11 primary emphasis areas across four categories (not including *Other*). Several of the emphasis areas can be further subdivided into secondary emphasis areas to provide additional detail. The primary and secondary emphasis areas—collectively referred to as *emphasis areas*—are summarized in Table 6.

Table 6. Washington State Emphasis Areas

Category	Primary Emphasis Area	Secondary Emphasis Area
High-risk behavior	Distracted drivers	
	Impairment	
	Speeding related	
	Unrestrained occupant	
Crash type/ location	Intersection related	
	Lane departure	Run-off-the-road Opposite direction
Road users by age group	Young drivers	
	Older drivers	
Road users by mode of travel	Active transportation users	Pedestrians
		Bicyclists
	Motorcycles	
	Heavy vehicles	School buses
Other	Other	Drowsy drivers
		Wildlife crashes
		Vehicle-train crashes
		Work zone crashes

Source: WTSC, 2024, Washington State SHSP.

Table 7 shows the percentage of fatal and serious injury crashes for each emphasis area for the state and the county. In addition to the total percentages, a breakdown of county data by urban and rural areas is also provided to highlight the differences between the different contexts. The SHSP suggests that both impairment and distraction are undercounted due to data limitations.

Table 7. County and State Fatal and Serious Injury Crashes by Emphasis Area

Category	Emphasis Area	Percentage of Washington Fatal and Serious Injury Crashes	Percentage of Unincorporated King County Fatal and Serious Injury Crashes		
			Total	Urban Areas	Rural Areas
High-risk behavior	Distracted drivers	22%	26%	27%	26%
	Impairment	21%	11%	10%	11%
	Speeding related	24%	30%	25%	33%
	Unrestrained occupant	15%	17%	16%	17%
Crash type/ location	Intersection related	33%	27%	39%	19%
	Lane departure	39%	49%	35%	58%
	Run-off-the-road	31%	37%	25%	45%
	Opposite direction	8%	12%	10%	14%
Road users by age group	Young drivers	30%	32%	31%	33%
	Older drivers	16%	13%	12%	14%
Road users by mode of travel	Active transportation users	22%	18%	24%	14%
	Pedestrians	18%	12%	19%	8%
	Bicyclists	5%	6%	5%	6%
	Motorcycles	19%	22%	16%	26%
	Heavy vehicles	7%	3%	3%	4%
	School buses	0%	0%	0%	1%
Other	Drowsy drivers	3%	3%	2%	3%
	Wildlife crashes	1%	0%	0%	1%
	Vehicle-train crashes	0%	0%	0%	0%
	Work zone crashes	1%	1%	0%	1%

Source: WTSC, 2024, Washington State SHSP; WSDOT, 2025a, Crash Data, 2014–2023, King County; WSDOT, 2025b, Highway Safety: Collision Data Portal.

Yellow cells indicate overrepresented emphasis areas, defined as emphasis areas in which the crash percentage in unincorporated King County exceeded the corresponding statewide percentage by 5% or more.

Totals do not sum to 100% because multiple emphasis areas can be associated with a single crash.

Overrepresented emphasis areas were defined as emphasis areas in which the crash percentage in unincorporated King County exceeded the corresponding statewide percentage by 5% or more. The following seven emphasis areas were overrepresented in King County when compared to statewide crashes:

- Distracted drivers (urban).
- Speeding related (total and rural).
- Intersection related (urban).
- Lane departure (total and rural).
- Run-off-the-road (total and rural).
- Opposite direction (rural).
- Motorcycle (rural).

These results largely align with the analysis of crash types in the preceding section. For example, fixed object crashes—the most common crash type in unincorporated King County for both total and combined fatal and serious injury crashes—are typically related to distracted driving, speeding, departing the lane, and/or running off the road.

Conversely, several emphasis areas were underrepresented in King County when compared to statewide crashes. The following emphasis areas were 5% lower on unincorporated King County roads than statewide:

- Impairment (total, urban, rural).
- Intersection-related (total, rural).
- Run-off-the-road (urban).
- Active transportation users (rural).
 - Pedestrians (rural).

HIN Analysis

A HIN represents the network locations where a disproportionate number of fatal and serious injury crashes occur. This network provides a data-driven foundation to identify where resources can be focused to have the greatest impact on improving road safety conditions.

Methodology

An equivalent property damage only (EPDO) analysis—which systematically incorporates all crashes into the analysis while reflecting the severity of each crash—was conducted to develop the HIN. In this analysis, each crash was scored based on its comprehensive (societal) cost, as provided by the Washington State Department of Transportation. Scores were indexed to property damage only crashes and ranged from 1 for property damage only crashes to 223 for fatal and serious injury crashes.

To account for differences in crash patterns and contributing circumstances of intersection crashes vs. roadway segment crashes, the HIN was split into intersections and segments. Each intersection and segment then received an EPDO score based on

the sum of the scores for all crashes that occurred at that location. Detailed methodological information, including the weights used, is included in Appendix A.

One challenge with crash analyses on large rural networks is that relatively few crashes are spread over a wide geographic area. This phenomenon can make it difficult to identify trends and determine whether effective solutions should be location specific, systemic, or nonengineering based. While the EPDO analysis method increases the study's sample size by including crashes of all severities, the limited number and dispersed nature of rural collisions can still be a limitation for analyses in rural areas.

HIN Intersections

The highest scoring intersections formed the intersection portion of the HIN. Based on a review of the intersection EPDO score distribution and the resulting geospatial distribution of qualifying intersections, a threshold score of 300 was chosen for inclusion in the HIN.

The resulting HIN includes 49 intersections—33 of which were urban and 16 of which were rural. While only approximately 1% of unincorporated county road intersections are included in the HIN, these intersections accounted for 48% of fatal intersection crashes, 51% of combined fatal and serious injury intersection crashes, and 27% of all intersection crashes.

HIN intersections in the north and south county areas are shown in Figure 9 and Figure 10, respectively. More detailed, zoomed-in maps of HIN intersections are included in Appendix B.

HIN Roadway Segments

The highest scoring roadway segments formed the roadway segment portion of the HIN. Based on a review of roadway segment EPDO score distribution and the resulting geospatial distribution of qualifying roadway segments, a threshold score of 750 was chosen for inclusion in the initial HIN.

A manual smoothing process was then applied to the HIN roadway segments to create logical, continuous corridors. This process included both removing and adding segments. Isolated or very short roadway segments that only contained one or two crashes were reviewed and removed when these locations created illogical outcomes. Segments were added to the HIN when they were bookended by other HIN segments; when they had crash trends consistent with adjacent HIN segments; or when the combined EPDO per mile score—when recalculated with the additional segment—was above the threshold score.

This approach ensured that the resulting network reflected meaningful, cohesive roadway segments rather than a collection of small or isolated roadway segments. The creation of continuous corridors facilitates the identification of safety improvement projects on logical sections of the network. The initial HIN included 43.5 miles of King County roadway; about 4.4 miles of roadway were removed and about 21.3 miles of roadway were added during the manual smoothing process.

The resulting HIN includes 60.4 miles of King County roadway. The HIN is comprised of 35.2 miles of rural roadway and 25.2 miles of urban roadway. While the HIN mileage is approximately 4% of the 1,500-mile King County network, it accounts for 58% of fatal roadway segment crashes, 58% of fatal and serious injury roadway segment crashes, and 30% of all roadway segment crashes.

HIN roadway segments in the north and south county areas are shown in Figure 11 and Figure 12, respectively. More detailed, zoomed-in maps of HIN roadway segments are included in Appendix B.

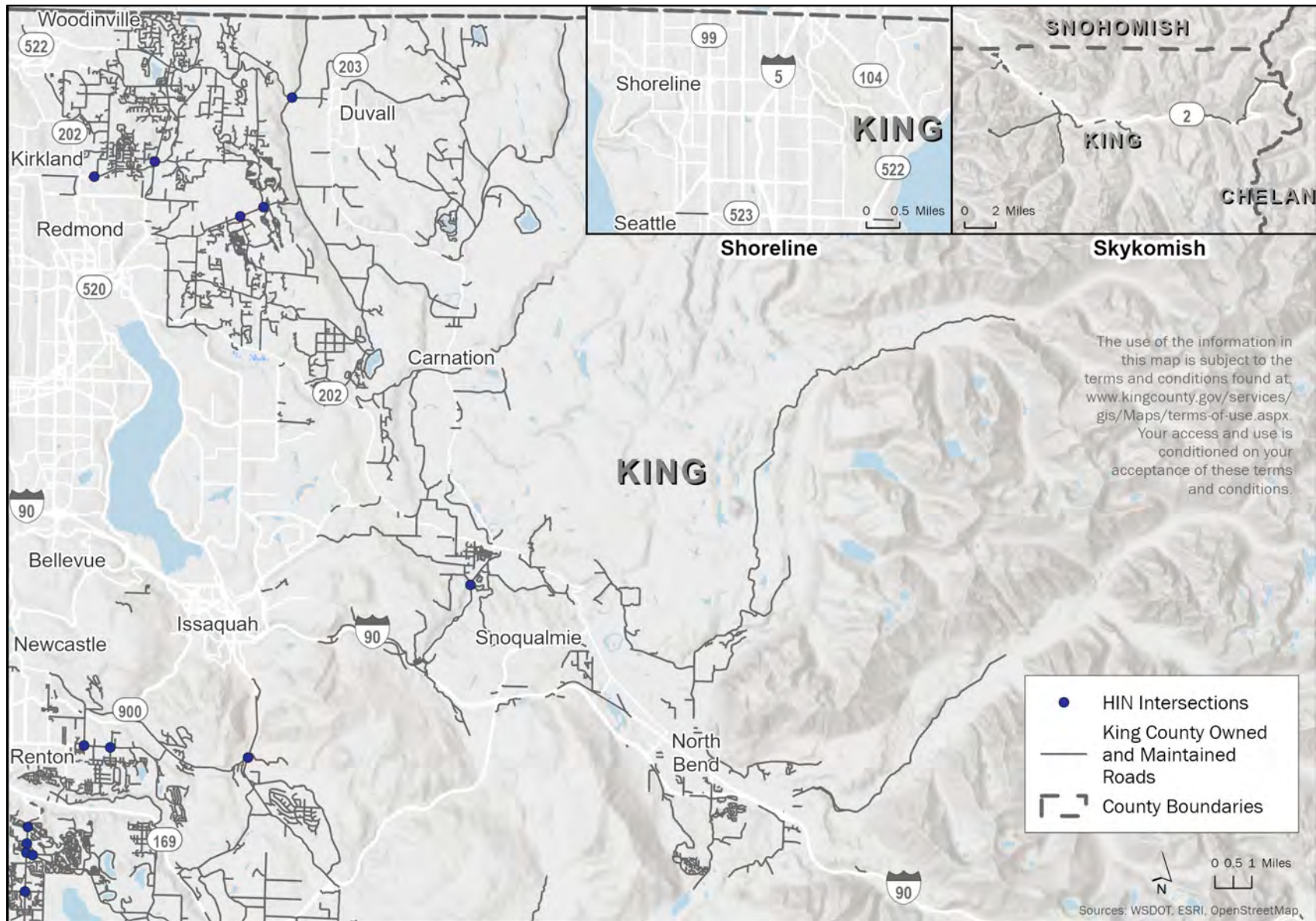


Figure 9. HIN Intersections: North

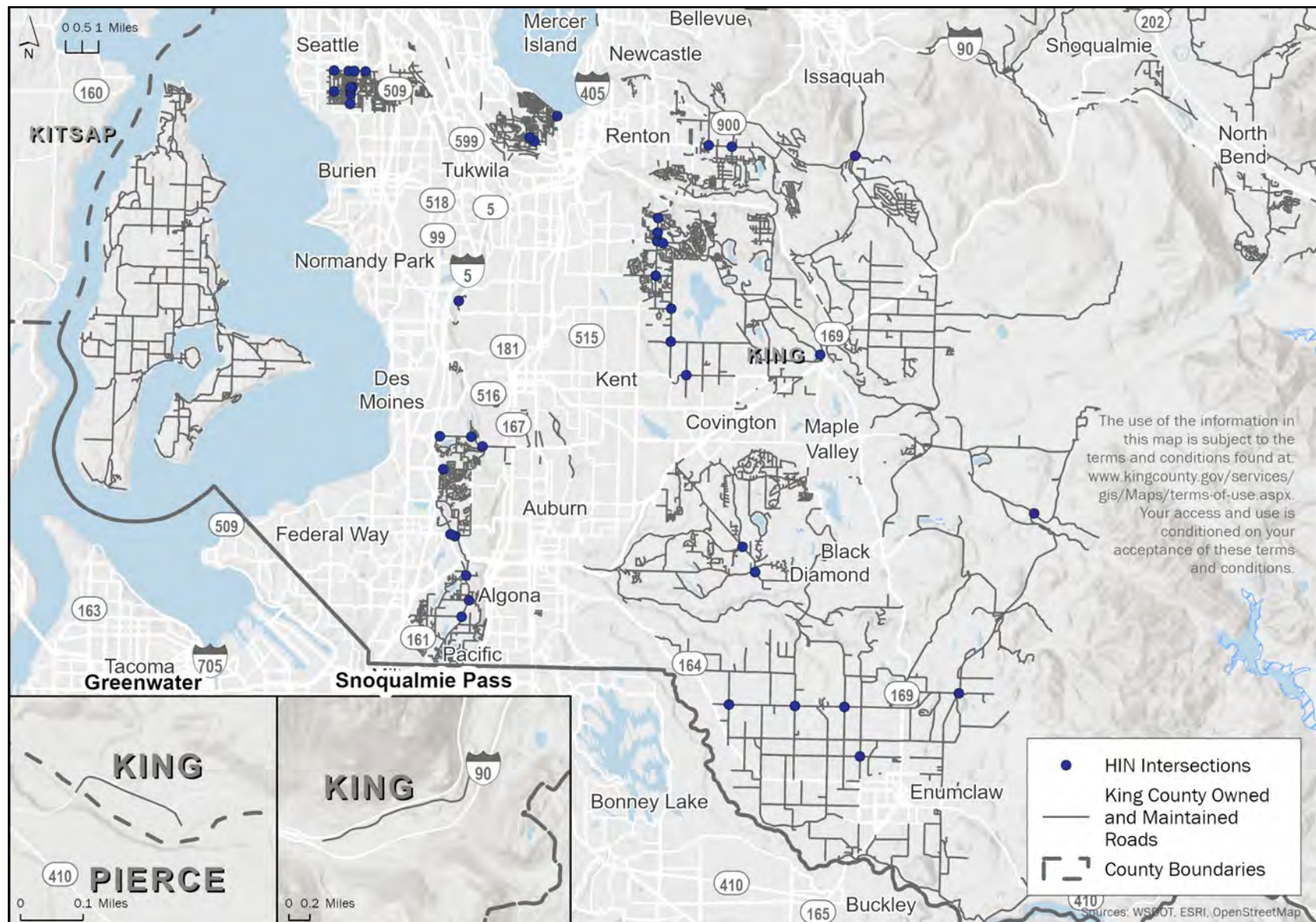


Figure 10. HIN Intersections: South

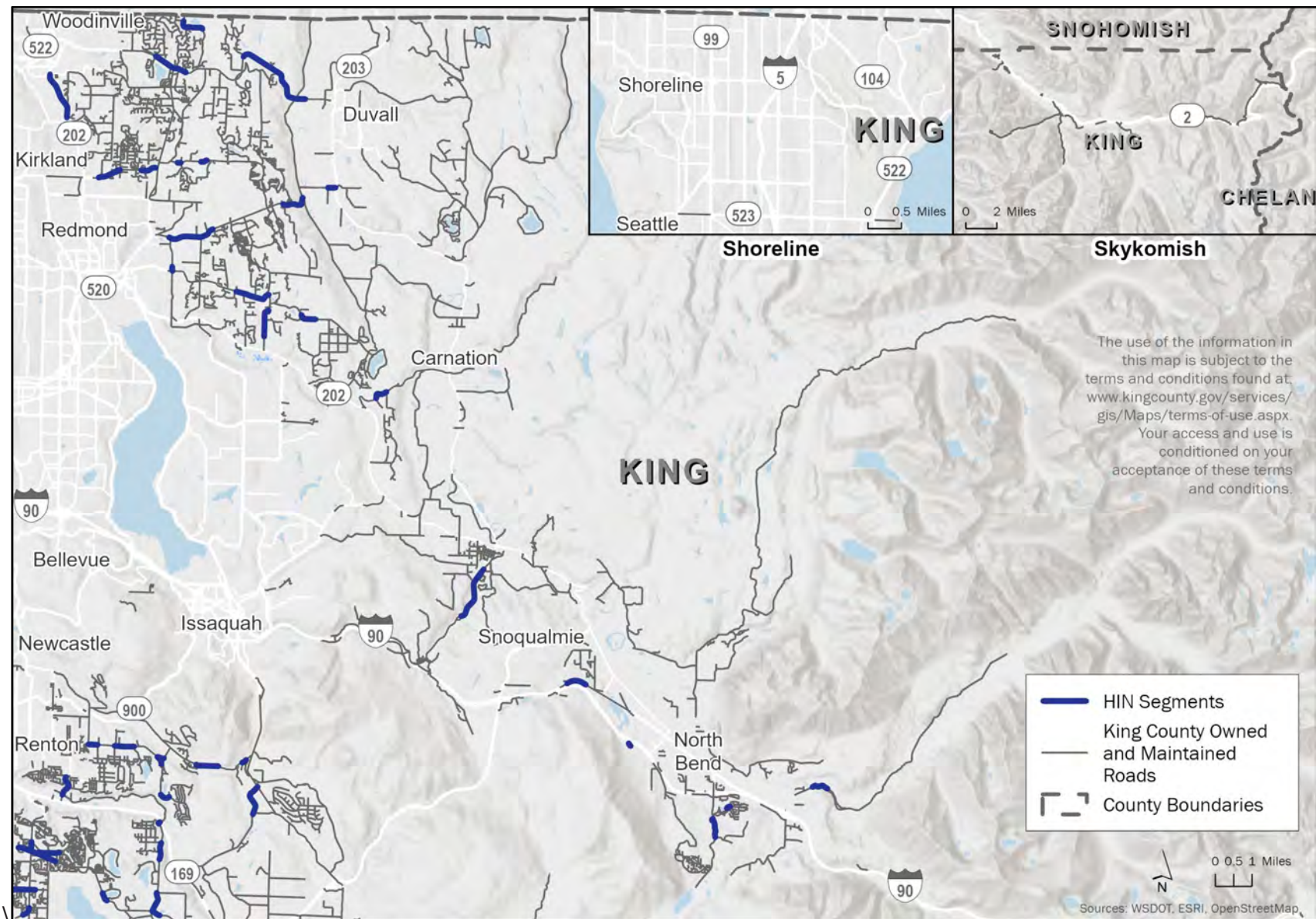


Figure 11. HIN Roadway Segments: North

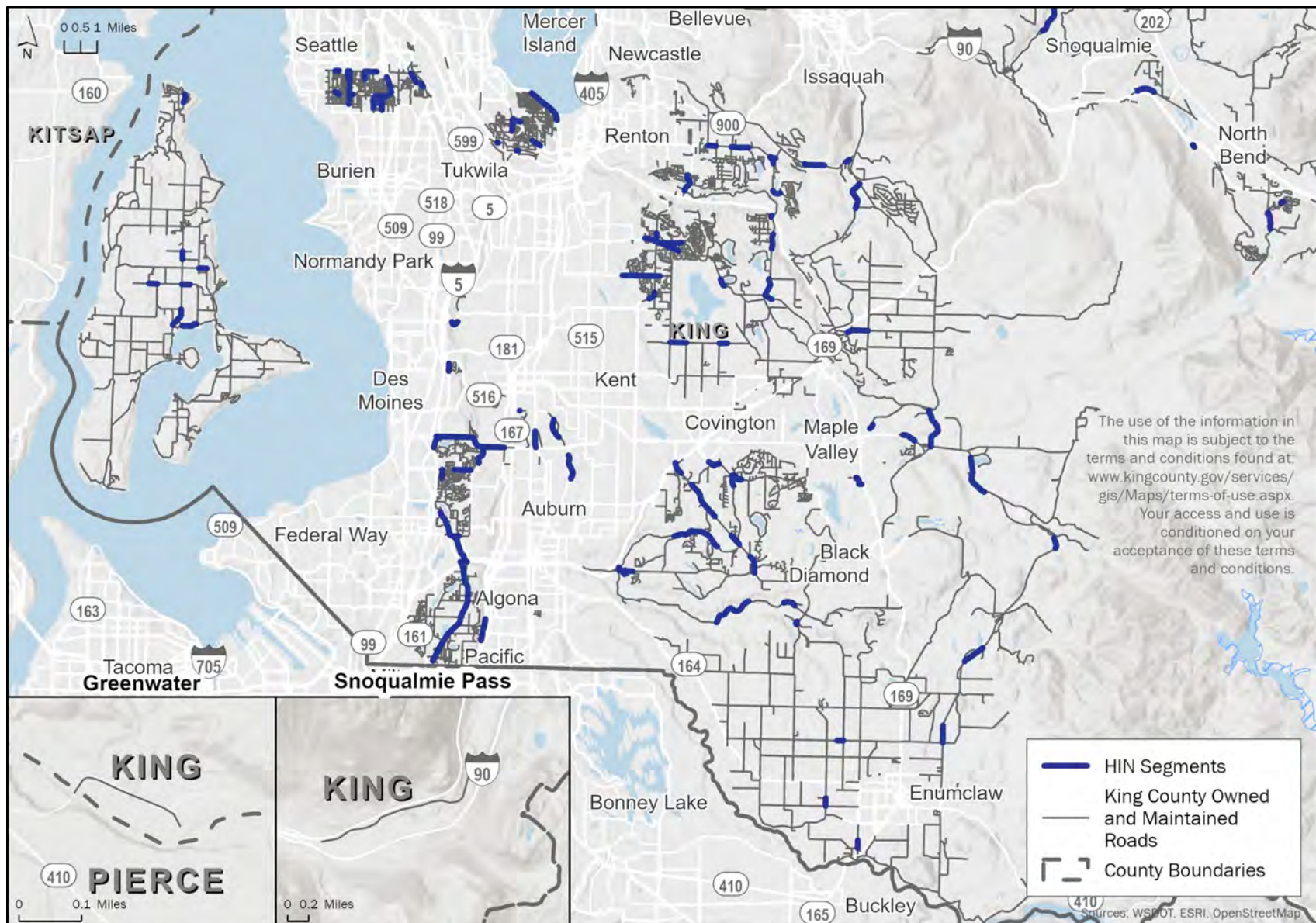


Figure 12. HIN Roadway Segments: South

Systemic Network Analysis

A systemic network analysis aims to provide a proactive assessment of safety. Instead of relying on crash data alone, this analysis focuses on traffic volume and geometric characteristics can be associated with higher-severity crashes. This approach helps to identify locations that may be more likely to experience severe crashes—even if none have previously occurred there.

Like the HIN development, the systemic network analysis considered intersections and roadway segments independently due to differences in crash patterns and contributing factors.

Using available data, the systemic analysis considered characteristics that are commonly associated with higher frequency and higher severity crashes. These frequency and severity correlations were validated using the county collision data to confirm the assumed relationships and applicability. The presence of one or more of these characteristics, or *systemic risk factors*, does not indicate that a specific location is unsafe; however, their presence can inform future analyses and systemic proactive improvements.

Intersection Systemic Analysis

Intersections were scored on the 10 criteria summarized in Table 8. Higher scores indicated the presence of more systemic risk factors. Criteria were modified for intersections where all legs were local, nonarterial roads. This adjustment was made for two reasons. First, recent average daily traffic data were generally not available for local access roadways. Second, some characteristics, like turn lanes, are typically unnecessary or inappropriate at local road intersections given the intended function of these intersections.

Table 8. Intersection Systemic Analysis Rubric

Intersection Characteristics					
<i>Risk Factor</i>	<i>Characteristic</i>	<i>Urban/Rural</i>	<i>Tiers</i>	<i>Points</i>	<i>Maximum Points</i>
Traffic volume	Maximum approach average daily traffic	Both	< 1,000 or local access	1	6
			≥ 1,000 to 5,000	2	
			≥ 5,000 to 10,000	3	
			≥ 10,000 to 15,000	4	
			≥ 15,000 to 20,000	5	
			≥ 20,000	6	
Traffic volume	Minimum approach average daily traffic	Both	< 1,000 or local access	1	6
			≥ 1,000 to 5,000	2	
			≥ 5,000 to 10,000	3	
			≥ 10,000 to 15,000	4	
			≥ 15,000 to 20,000	5	
			≥ 20,000	6	
Speed	Maximum approach speed limit	Both	≤ 25 mph	1	6
			30 to 35 mph	3	
			40 to 45 mph	5	
			≥ 50 mph	6	
Speed	Minimum approach speed limit	Both	≤ 25 mph	1	6
			30 to 35 mph	3	
			40 to 45 mph	5	
			≥ 50 mph	6	
Intersection type	Intersection control	Both	Roundabout	1	4
			Signal	2	
			All way stop	2	
			Minor stop control/yield	4	
Turn lanes	Presence of turn lanes	Both	Right and left turn lanes present at intersection, roundabout, or local access	0	2
			Right or left turn lanes present at intersection	1	
			No turn lanes present at intersection	2	
Lighting	Lighting presence	Both	Lighting present or local access	0	2
			No lighting present	2	
Pedestrian exposure	Proximity to schools	Both	No school within 1/4 mile or local access	0	2
			School within 1/4 mile	2	
Pedestrian exposure	Proximity to transit	Both	No transit stop within 1/4 mile or local access	0	1
			Transit stop within 1/4 mile	1	
Pedestrian exposure	Higher density zoning	Both	Not within 1/4 mile of higher density zoning (1/8 mile for local access)	0	2
			Within 1/4 mile of higher density zoning (1/8 mile for local access)	2	

After intersections were scored, they were grouped into five categories based on the score ranges shown in Table 9.

Table 9. Intersection Systemic Analysis Categories

Systemic Category	Intersection Score	Number of Intersections	Percentage of Intersections
Low	0 to 9	3,968	51%
Medium-low	10 to 15	2,019	26%
Medium	16 to 17	864	11%
Medium-high	18 to 20	723	9%
High	21 to 37	168	2%

The intersection systemic analysis results for the north and south county areas are shown in Figure 13 and Figure 14, respectively. Intersections categorized as low or medium-low are not shown on these maps for clarity. More detailed, zoomed-in maps of systemic analysis intersections, including all systemic categories, are included in Appendix B.

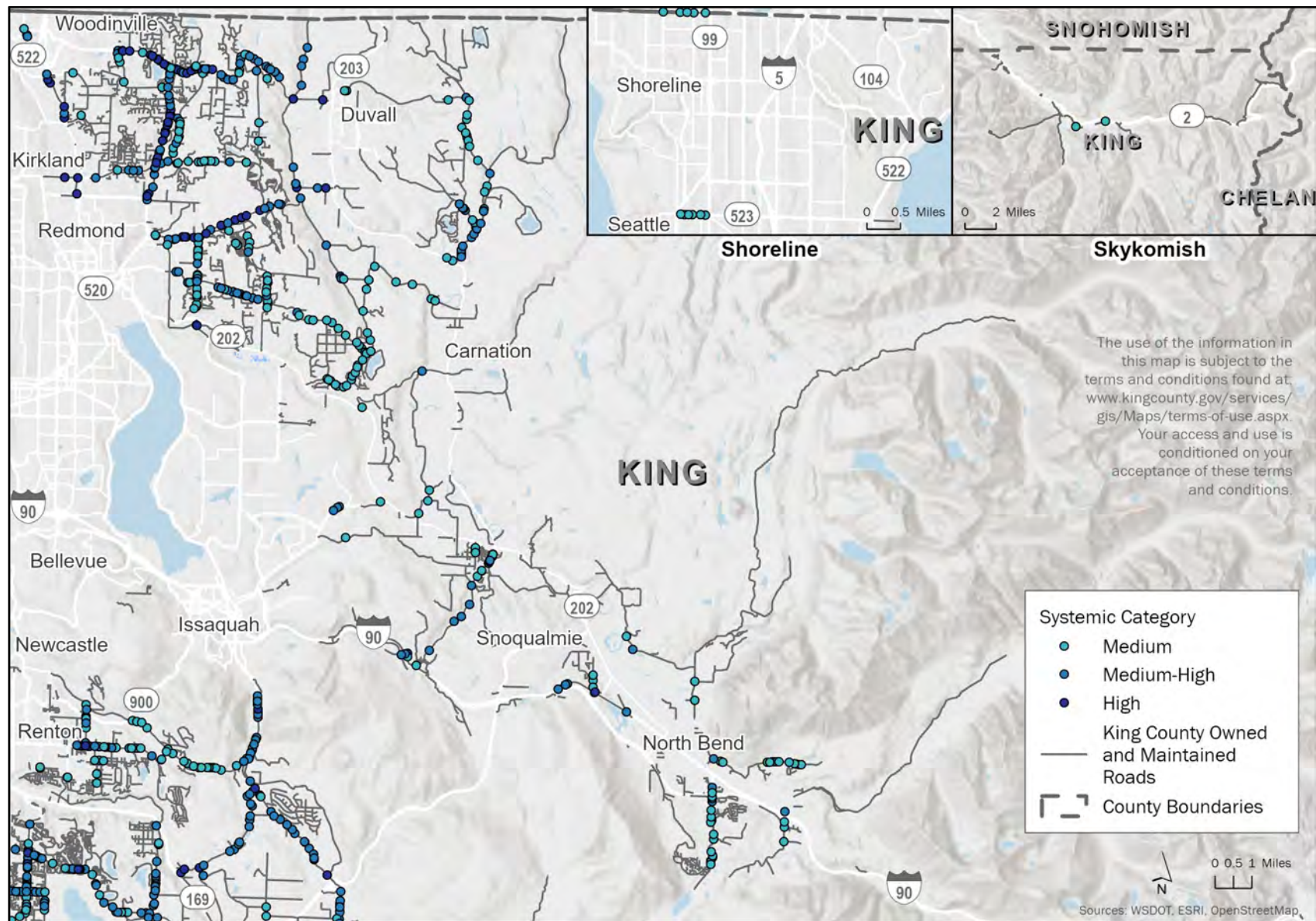


Figure 13. Intersection Systemic Analysis: North

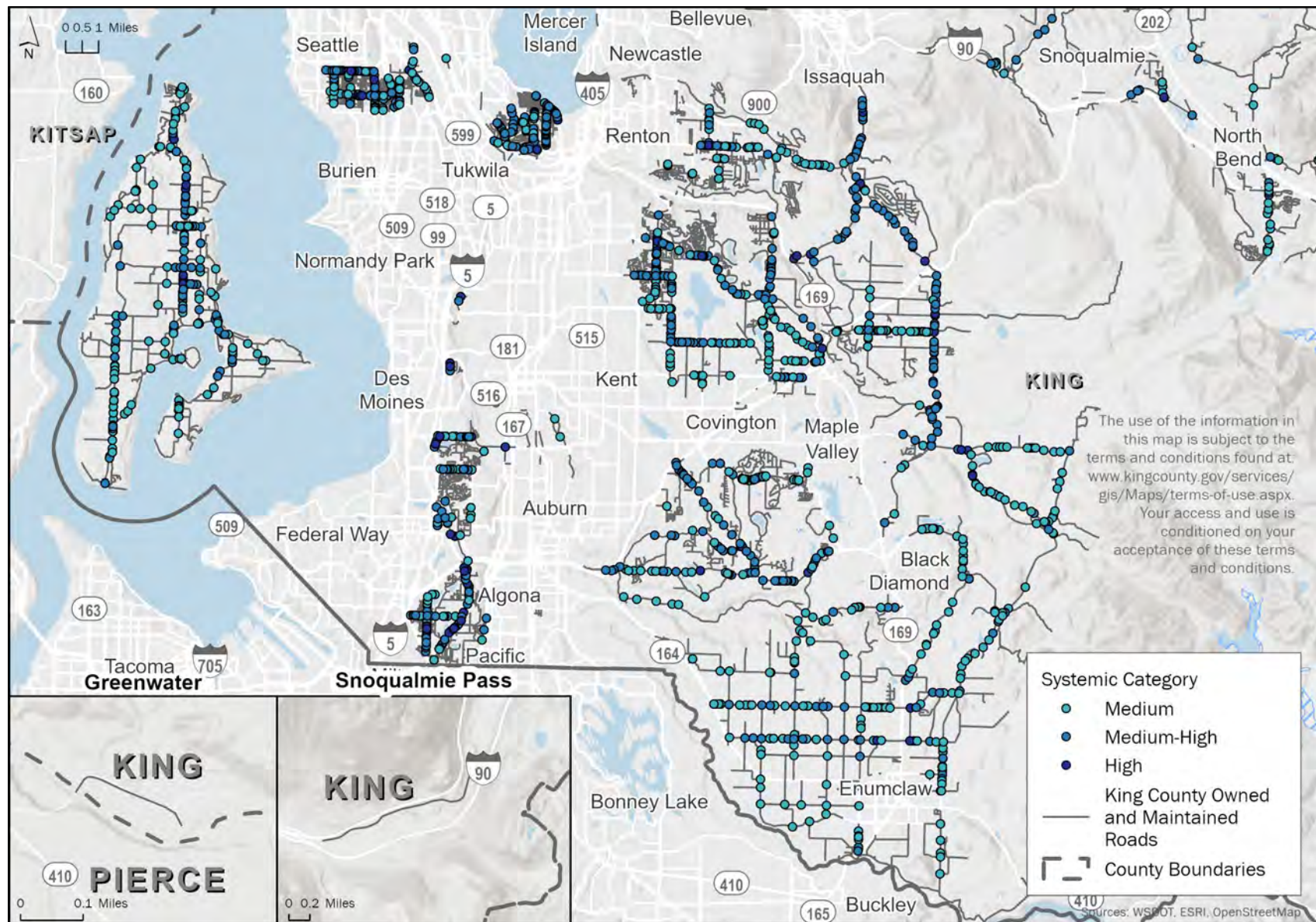


Figure 14. Intersection Systemic Analysis: South

Roadway Segment Systemic Analysis

Roadway segments were scored based on the 11 criteria summarized in Table 10. Higher scores indicated the presence of more systemic risk factors. Some criteria applied to both urban and rural segments and some criteria applied to only urban or only rural segments. Like the intersection systemic analysis, local and arterial roadway segments were scored differently due to the lack of volume data and the inapplicability of some geometric characteristics on local roads.

Table 10. Roadway Segment Systemic Analysis Rubric

Segment Characteristics					
<i>Risk Factor</i>	<i>Characteristic</i>	<i>Urban/Rural</i>	<i>Tiers</i>	<i>Points</i>	<i>Maximum Points</i>
Traffic volume	Average daily traffic	Both	< 1,000 or local access	1	10
			≥ 1,000 to 5,000	2	
			≥ 5,000 to 10,000	4	
			≥ 10,000 to 15,000	6	
			≥ 15,000 to 20,000	8	
			≥ 20,000	10	
Speed	Speed limit	Both	≤ 25 mph	1	10
			30 to 35 mph	4	
			40 to 45 mph	8	
			≥ 50 mph	10	
Roadway type	Number of through lanes	Both	≤ 2	1	5
			3	2	
			4	3	
			5	5	
Median type	Two-way left-turn lane and median presence	Both	Two-way left-turn lane presence, median presence, or local access	0	2
			No two-way left-turn lane or median presence	2	
Roadway geometry	Horizontal curve	Both	No horizontal curve or local access	0	2
			Horizontal curve present	2	
Lighting	Lighting presence	Both	Lighting present or local access	0	2
			No lighting present	2	
Pedestrian exposure	Higher density zoning	Both	Not within 1/4 mile of higher density zoning (1/8 mile for local access)	0	2
			Within 1/4 mile of higher density zoning (1/8 mile for local access)	2	
Pedestrian exposure	Sidewalk presence	Urban	Sidewalk present or local access	0	1
			No sidewalk present	1	
Bicyclist exposure	Bicycle facility presence	Urban	Bicycle facility present or local access	0	2
			No bicycle facility present	2	
Road shoulder condition	Paved shoulder	Rural	≥ 4 ft paved shoulder present or local access	0	2
			< 4 ft paved shoulder present	1	
			No paved shoulder	2	
Road shoulder/median condition	Centerline or shoulder rumble strip presence	Rural	Rumble strip present or local access	0	1
			No rumble strip present	1	

Roadway segments were grouped into the five categories shown in Table 11 based on their scores.

Table 11. Roadway Segment Systemic Analysis Categories

Systemic Category	Segment Score	Road Miles	Percentage of Road Miles
Low	0 to 5	807	55%
Medium-low	6 to 12	308	21%
Medium	13 to 15	189	13%
Medium-high	16 to 20	118	8%
High	21 to 36	48	3%

Roadway segment systemic analysis results for the north and south county areas are shown in Figure 15 and Figure 16, respectively. More detailed, zoomed-in maps of the systemic analysis roadway segments are included in Appendix B.

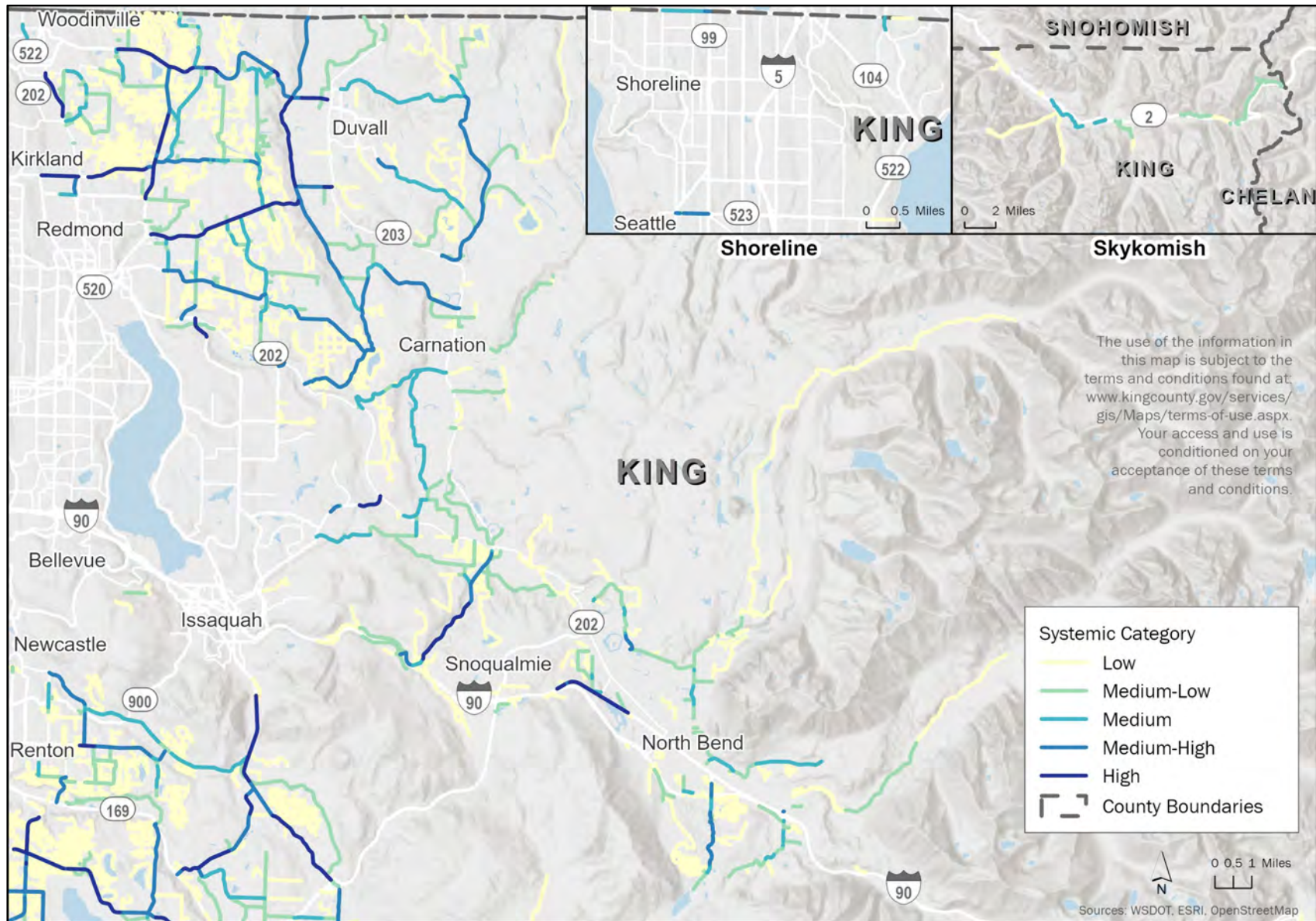


Figure 15. Roadway Segment Systemic Analysis: North

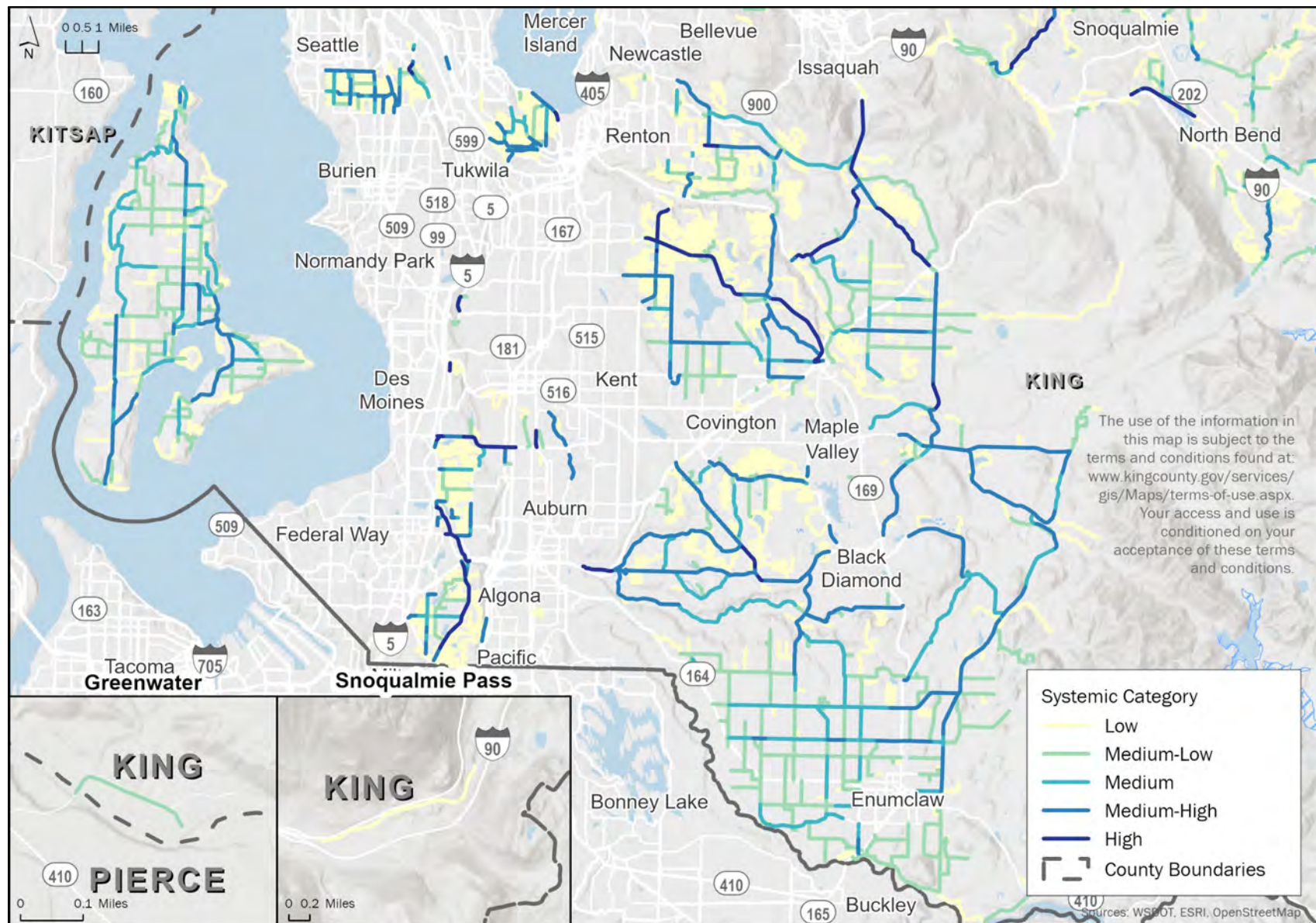


Figure 16. Roadway Segment Systemic Analysis: South

Project Identification

Potential project locations were identified through a collaborative process between the consultant project team and King County. The initial pool of locations was drawn from the HIN, ensuring that the prioritization effort focused on areas with documented crash history and potential for safety improvement. The EPDO, systemic, and emphasis area scores were combined with demographic information to prioritize locations. Possible countermeasures, including cost estimates and implementation timeframes, were identified for the highest scoring locations.

The prioritization approach memorandum in Appendix C includes additional details on this process.

Location Prioritization

The prioritization of potential locations was completed using a scoring rubric developed with King County. The rubric incorporated the EPDO analysis results, systemic analysis results, overrepresented emphasis areas, and demographic considerations.

Demographic considerations were included because an increasing amount of transportation safety research has demonstrated the role that socioeconomic factors such as income, race, and language play in collision risk, particularly in relation to pedestrian-involved collisions (see Appendix A for more detail). These factors may increase community members' risk of being involved in a serious collision and limit their capacity to recover financially or physically after a crash has occurred.

To address these factors, the Consolidated Demographics Index for King County Census Tracts geographic information system data (King County 2025) were used to inform prioritization, engagement, and other equity considerations. These data combine census tract-level demographic information for household income, race/ethnicity, and English proficiency into a single index. This indexed score provides a simple means to understand an area's demographics relative to other King County areas. Higher indexed scores indicate that a tract's residents are more likely to have a lower household income, be non-White, and speak less-than-proficient English. The Consolidated Demographics Index for King County Census Tracts is shown in Figure 17.

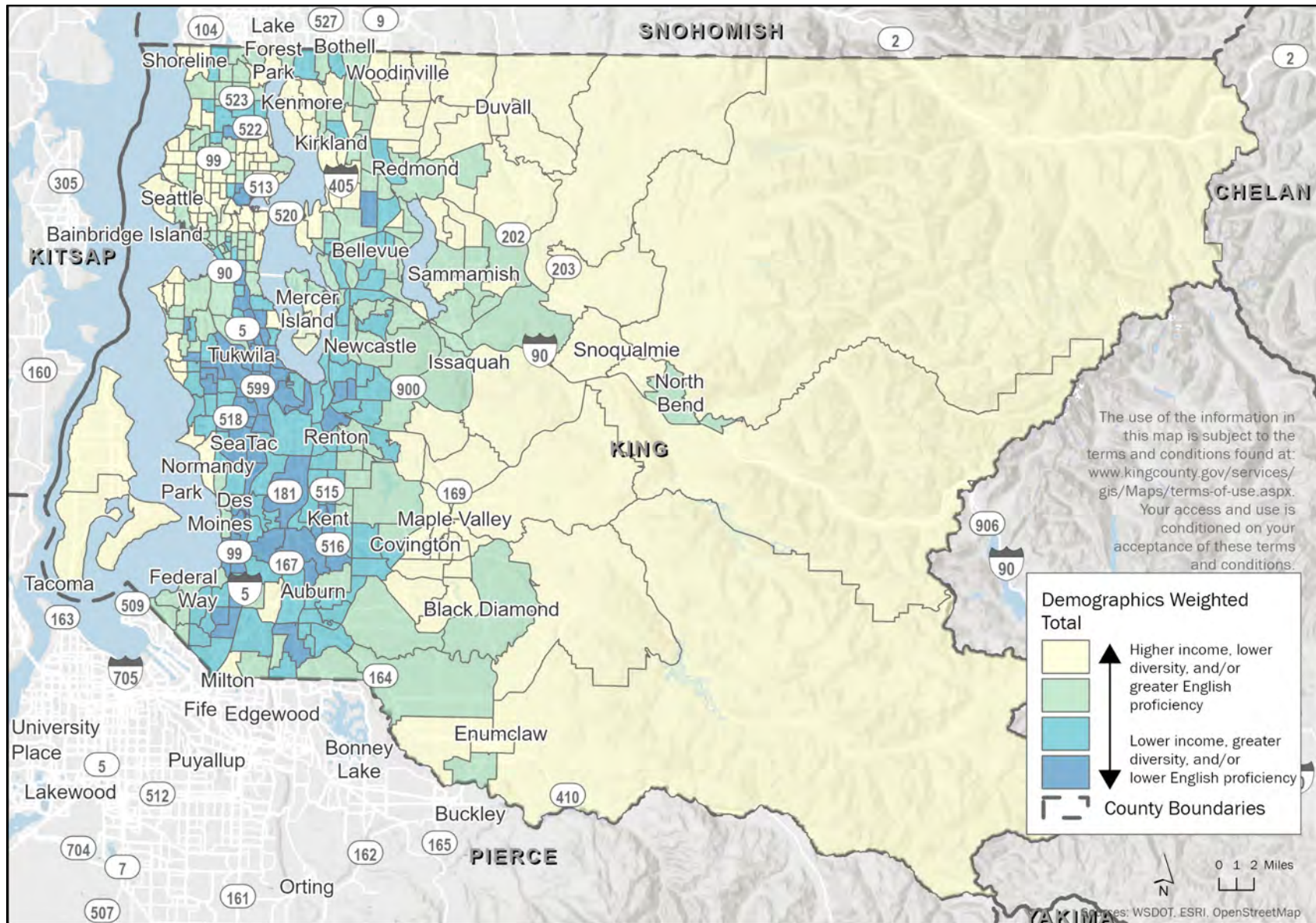


Figure 17. Consolidated Demographic Index for King County Census Tracts (King County 2025)

All HIN intersections and roadway segments were prioritized based on the rubric detailed in Appendix C. Table 12 shows a summarized version of the rubric.

Table 12. Summarized Prioritization Rubric

Category	Maximum Points	Percentage of Score
HIN EPDO percentile	10	50%
Systemic analysis category	6	30%
Emphasis areas	3	15%
Consolidated Demographic Index category	1	5%
Total Possible Score	20	100%

EPDO = equivalent property damage only; HIN = high-injury network.

HIN locations where recent projects have addressed—or likely will address—the reported collision trends were omitted. The top 30 remaining locations were selected as locations for project identification. Project locations in the north and south county areas are shown in Figure 18 and Figure 19, respectively.

A list of all prioritized HIN locations is included in Appendix D. Zoomed-in maps of all prioritized HIN locations are included in Appendix B.

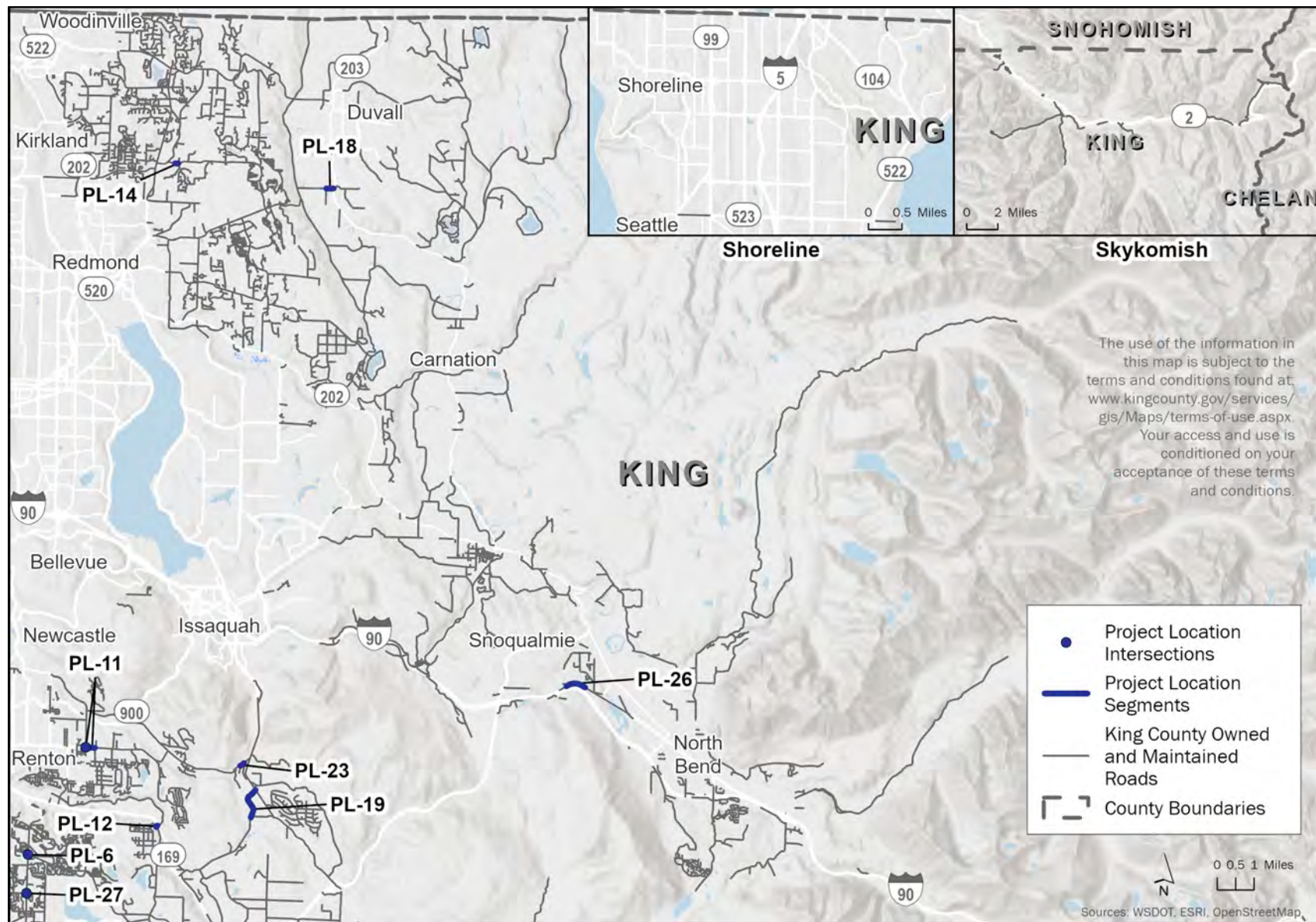


Figure 18. Project Locations: North

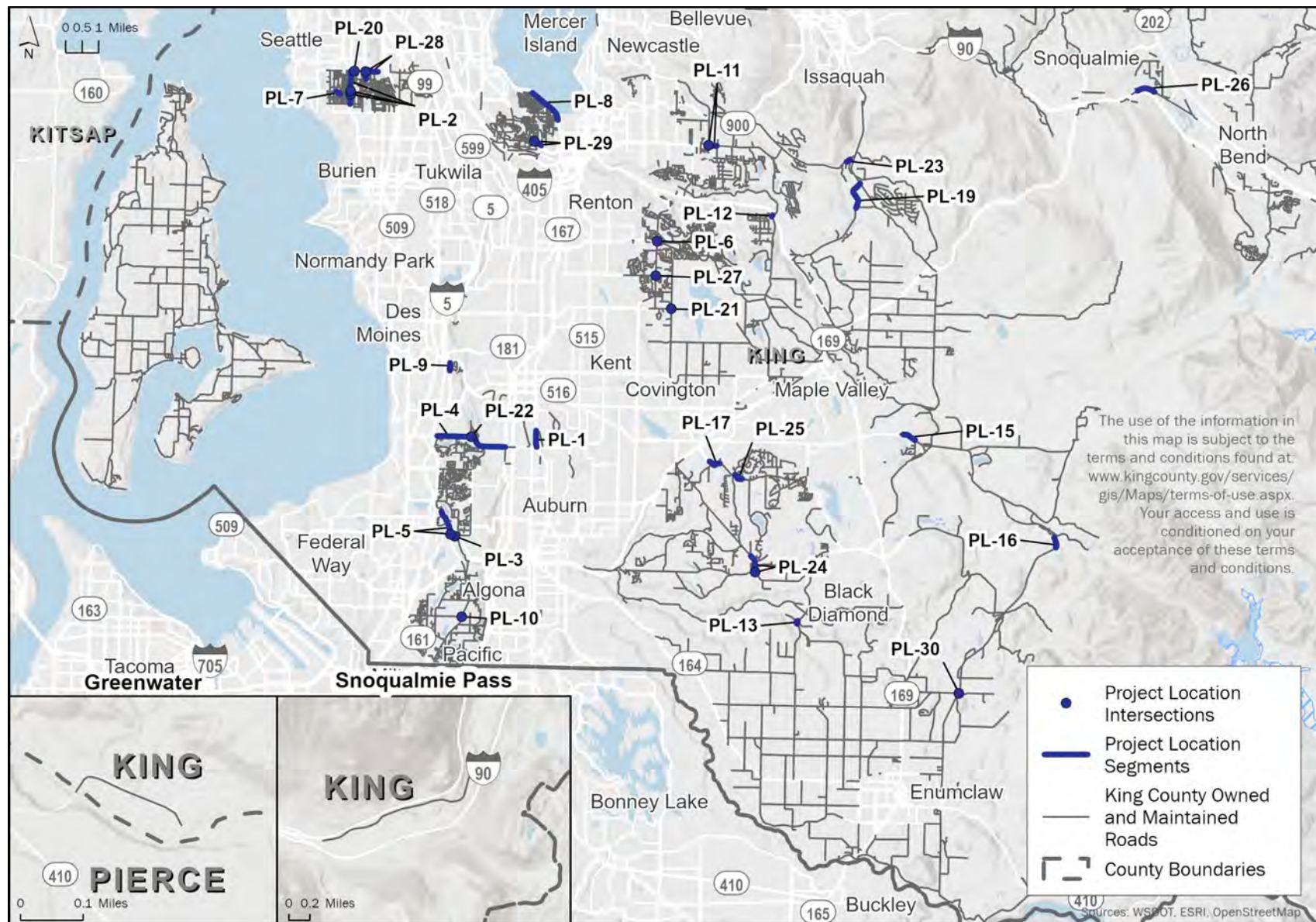


Figure 19. Project Locations: South

Potential Countermeasure Identification

Project locations were reviewed in coordination with King County staff. A broad set of potential treatments was considered at each location. From the broad set of potential treatments at each location, a subset of countermeasures was selected as the preferred potential project. Project locations and preferred potential projects may change as the Plan is implemented; as more refined, site-specific analyses are completed; and as funding allows.

Project Details

For each of the project locations, project details were compiled to provide a comprehensive understanding of potential improvements. Project details included planning-level cost estimates, expected implementation timeframes, required coordination, and the relevant Safe Systems Approach categories. These details provide King County with a clear basis for comparing and advancing projects into subsequent design and implementation phases.

Planning level cost estimate ranges assigned to each project location are shown in Table 13. These planning-level estimates provide a means to compare potential projects without requiring detailed design or engineering at this stage. The ranges reflect the relative scale of investment—from small, low-cost treatments under \$10,000 to larger, more complex projects exceeding \$500,000. These categories allow projects to be considered not only on safety impact and need but also on the magnitude of resources likely required for implementation.

Table 13. Planning Level Cost Estimate Ranges

Relative Cost	Planning Level Cost Estimate Range
\$	< \$10,000
\$\$	\$10,000 to \$100,000
\$\$\$	\$100,001 to \$500,000
\$\$\$\$	> \$500,000

The implementation timeframe of each project was also considered. Timeframe definitions assigned to potential projects are shown in Table 14. These definitions are intended to help King County align project planning with realistic delivery schedules, coordination, and funding. Short-term projects are those that can be advanced quickly, requiring less than one year for implementation. Medium-term projects generally require additional planning, design, funding, and/or coordination and are expected to be delivered within 1 to 10 years. Long-term projects are anticipated to take more than 10 years to complete, often due to their complexity, scale, coordination requirements, or dependency on larger infrastructure or funding opportunities. Actual implementation timelines will vary based on funding availability and staff capacity.

Table 14. Timeframe Definitions

Timeframe	Definition
Short-term	< 1 year
Medium-term	1 to 10 years
Long-term	> 10 years

Projects likely to require jurisdictional coordination were also noted to assist in planning and implementation.

Each potential project was reviewed from the standpoint of the most relevant Safe Systems Approach elements of safer speeds and safer roadways. The applicable Safe Systems Approach elements were identified for each project.

Prioritized Potential Project Location List

The prioritized potential project location list, including related details, is shown in Table 15.

Table 15. Prioritized Potential Project Location List

No.	HIN ID	Location Description	Potential Projects			Short- and Medium-Term Cost Range ^a	Safe Systems Approach
			Short-Term	Medium-Term	Long-Term		
1	SEG 5	83rd Avenue S from S 277th Street to Kent city limits		<ul style="list-style-type: none"> • Signing • Delineation • Radar speed feedback sign • Evaluate narrower lane widths 	<ul style="list-style-type: none"> • Lighting (C) 	\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
2	INT 2	16th Avenue SW and SW 107th Street	<ul style="list-style-type: none"> • Lane reduction • Pedestrian-activated crossing beacons/RRFBs • Curb bulbs: SW 100th Street to SW 107th Street 	<ul style="list-style-type: none"> • Review signal timings • Assess signal for leading pedestrian interval • Assess increased clearance time 		\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
	SEG 12	16th Avenue SW from SW 112th Street to SW Roxbury Street					
	INT 5	16th Avenue SW and SW 106th Street					
3	INT 4	Peasley Canyon Road S and S 321st Street		<ul style="list-style-type: none"> • Signal improvements 	<ul style="list-style-type: none"> • Realignment 	\$\$\$\$	<ul style="list-style-type: none"> • Safer roadways
4	SEG 25	S 272nd/S 277th Street from I-5 junction to 68th Avenue S	<ul style="list-style-type: none"> • Speed study 	<ul style="list-style-type: none"> • Radar speed feedback sign • Guardrail reflectivity • Delineation 		\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
5	SEG 26	Military Road S from S 320th SE to 34th Place S	<ul style="list-style-type: none"> • Speed study • Trim vegetation 	<ul style="list-style-type: none"> • Review signal timings • Assess signal for leading pedestrian interval 		\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
	INT 30	S 320th Street and Military Road S					
6	INT 3	SE Petrovitsky Road and 140th Avenue SE	<ul style="list-style-type: none"> • Speed study 	<ul style="list-style-type: none"> • Review signal timings • Assess signal for leading pedestrian interval • Assess increased in clearance time • Radar speed feedback sign 	<ul style="list-style-type: none"> • Evaluate slip lane • Access control 	\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
7	SEG 16	SW 107th Way from 22nd Avenue SW to 25th Avenue SW	<ul style="list-style-type: none"> • Delineation • Speed study 	<ul style="list-style-type: none"> • Center islands • Evaluate narrower lane widths 		\$\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
8	SEG 21	Rainier Avenue S from S 106th Street to S 116th Street		<ul style="list-style-type: none"> • Lane reduction • Curb bulbs • Buffered bike lane 		\$\$\$\$	<ul style="list-style-type: none"> • Safer roadways
9	SEG 45	Military Road S north of S 240th Street		<ul style="list-style-type: none"> • Signing • Radar speed feedback sign 		\$\$	<ul style="list-style-type: none"> • Safer speeds
10	INT 1	S 360th Street and Military Road S		<ul style="list-style-type: none"> • Roundabout 		\$\$\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways

No.	HIN ID	Location Description	Potential Projects			Short- and Medium-Term Cost Range ^a	Safe Systems Approach
			Short-Term	Medium-Term	Long-Term		
11	INT 11	SE 128th Street and 164th Avenue SE	• Speed study			\$	• Safer speeds
	SEG 30	SE 128th Street from 164th Avenue SE to Patriot Way SE					
12	SEG 3	196th Avenue SE from SE 162nd Street to SR 169		• Centerline rumble strips	• Lighting (C) • Superelevation	\$	• Safer roadways
13	SEG 6	212th Way SE west of SE 358th Street		• Signing	• Lighting (C)	\$	• Safer roadways
14	SEG 8	NE 133rd Street from 198th Avenue NE to Bear Creek		• Signing • Centerline rumble strips • Raised pavement markings	• Replace bridge	\$	• Safer roadways
15	SEG 15	SE Kent Kangley Road from 268th Avenue SE to 262nd Avenue SE	• Speed study	• Signing • Radar speed feedback sign • Centerline rumble strips • Shoulder rumble strips • Evaluate for High friction surface treatment	• Lighting (C)	\$\$	• Safer speeds • Safer roadways
16	SEG 22	Cumberland Kanaskat Road SE north of SE Green River Headworks Road SE		• Signing • Delineation • Shoulder rumble strips	• Superelevation	\$	• Safer roadways
17	SEG 32	Covington Way SE from 173rd Place SE to SE Wax Road		• Signing • Centerline rumble strips • Shoulder rumble strips	• Roundabout at 164th Place SE	\$\$	• Safer roadways
18	SEG 34	NE 124th Street from 262nd Avenue NE to SR 203		• Signing • Wider edge lines	• Shoulder rumble strips • Widen shoulders	\$\$	• Safer roadways
19	SEG 41	Cedar Grove Road SE from SE 156th Street to Issaquah Hobart Road SE	• Speed study	• Signing • Delineation • Centerline rumble strips • Shoulder rumble strips • Wider edge lines	• Lighting (C) • Widen shoulders	\$\$\$	• Safer speeds • Safer roadways
20	INT 7	SW Roxbury Street and 14th Avenue SW		• Limited turning movements (C) • Evaluate pedestrian crossing (prohibition vs. enhanced crossing) (C) • Median island (C)		\$\$	• Safer roadways
21	INT 15	148th Avenue SE and SE 208th Street	• Speed study	• Signing • All-way stop-control		\$\$	• Safer roadways

No.	HIN ID	Location Description	Potential Projects			Short- and Medium-Term Cost Range ^a	Safe Systems Approach
			Short-Term	Medium-Term	Long-Term		
22	INT 17	S 272nd Street and Lake Fenwick Road S	<ul style="list-style-type: none"> • Reduce speed limit • Delineation 	<ul style="list-style-type: none"> • Evaluate acceleration lane • Channelization • Median island 	<ul style="list-style-type: none"> • Add sidewalk 	\$\$\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
23	SEG 19	SE May Valley Road from 231st Place SE to 233rd Way SE		<ul style="list-style-type: none"> • Signing • Delineation • Wider edge lines 		\$\$	<ul style="list-style-type: none"> • Safer roadways
24	SEG 24	192nd Avenue SE from SE Lake Holm Road to 190th Avenue SE	<ul style="list-style-type: none"> • Intersection control evaluation • Reduce speed limit 	<ul style="list-style-type: none"> • Signing • Shoulder rumble strips • Wider edge lines • Radar speed feedback sign 		\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
	INT 20	192nd Avenue SE & SE Lake Holm Road					
25	SEG 31	SE Covington Sawyer Road from 181st Avenue SE to 184th Place SE		<ul style="list-style-type: none"> • Signing 		\$	<ul style="list-style-type: none"> • Safer roadways
26	SEG 53	SE North Bend Way east of 372nd Avenue SE	<ul style="list-style-type: none"> • Speed study 	<ul style="list-style-type: none"> • Signing • Radar speed feedback sign • Turn lane 	<ul style="list-style-type: none"> • Evaluate lane reduction 	\$\$\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways
27	INT 6	SE 192nd Street and 140th Avenue SE		<ul style="list-style-type: none"> • Signing • Striping • Transverse rumble strips • Channelization • Median island 	<ul style="list-style-type: none"> • Lighting (C) • Roundabout 	\$\$\$\$	<ul style="list-style-type: none"> • Safer roadways
28	INT 10	SW Roxbury Street and 8th Avenue SW		<ul style="list-style-type: none"> • Signing (C) • Review signal timings (C) • Raised pavement markings (C) 	<ul style="list-style-type: none"> • Lighting (C) • Channelization (C) • Raised crosswalk 	\$\$	<ul style="list-style-type: none"> • Safer roadways
	SEG 50	8th Avenue SW from SW Roxbury Street to SW 100th Street					
	SEG 69	SW Roxbury Street east of 8th Avenue SW					
29	INT 13	Renton Avenue S and S 128th Street	<ul style="list-style-type: none"> • Sight distance evaluation • Lane reduction 	<ul style="list-style-type: none"> • Median island 		\$\$\$	<ul style="list-style-type: none"> • Safer roadways
	SEG 90	Renton Avenue S north of S 130th Street					
30	INT 8	Veazie-Cumberland Road SE and SE 392nd Street	<ul style="list-style-type: none"> • Sight distance evaluation • Intersection control evaluation • Speed study 	<ul style="list-style-type: none"> • Signing • Striping • Shoulder rumble strips • Radar speed feedback sign 	<ul style="list-style-type: none"> • Intersection realignment 	\$\$	<ul style="list-style-type: none"> • Safer speeds • Safer roadways

Projects with a (C) designation likely require coordination or partnership with other agencies.

HIN = high-injury network; INT = intersection; RRFB = rectangular rapid flashing beacon; SEG = roadway segment.

^a Long-term improvements are typically assumed to be in the \$\$\$–\$\$\$\$ range.

References

King County. 2025. Consolidated Demographics Index for King County Census Tracts.

King County. <https://gis-kingcounty.opendata.arcgis.com/datasets/kingcounty::consolidated-demographics-index-for-king-county-census-tracts-demographic-index-area/explore?location=47.425978%2C-121.802436%2C8.99&showTable=true>.

USDOT (U.S. Department of Transportation). 2025. What is a Safe System Approach?

U.S. Department of Transportation. <https://www.transportation.gov/safe-system-approach>.

WSDOT (Washington State Department of Transportation). 2025a. Crash Data, 2014–2023, King County. Washington State Department of Transportation, Olympia, WA.

WSDOT. 2025b. Highway Safety: Collision Data Portal. Washington State Department of Transportation. Accessed April 4, 2025.

<https://remoteapps.wsdot.wa.gov/highwaysafety/collision/data/portal/public/>.

WSTC (Washington Traffic Safety Commission). 2024. Washington State Strategic Highway Safety Plan. Washington Traffic Safety Commission, Olympia, WA.

[https://targetzero.com/wp-content/uploads/2024/11/Washington Target Zero Plan FINAL 11-04-2024 Accessible.pdf](https://targetzero.com/wp-content/uploads/2024/11/Washington%20Target%20Zero%20Plan%20FINAL%2011-04-2024%20Accessible.pdf).

Appendices

Appendix A: Collision Analysis Methodology Memorandum

Appendix B: Detailed Maps

Appendix C: Prioritization Approach Memorandum

Appendix D: Prioritized HIN Locations

Appendix A

Collision Analysis Methodology Memorandum

DATE: August 21, 2025
TO: John Vander Sluis, King County Roads Services Division
FROM: Kate Bradbury and Mitch Hadfield, Parametrix
SUBJECT: Final Collision Analysis Methodology Memorandum
PROJECT NAME: King County Traffic Safety Action Plan

Analysis Methodology and Assumptions

Introduction

Parametrix is working with King County to complete a Traffic Safety Action Plan (hereafter referred to as the *Plan*). The Plan is funded through a U.S. Department of Transportation Safe Streets and Roads for All grant and is designed to meet program requirements. The Plan will identify localized and systemic treatments to improve the safety of all road users and reduce crash severity, with the goal of reducing serious injuries and fatalities on county roads. The Plan will be developed through the lens of the Safe Systems Approach (USDOT 2025), while emphasizing actions under King County's direct influence. The Plan will address the unincorporated road network managed by King County.

This document defines the methodology and assumptions pertaining to the collision analysis component of the Plan. This component includes the completion of an evidence-based, data-driven, systemwide analysis of collisions on the unincorporated King County road network. Figure 1 shows a process diagram of the collision analysis components and their relationships to one another. Each item is discussed in more detail in the subsequent sections.

Data and References

Crash Data

Ten years (2014–2023) of Washington State Department of Transportation (WSDOT) crash data, provided by King County, will be used in the analysis.

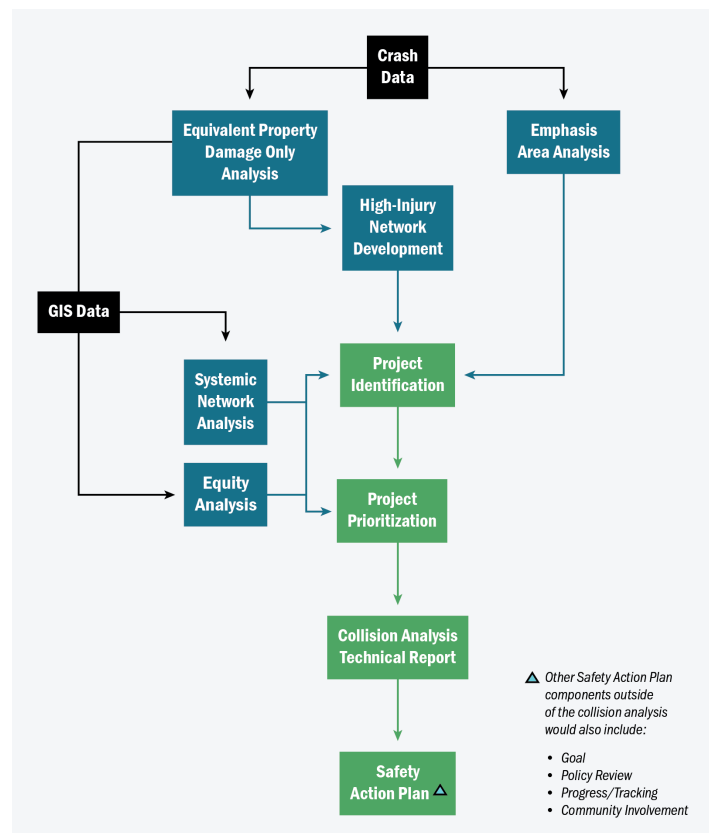


Figure 1. Traffic Safety Action Plan Collision Analysis Process Diagram

Geographic Information System Data

The following geographic information system (GIS) data, provided by King County, will be used in the collision analysis:

- King County roadway network.
- King County functional classification.
- Speed limits.
- Traffic volumes.
- Number of through lanes.
- Turn lanes.
- Roadway shoulder widths and types.
- Medians.
- Two-way left-turn lanes.
- Existing guardrail.
- Existing sidewalk.
- Zoning.
- Urban growth areas.
- Existing rumble strips.
- Existing bike lanes.
- Existing traffic signs.
- Existing signals.
- Existing streetlights.
- Transit stops.
- Schools.
- Consolidated Demographics Index.

Additional Data and Reference Sources

The following sources will be used for additional reference and information, as outlined in the subsequent sections of this document:

- Washington State Strategic Highway Safety Plan (WSTC 2024).
- King County annual Traffic Safety Reports (King County 2023).
- Comprehensive (societal) crash costs by severity level.¹
- WSDOT Crash Data Portal (WSDOT 2025).
- Federal Highway Administration Proven Safety Countermeasures (FHWA 2025b).
- Federal Highway Administration Crash Modification Factor Clearinghouse (FHWA 2025a).
- National Highway Traffic Safety Administration Countermeasures that Work (NHTSA 2023).

Methodologies

Crash Summary and Trends

Crash data received from King County will be summarized by year, severity, crash type, contributing factors, and user group to identify high-level crash trends. These statistics are similar to the statistics summarized in the King County Traffic Safety Reports (King County 2023) but will build upon that work and include more years of data. This summary is intended to provide overall context for safety conditions in King County. Data will be analyzed and presented in tabular form in the report. The crash types and contributing factors will be aggregated into more

¹ Per a phone call with WSDOT, May 13, 2025.

general categories based on the crosswalk tables (see Attachment A) to simplify and facilitate the analysis. The Plan will also include graphical representations, as applicable.

Emphasis Areas

An emphasis area crash analysis will be conducted to compare crash trends in King County to those same trends at the statewide level. This analysis will focus on fatal and serious injury crashes and include the primary and secondary emphasis areas defined in the Washington State Strategic Highway Safety Plan. The following emphasis areas will be analyzed:

- High risk behavior including:
 - Distracted driver crashes.
 - Impairment crashes.
 - Speeding related crashes.
 - Unrestrained occupant crashes.
- Crash type/location including:
 - Intersection related crashes.
 - Lane departure crashes including:
 - Run-off-the-road crashes.
 - Opposite direction crashes.
- Road users by age group including:
 - Young driver (motor vehicle driver aged 16 to 25) crashes.
 - Older driver (motor vehicle driver aged 65 and older) crashes.
- Road users by mode of travel including:
 - Active transportation user crashes including:
 - Pedestrian crashes.
 - Bicyclist crashes.
 - Motorcycle crashes.
 - Heavy vehicle crashes including:
 - School bus crashes.
- Others including:
 - Drowsy driver crashes.
 - Wildlife crashes.
 - Vehicle-train crashes.
 - Work zone crashes.

Emphasis area data for statewide crashes will be obtained from the WSDOT Crash Data Portal, specifically the TZ Fatalities and Suspected Serious Injuries by Year summary report (WSDOT 2025).

The emphasis area analysis will highlight types of King County crashes that are overrepresented relative to statewide distributions. The analysis will look separately at crashes that occurred on urban vs. rural roadways in King County to highlight any potential differences in trends between urban and rural environments.

For the purposes of this analysis, any emphasis area for which the crash percentage in King County exceeds the statewide percentage by 5% or more will be considered overrepresented.

High-Injury Network Identification

A high-injury network (HIN) will be developed that represents the county road locations where a disproportionate number of fatal and serious injury crashes occur. This data-driven approach will help to identify where resources can be focused to have the greatest impact on improving road safety conditions in King County.

The county road network will be categorized into urban and rural locations using the King County Urban Growth Area boundary defined by the King County Comprehensive Plan. Locations will be further classified into intersections and roadway segments to account for typical differences in crash patterns and contributing circumstances. Crashes will be assigned to either an intersection or a roadway segment within the King County transportation network based on their geographic location and Junction Relationship crash data field.

An equivalent property damage only (EPDO) analysis will be performed to identify the HIN locations. EPDO analysis uses a crash severity weighting system that enables comparison of crashes with different severities on a consistent scale. Additional information pertaining to the EPDO analysis methodology and application is included in Chapter 4.2 of the American Association of State Highway and Transportation Officials Highway Safety Manual (AASHTO 2010).

Each intersection and roadway segment in the transportation network will be assigned an EPDO score based on the severity of crashes that occurred at that location. Individual crash scores are calculated by dividing the estimated comprehensive cost of the crash by the estimated comprehensive cost of a property-damage-only crash; thereby assigning higher values to more severe outcomes. The total EPDO score for an intersection or roadway segment is the sum of all crash scores at that location. To account for differences in length, roadway segment EPDO scores will be normalized by segment length. Safety analyses in large, rural areas can be challenging from a sample size perspective; this approach allows for all crashes to be considered while maintaining greater emphasis on those with higher severities.

Intersections and roadway segments will be sorted based on their EPDO scores, with the highest scoring intersections and segments forming the basis of the HIN. The threshold for inclusion in the HIN will be determined in association with King County to ensure a reasonable network.

Comprehensive (societal) crash costs were obtained from a discussion with WSDOT in May 2025 (see Table 1). Comprehensive costs are intended to reflect all calculable economic crash costs, such as wage and productivity losses, medical expenses, administrative expenses, motor vehicle damage, and employers' uninsured costs, as well as research-based estimates of what people would pay to reduce their safety and health risks. WSDOT costs were updated in 2024 and reflect 2023 dollars. Table 1 also notes the EPDO weights for each severity level based on these crash costs.

Table 1. WSDOT Societal Crash Costs and EPDO Weights by Severity

Severity Level	WSDOT Societal Crash Cost	EPDO Weight
Fatal	\$4,308,200	223
Serious injury	\$4,308,200	223
Minor injury	\$304,200	16
Possible injury	\$180,600	9
Property damage only	\$19,300	1

EPDO = equivalent property damage only; WSDOT = Washington State Department of Transportation.

A manual smoothing process will be applied to the initial HIN network to create logical, continuous corridors and reduce fragmentation. This approach helps ensure that the resulting network reflects meaningful, logical, and cohesive roadway corridors rather than a collection of small or isolated segments. Creating more continuous corridors supports the identification and implementation of systemic safety treatments by highlighting broader patterns and corridors where consistent countermeasures can be applied effectively. However, because the county road network includes short sections of isolated roads in incorporated areas and roadways where the County's jurisdiction does not extend across the full width of the road, there may be some isolated locations that are reasonable to include as part of the HIN. All smoothing decisions will be reviewed by King County and documented to ensure appropriate contextual considerations have been taken.

The final HIN will be a subset of King County intersections and roadway segments that will be used as the foundation of identifying priority locations for potential project development.

Systemic Network Analysis

A systemic network analysis will be conducted using available GIS data to assess the King County road network for characteristics often associated with higher-severity crashes. This approach is intended to be a more proactive approach to safety analysis that does not rely on a history of reported crashes to identify a priority network. This analysis will include evaluating the following roadway or intersection characteristics:

- Roadway segment characteristics including:
 - Average daily traffic volume ranges.
 - Shoulder widths.
 - Number of through lanes.
 - Speed limits.
 - Presence of median/two-way left-turn lanes.
 - Presence of curves (manually identified from GIS data).
 - Presence of sidewalks.
 - Presence of bicycle facilities.
 - Presence of lighting.
 - Presence of rumble strips.
 - Proximity to higher density land use zones (community business, neighborhood business, office, residential zones of 12 or more dwelling units per acre, and regional business).

- Intersection characteristics including:
 - Average daily traffic volume ranges.
 - Speed limits.
 - Intersection control types including:
 - Roundabouts.
 - Signals.
 - All-way stops.
 - Minor road stops/yields.
 - Presence of turn lanes.
 - Presence of lighting.
 - Proximity to higher density zoning areas.
 - Proximity to transit stops.
 - Proximity to schools.

These characteristics are commonly associated with higher frequency and higher severity crashes for which data are available. These frequency and severity correlations will be validated with King County collision data to confirm the assumed relationships and applicability. Intersections and roadway segments will then be given a score based on their characteristics. The specifics of this scoring will be discussed with King County during development to ensure consistency with their priorities and policies. High-scoring locations will be identified, ranked, and used in the project prioritization process.

Equity Considerations

Transportation safety research has increasingly examined the role that socioeconomic factors such as income, race, and language play in collision risk—particularly in relation to pedestrian-involved collisions (GHSA 2021, Smart Growth America 2024). Multiple factors may contribute to traffic safety differences across demographic/socioeconomic groups. Such differences may include the rate of car ownership (lower-income households are expected to use vulnerable active modes at higher rates), the age of owned vehicles (lower income-households are expected to drive older vehicles with fewer safety features), neighborhood-level differences in roadway design, the likelihood of living near highways and other very high volume roads (Dumbaugh et al. 2022), the fiscal capacity of the local government to fund improvements (Chupak et al. 2025), the likelihood of using passenger restraints (Lazarus et al. 2025), trip purpose (lower-income households are expected to make more utilitarian vs. recreational trips and therefore have fewer travel route options) (Dumbaugh and Stiles 2025), the rate of drug or alcohol use while traveling (Dumbaugh and Stiles 2025), and community norms (Haddad et al. 2023). In addition, residents with lower incomes, limited English proficiency, or other characteristics may be more likely to be vulnerable to nonphysical effects of collisions, such as the ability to afford post-crash medical care.

To address the issues described previously, this project will use the Consolidated Demographics Index for King County Census Tracts GIS data to inform prioritization, engagement, and other equity considerations. These data combine census tract-level demographic information for household income, race/ethnicity, and English proficiency into a single index. This indexed score provides a simple means to understand an area's

demographics relative to other King County areas. Higher indexed scores indicate that a tract's residents are more likely to have a lower household income, be non-White, and speak less-than-proficient English.

Project and Strategy Development

The HIN will serve as the foundation for identifying potential project locations. A more detailed analysis of the highest scoring locations on the HINs will be performed to identify specific crash patterns and network characteristics to guide location-specific countermeasure selection. The following resources will be referenced to ensure the development of effective solutions at these locations that address the identified trends:

- Federal Highway Administration Proven Safety Countermeasures (FHWA 2025b).
- Federal Highway Administration Crash Modification Factor Clearinghouse (FHWA 2025a).
- National Highway Traffic Safety Administration Countermeasures that Work (NHTSA 2023).

Relevant project information will be documented for each potential project identified, including implementation timeline (short-, medium-, and long-term) and planning level cost estimates.

References

AASHTO (American Association of State Highway and Transportation Officials). 2010. Highway Safety Manual, 1st Edition. American Association of State Highway and Transportation Officials, Washington, DC.

Chupak, Z., S. Hallum, B. Shariati, T. Looney, and A. Kaczynski. 2025. Identifying Disparities in the Relationship Between Neighborhood Walkability and Active Transportation Safety Within South Carolina. *Journal of Transport and Health* 40. <https://doi.org/10.1016/j.jth.2024.101960>.

Dumbaugh, E., and R. Stiles. 2025. Social Vulnerability: A Review of the Literature on Pedestrian Crash Risk in Lower-Income and Minority Communities. *Journal of Transport and Land Use*. <https://doi.org/10.5198/jtlu.2025.2547>.

Dumbaugh, E., W. Li, D. Saha, and W. Marshall. 2022. Why Do Lower-Income Areas Experience Worse Road Safety Outcomes? Examining the Role of the Built Environment in Orange County, Florida. *Transportation Research Interdisciplinary Perspectives* 14. <https://doi.org/10.1016/j.trip.2022.100696>.

FHWA (Federal Highway Administration). 2025a. Crash Modification Factors Clearinghouse. U.S. Department of Transportation, Federal Highway Administration. Accessed April 17, 2025. <https://cmfclearinghouse.fhwa.dot.gov/index.php>.

FHWA. 2025b. Proven Safety Countermeasures. U.S. Department of Transportation, Federal Highway Administration. Accessed April 17, 2025. <https://highways.dot.gov/safety/proven-safety-countermeasures>.

GHSa (Governors Highway Safety Association). 2021. An Analysis of Traffic Fatalities by Race and Ethnicity. Governors Highway Safety Association, Washington, DC. https://www.ghsa.org/sites/default/files/2025-01/race_2021.pdf.

Haddad, H., A. Mondal, C. Bhat, Y. Zhang, J. Liao, J. Macias, R. Lee, and K. Watkins. 2023. Pedestrian Crash Frequency: Unpacking the Effects of Contributing Factors and Racial Disparities. *Accident Analysis and Prevention* 187. https://pages.ischool.utexas.edu/hai-files/files/publications/69/2023-pedestrian_crash_frequency_unpacking_effects_of_contributing_factors_racial_disparities.pdf.

King County. 2023. Traffic Safety Reports. King County, Road Services Division, Seattle, WA. <https://kingcounty.gov/en/dept/local-services/transit-transportation-roads/roads-and-bridges/road-services/traffic/traffic-safety-reports>

Lazarus, S.G., S. Chaudhary, T.P. Moran, T. Miller, K.F. Doh, C.A. Delgado, K. Daniels, and C.A. Rees. 2025. Cradle to Grave: How Social Vulnerability Correlates with Leading Causes of Injury-Related Mortality Among Children and Youth. *Injury Epidemiology* 12. <https://doi.org/10.1186/s40621-025-00619-4>.

NHTSA (National Highway Traffic Safety Administration). 2023. Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices. National Highway Traffic Safety Administration, Washington, DC. <https://www.nhtsa.gov/book/countermeasures/countermeasures-that-work>.

Smart Growth America. 2024. Dangerous by Design. Smart Growth America, National Complete Streets Coalition, Washington, DC. https://wordpress.smartgrowthamerica.org/wp-content/uploads/2024/08/Dangerous-By-Design-2024_5.30.pdf.

USDOT (U.S. Department of Transportation). 2025. What is a Safe System Approach? U.S. Department of Transportation. <https://www.transportation.gov/safe-system-approach>.

WSDOT (Washington State Department of Transportation). 2025. Highway Safety: Collision Data Portal. Washington State Department of Transportation. Accessed April 4, 2025. <https://remoteapps.wsdot.wa.gov/highwaysafety/collision/data/portal/public/>.

WSTC (Washington Traffic Safety Commission). 2024. Washington State Strategic Highway Safety Plan: Target Zero. Washington Traffic Safety Commission, Olympia, WA. https://targetzero.com/wp-content/uploads/2024/11/Washington_Target_Zero_Plan_FINAL_11-04-2024_Accessible.pdf.

Attachment A: Crash Data Crosswalk Tables

Contributing Factors Crosswalk Table

Contributing Factor Category	WSDOT Contributing Circumstance Field
Alcohol/Drugs	Had Taken Medication
	Under Influence of Alcohol
	Under Influence of Drugs
Defective equipment	Operating Defective Equipment
Distracted	Distracted by Adjusting Vehicle Cntrl
	Distracted by Other Occupant
	Distractions Outside Vehicle
	Driver Adjusting Audio or Entertainment
	Driver Interacting with Passengers, Animals or Objects in the Vehicle
	Eating or Drinking
	Grooming
	Lost in Thought / Day Dreaming
	Operating Handheld Cell Phone
	Operating Hands-Free Cell Phone
	Operating Other Electronic Devices (comp
	Other Distractions
	Other Driver Distractions Inside Vehicle
	Smoking
	Unknown Distraction
Driver distraction	Reading or Writing
Failure to yield	Did Not Grant R/W to Non Motorist
	Did Not Grant RW to Vehicle
	Disregard Flagger / Officer
	Disregard Stop and Go Light
	Disregard Stop Sign - Flashing Red
	Disregard Traffic Sign and Signals
	Disregard Yield Sign - Flashing Yellow
Follow too closely	Follow Too Closely
Ill/Asleep/Fatigued	Apparently Asleep or Fatigued
	Apparently Emotional (Depressed, Angry,
	Apparently Fatigued
	Apparently Ill
Improper driving behavior	Failing to Signal
	Improper Backing
	Improper Parking Location
	Improper Passing
	Improper Signal
	Improper Turn/Merge
	Improper U-Turn
	Operating Recklessly or Aggressively
	Over Center Line
	Overcorrecting / Oversteering
	Racing
Inattention	Inattention
None	None
Other	Blank
	Driver Not Distracted
	Light Violation: No Lights/Fail to Dim
	Other
	Other Contributing Circ Not Listed
	Physically Impaired
Speeding	Exceeding Reas. Safe Speed
	Exceeding Reas. Safe Speed
	Exceeding Stated Speed Limit
Wrong-way driving	Non Motorist on Wrong Side of Road

Crash Type Crosswalk Table

Crash Type Category	WSDOT First Collision Type and Object Struck Field
Angle	Entering at angle
	From opposite direction - one left turn - one right turn
	From opposite direction - one left turn - one straight
	From same direction - one left turn - one straight
	From same direction - one right turn - one straight
Animal	Domestic animal (horse, cow, sheep, etc)
	Domestic Animal (ridden)
	Domestic animal other (cat, dog, etc)
	Non Domestic Animal Struck Again
	Vehicle Strikes All Other Non-Domestic Animal
	Vehicle Strikes Deer
	Vehicle Strikes Elk
Bicycle	Bicycle
	Pedalcyclist All Other Involvements "ONE UNIT - PEDALCYCLIST ONLY or PEDALCYCLIST STRIKES PARKED VEHICLE"
	Pedalcyclist Strikes Moving Vehicle
	Pedalcyclist Strikes Pedalcyclist or Pedestrian
	Vehicle - Pedalcyclist
	Vehicle Strikes Pedalcyclist
Fixed object	All Other Fixed Objects (On the Road)
	Boulder (stationary)
	Bridge Abutment
	Bridge Column, Pier or Pillar
	Bridge Rail - Face
	Bridge Rail - Leading End
	Bridge Rail - Through, Over or Under
	Building
	Cable Barrier
	Concrete Barrier/Jersey Barrier - Face
	Concrete Barrier/Jersey Barrier - Leading End
	Concrete Barrier/Jersey Barrier - Through, Over or Under
	Crash Cushions - Impact Attenuators
	Culvert and/or other Appurtenance in Ditch
	Curb, Raised Traffic Island or Raised Median Curb
	Earth Bank or Ledge
	Fence
	Fire Hydrant
	Guardrail - Face
	Guardrail - Leading End
	Guardrail - Through, Over or Under
	Guide Post
	Linear Curb
	Mailbox
	Manhole/Utilities/Drain Grates (Fixed)
	Metal Sign Post
	Overhead Sign Support
	Parking Meter
	Railroad Tracks (ie. Run off the road and hit the tracks)
	Railway Crossing Gate
	Railway Signal Pole
	Retaining Wall (concrete, rock, brick, etc.)
	Reversible Lane Control Gate
	Roadway Ditch
	Rock Bank or Ledge
	Signal Pole
	Street Light Pole or Base
	Traffic Island
	Tree or Stump (stationary)
	Tunnel Wall / Barrier within Tunnel
	Underside of Bridge
	Utility Box
	Utility Pole
	Wood Sign Post
Head-on	From opposite direction - both moving - head-on
	From opposite direction - both moving - head-on
	From opposite direction - one stopped - head-on

Crash Type Category	WSDOT First Collision Type and Object Struck Field
Noncollision	All other non-collision
	Breakage of any part of the vehicle resulting in injury or in further property damage
	Fire started in vehicle
	Into River, Lake, Swamp, etc.
	Jackknife Trailer
	Over Embankment - No Guardrail Present
	Person fell, jumped or was pushed from vehicle
	Vehicle overturned
Other	All Other Multi Vehicle
	From opposite direction - all others
	From same direction - all others
	Not Stated
	Railway Vehicle Strikes Vehicle
	Vehicle Strikes Railway Vehicle
Other object	Closed Toll Gate
	Debris from Previous Collision
	Drawbridge Crossing Gate Arm
	Expansion Joint or Similar (On the Road)
	Fallen rock hit by vehicle (on the road)
	Fallen tree hit by vehicle (on the road)
	Falling rock on vehicle (on the road)
	Falling tree on vehicle (on the road)
	Garbage / Recycle Containers (Out for PU)
	Manhole/Utilities/Drain Cover (Not Secure/Loose)
	Miscellaneous Object or Debris on Road
	Other Objects
	Over Roadway Branches
	Over Roadway Power Lines
	Snow Bank
	Strikes or Was Struck by a Part of Another Vehicle (Not from Load)
	Strikes or Was Struck by Object from the Load of Another Vehicle
	Temporary Traffic Sign or Barricade
	Temporary Traffic Sign, Barricade or Construction Materials
	Tire Tread
Parked	One car entering parked position
	One car leaving parked position
	One parked--one moving
	Trailer Parked (Legally or Not)
Pedestrian	Vehicle backing hits pedestrian
	Vehicle going straight hits pedestrian
	Vehicle hits Pedestrian - All Other Actions
	Vehicle turning left hits pedestrian
	Vehicle turning right hits pedestrian
Rear-end	From same direction - both going straight - one stopped - rear-end
	From same direction - both going straight - both moving - rear-end
	From same direction - both going straight - one stopped - rear-end
	Same direction -- both turning left -- both moving -- rear end
	Same direction -- both turning left -- one stopped -- rear end
	Same direction -- both turning right -- both moving -- rear end
	Same direction -- both turning right -- one stopped -- rear end
Sideswipe, O-D	From opposite direction - both going straight - one stopped - sideswipe
	From opposite direction - both going straight - sideswipe
Sideswipe, S-D	From same direction - both going straight - both moving - sideswipe
	From same direction - both going straight - one stopped - sideswipe
	Same direction -- both turning left -- both moving -- sideswipe
	Same direction -- both turning left -- one stopped -- sideswipe
	Same direction -- both turning right -- both moving -- sideswipe
	Same direction -- both turning right -- one stopped -- sideswipe

Appendix B

Detailed Maps

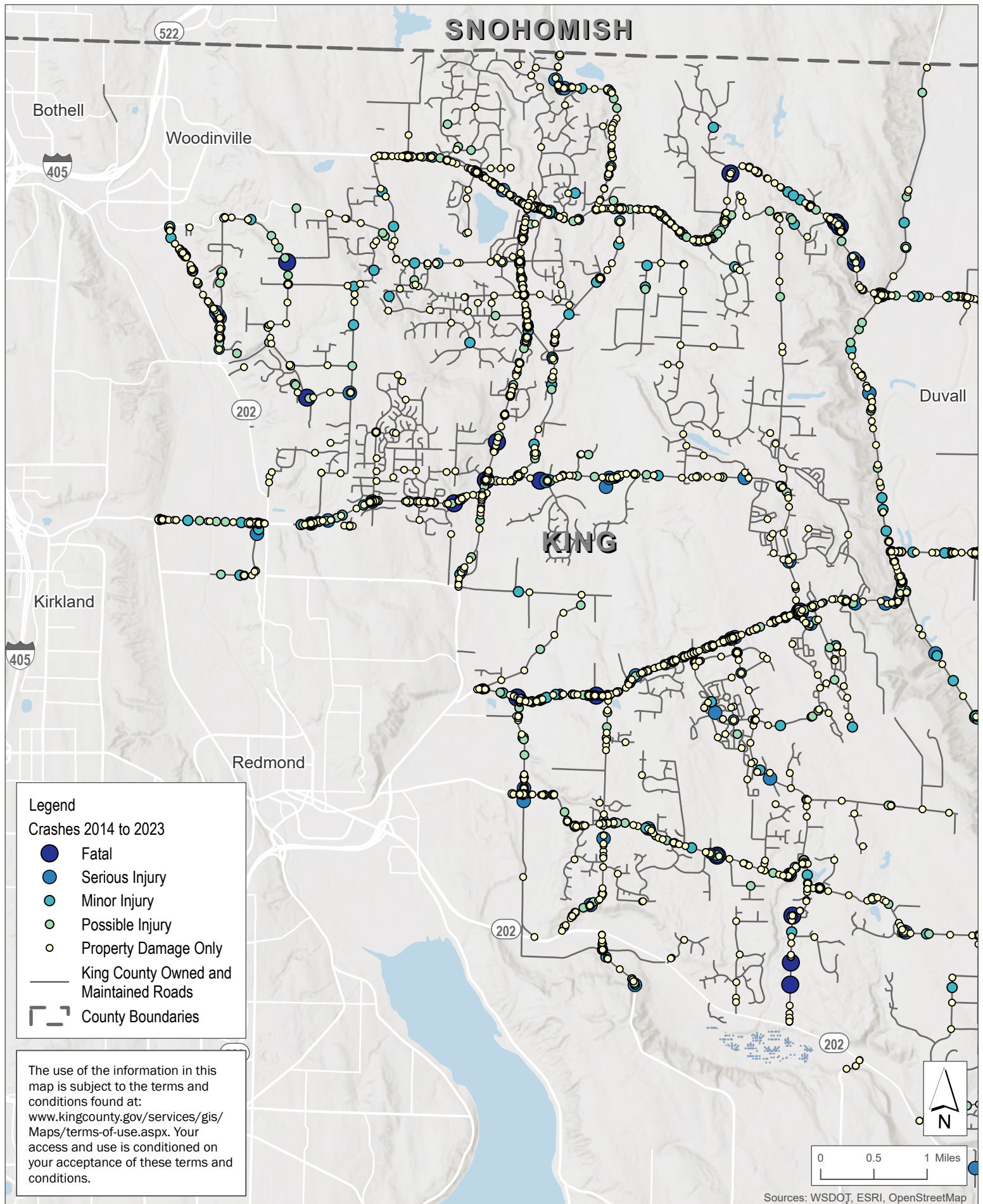
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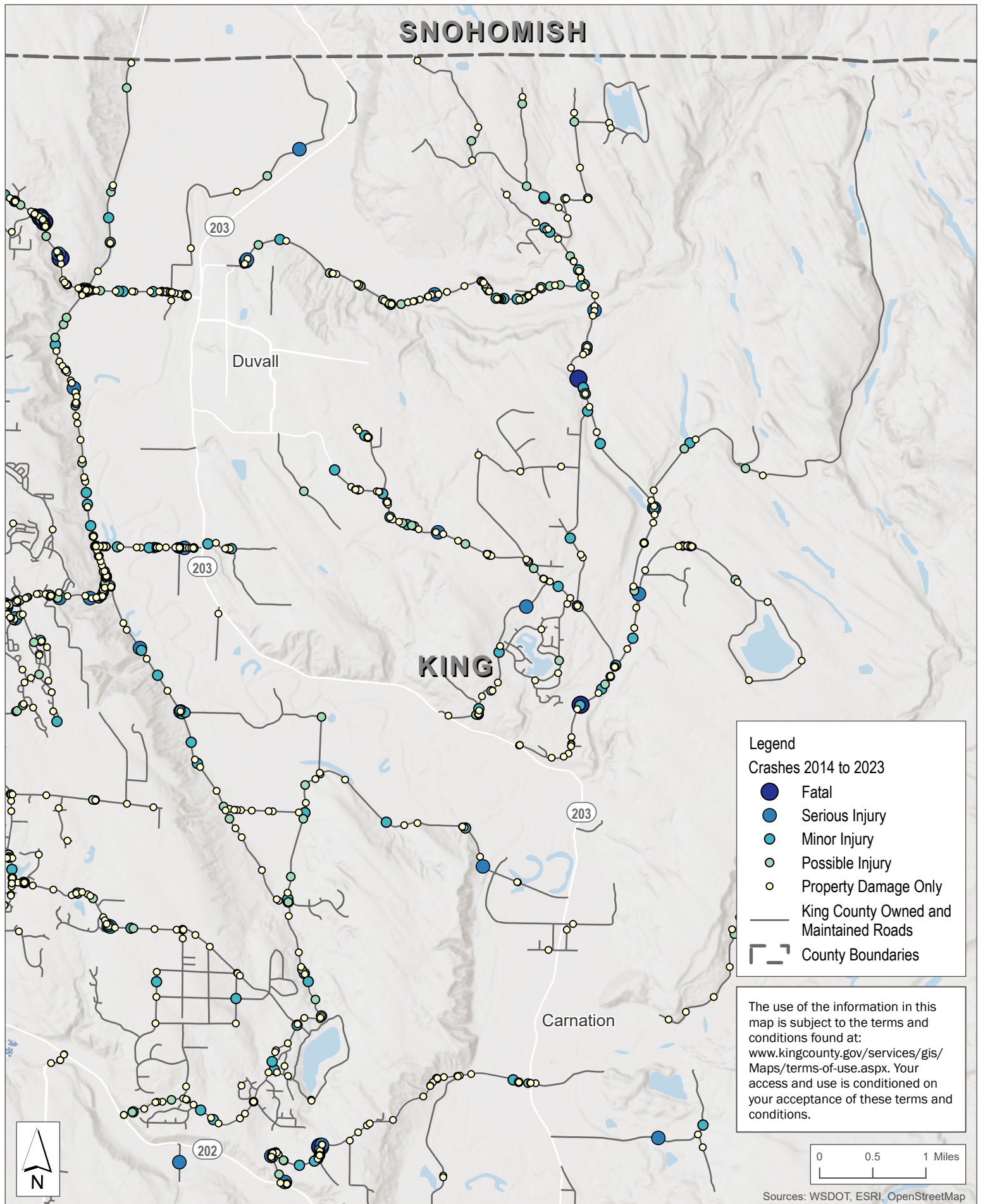
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3. Severe Crashes 2014 to 2023
4. Pedestrian- and Bicyclist-Involved Crashes 2014 to 2023
5. HIN Intersections
6. HIN Segments
7. Systemic Intersections
8. Systemic Segments
9. Prioritized Intersections
10. Prioritized Segments

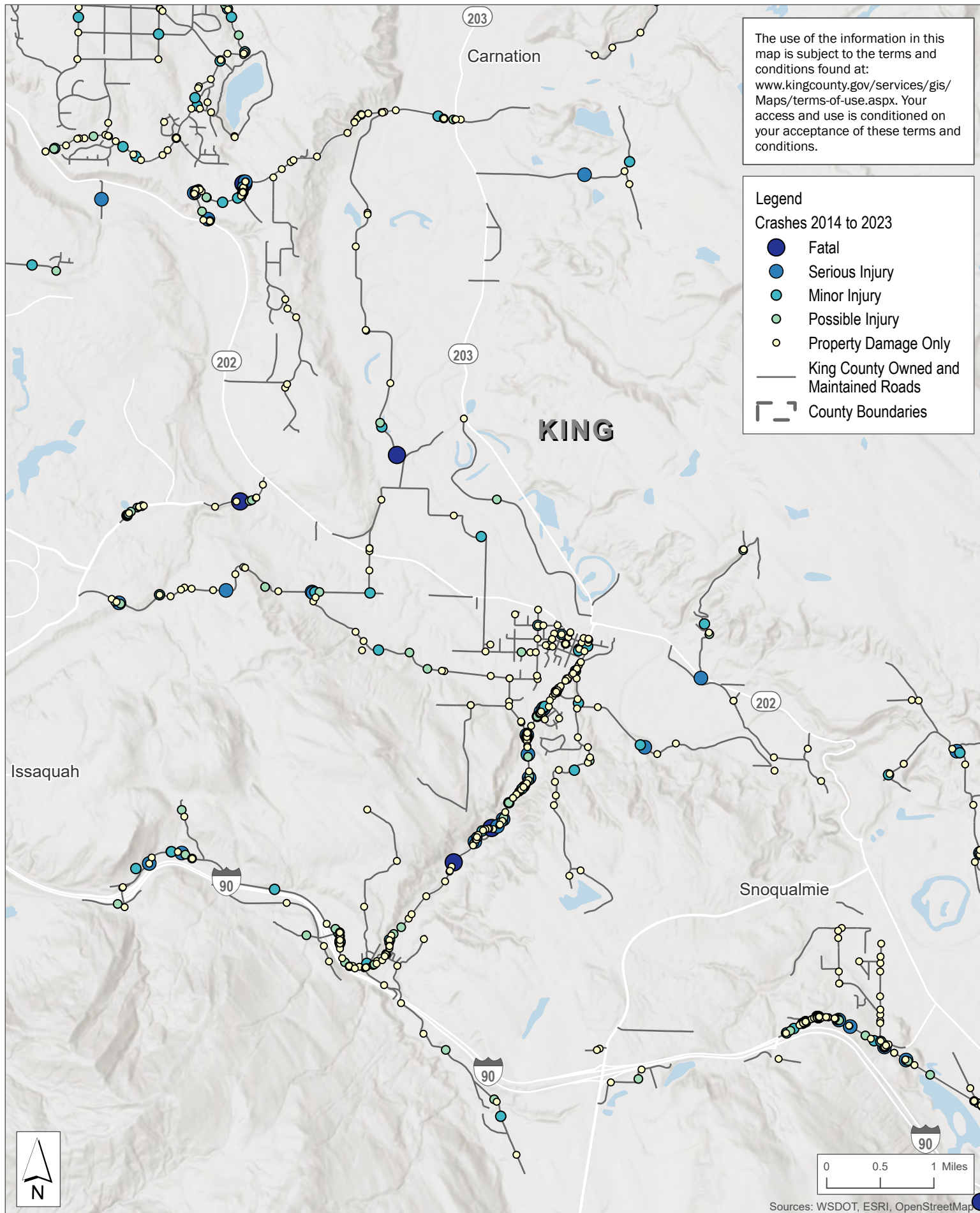
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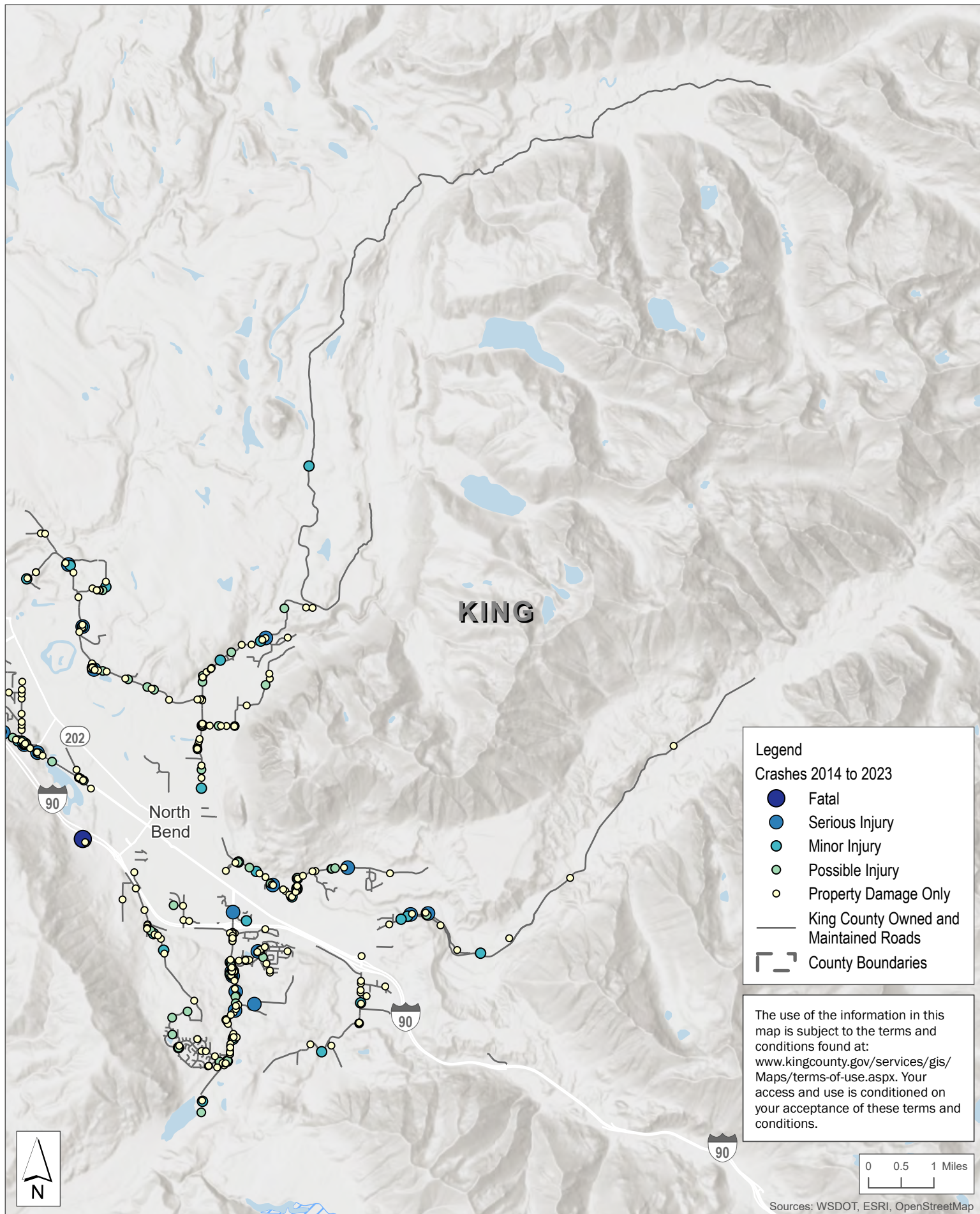
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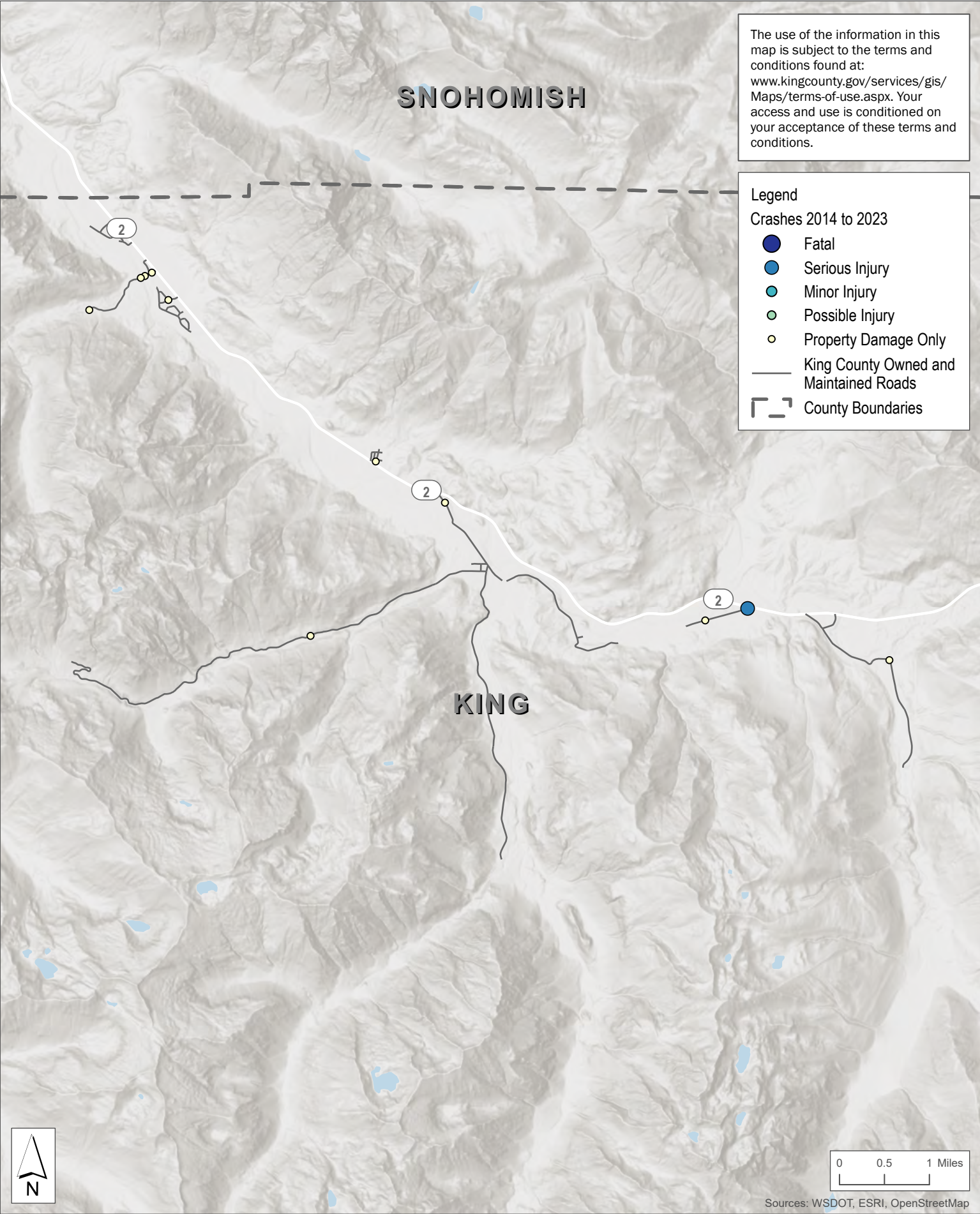










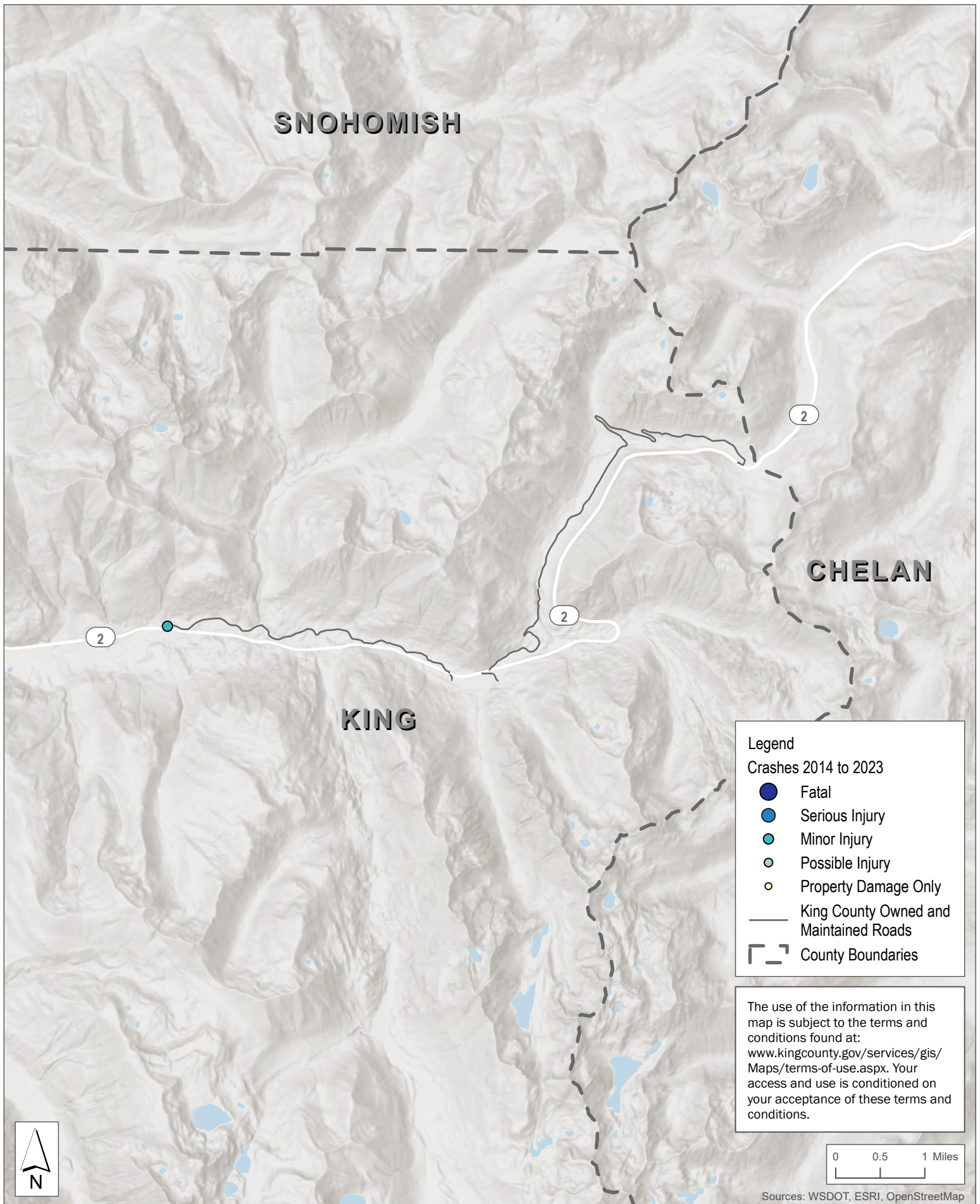


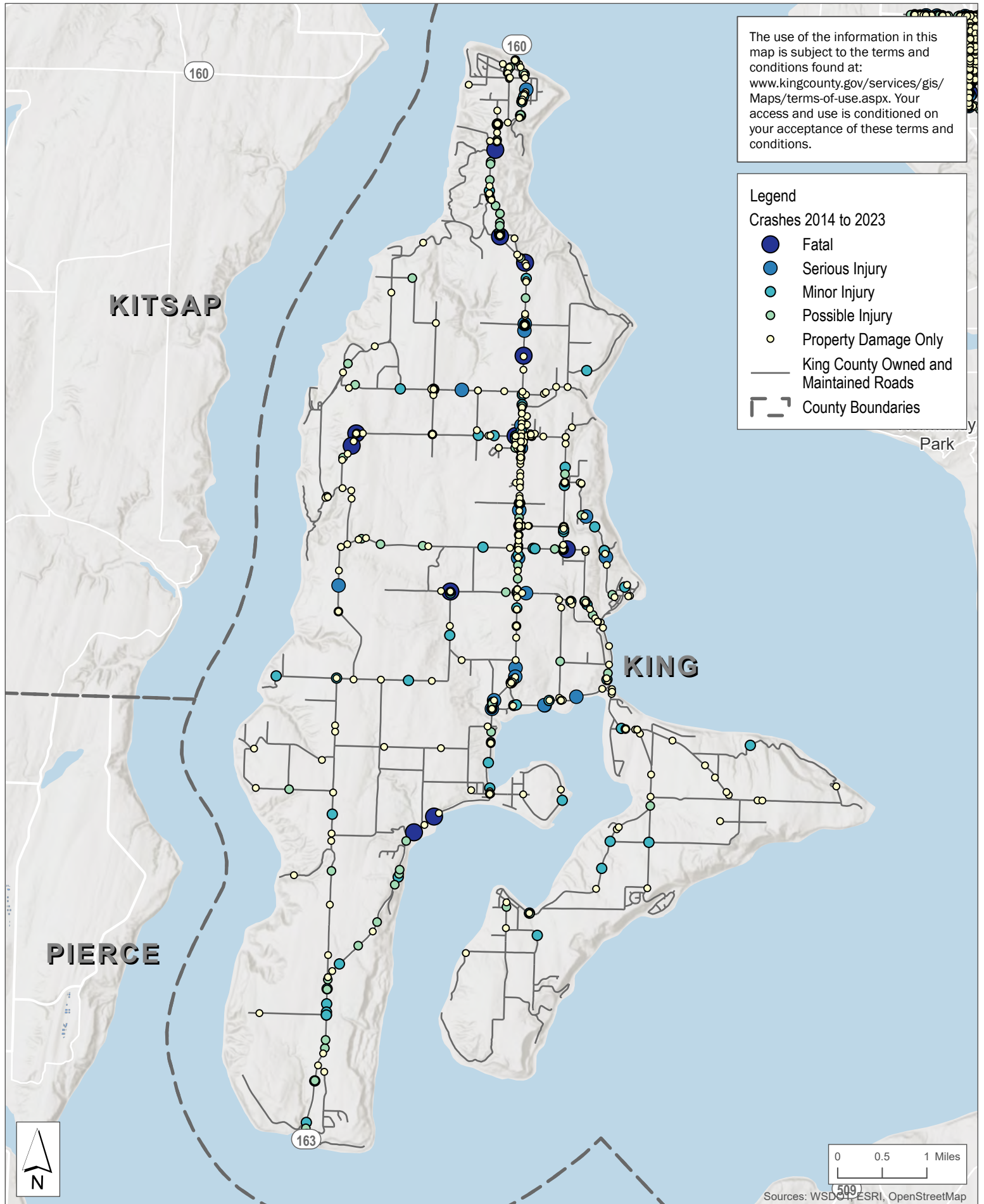
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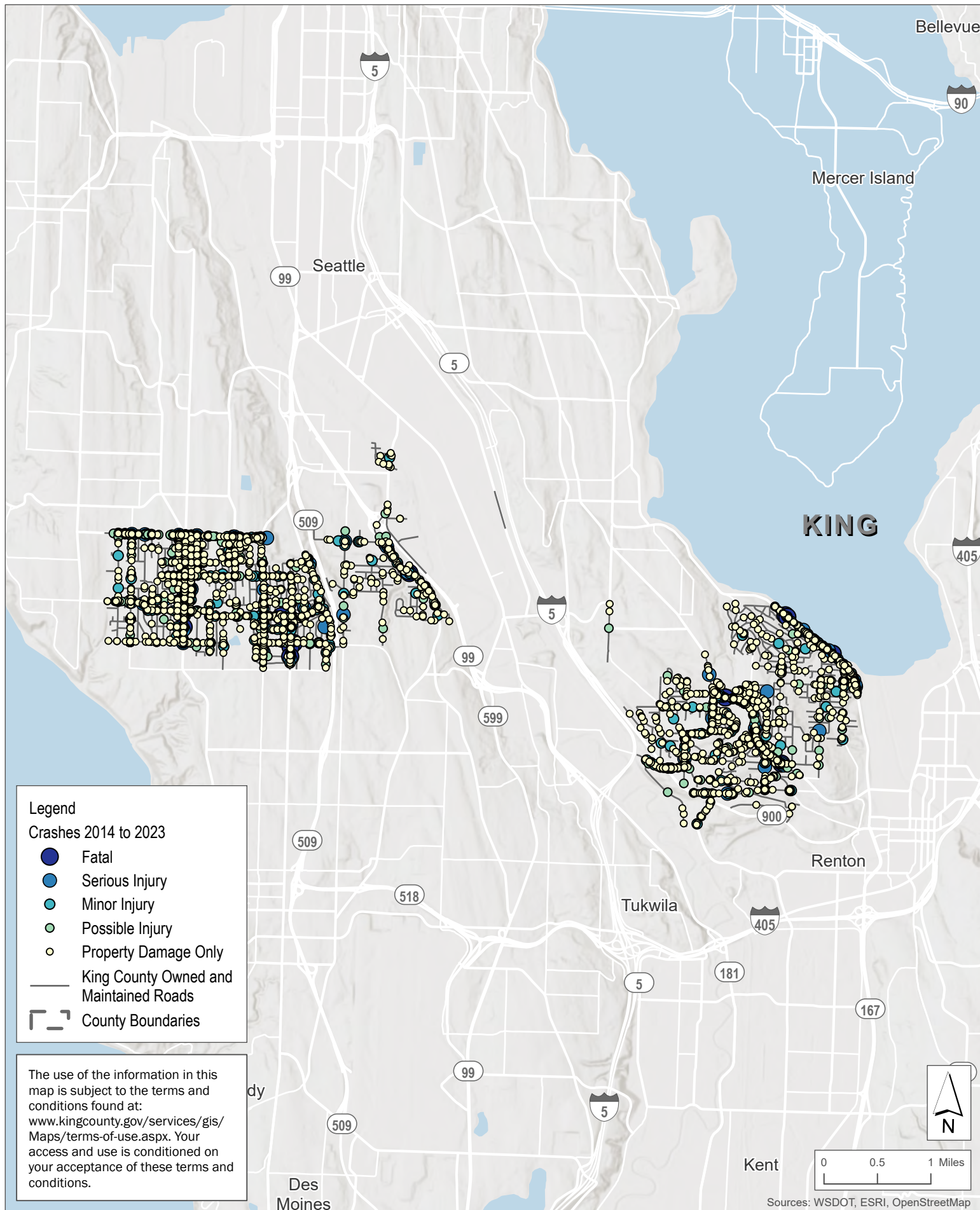
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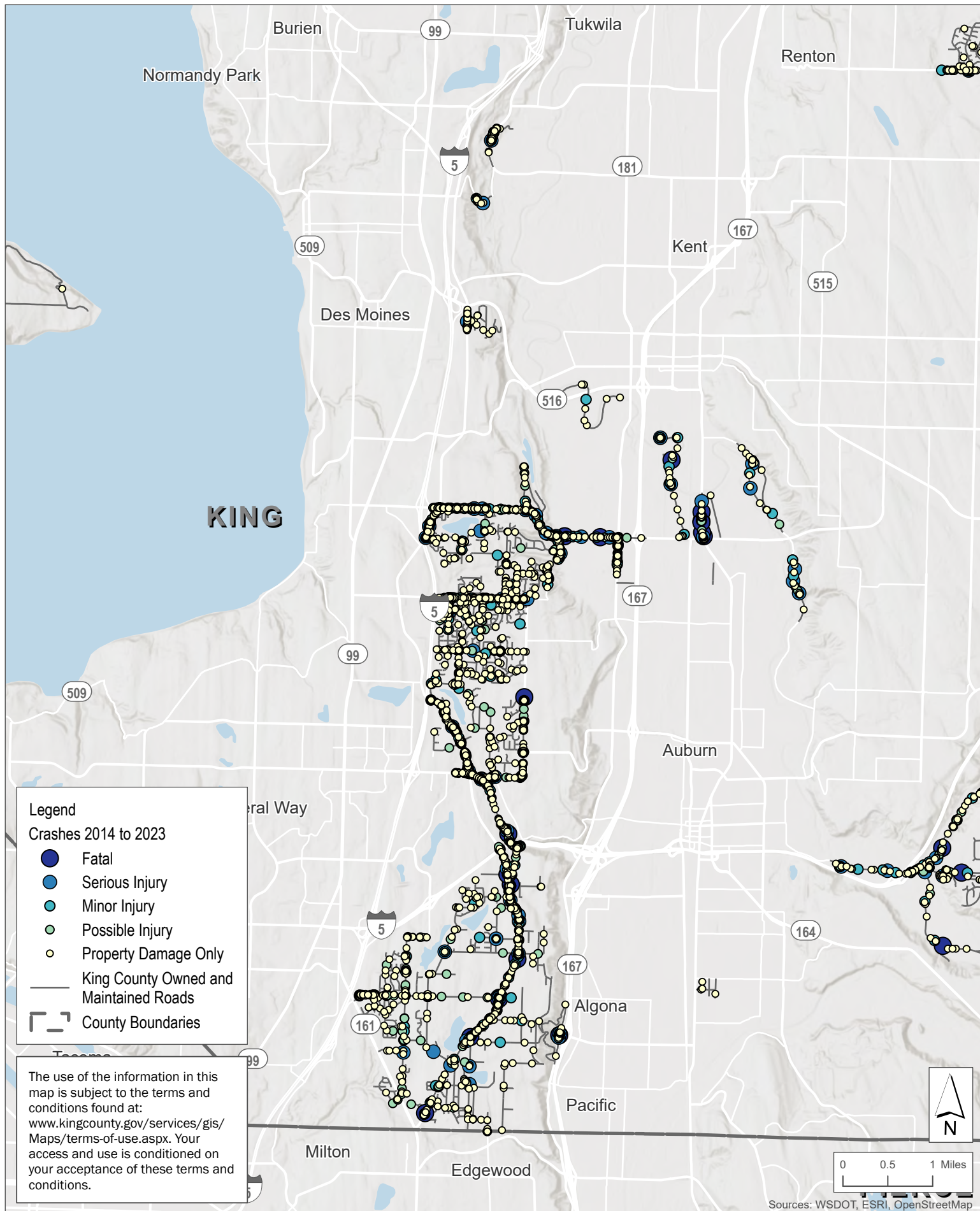
Crashes 2014 to 2023

- Fatal
- Serious Injury
- Minor Injury
- Possible Injury
- Property Damage Only
- King County Owned and Maintained Roads
- County Boundaries







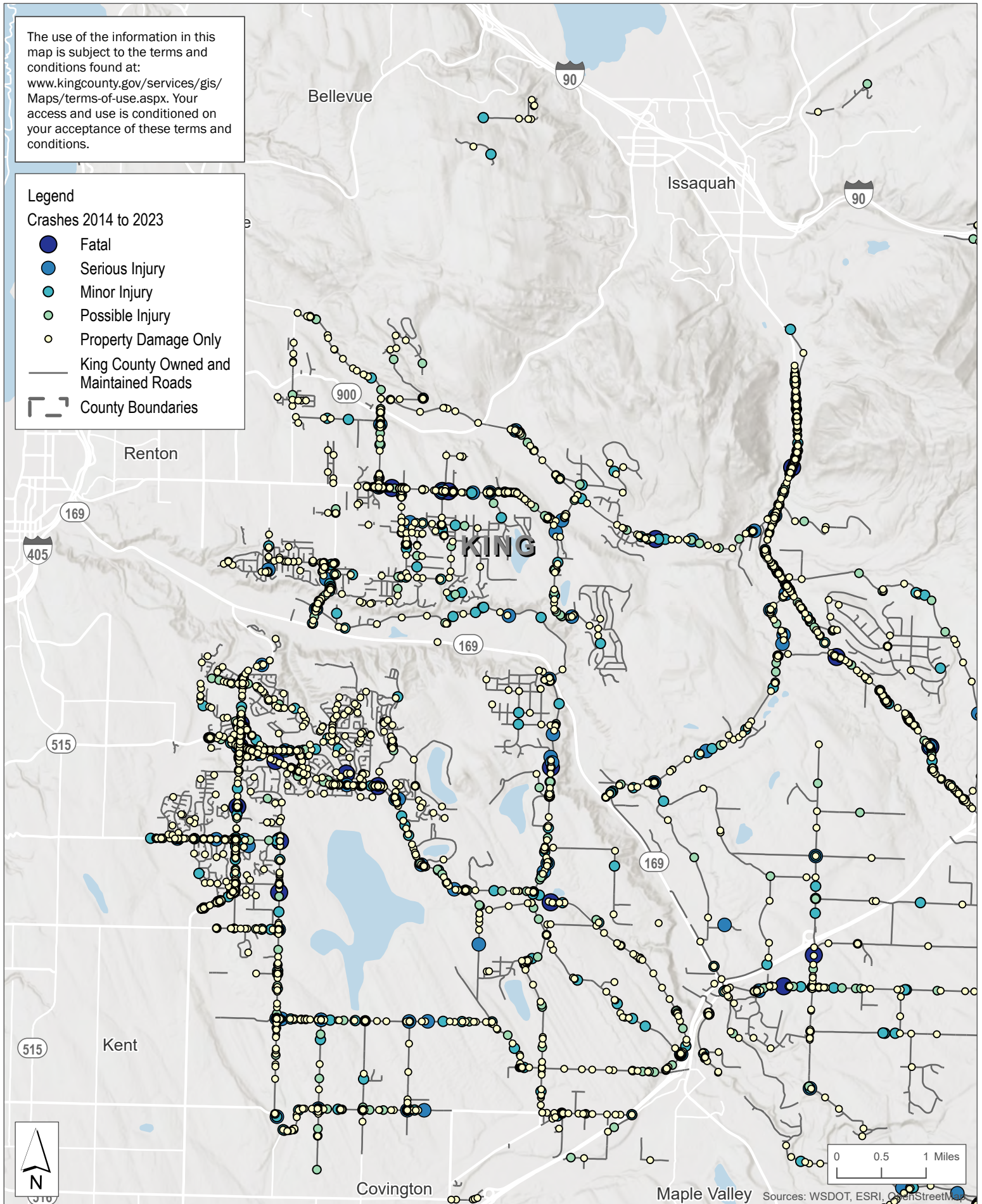


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Legend

Crashes 2014 to 2023

- Fatal
- Serious Injury
- Minor Injury
- Possible Injury
- Property Damage Only
- King County Owned and Maintained Roads
- ▭ County Boundaries



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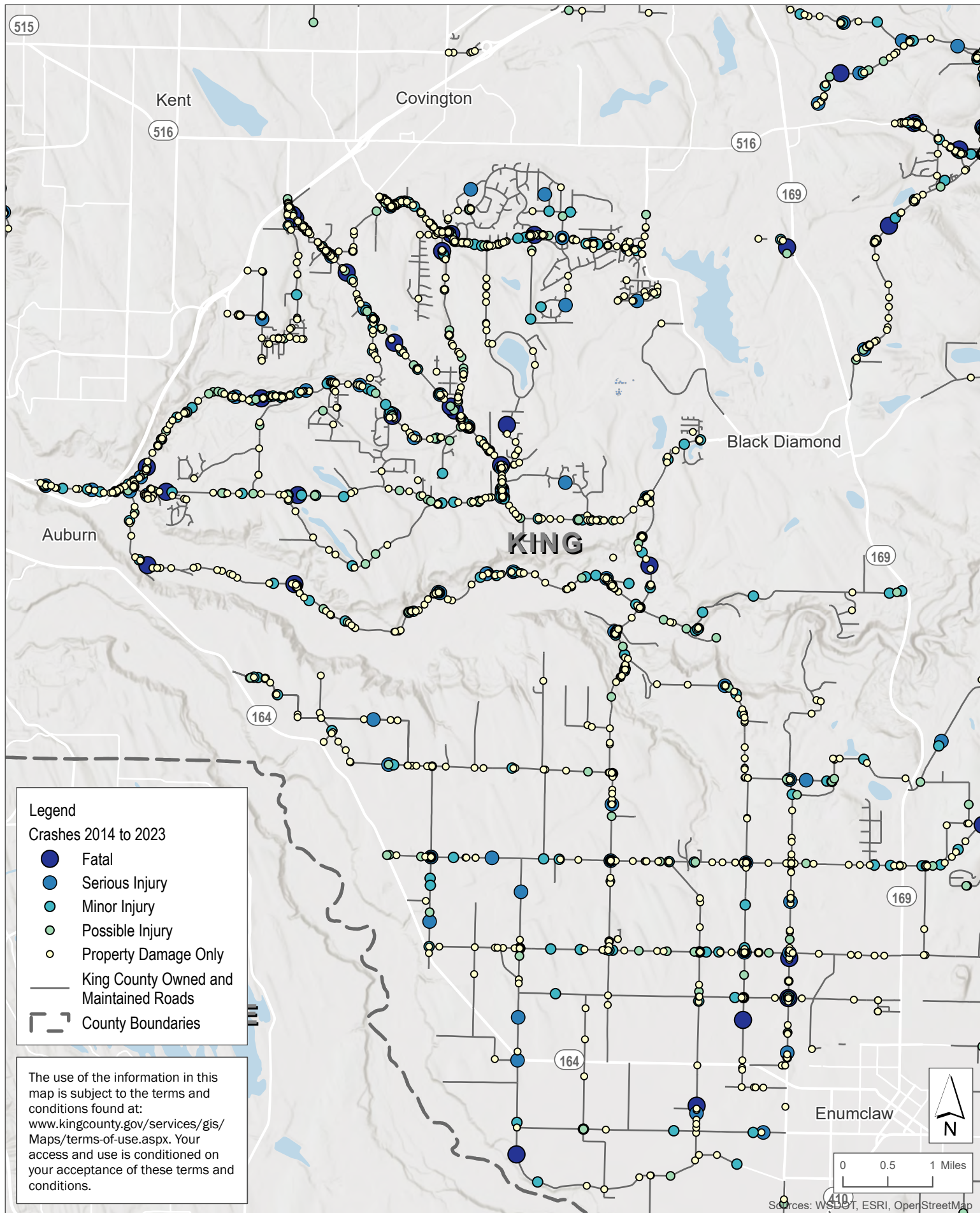


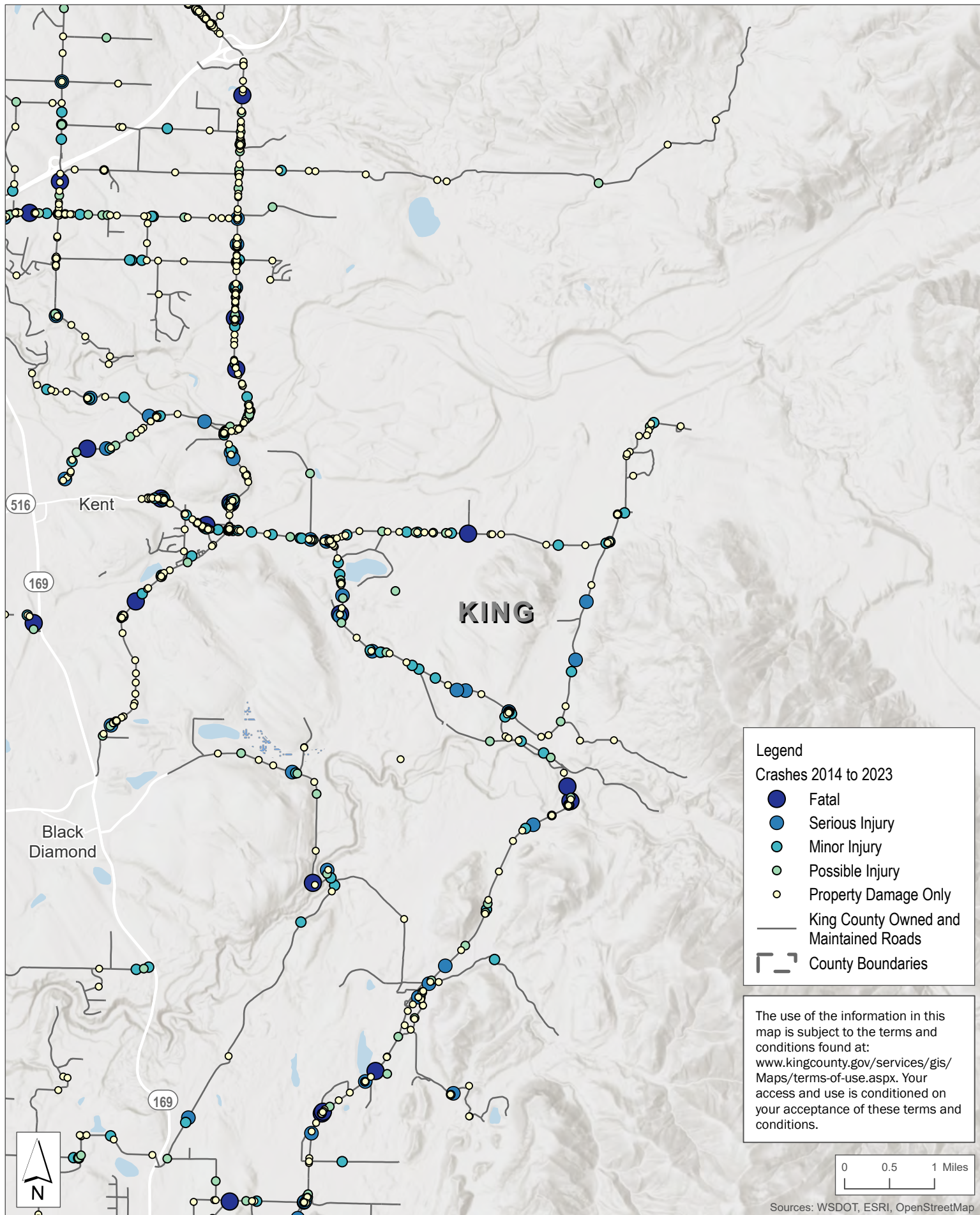
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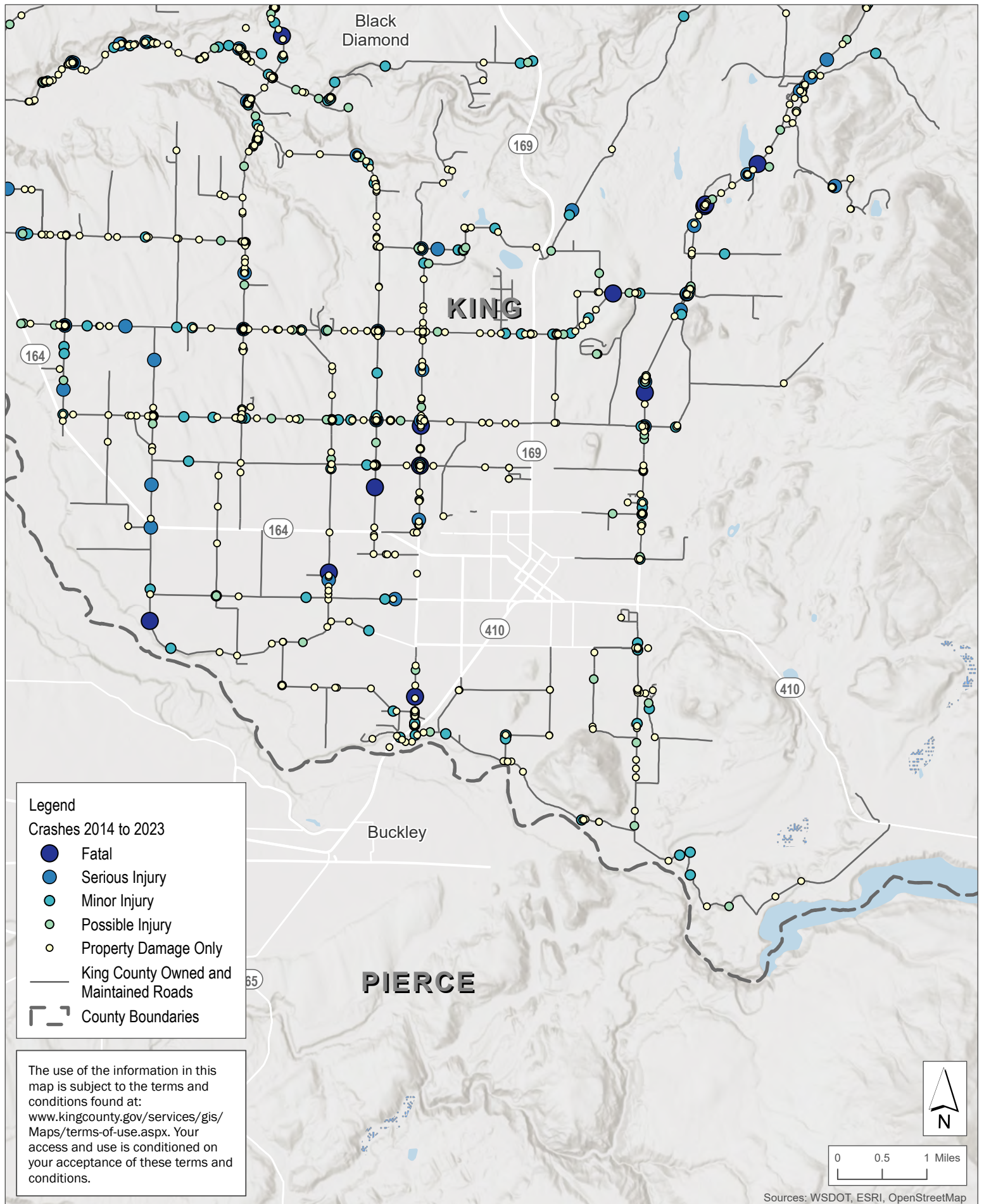
Department of Local Services
Road Services Division

Crashes by Severity 2014 to 2023

K - Bellevue to Maple Valley












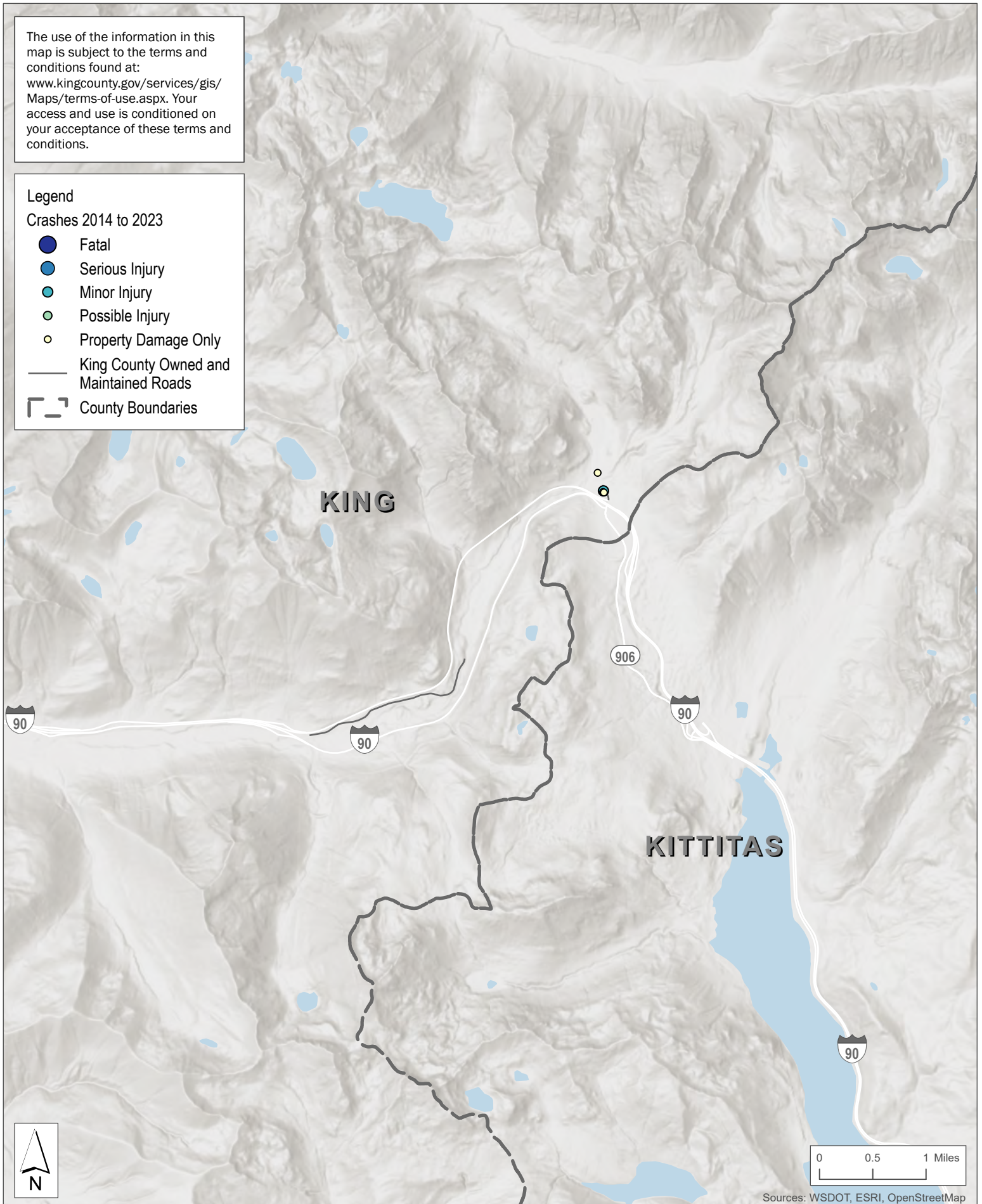


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Legend

Crashes 2014 to 2023

-  Fatal
-  Serious Injury
-  Minor Injury
-  Possible Injury
-  Property Damage Only
-  King County Owned and Maintained Roads
-  County Boundaries



Sources: WSDOT, ESRI, OpenStreetMap

Parametrix

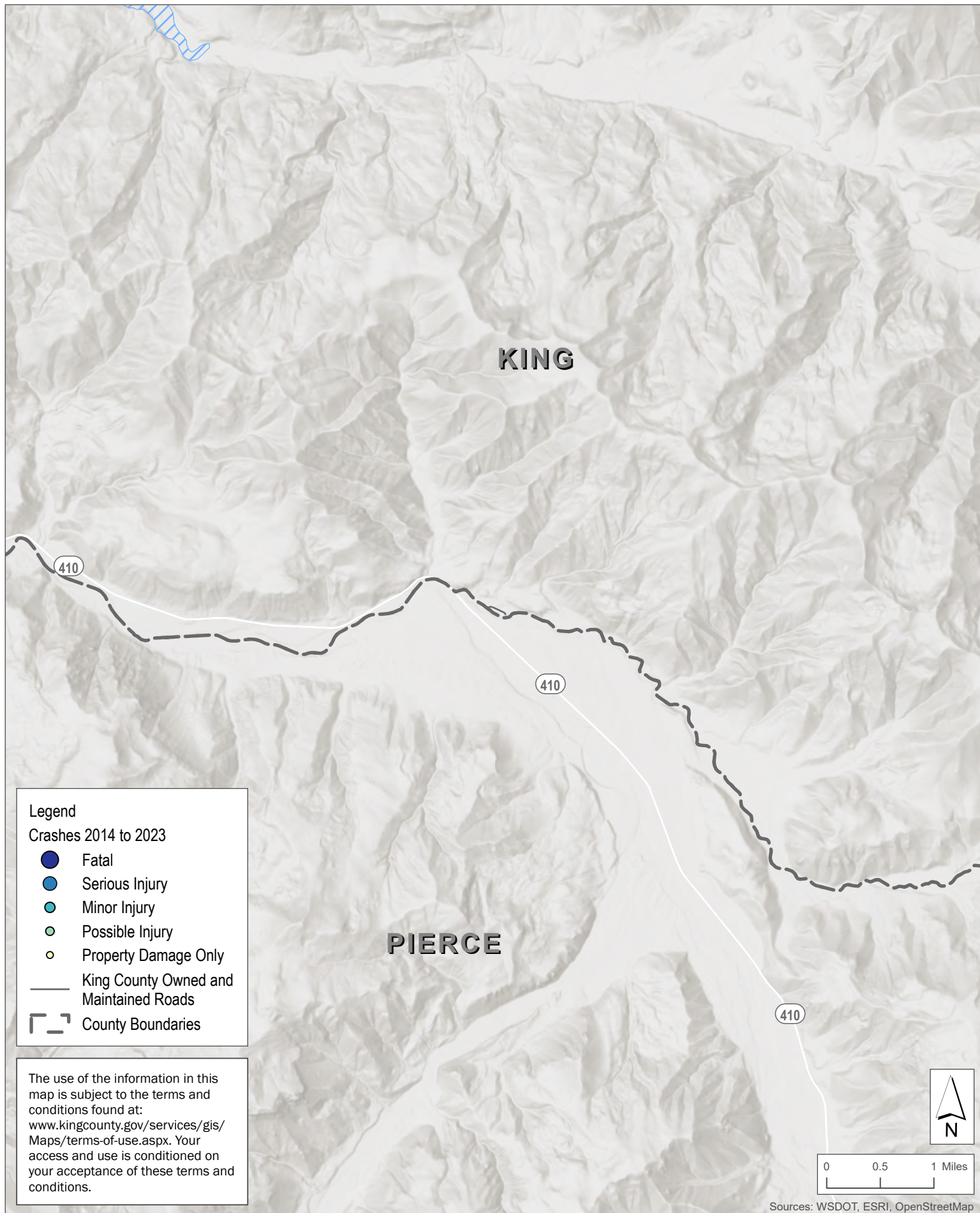


King County

Department of Local Services
Road Services Division

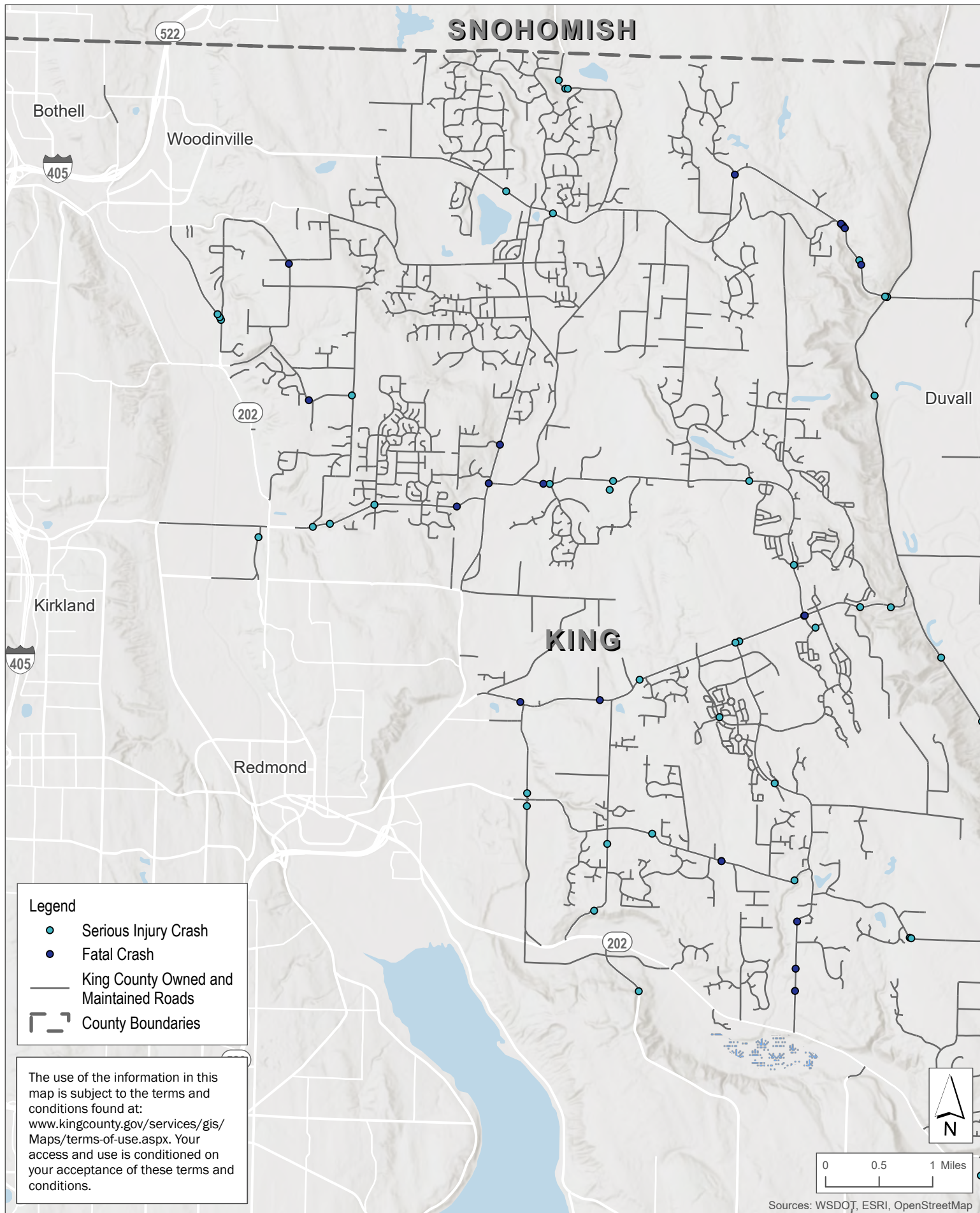
Crashes by Severity 2014 to 2023

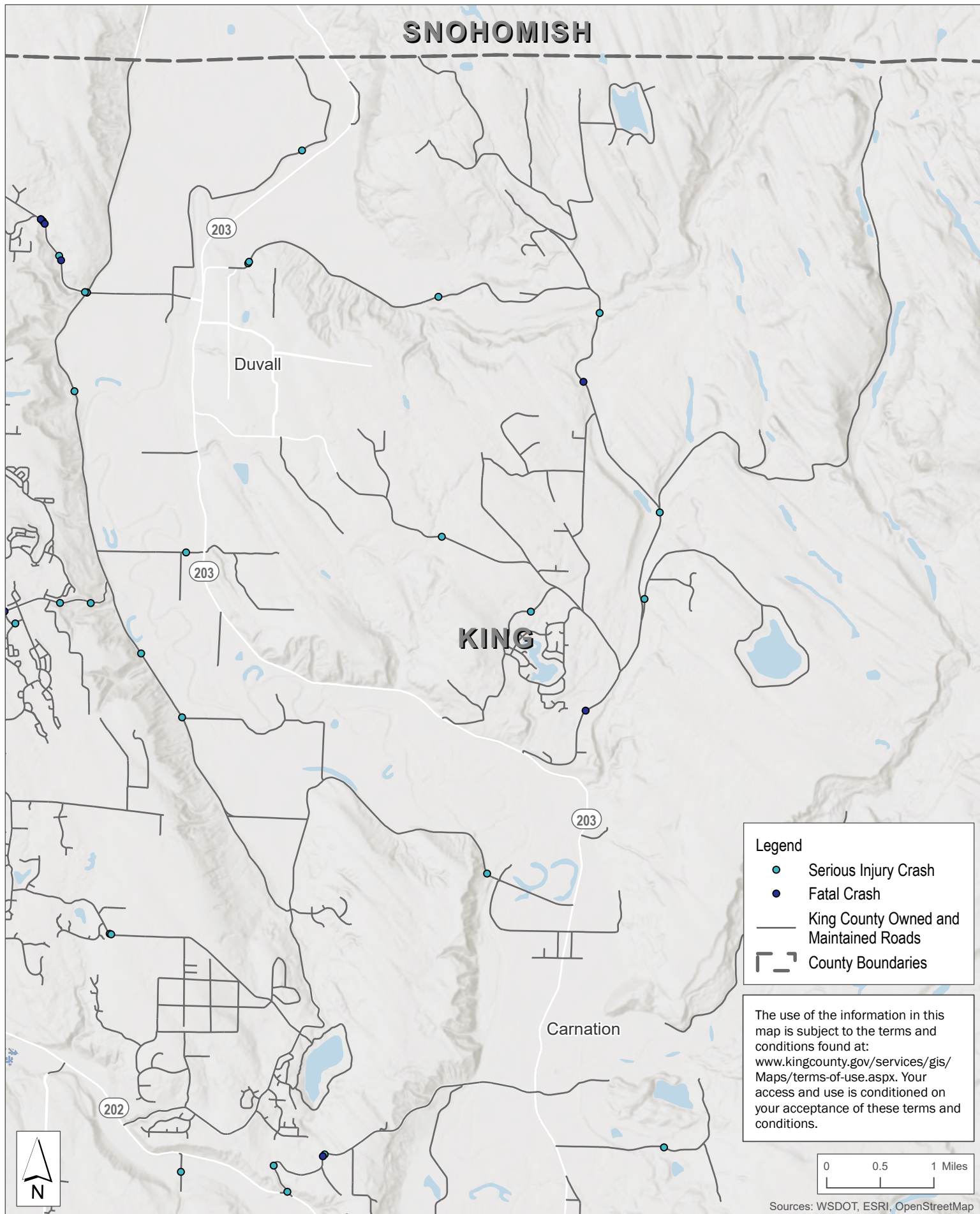
O - E King County

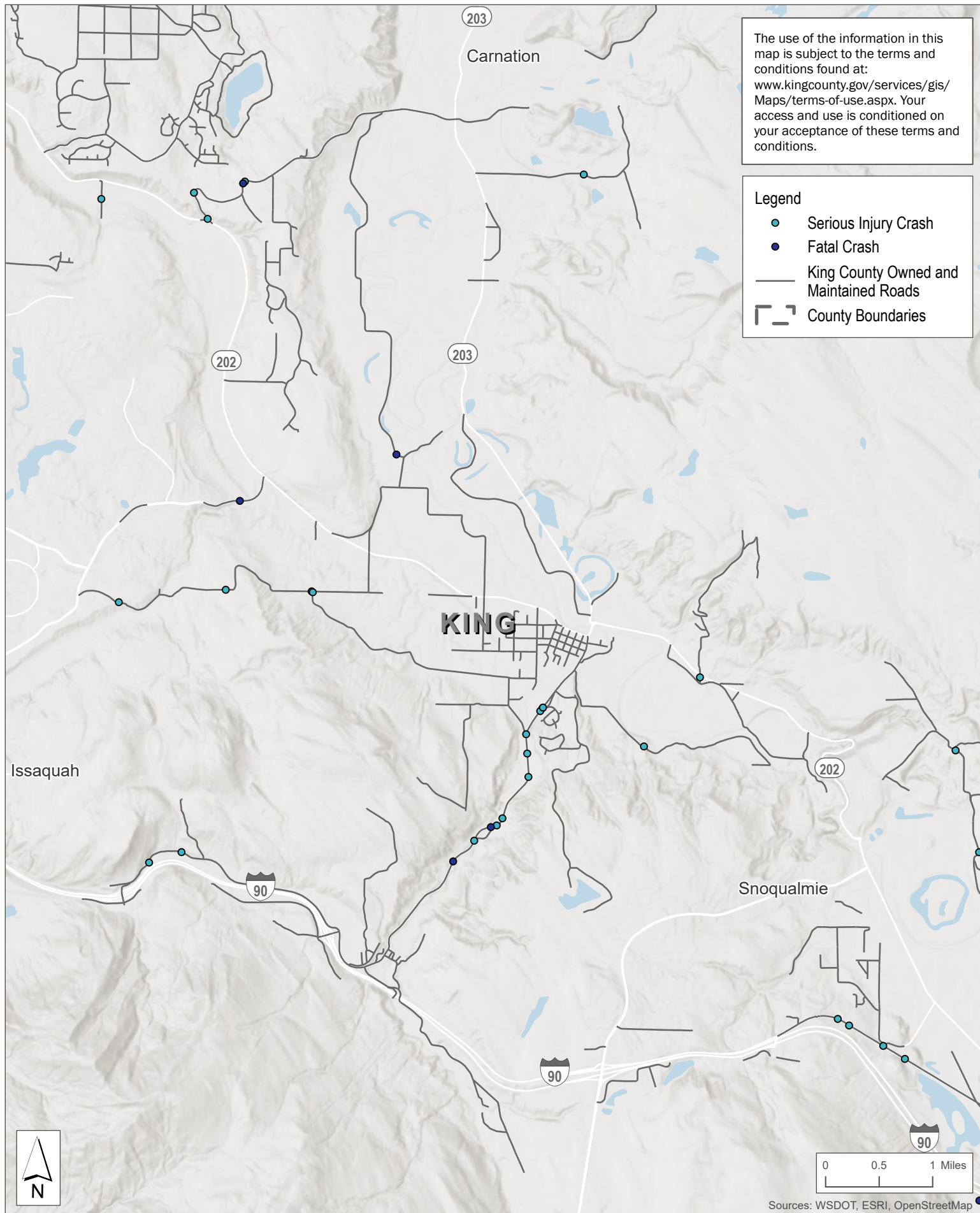


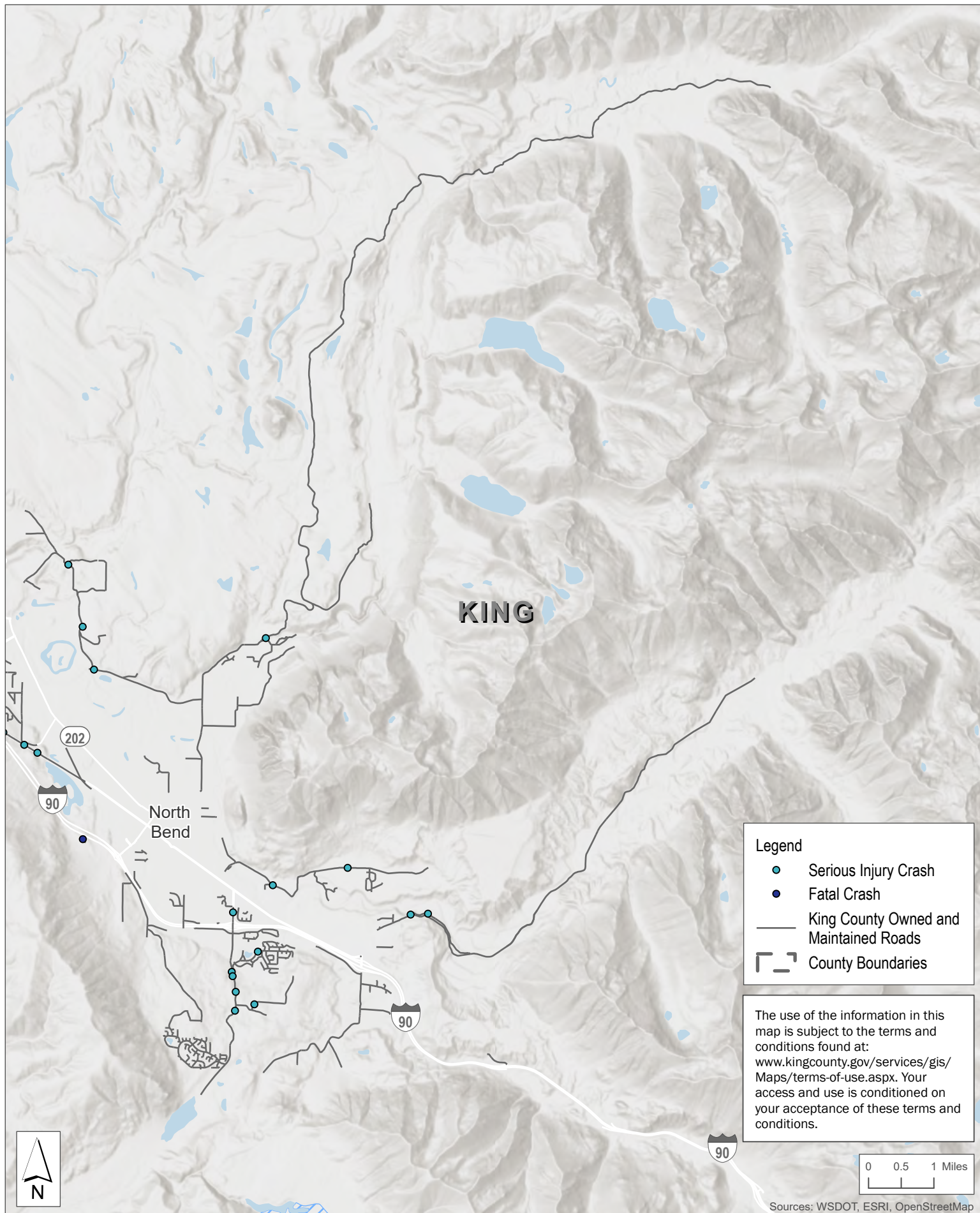
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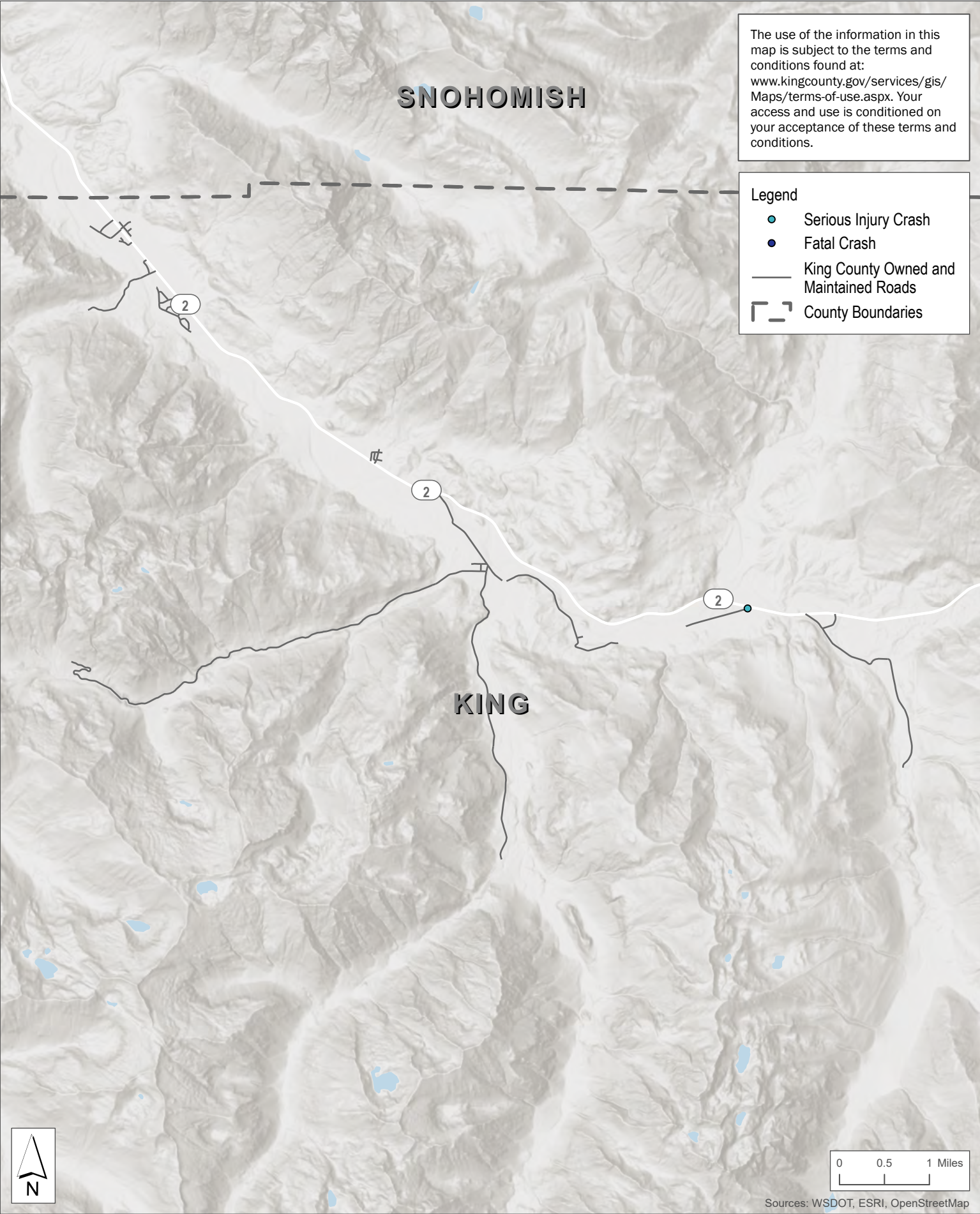


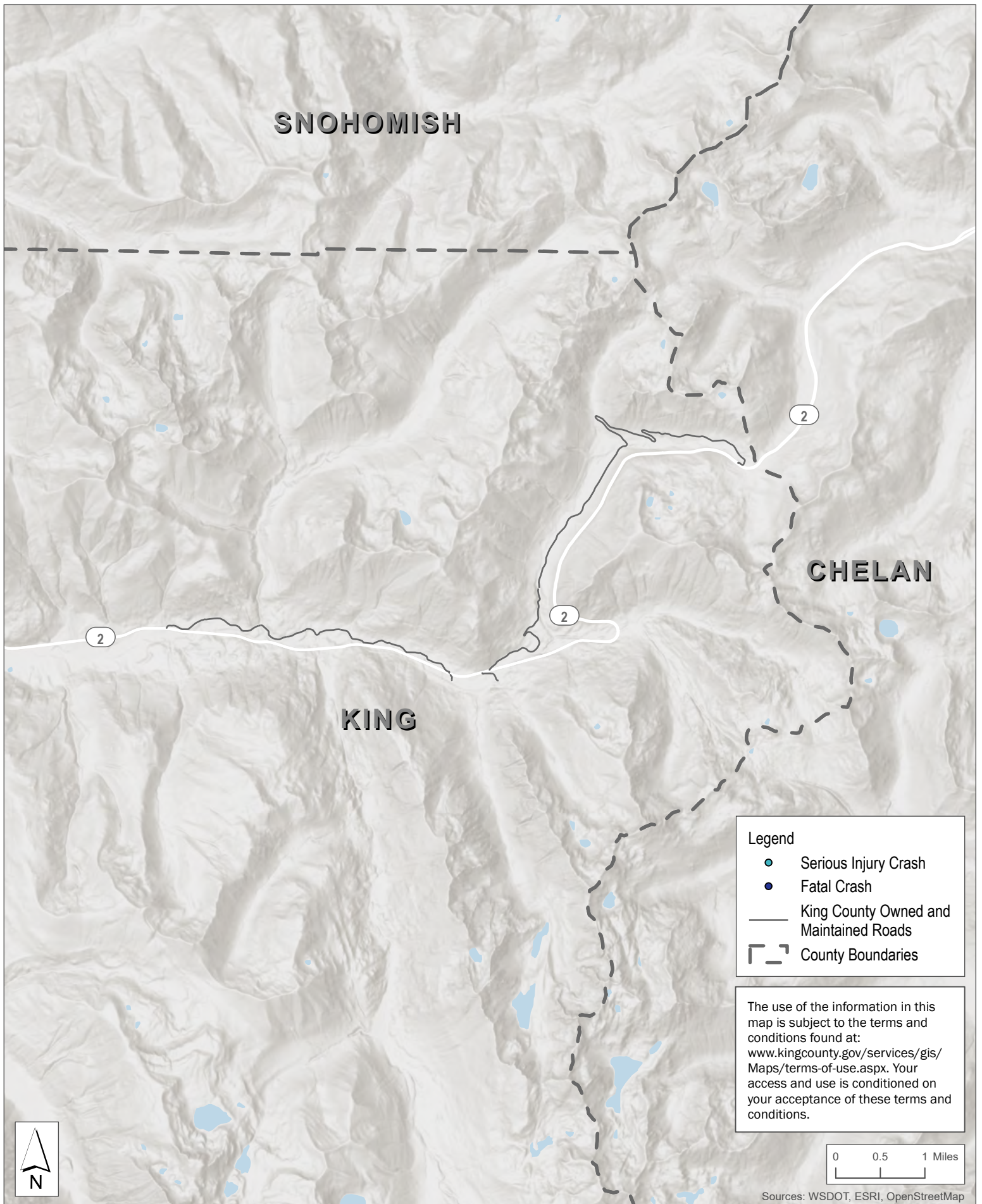


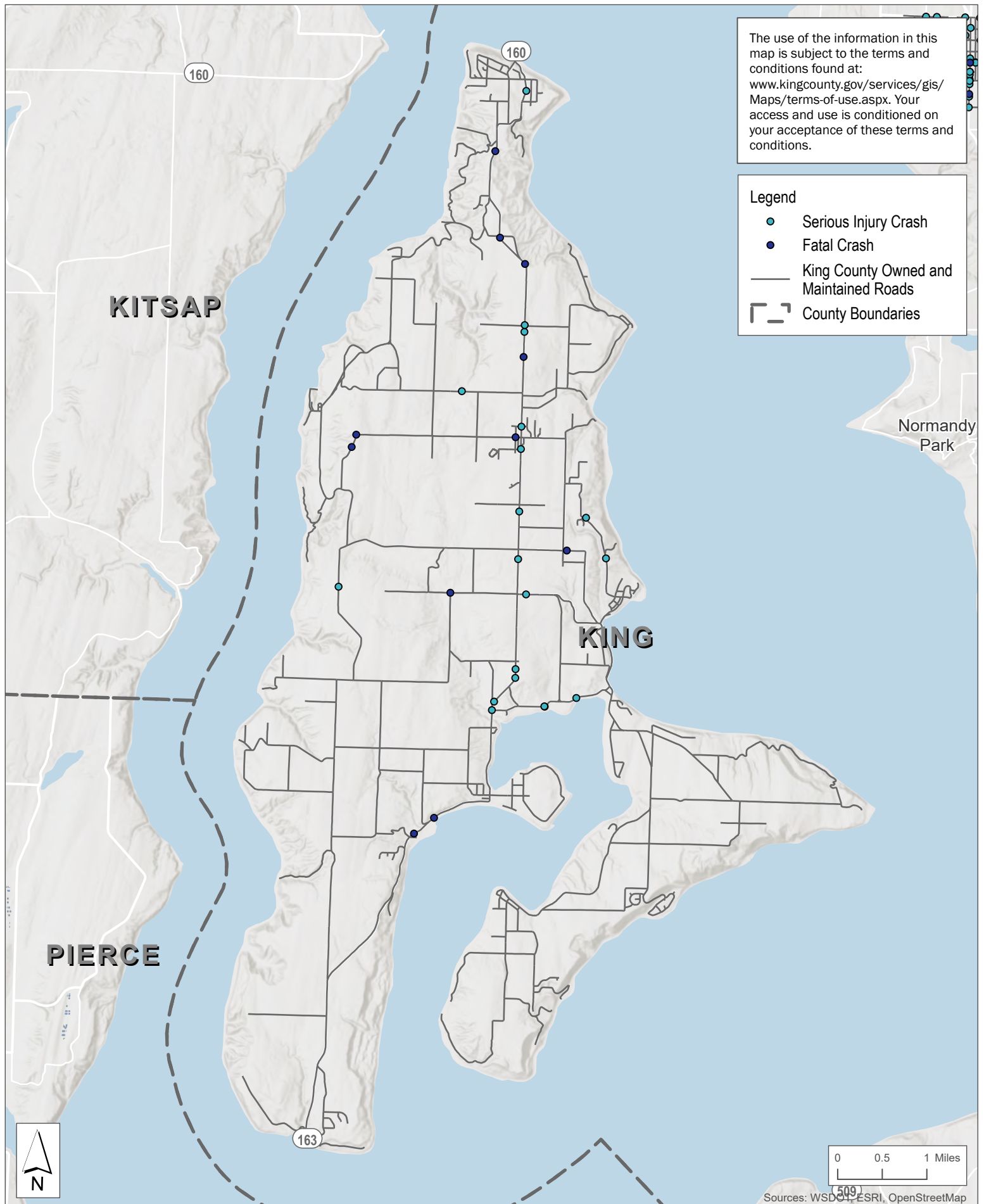


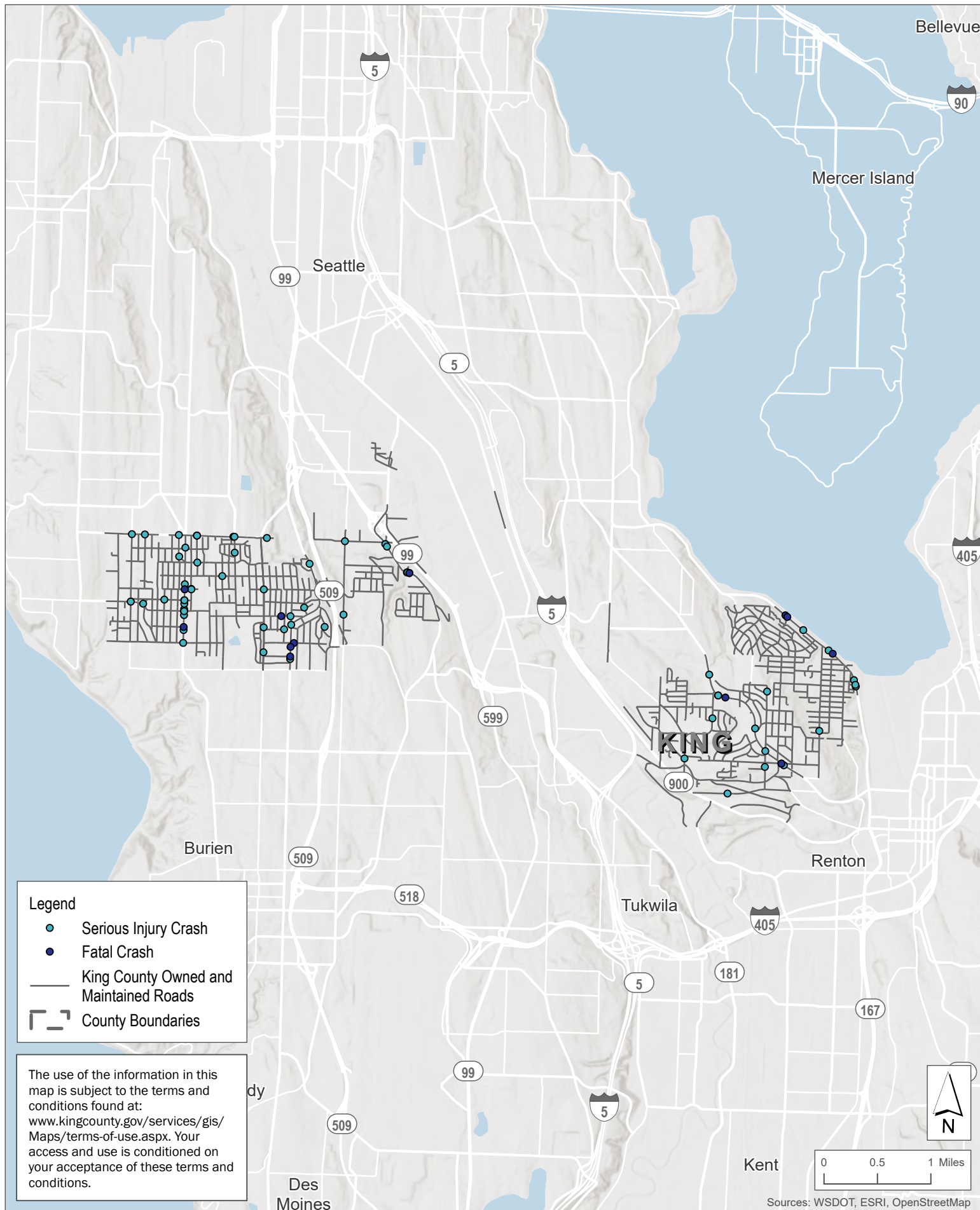


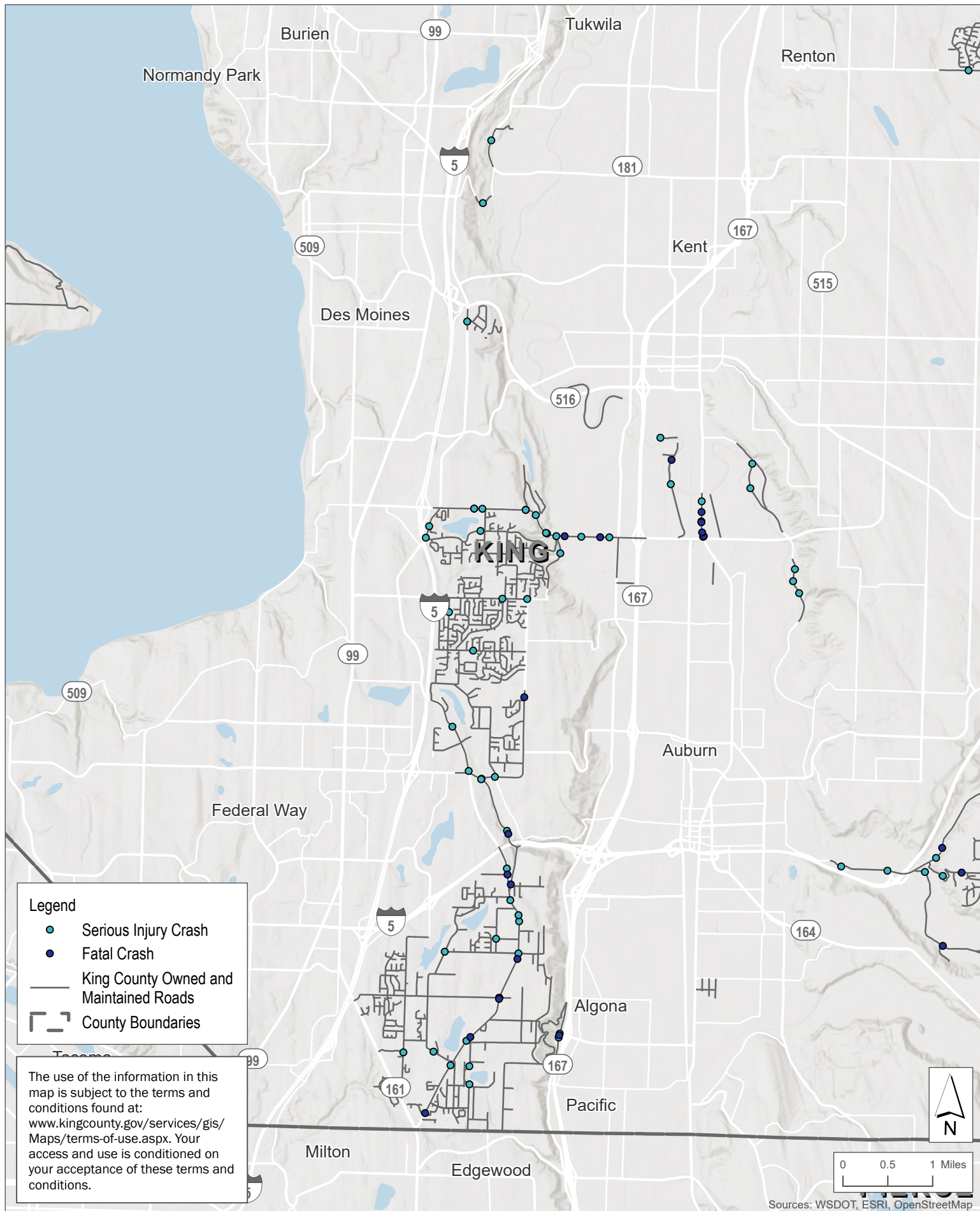








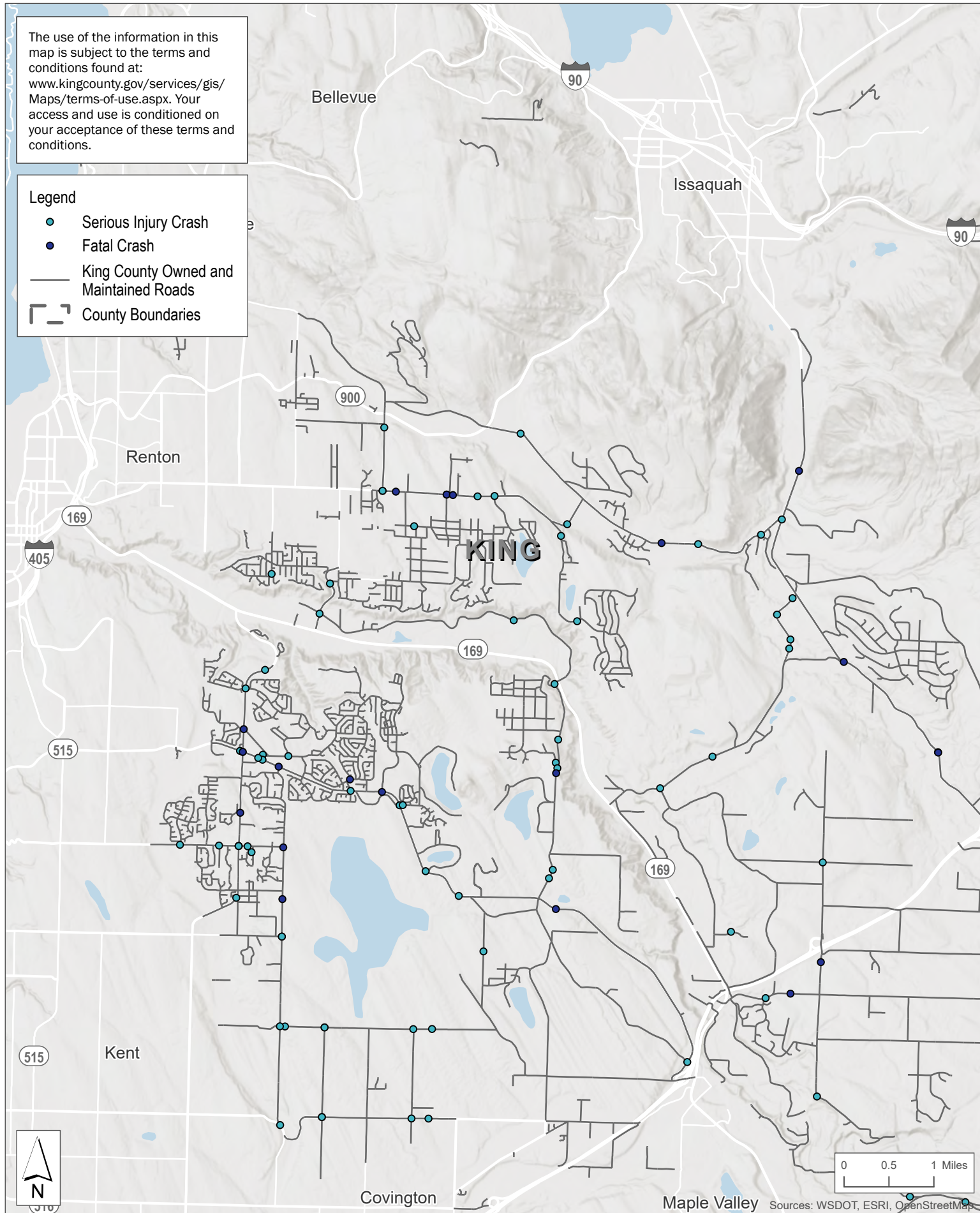




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Legend

- Serious Injury Crash
- Fatal Crash
- King County Owned and Maintained Roads
- ▭ County Boundaries



Parametrix

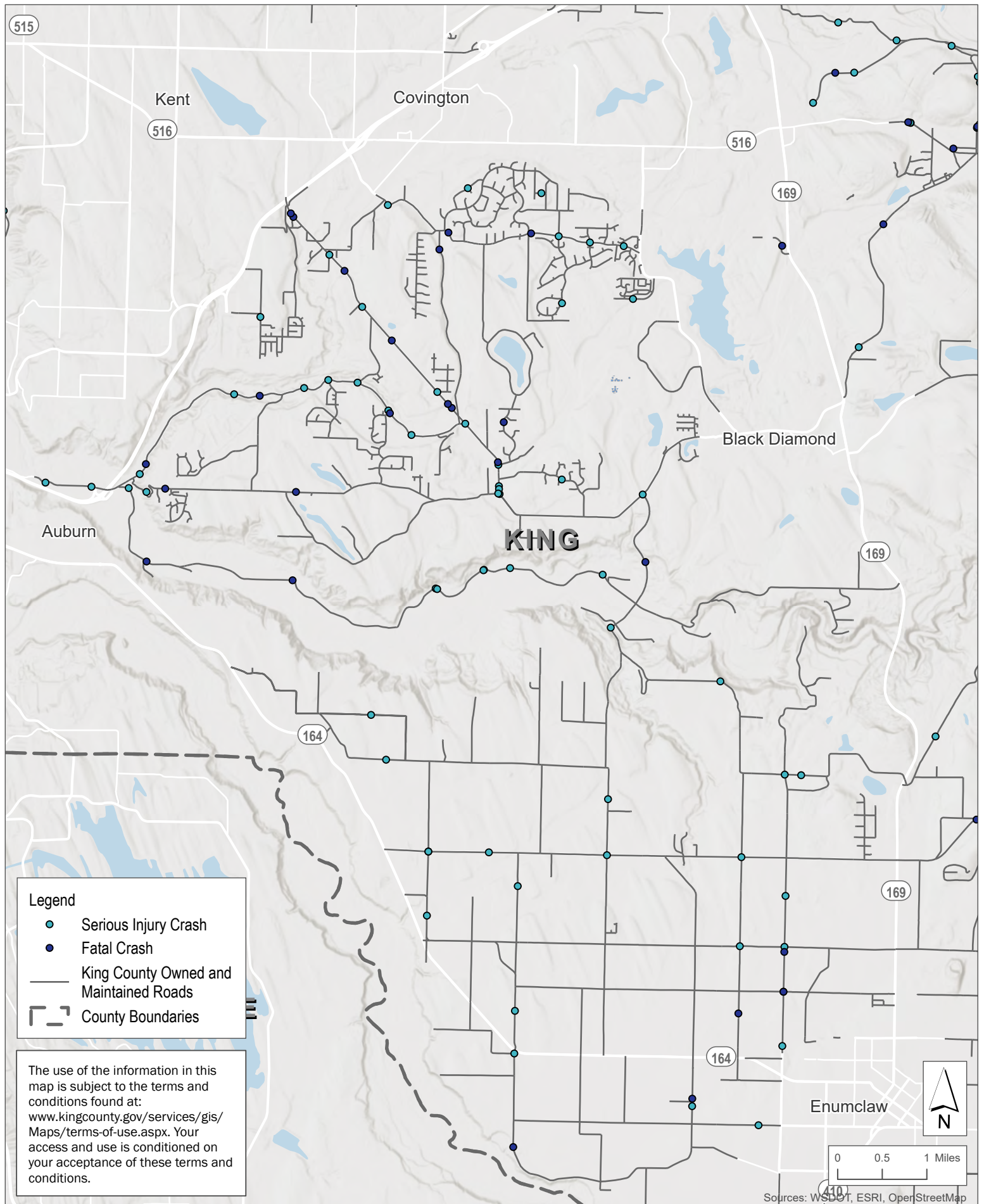


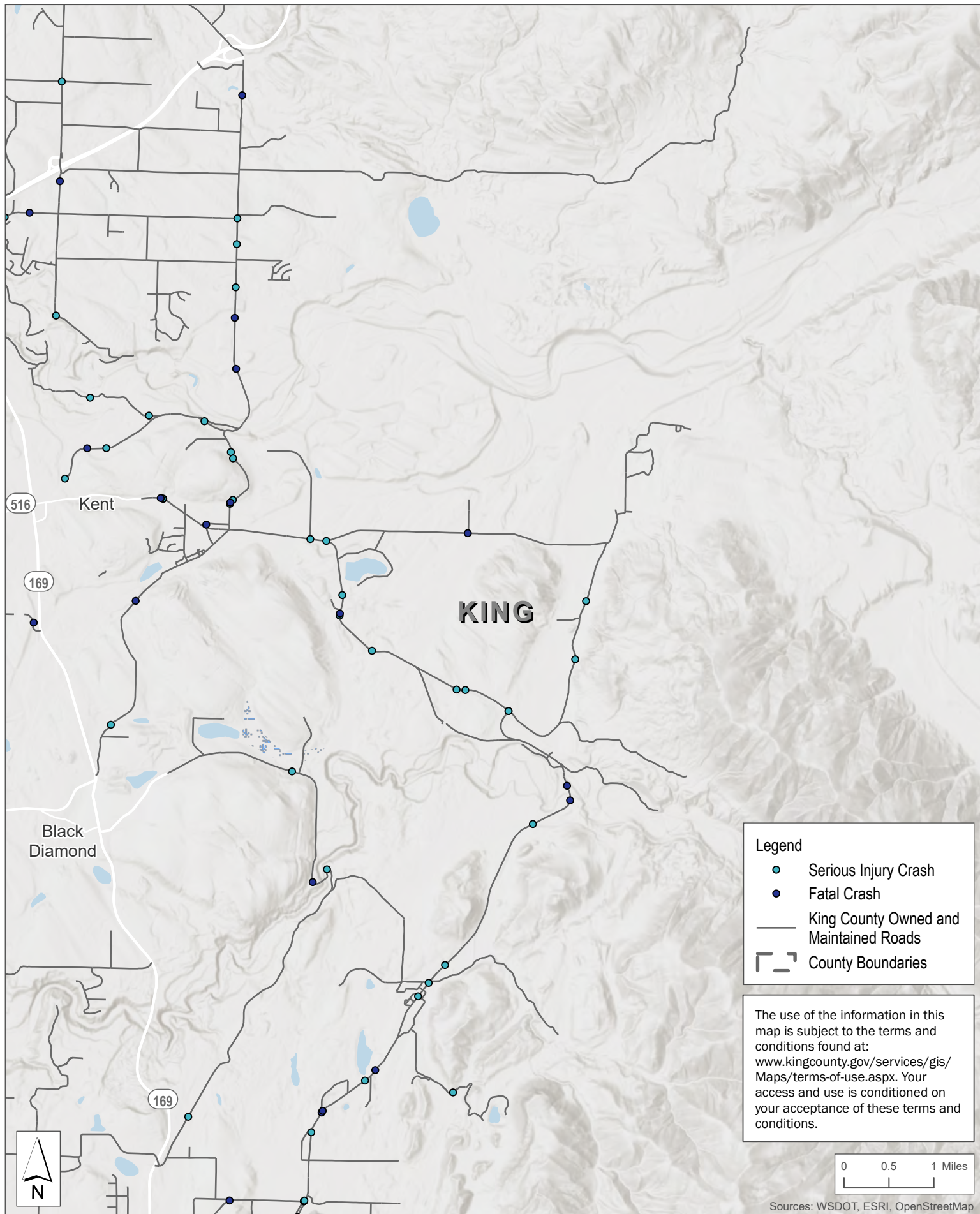
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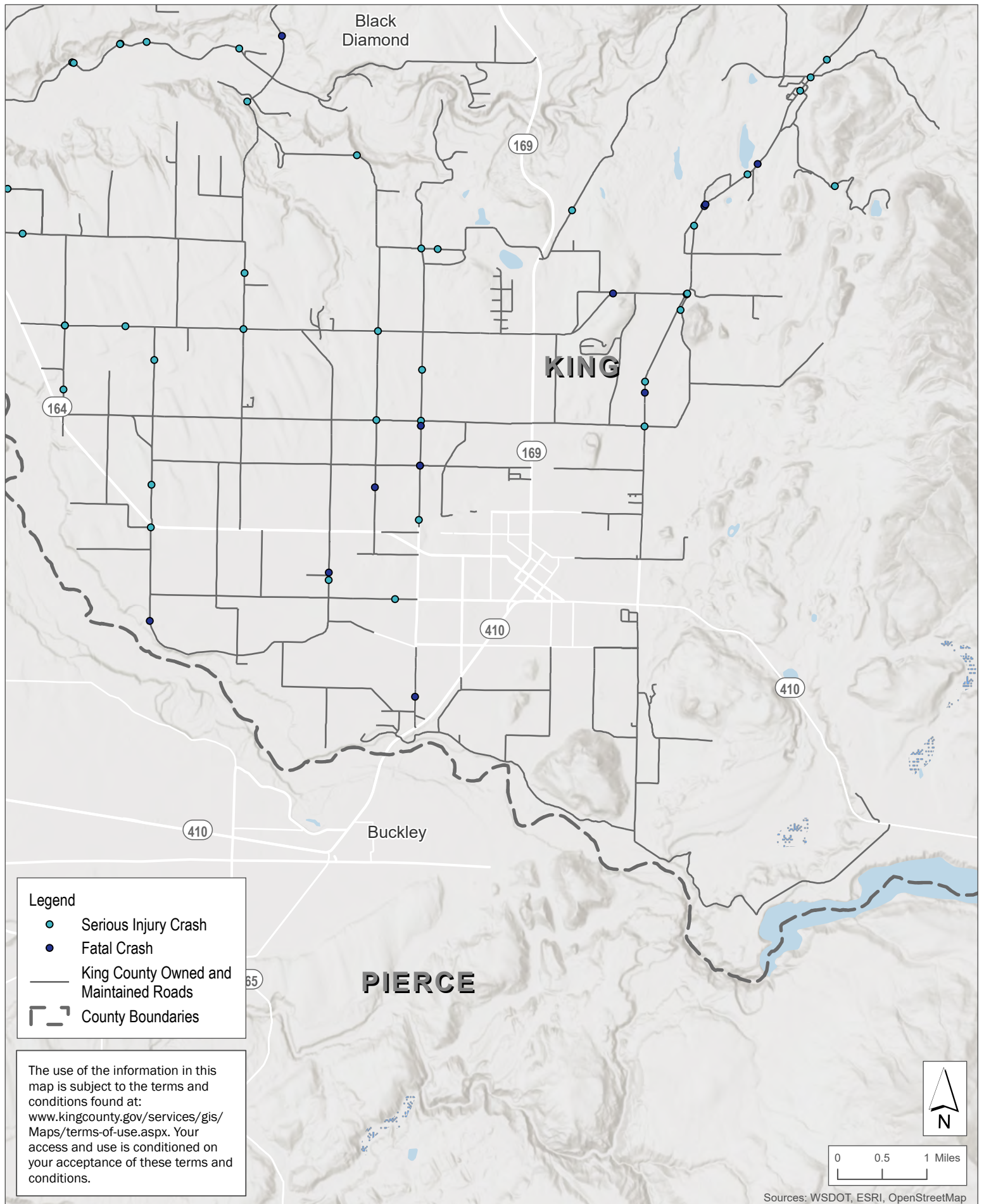
Department of Local Services
Road Services Division

Severe Crashes 2014 to 2023

K - Bellevue to Maple Valley



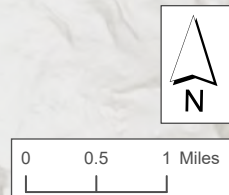




Legend

- Serious Injury Crash
- Fatal Crash
- King County Owned and Maintained Roads
- ▭ County Boundaries

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Sources: WSDOT, ESRI, OpenStreetMap

Parametrix



King County

Department of Local Services
Road Services Division

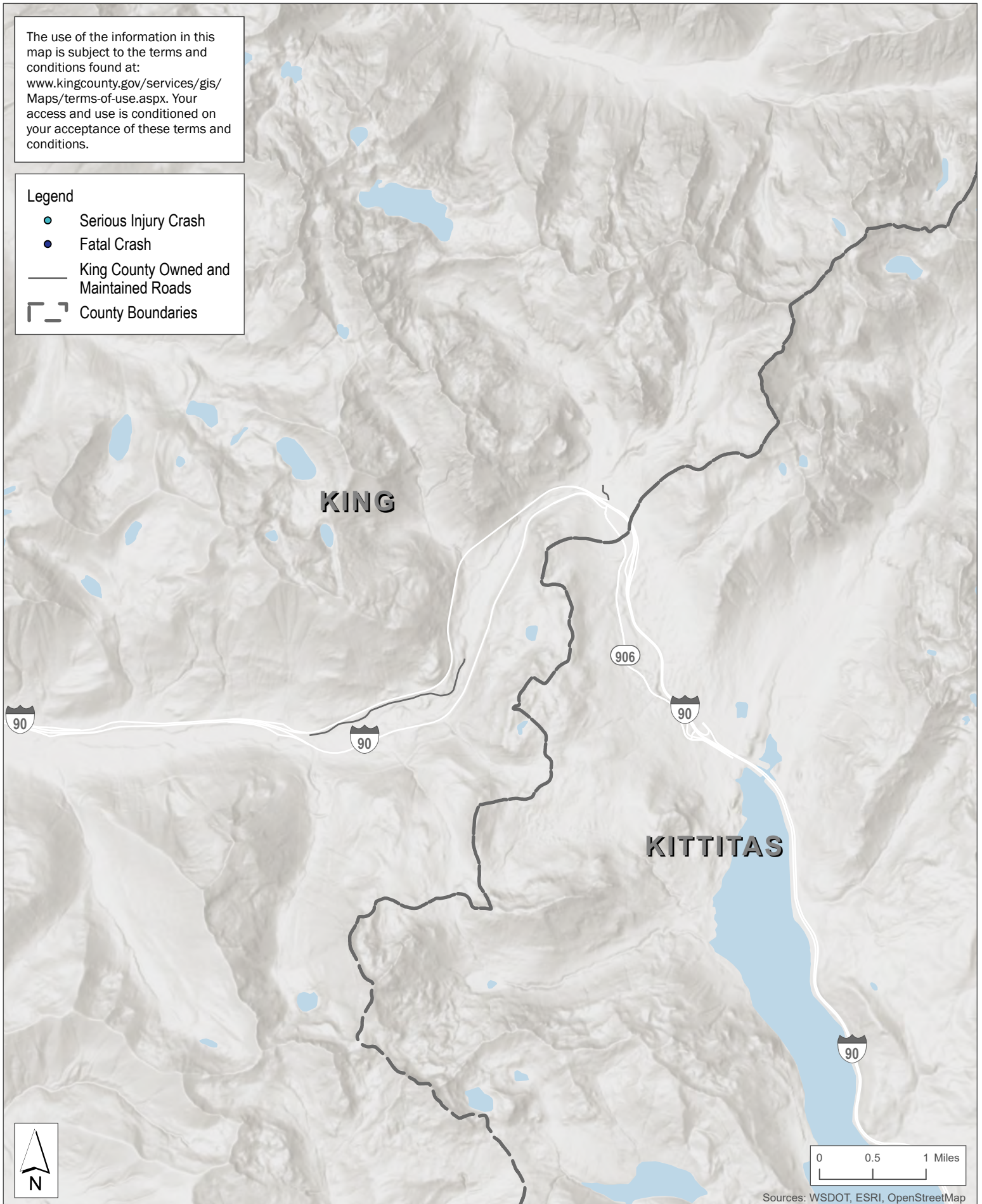
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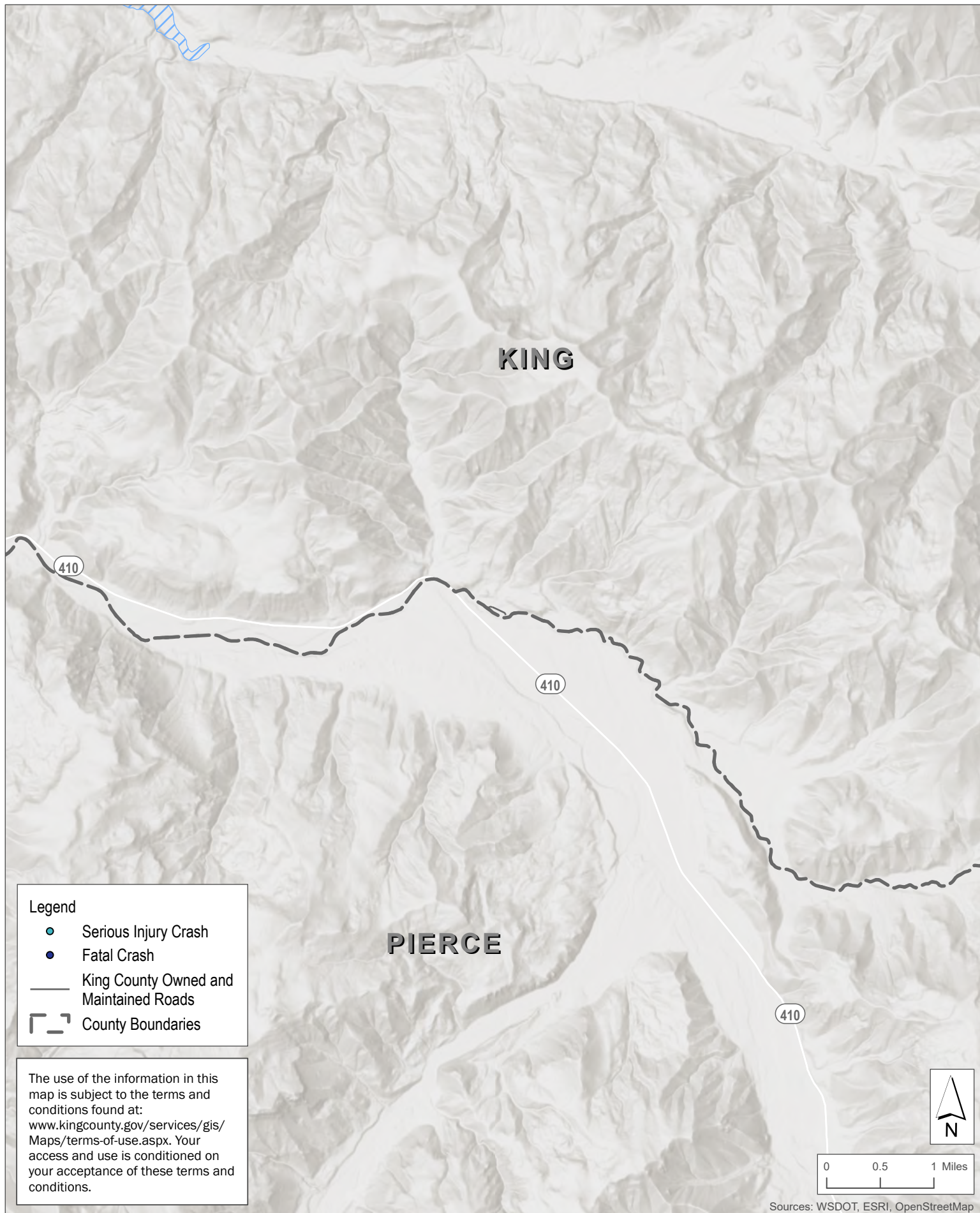
N - Enumclaw

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Legend

- Serious Injury Crash
- Fatal Crash
- King County Owned and Maintained Roads
- ▭ County Boundaries





4. Pedestrian- and Bicyclist-Involved Crashes 2014 to 2023



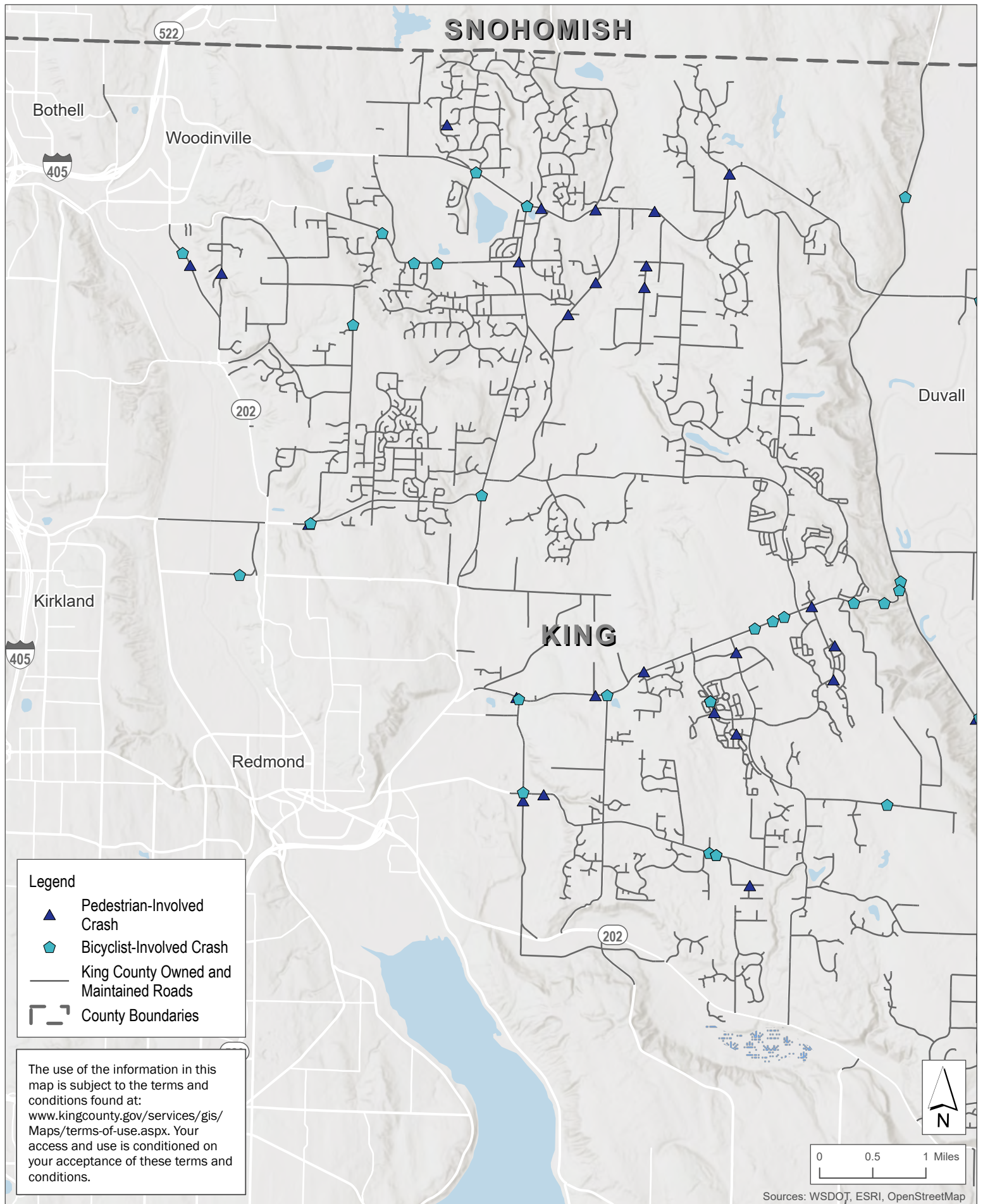
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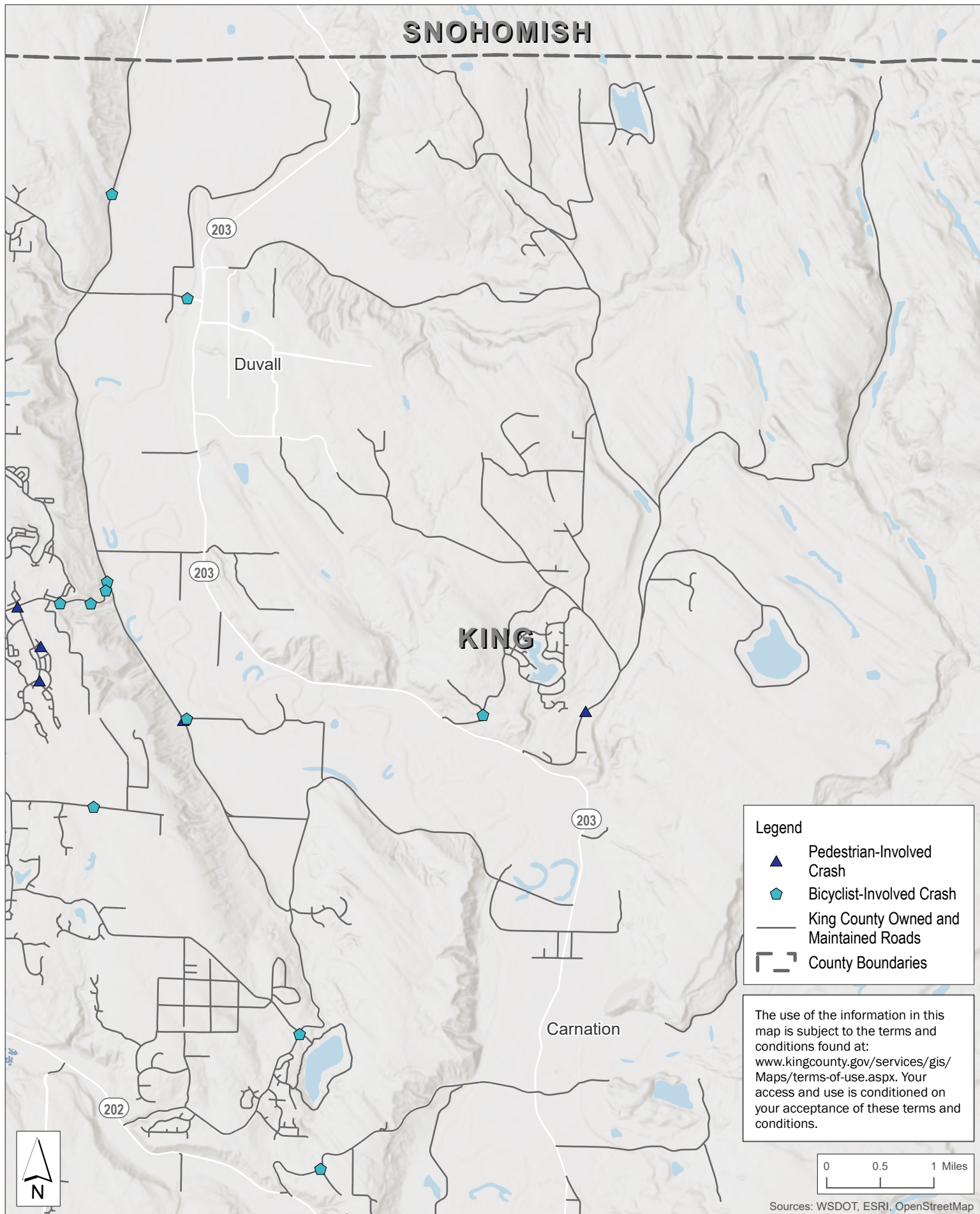


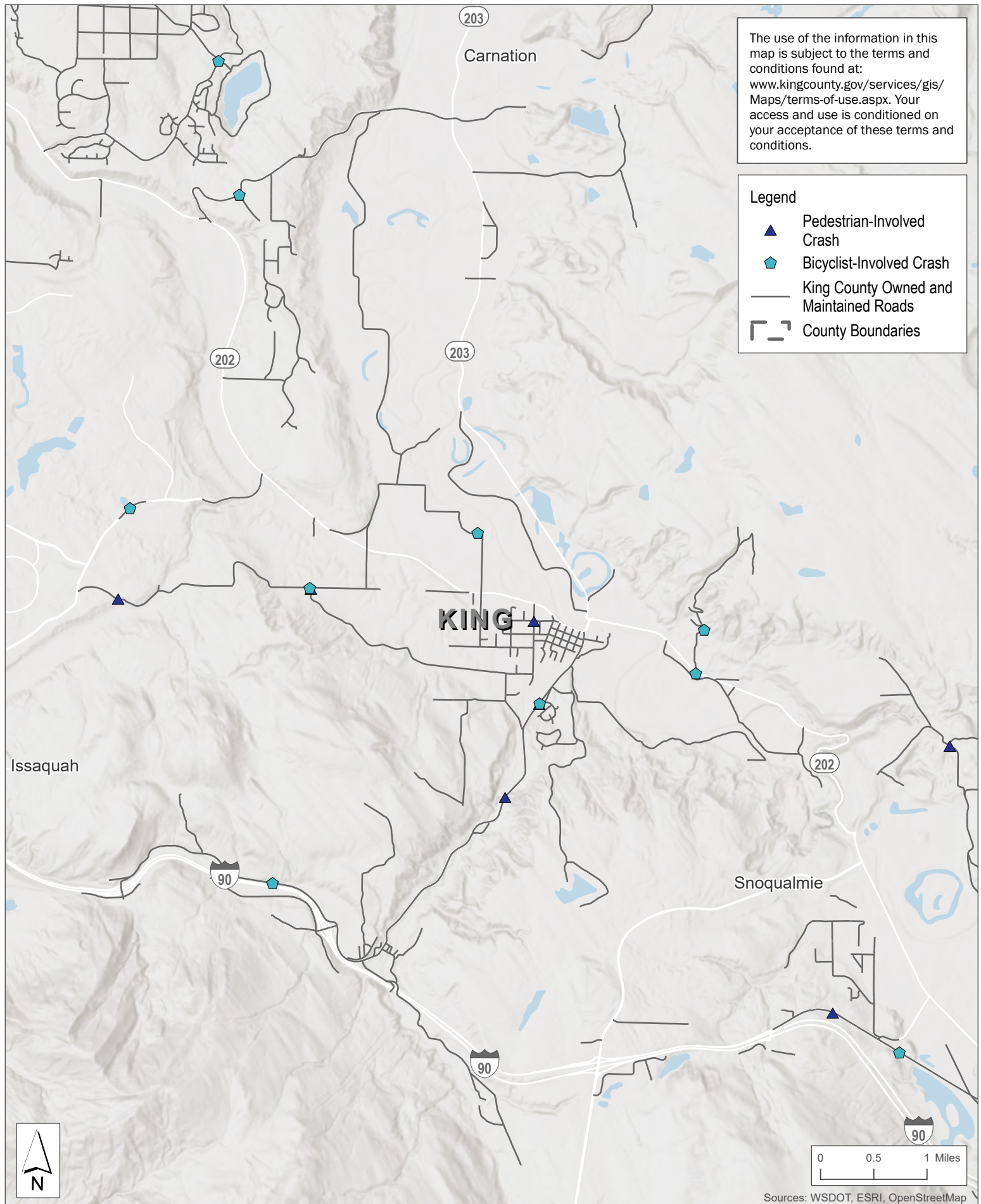
King County

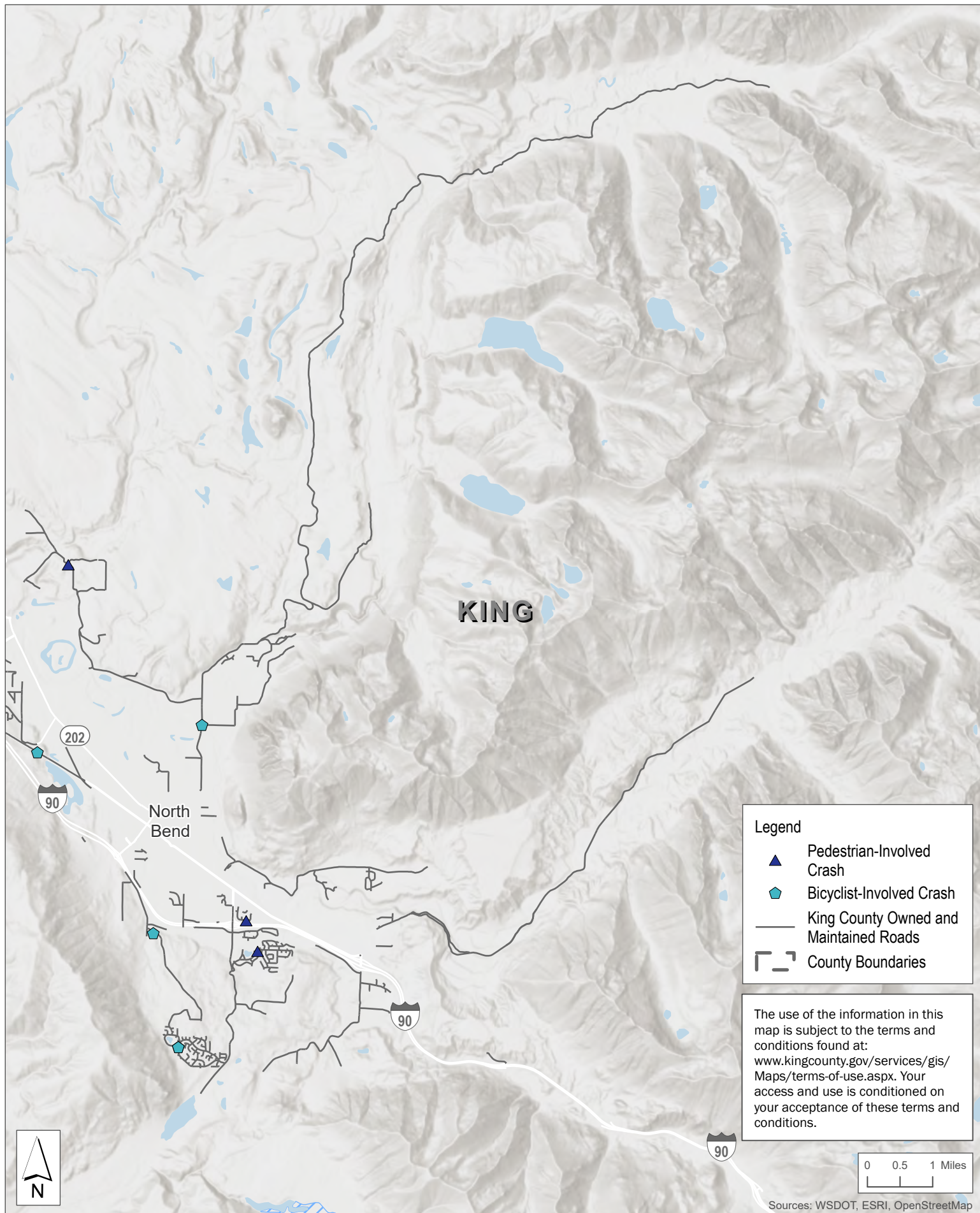
Department of Local Services
Road Services Division

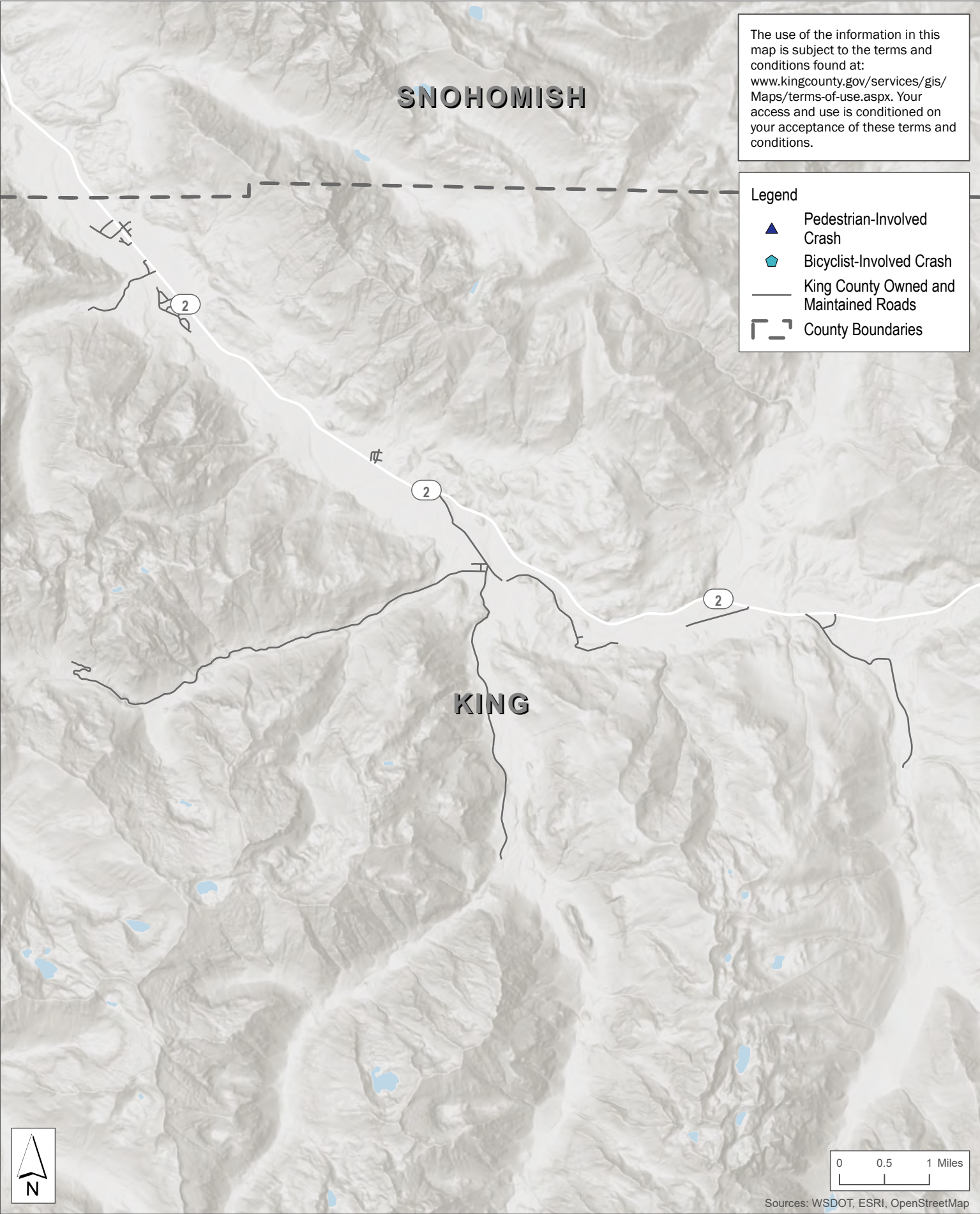
Pedestrian- and Bicyclist-Involved Crashes 2014 to 2023 A - Shoreline

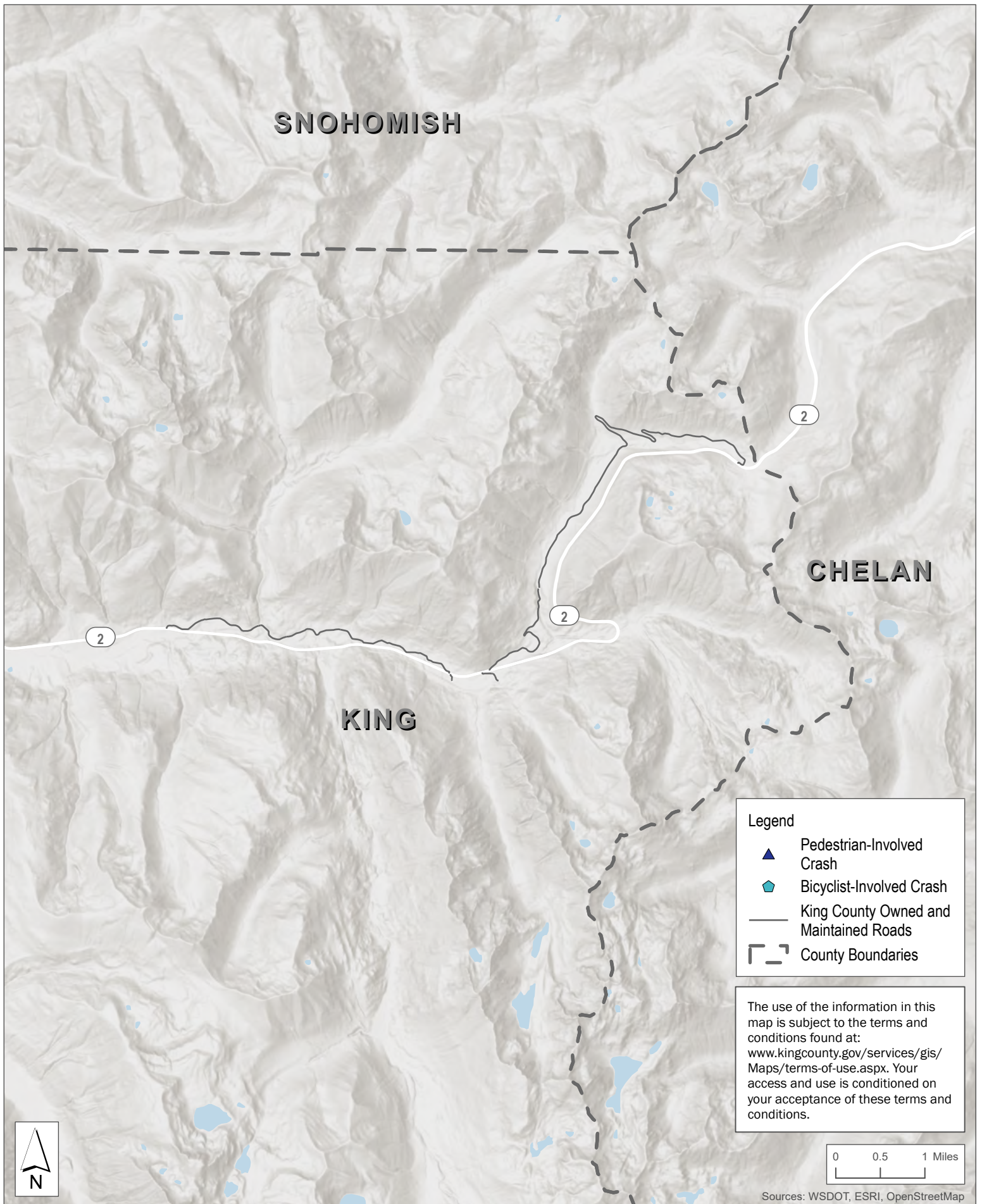


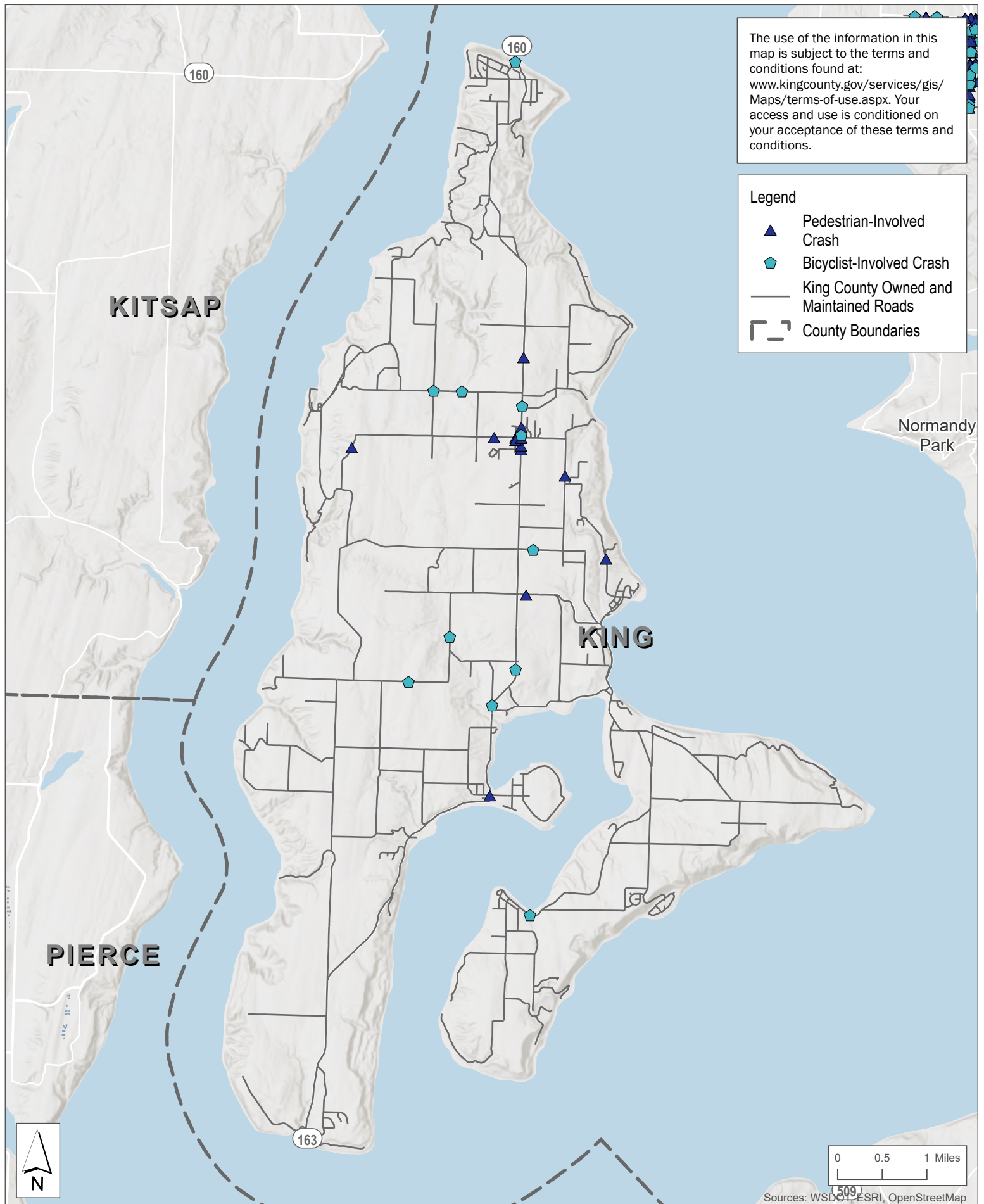


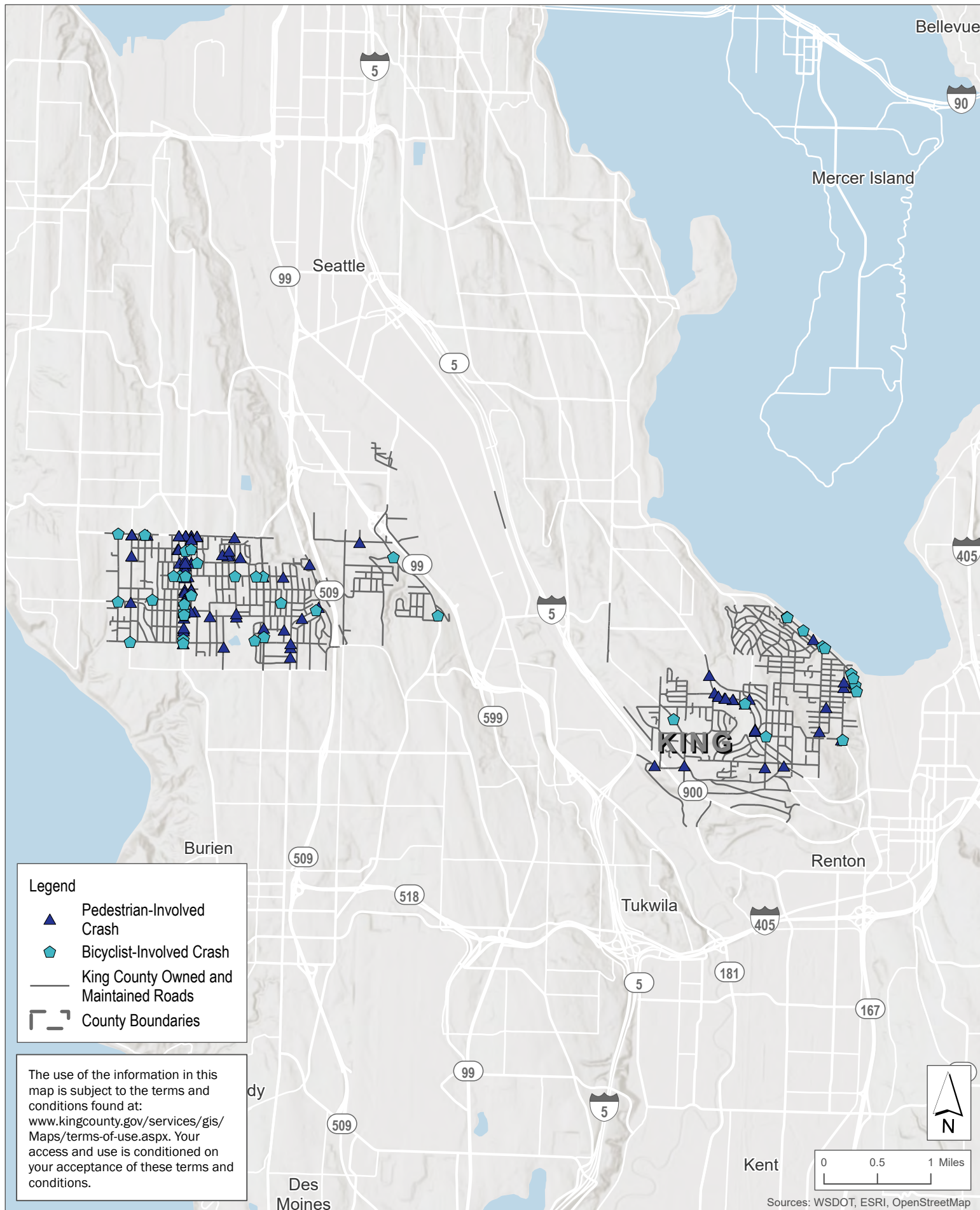


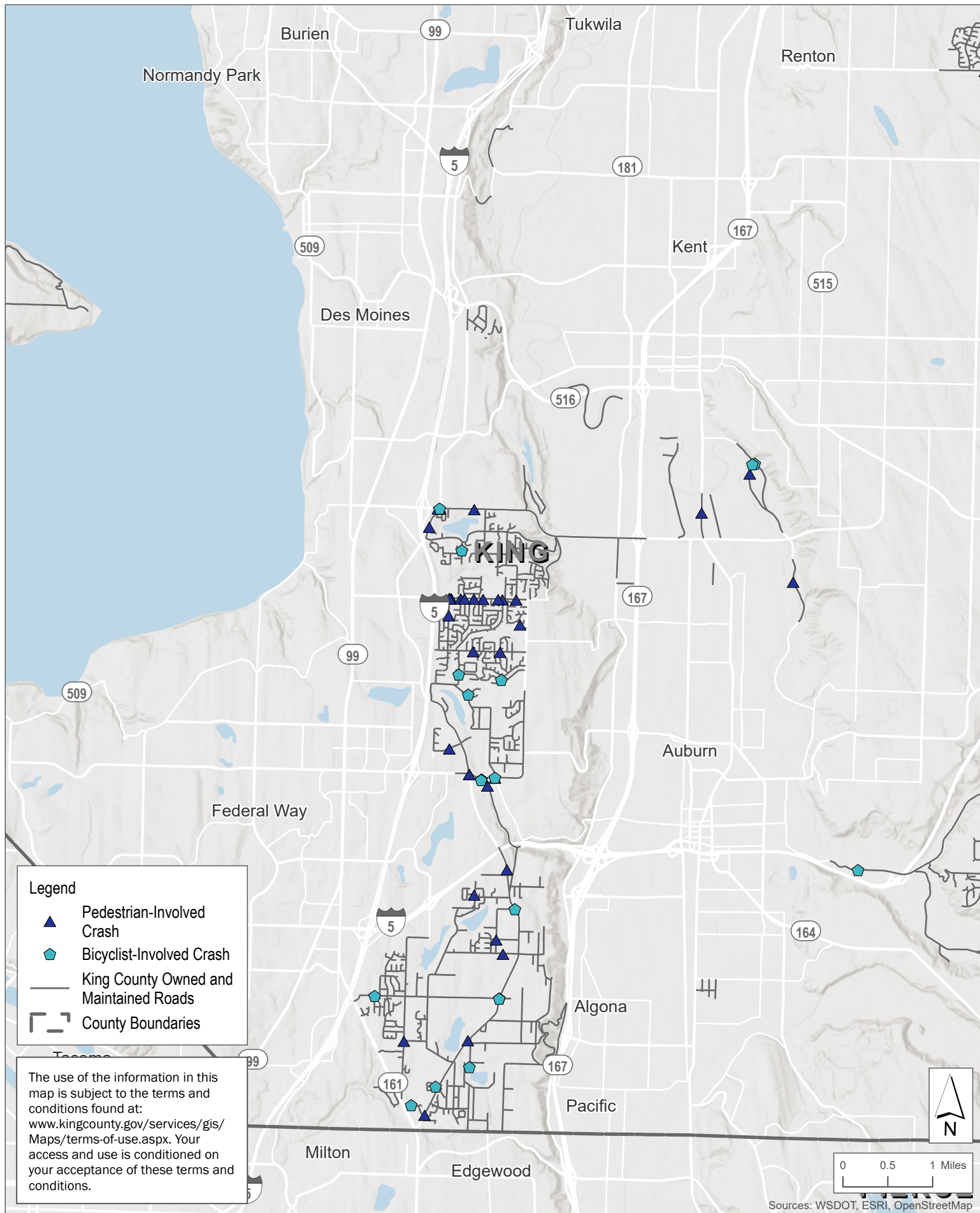










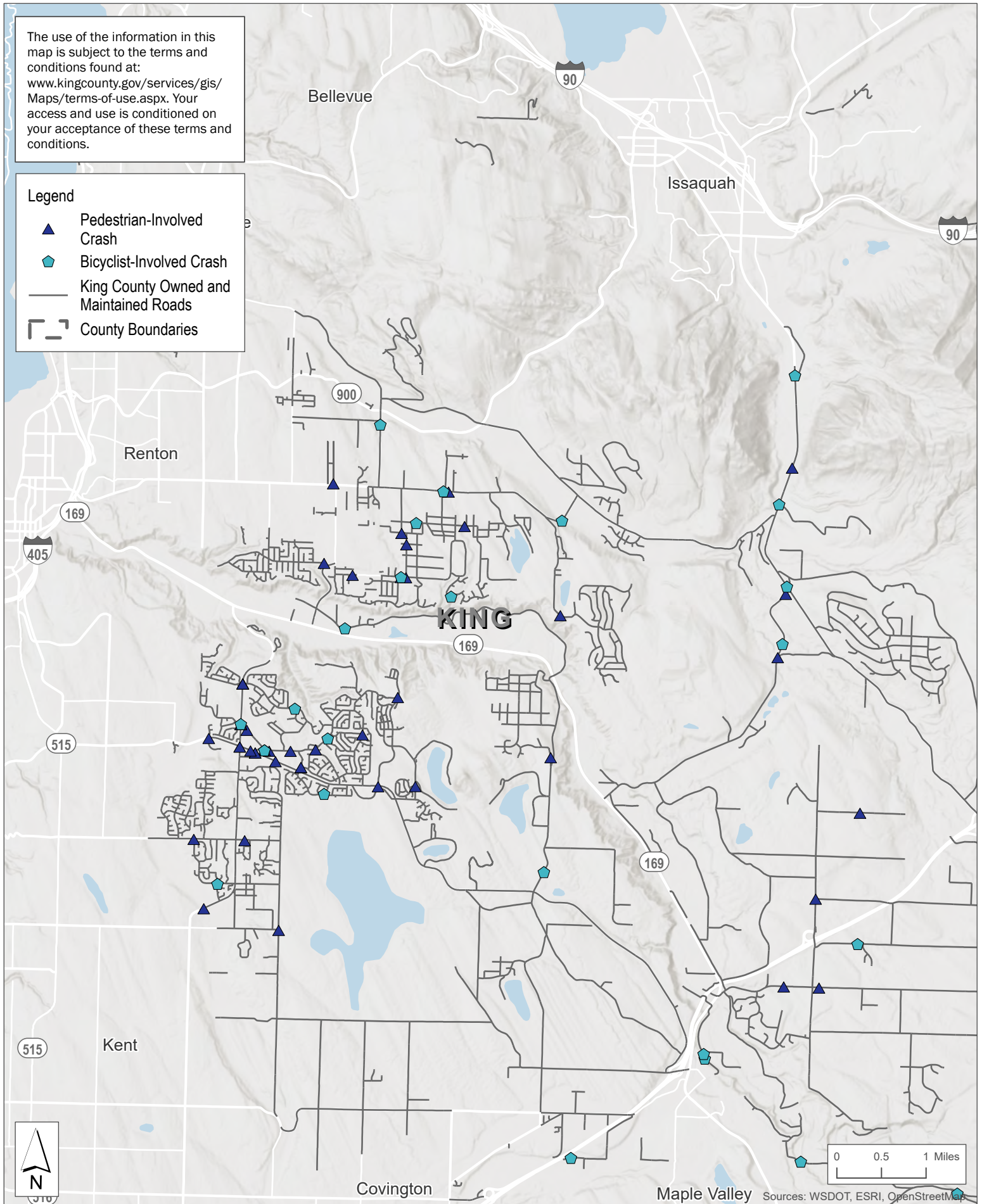




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Legend

-  Pedestrian-Involved Crash
-  Bicyclist-Involved Crash
-  King County Owned and Maintained Roads
-  County Boundaries



Parametrix

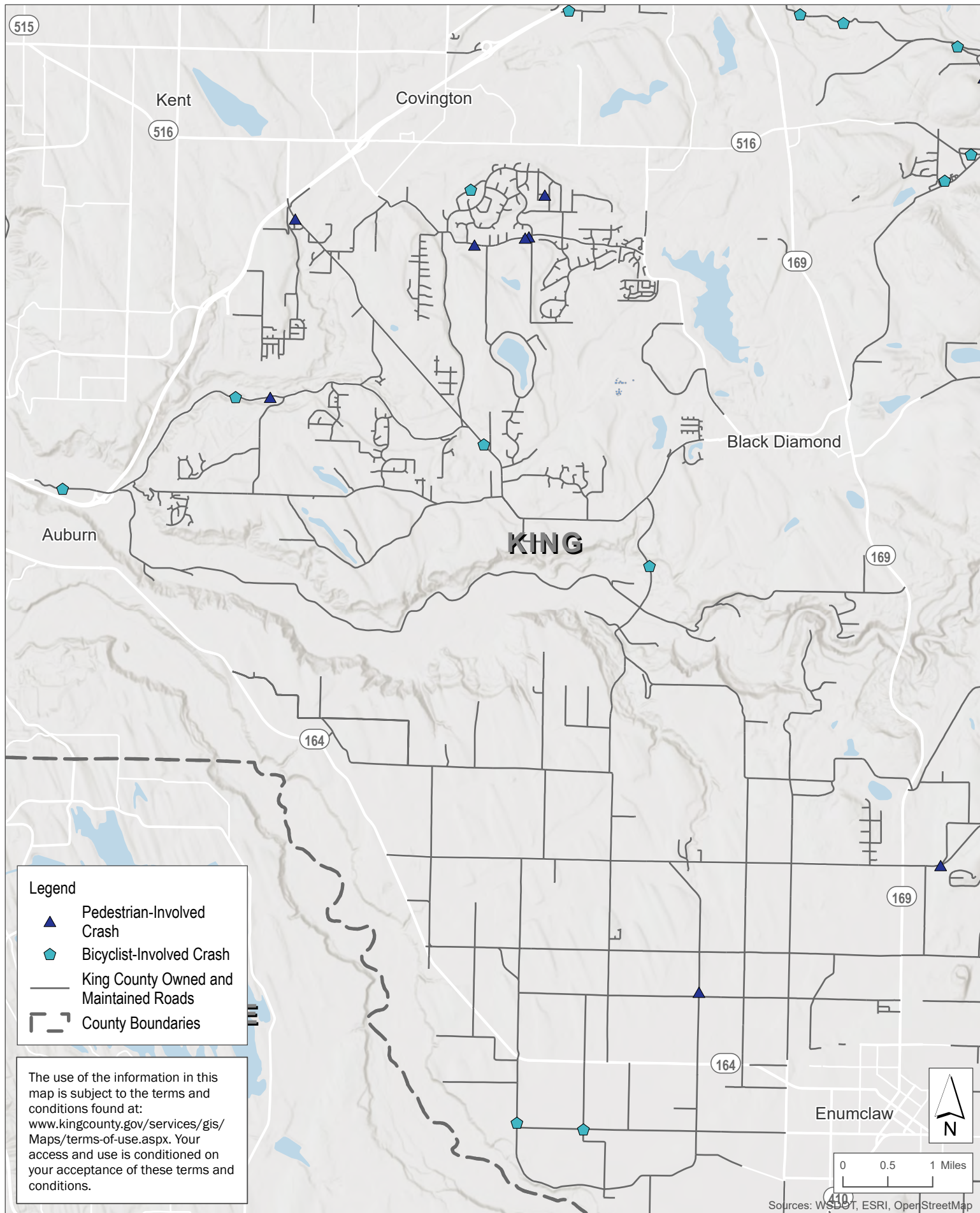


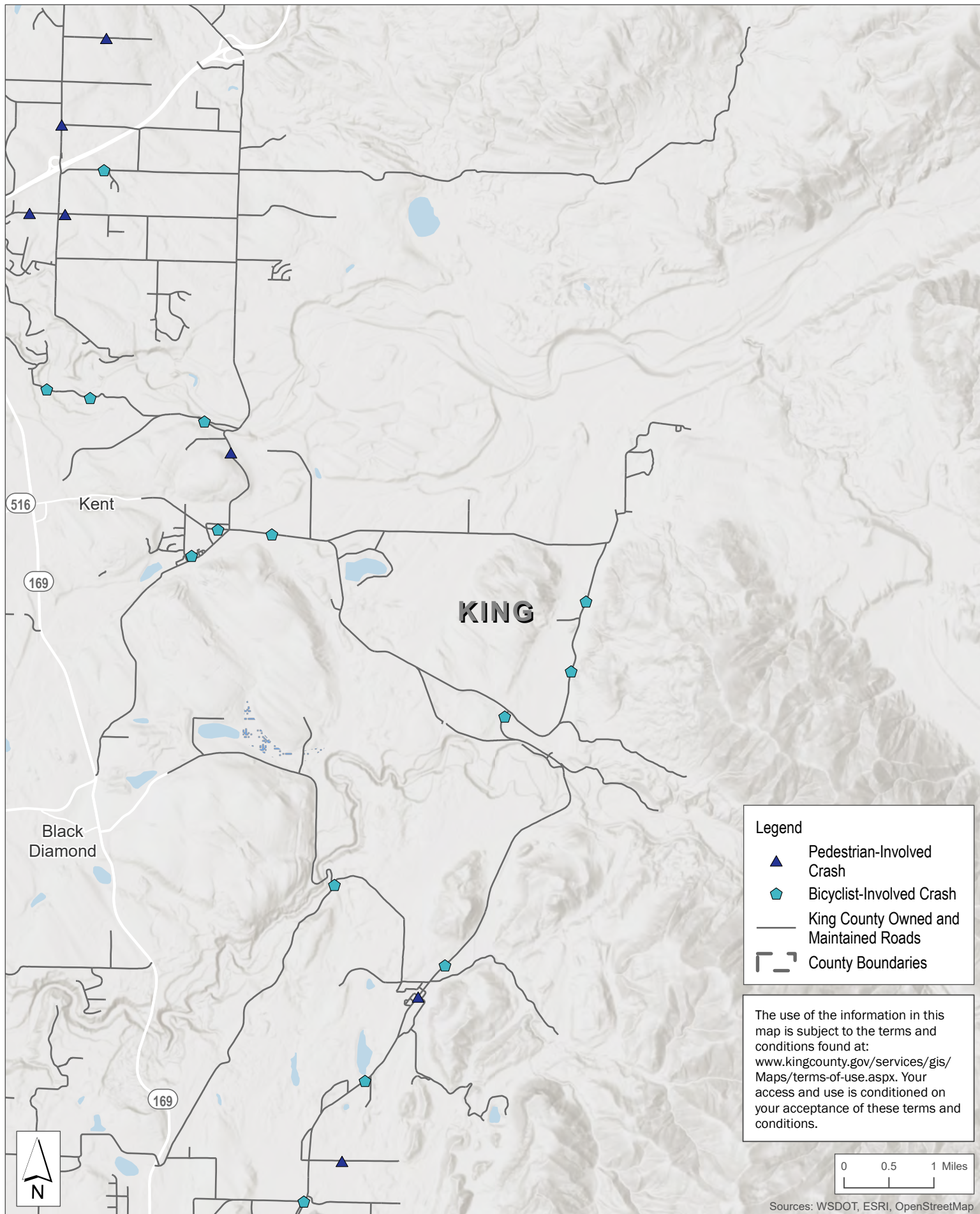
King County

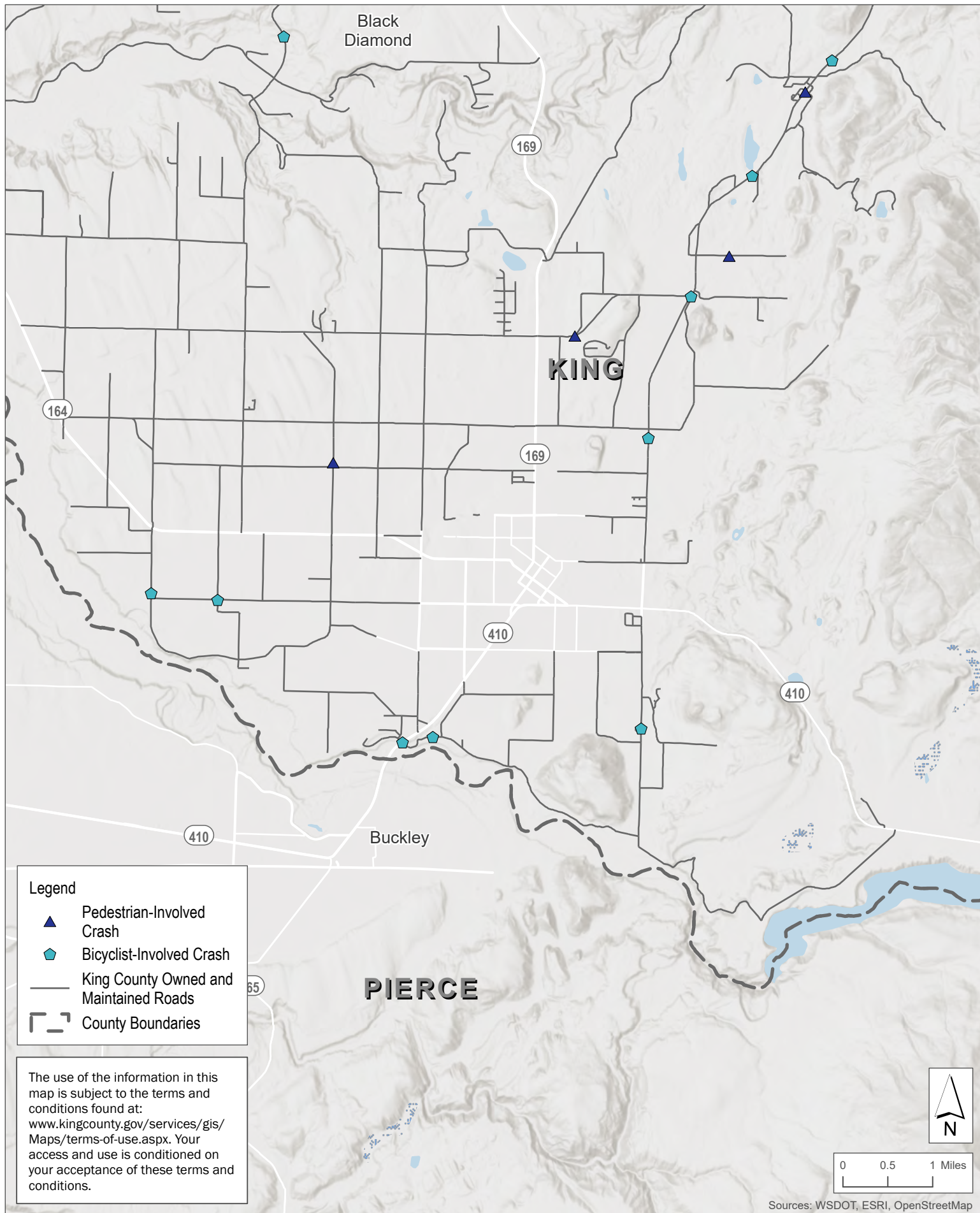
Department of Local Services
Road Services Division

Pedestrian- and Bicyclist-Involved Crashes 2014 to 2023

K - Bellevue to Maple Valley





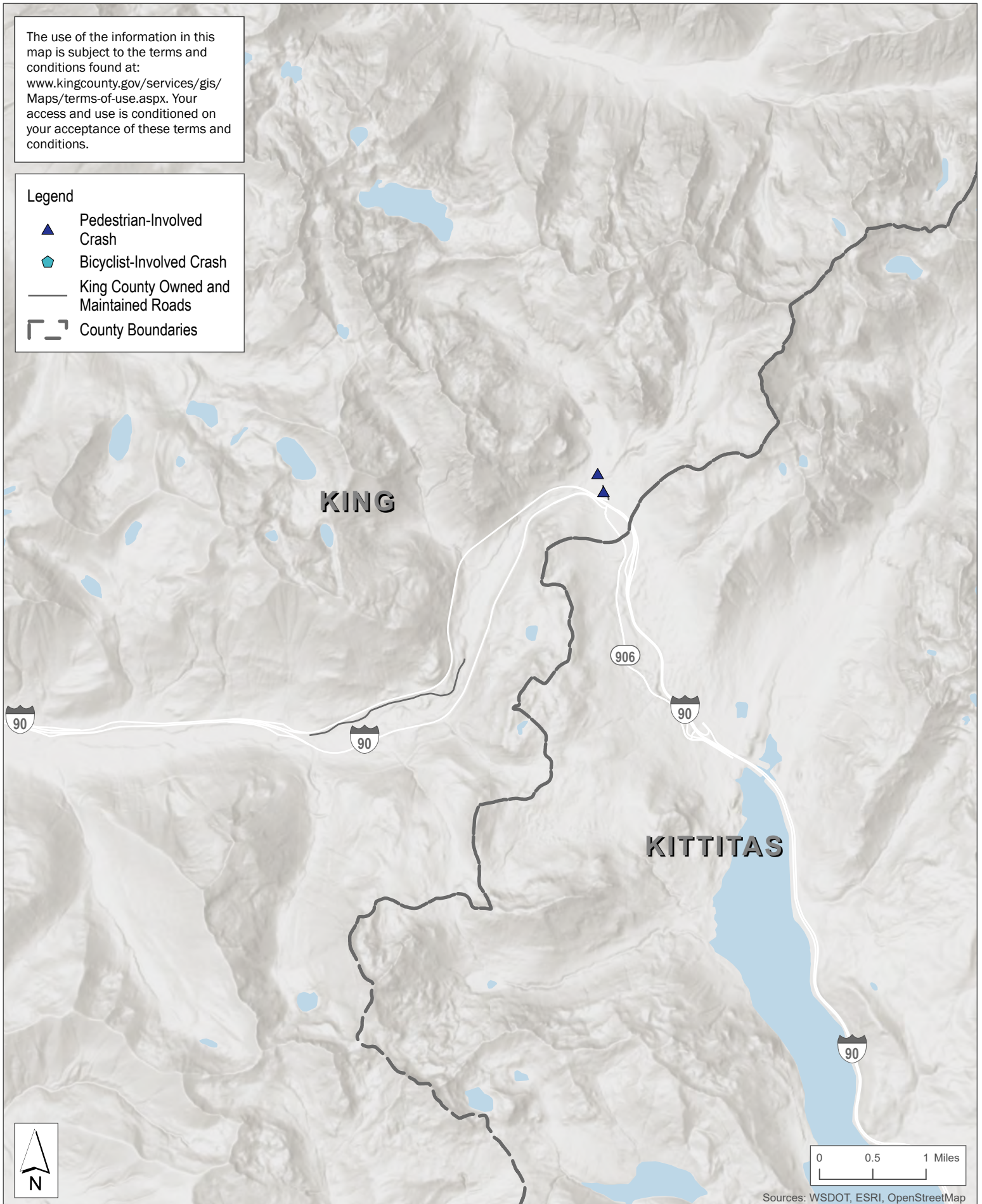




The use of the information in this map is subject to the terms and conditions found at: www.kingcounty.gov/services/gis/Maps/terms-of-use.aspx. Your access and use is conditioned on your acceptance of these terms and conditions.

Legend

-  Pedestrian-Involved Crash
-  Bicyclist-Involved Crash
-  King County Owned and Maintained Roads
-  County Boundaries



Sources: WSDOT, ESRI, OpenStreetMap

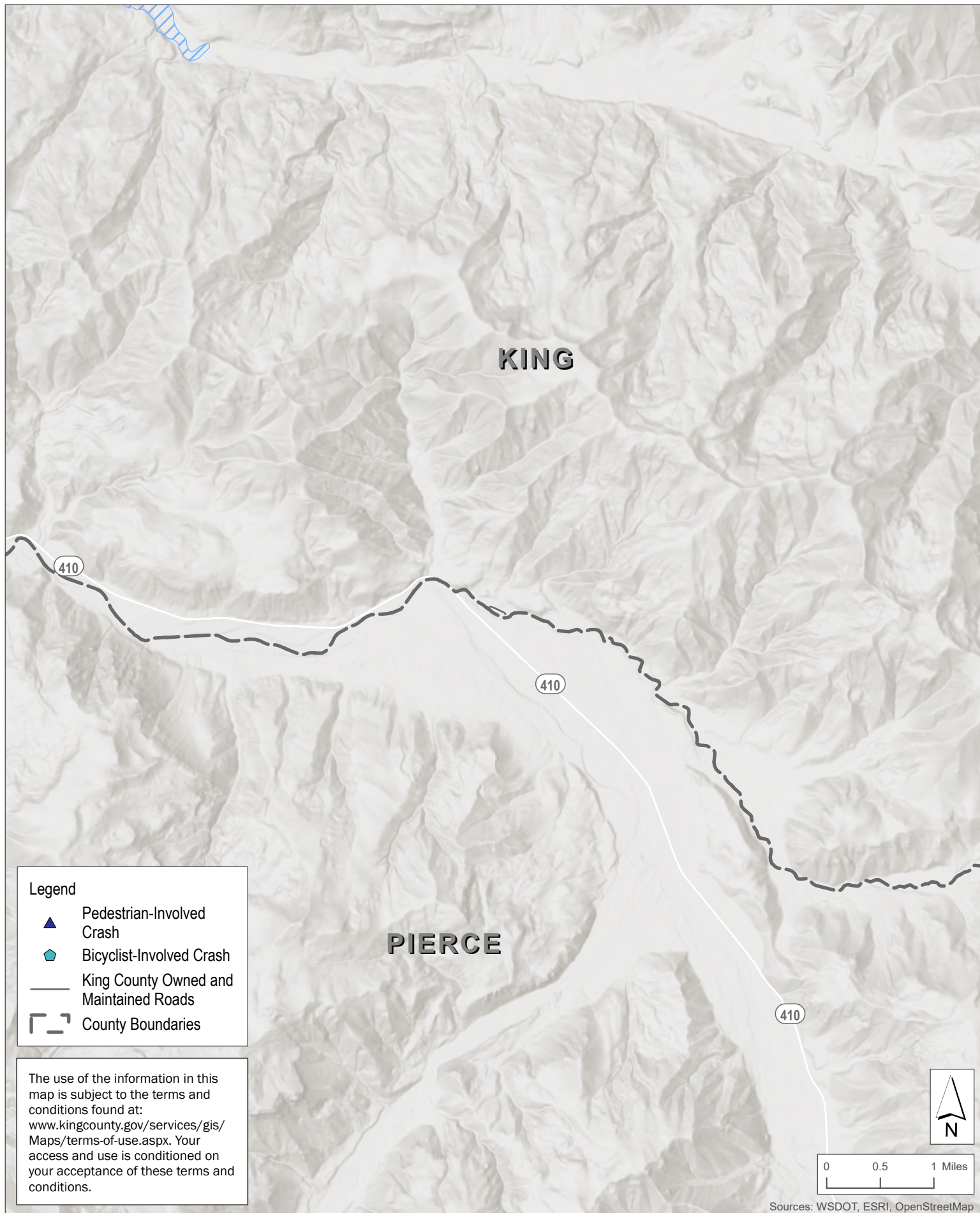
Parametrix







King County

Department of Local Services
Road Services Division

Pedestrian- and Bicyclist-Involved Crashes 2014 to 2023 O - E King County



Legend

-  Pedestrian-Involved Crash
-  Bicyclist-Involved Crash
-  King County Owned and Maintained Roads
-  County Boundaries

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Sources: WSDOT, ESRI, OpenStreetMap

Parametrix



King County

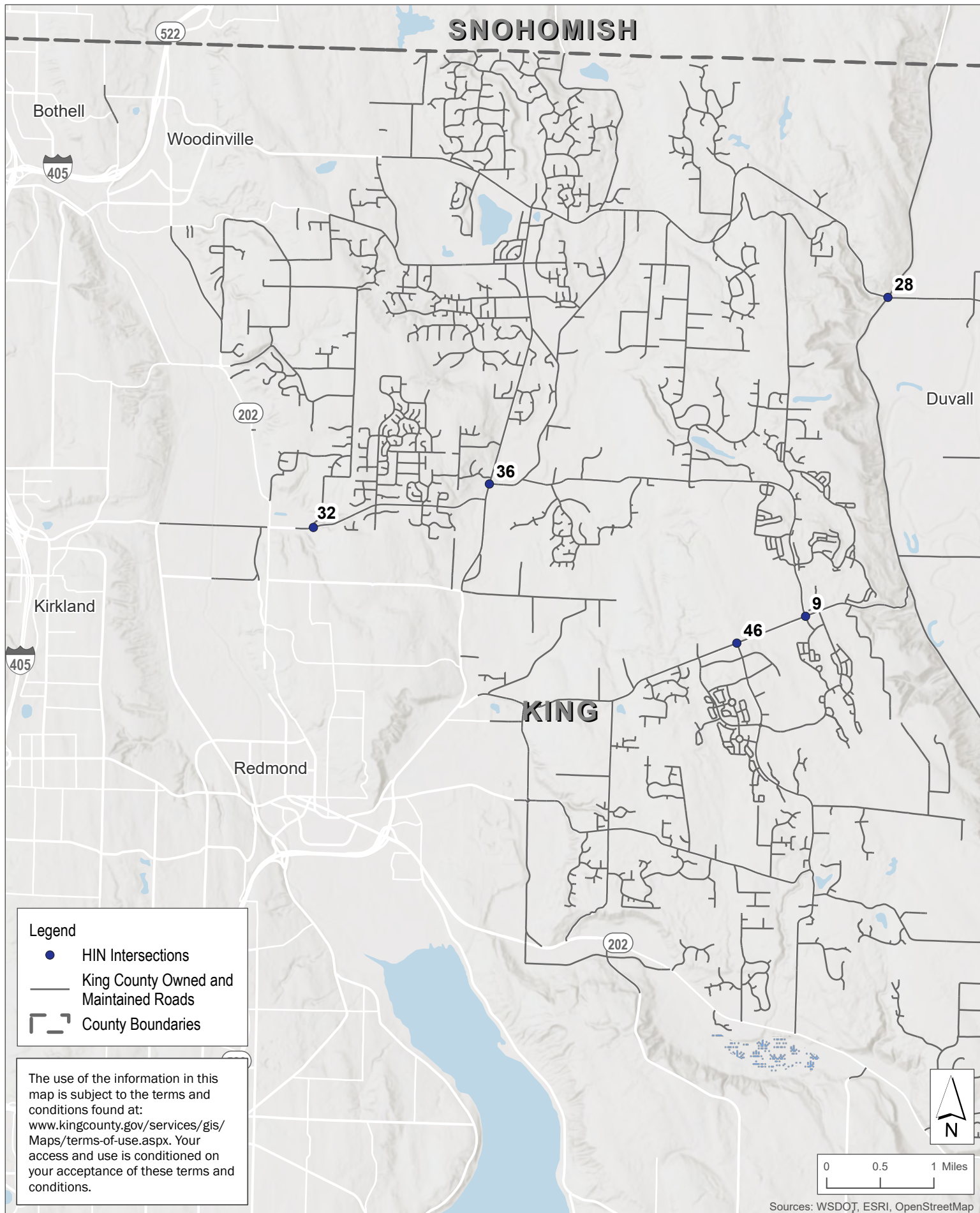
Department of Local Services
Road Services Division

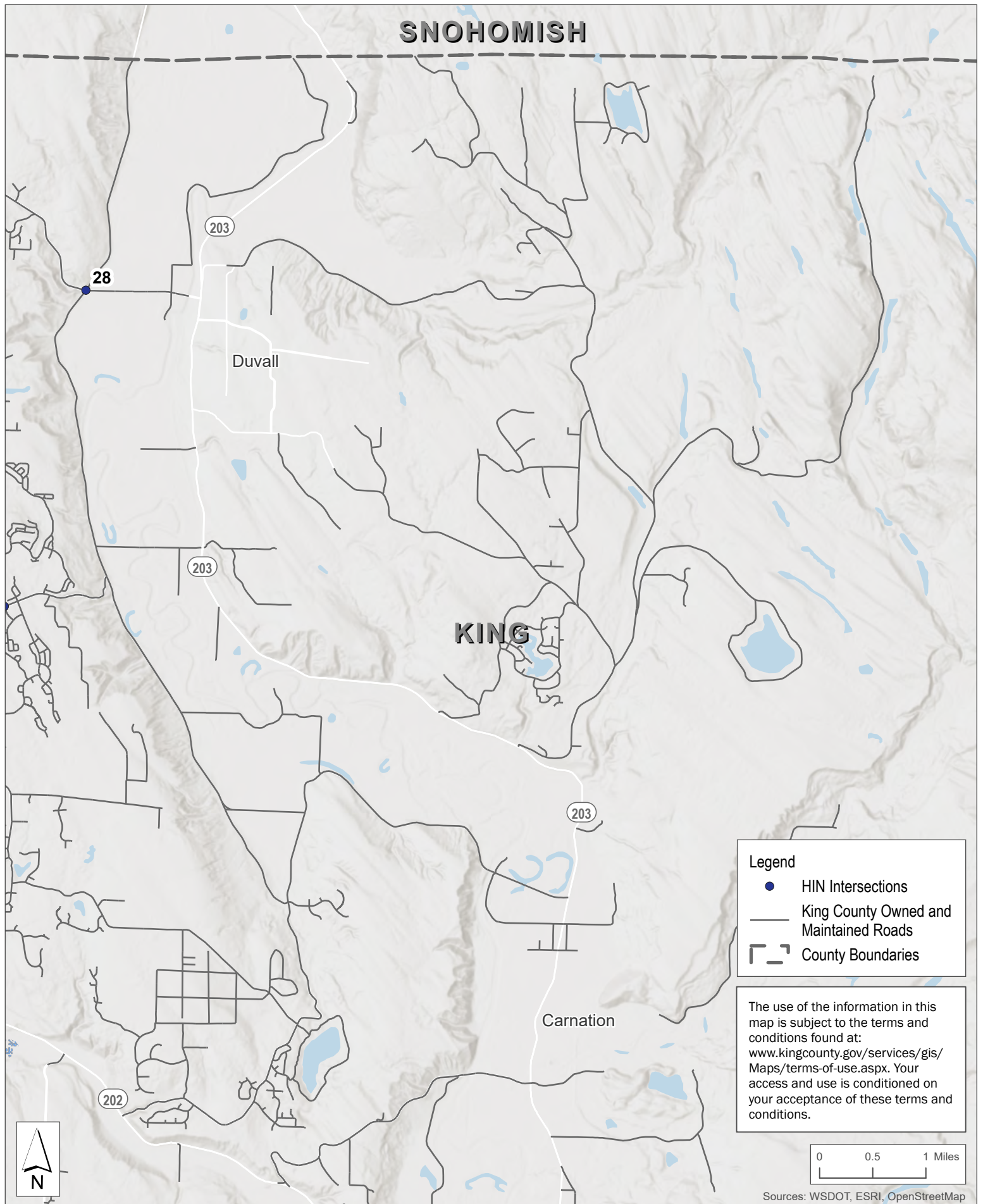
Pedestrian- and Bicyclist-Involved Crashes 2014 to 2023

P - Greenwater

5. HIN Intersections



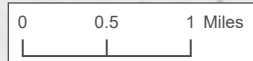




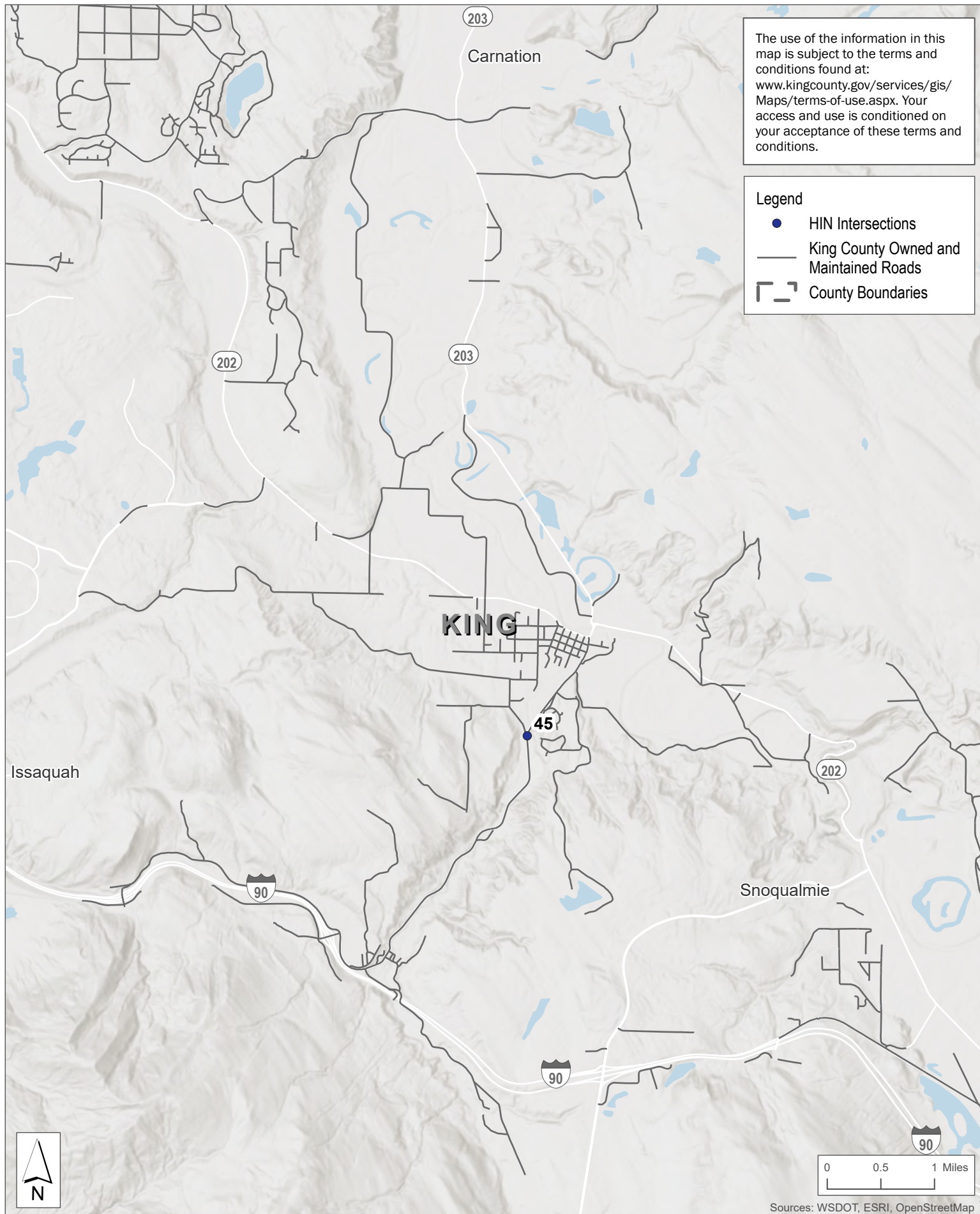
Legend

- HIN Intersections
- King County Owned and Maintained Roads
- ▭ County Boundaries

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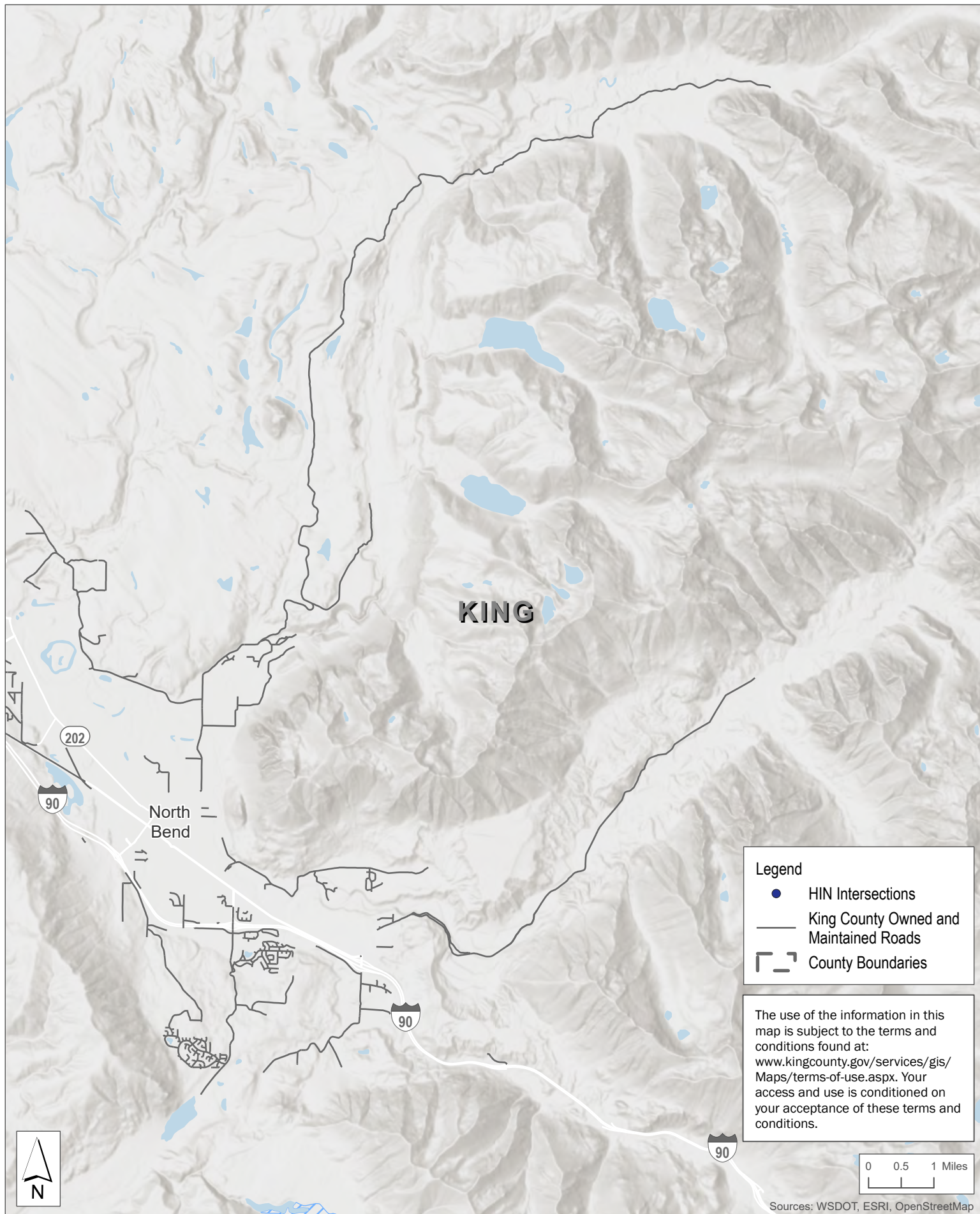
Sources: WSDOT, ESRI, OpenStreetMap

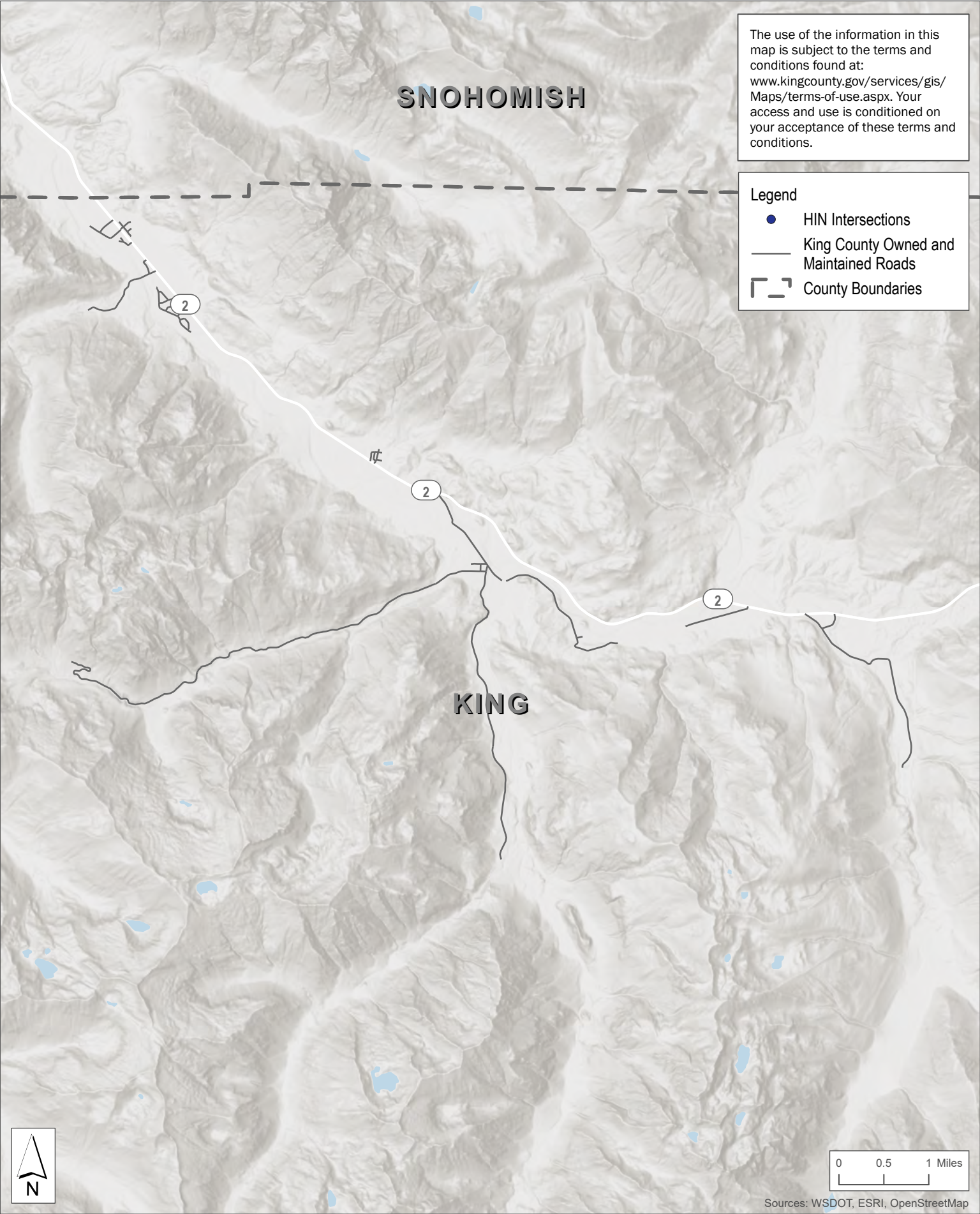


The use of the information in this map is subject to the terms and conditions found at: www.kingcounty.gov/services/gis/Maps/terms-of-use.aspx. Your access and use is conditioned on your acceptance of these terms and conditions.

Legend

- HIN Intersections
- King County Owned and Maintained Roads
- County Boundaries



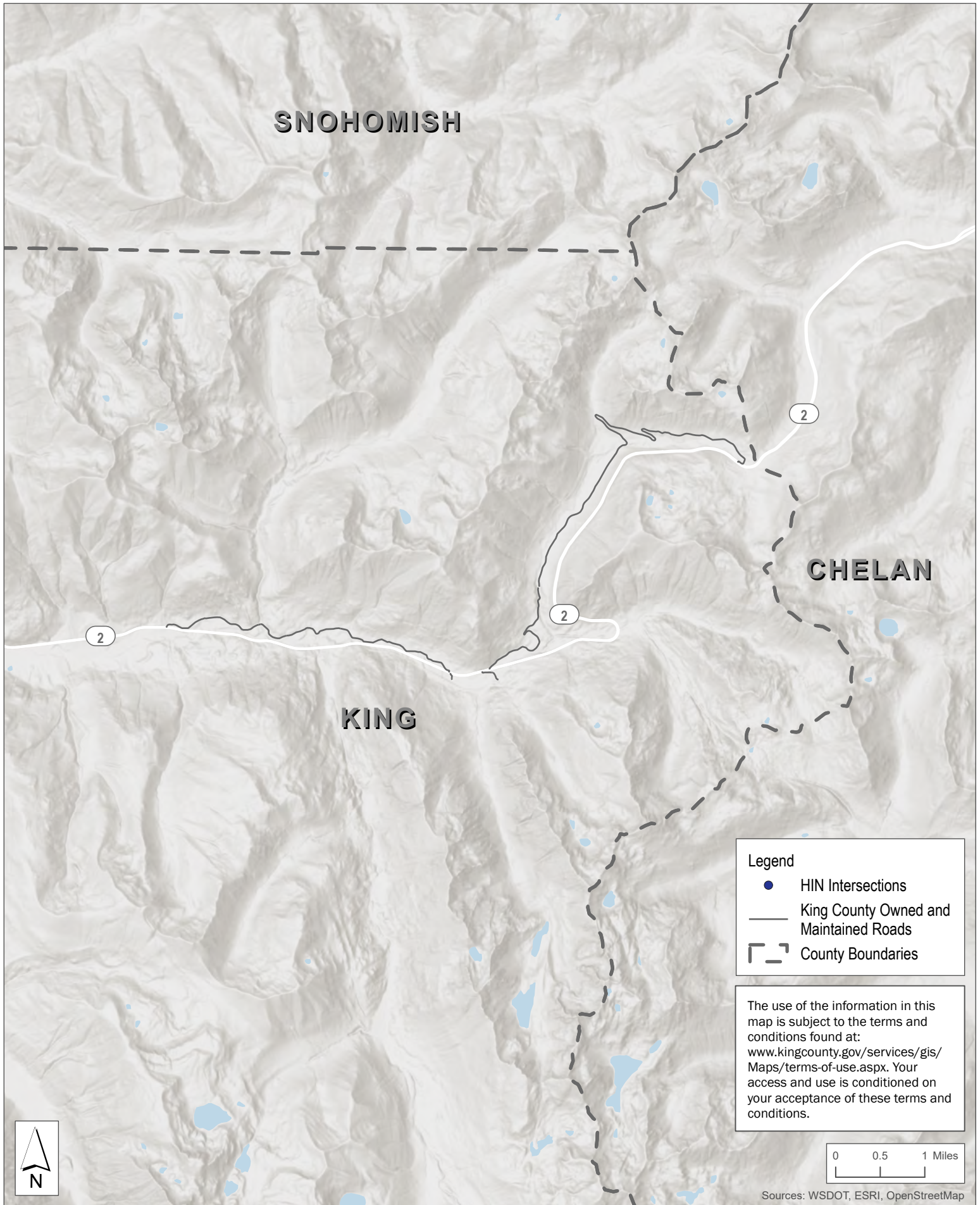


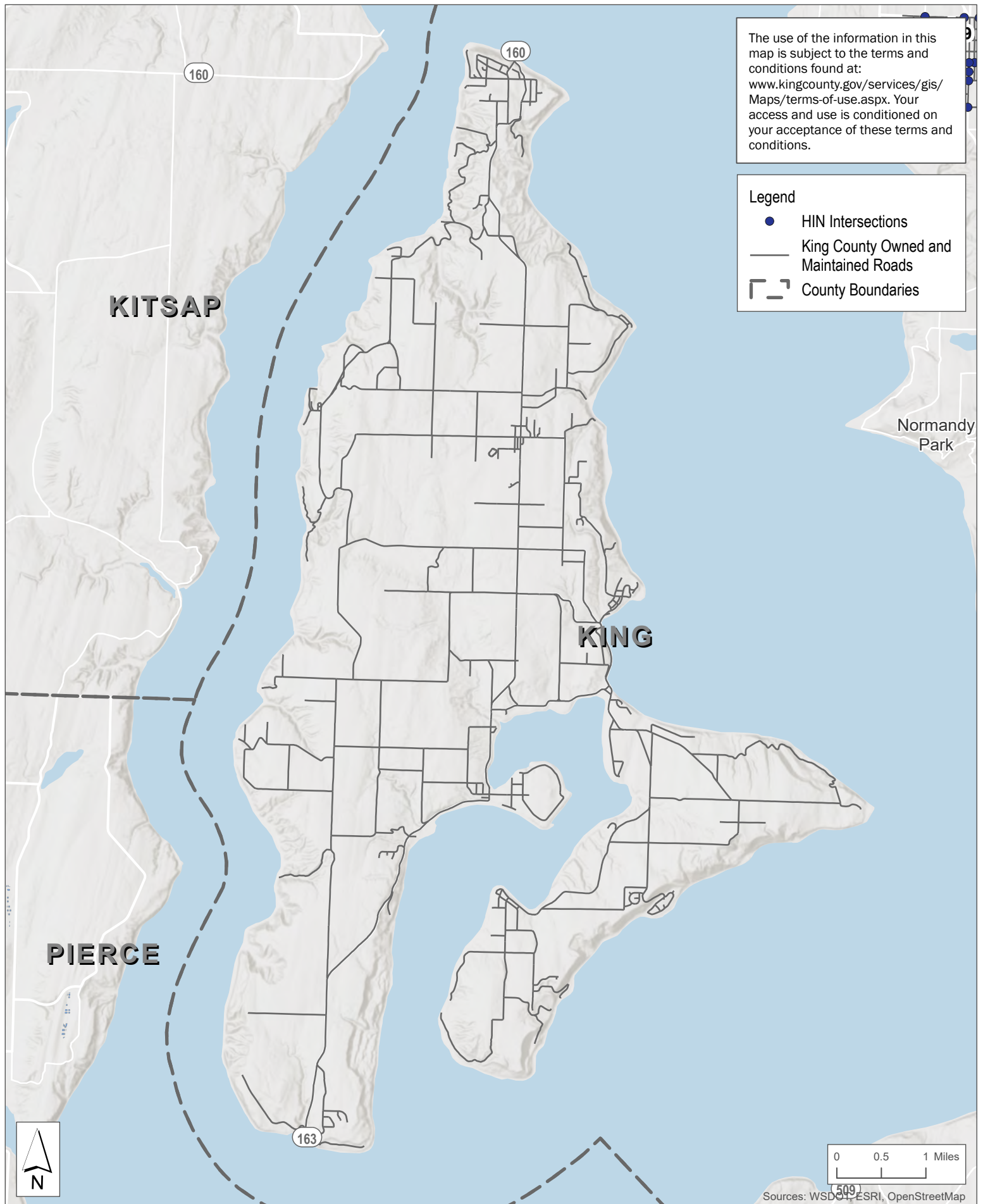
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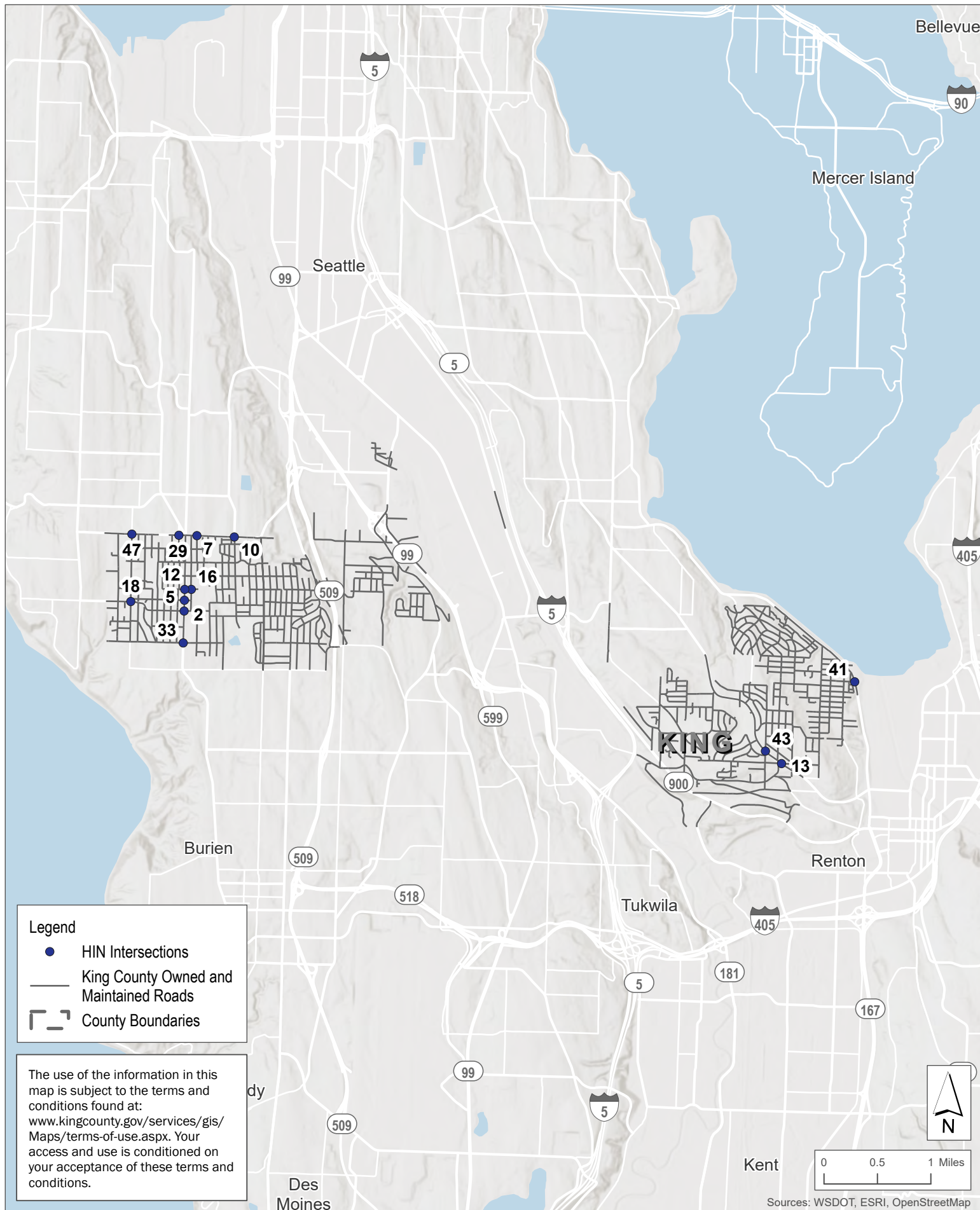
- Legend**
- HIN Intersections
 - King County Owned and Maintained Roads
 - ┌ ┐ County Boundaries



Sources: WSDOT, ESRI, OpenStreetMap







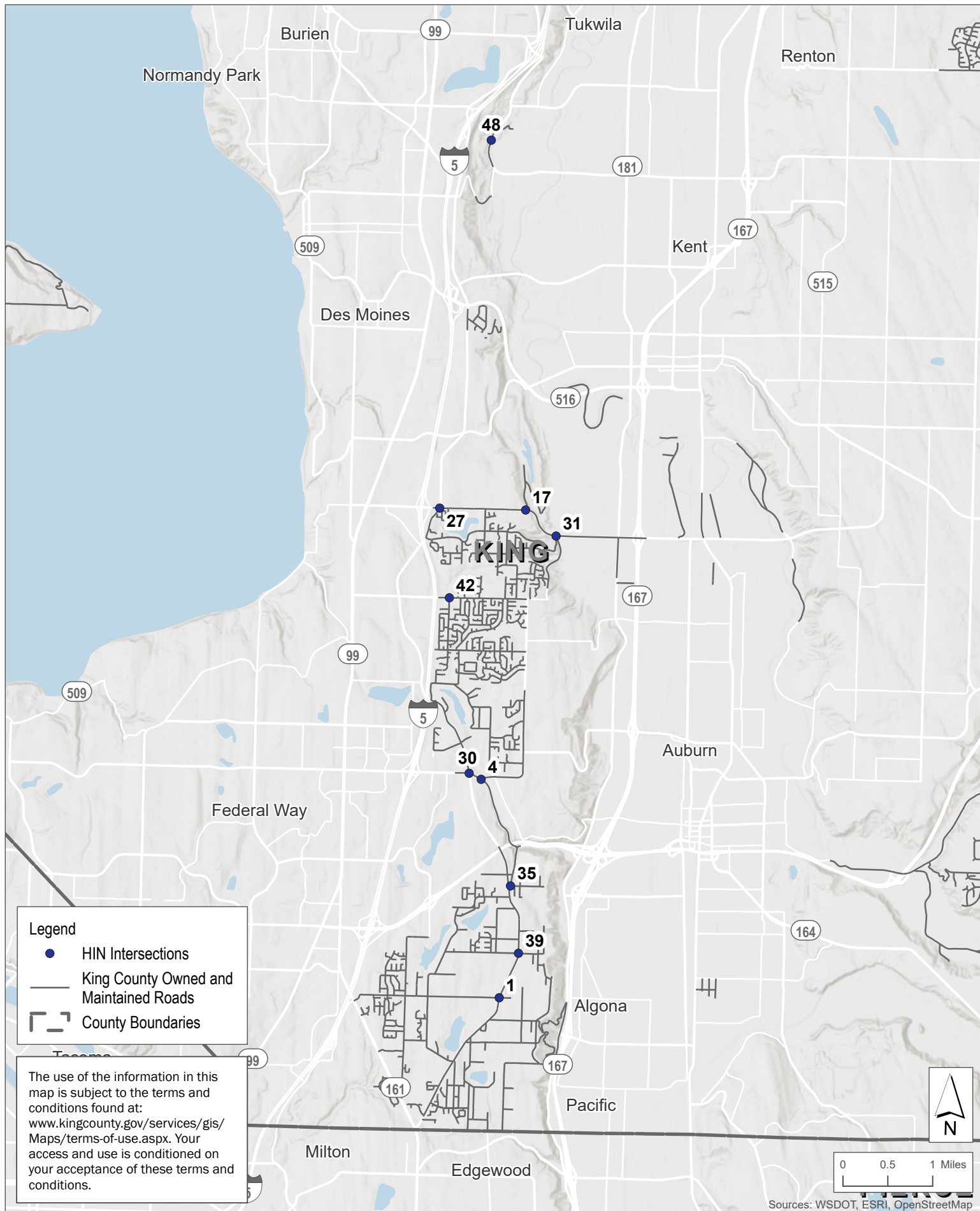
Parametrix



King County

Department of Local Services
Road Services Division

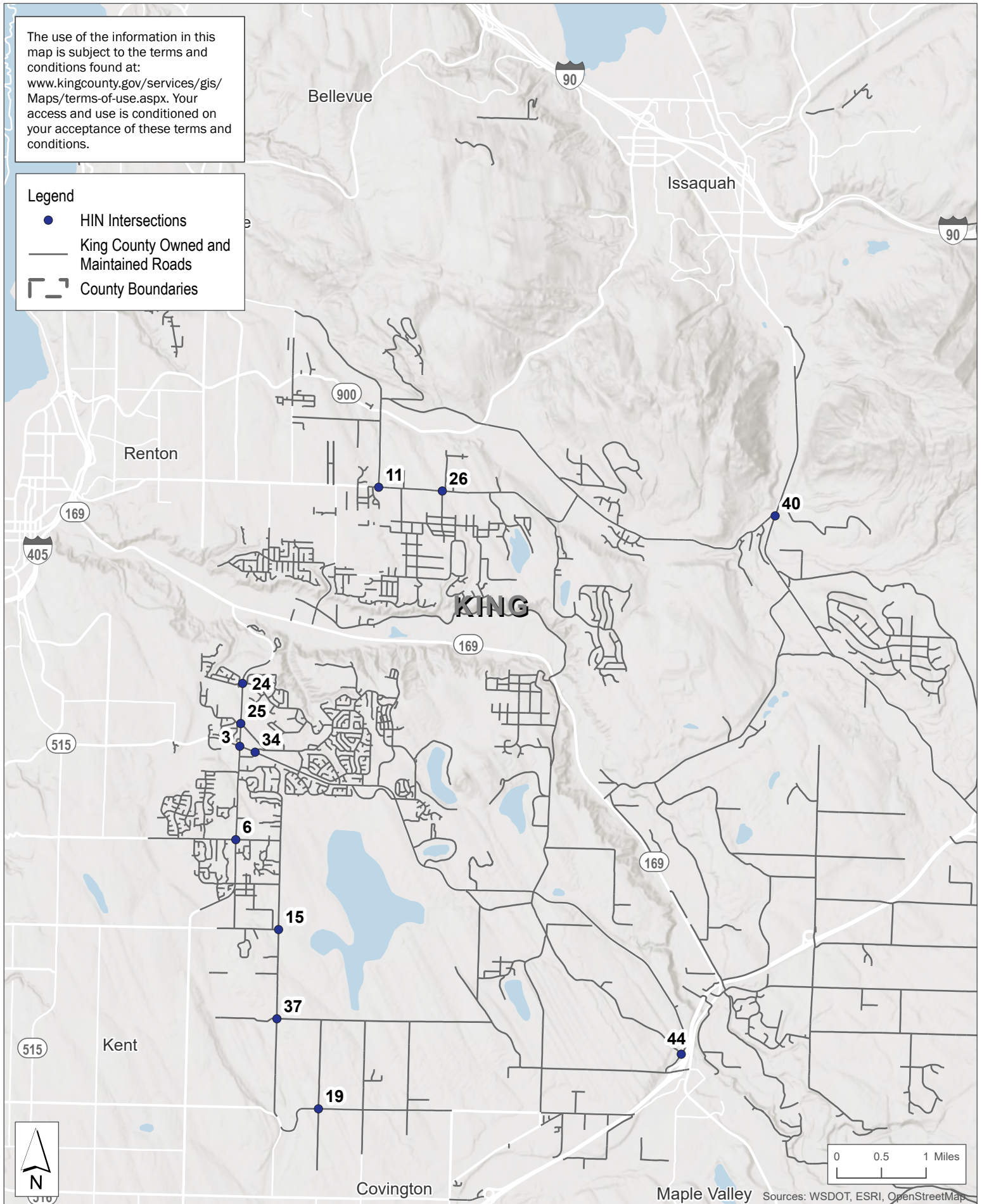
HIN Intersections I - North Highline/Skyway



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Legend

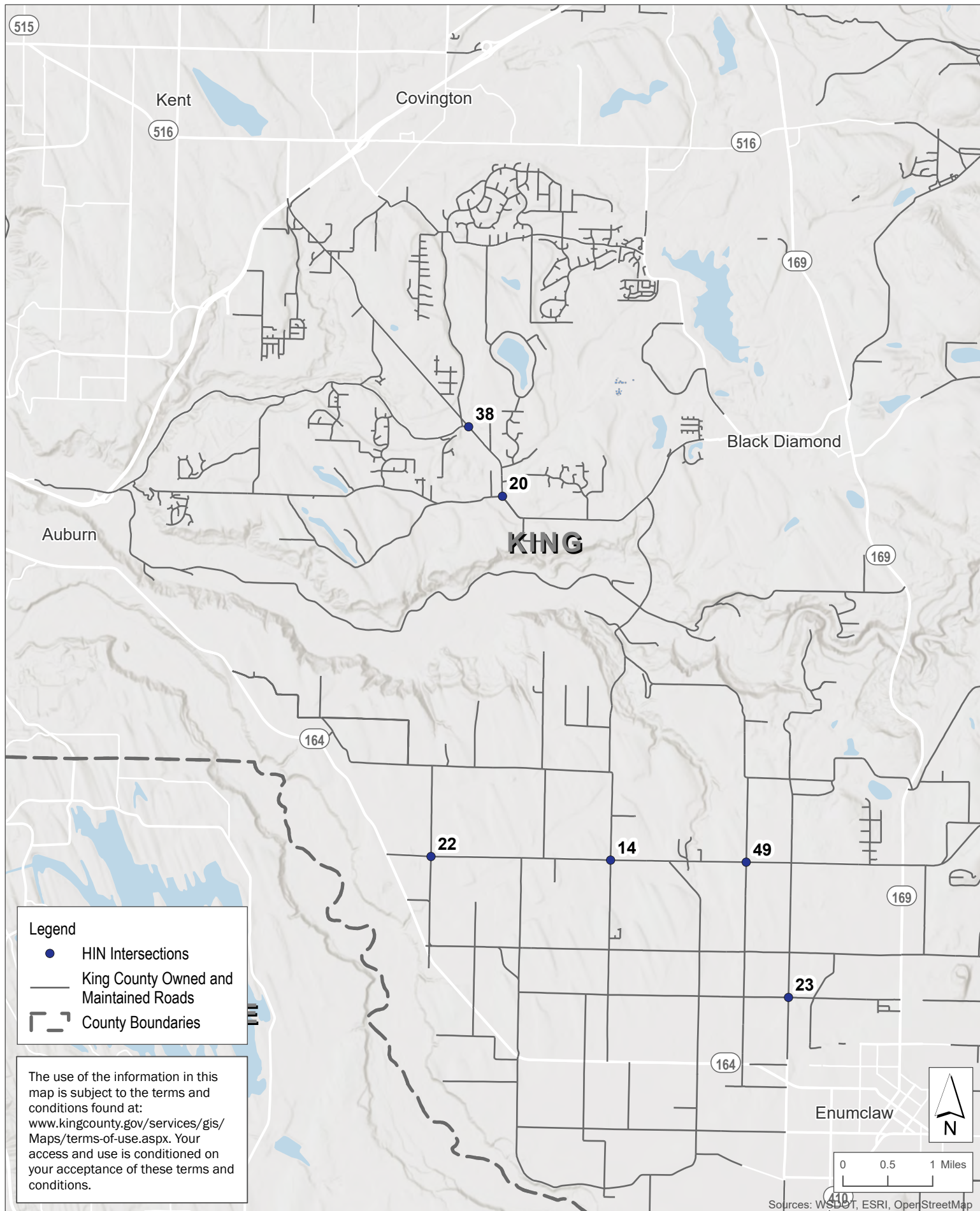
- HIN Intersections
- King County Owned and Maintained Roads
- ▭ County Boundaries

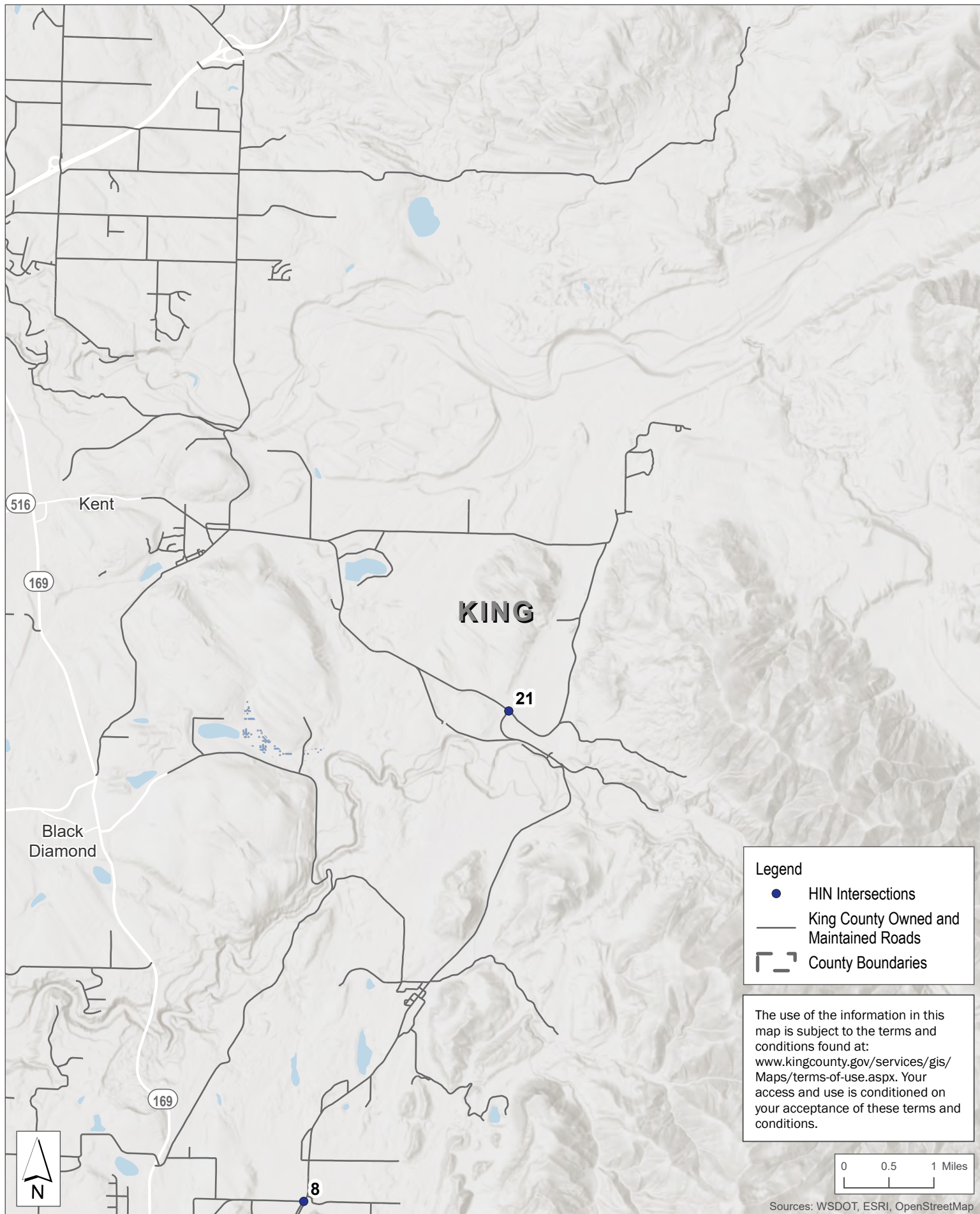


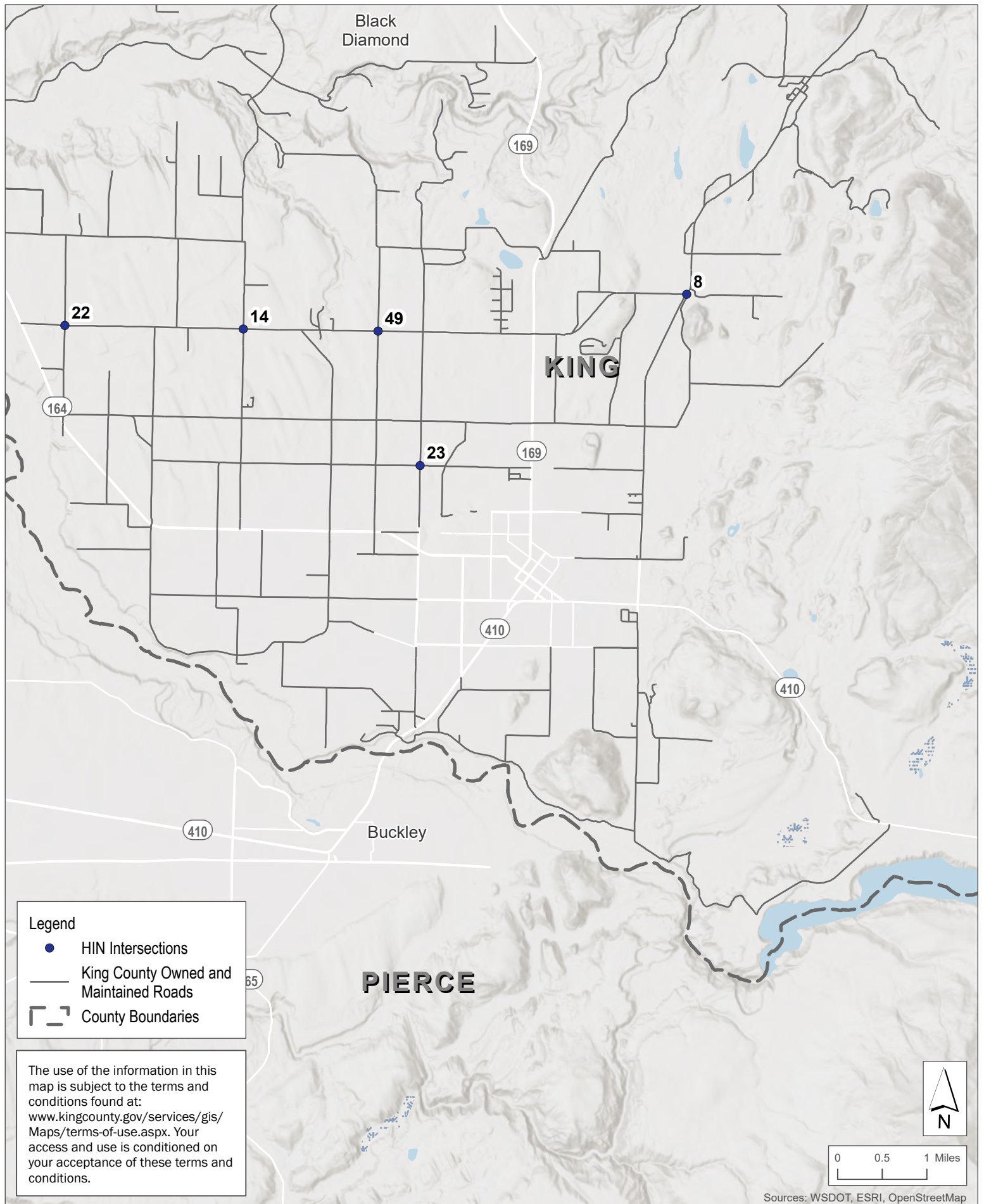
Parametrix

King County
Department of Local Services
Road Services Division

HIN Intersections
K - Bellevue to Maple Valley



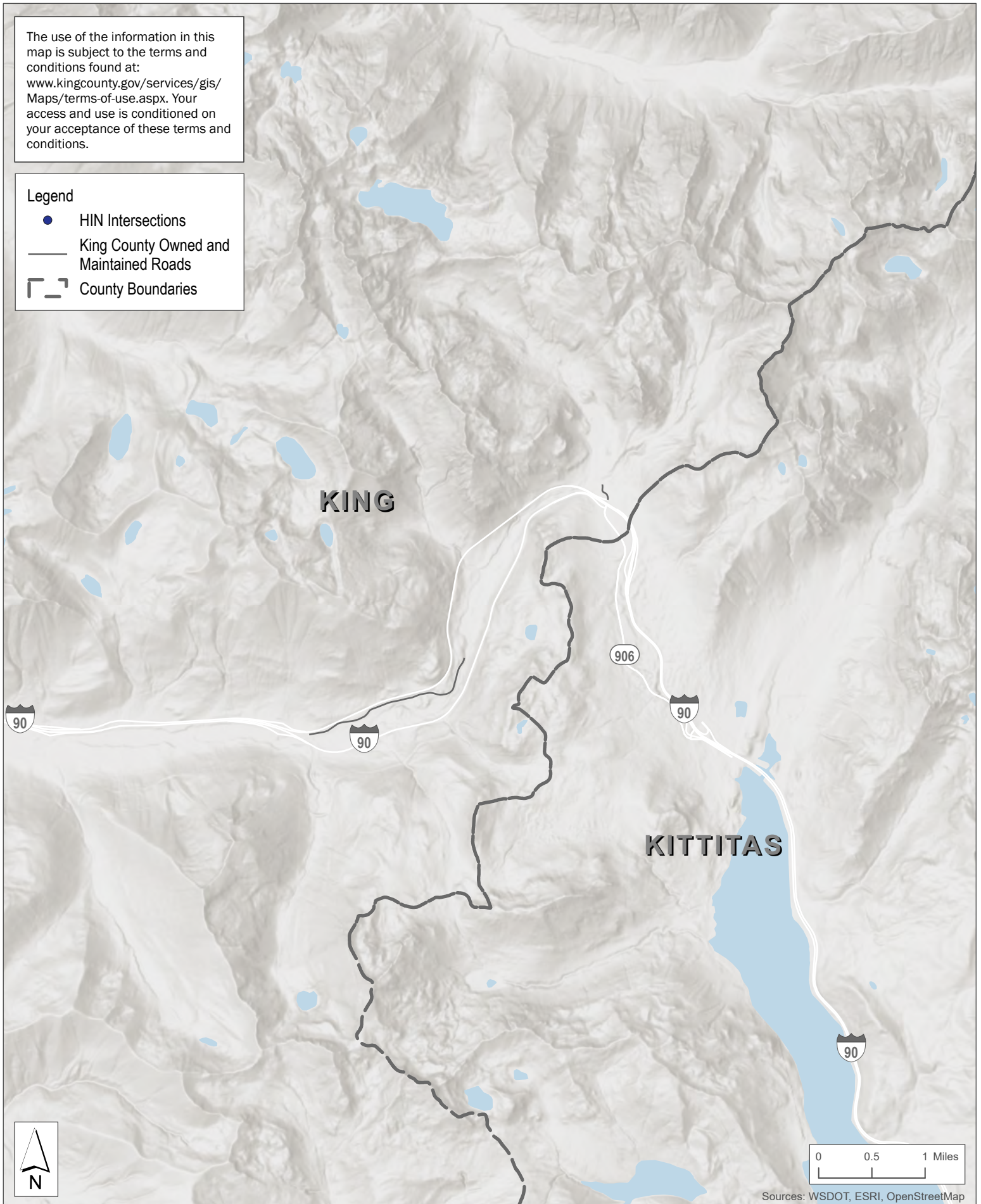




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Legend

- HIN Intersections
- King County Owned and Maintained Roads
- ▭ County Boundaries



Sources: WSDOT, ESRI, OpenStreetMap

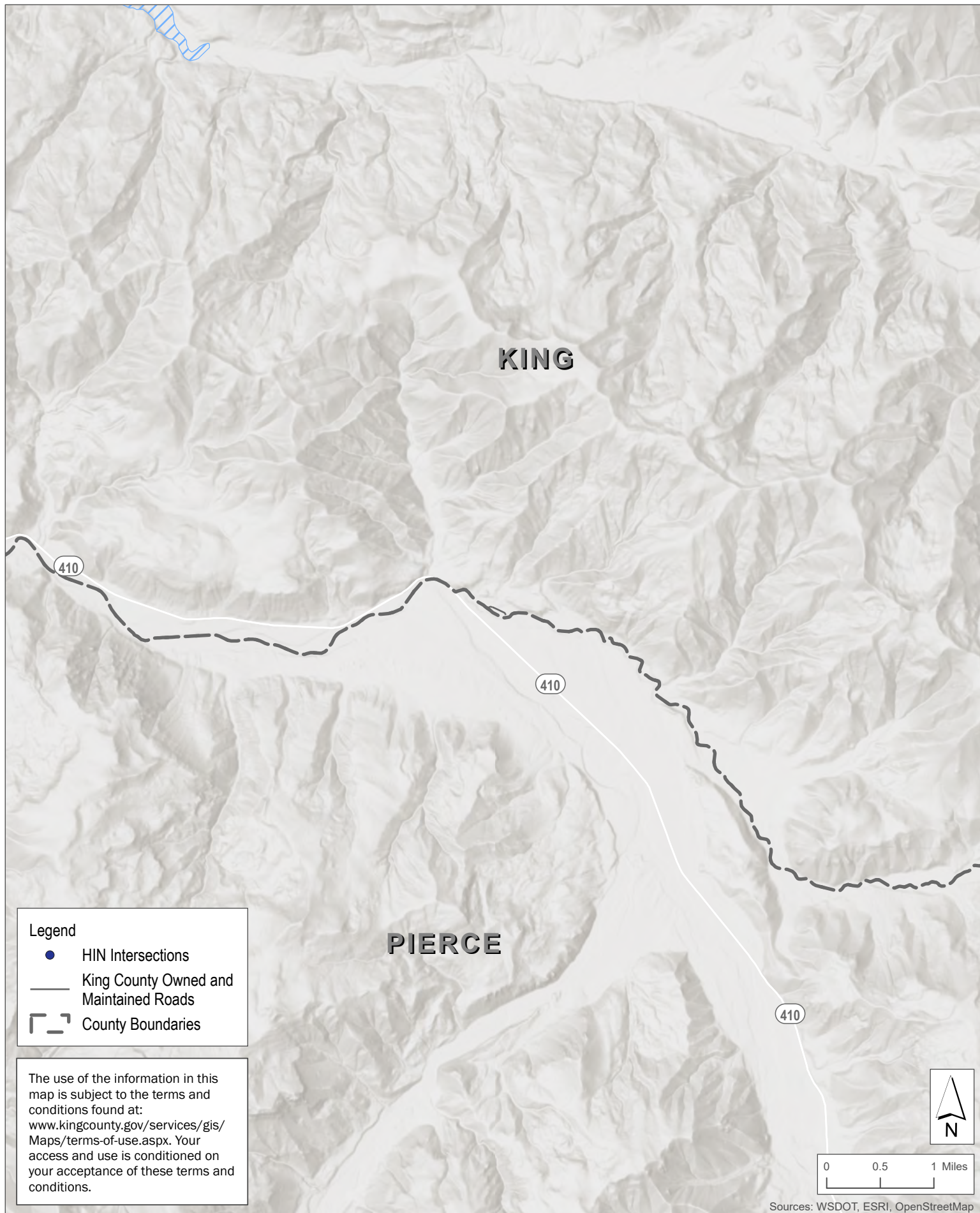
Parametrix



King County

Department of Local Services
Road Services Division

**HIN Intersections
O - E King County**



Legend

- HIN Intersections
- King County Owned and Maintained Roads
- - - County Boundaries

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Sources: WSDOT, ESRI, OpenStreetMap

Parametrix

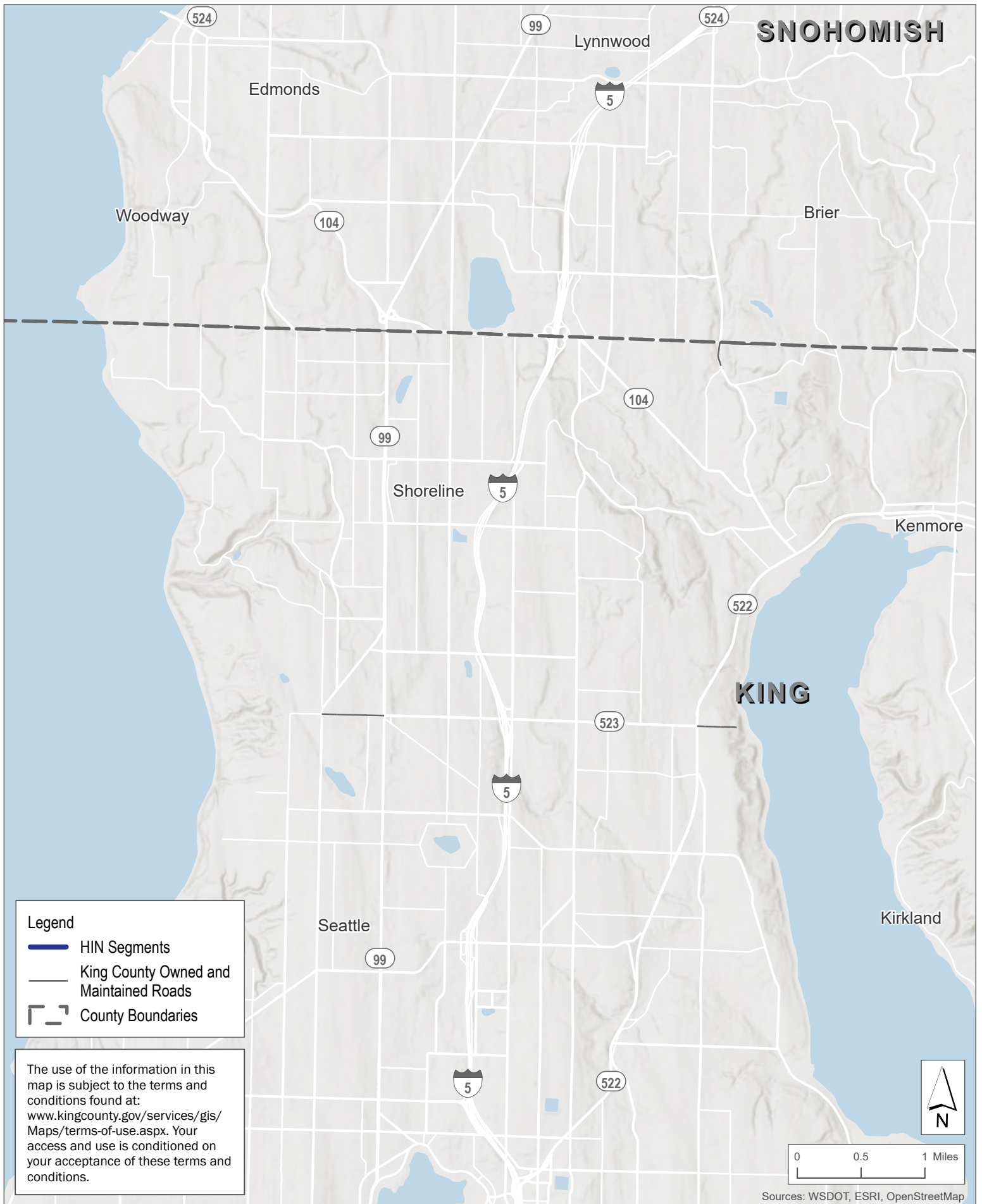


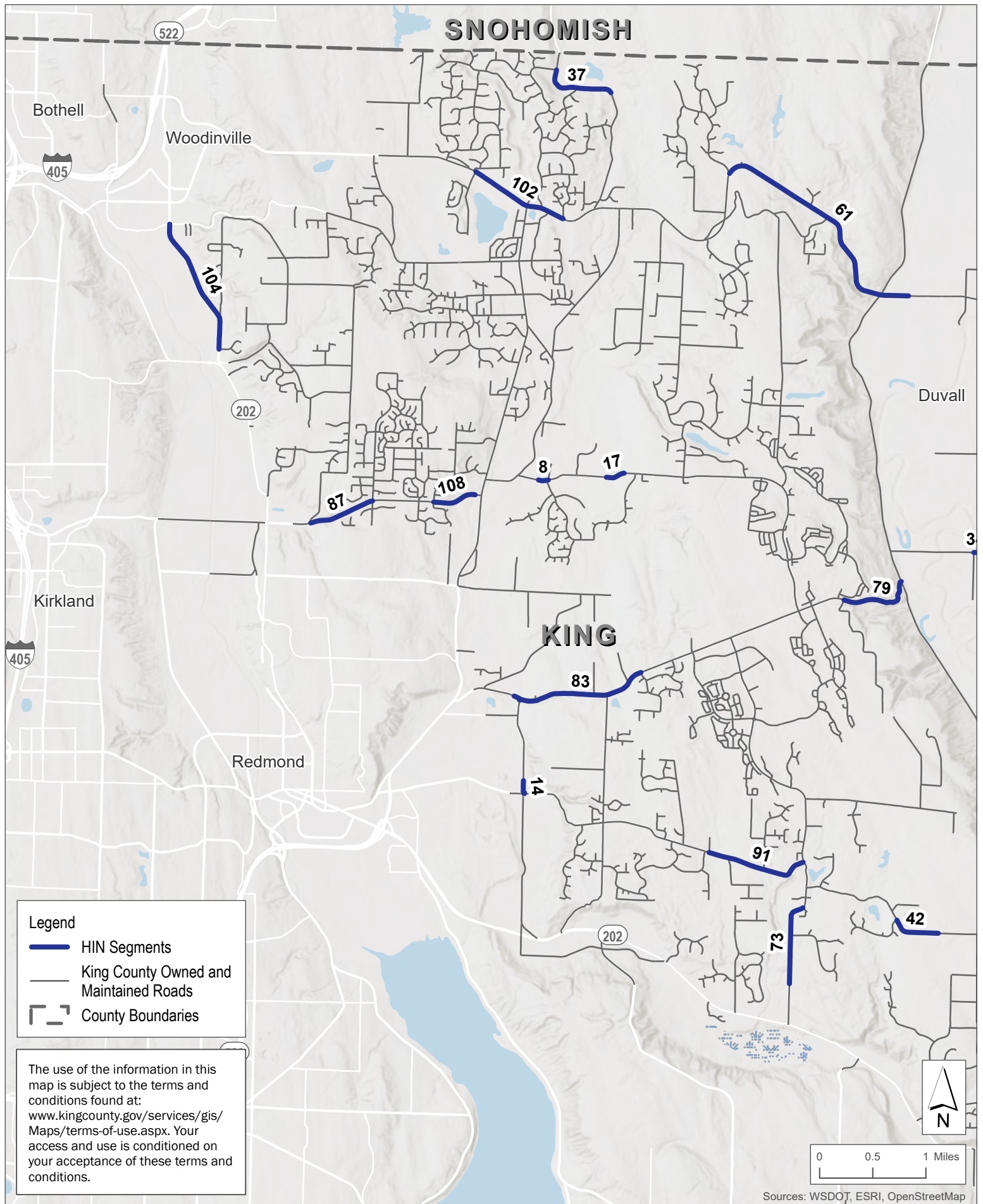
King County

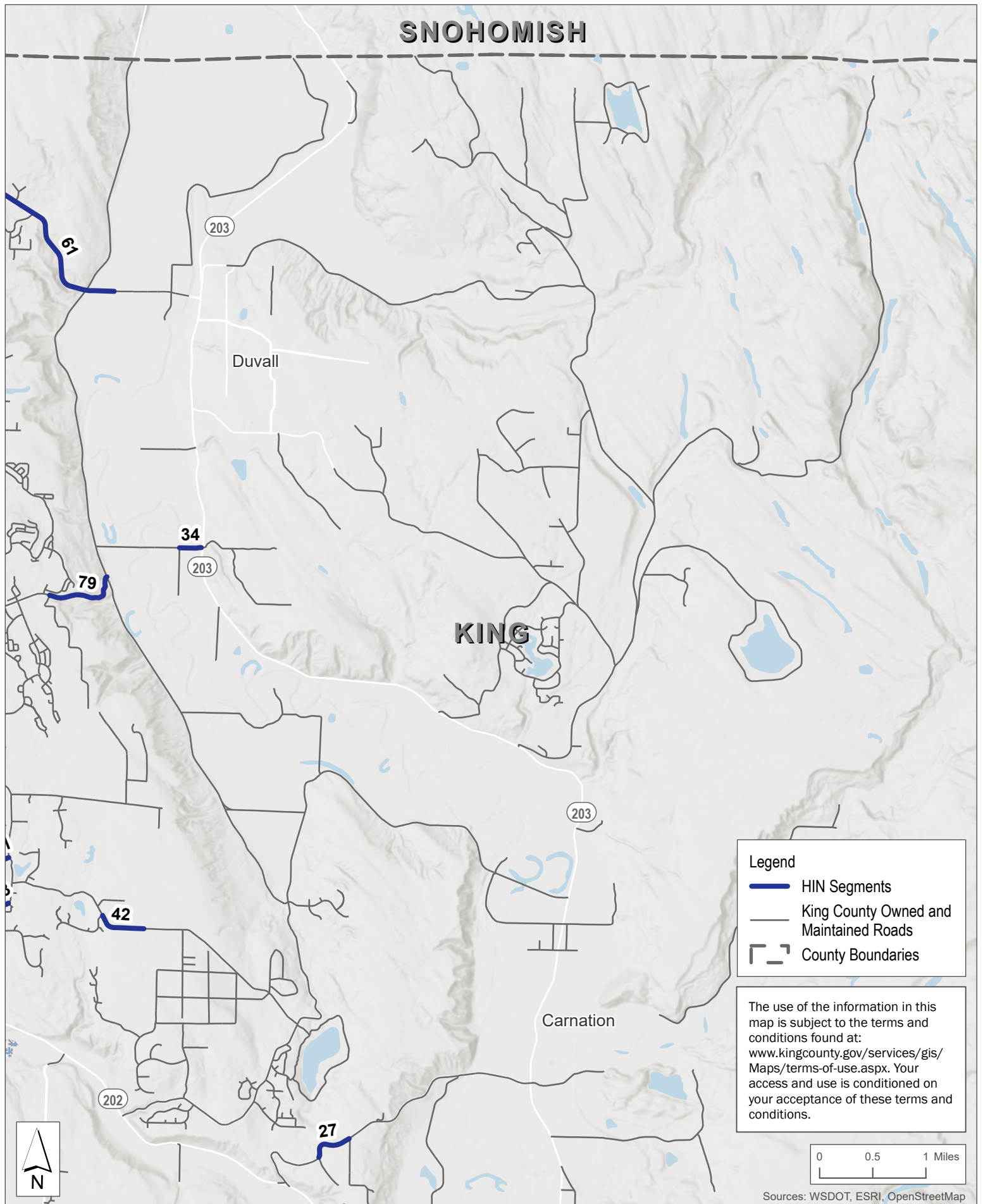
Department of Local Services
Road Services Division

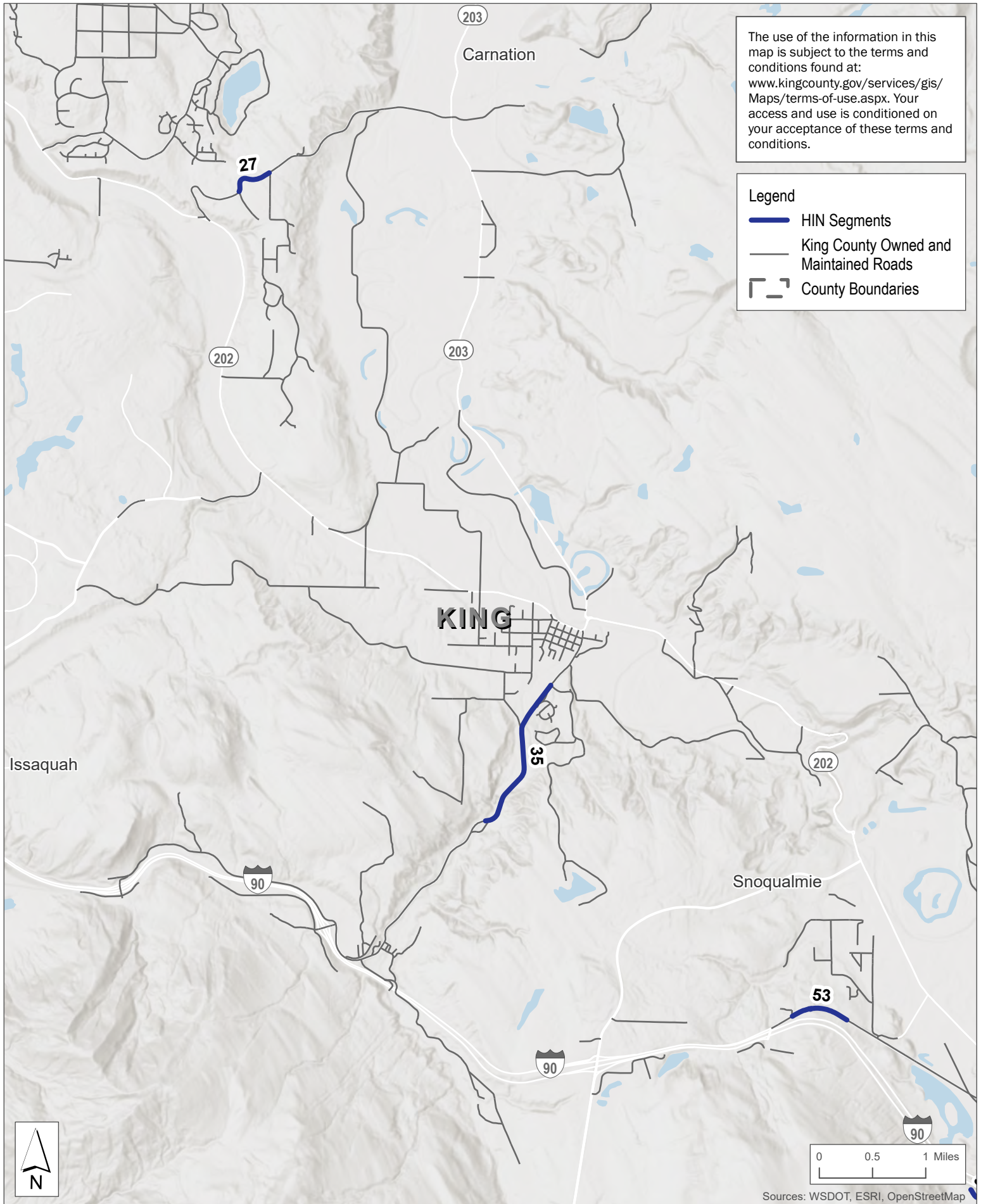
HIN Intersections
P - Greenwater

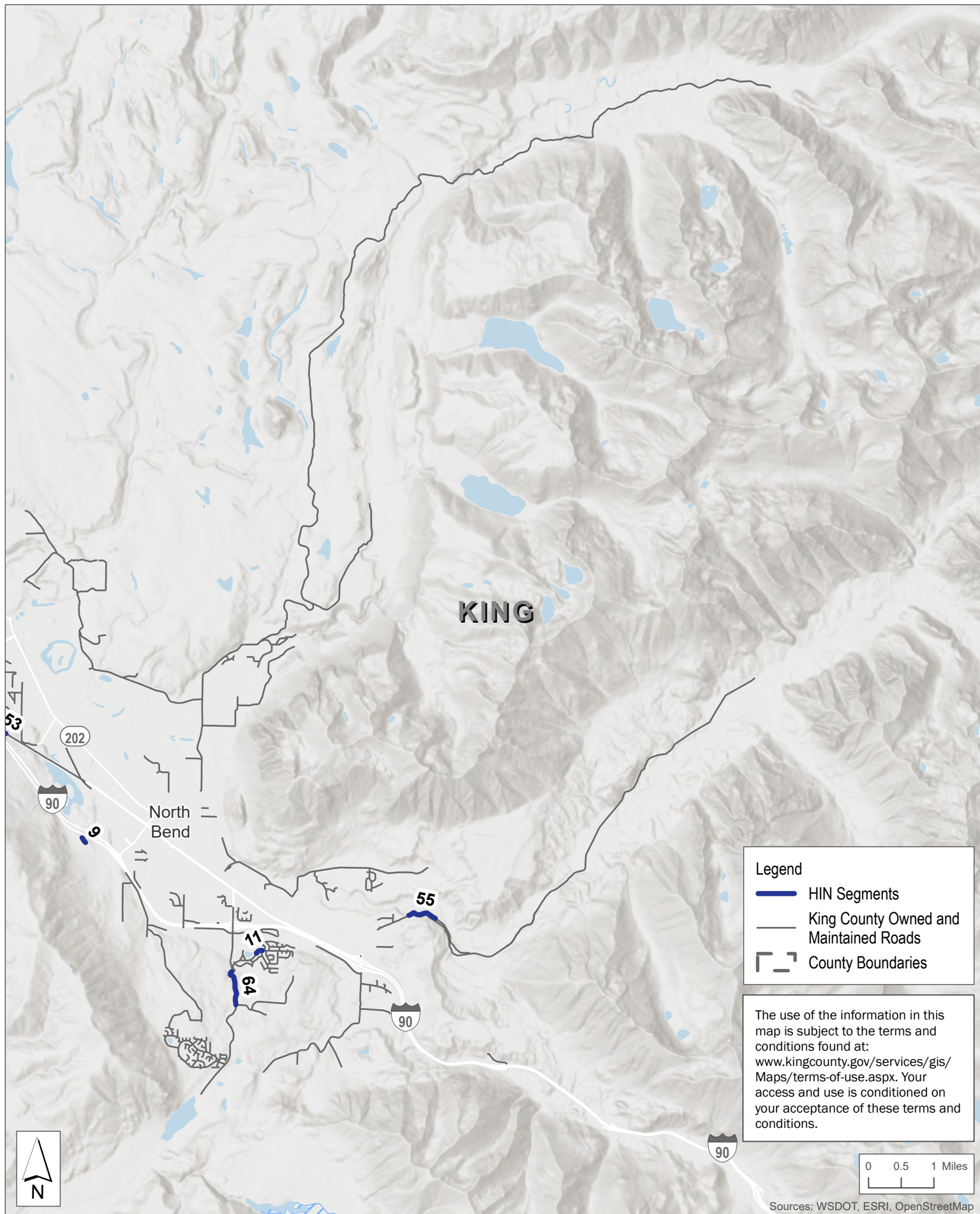
6. HIN Segments











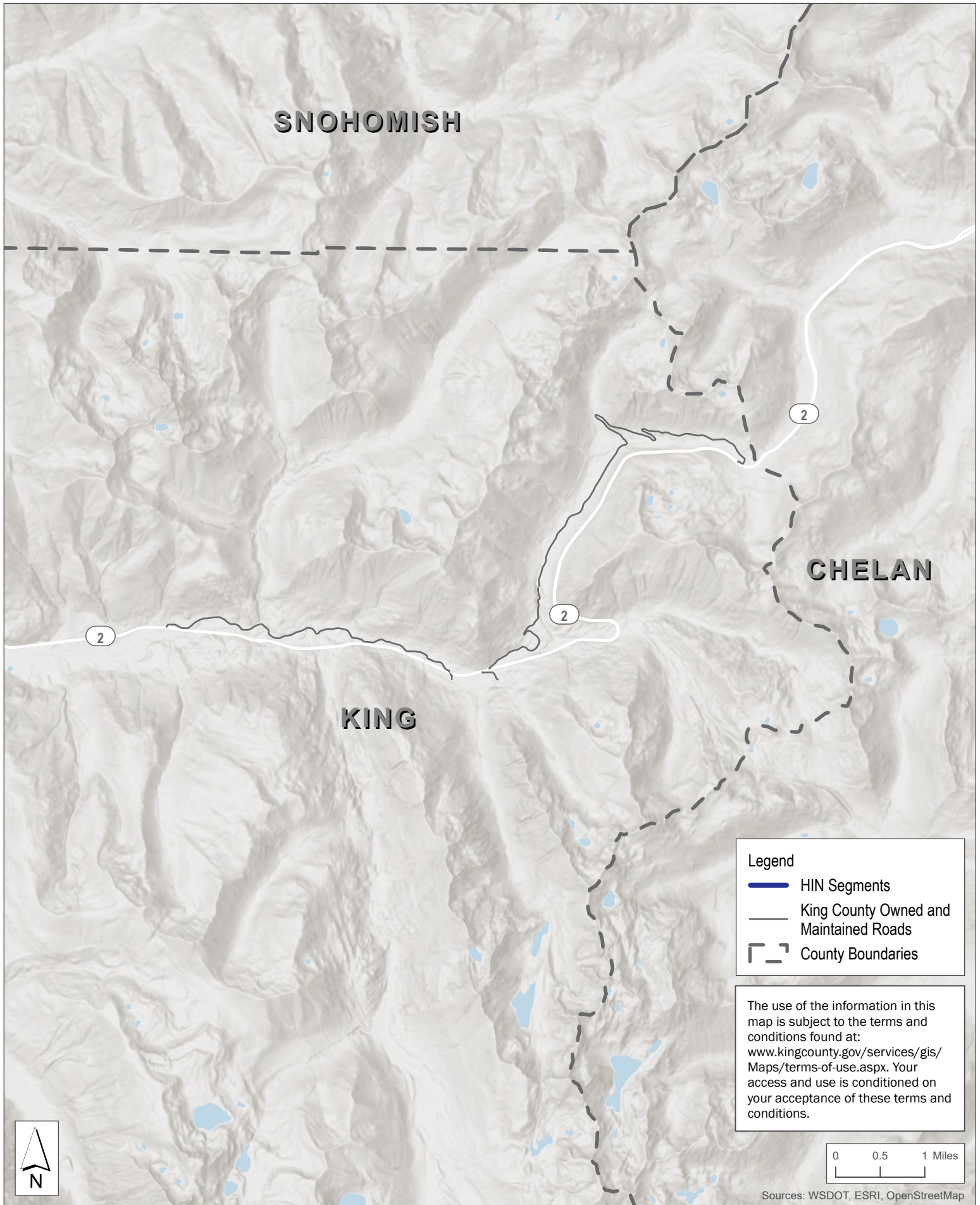


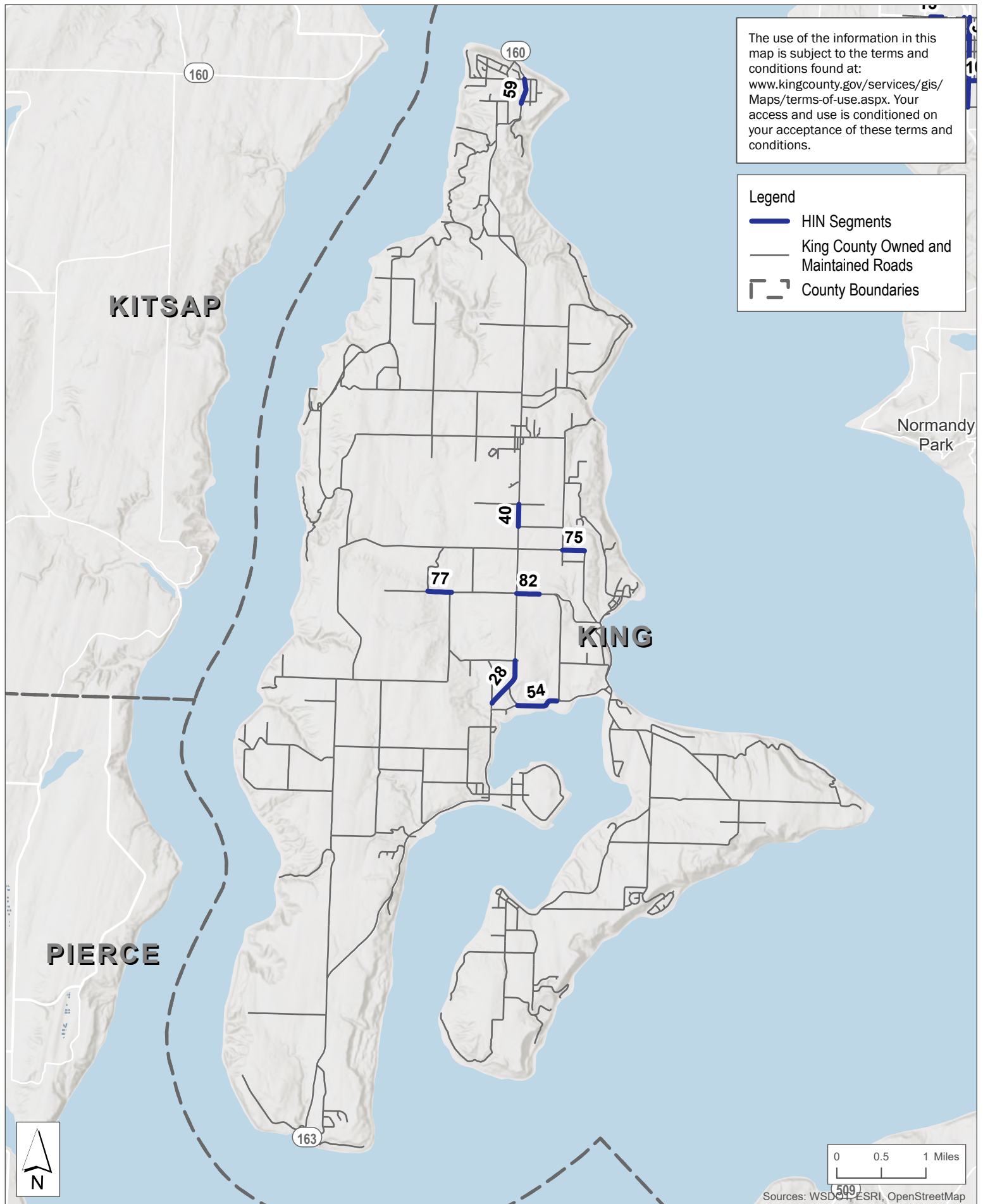
The use of the information in this map is subject to the terms and conditions found at: www.kingcounty.gov/services/gis/Maps/terms-of-use.aspx. Your access and use is conditioned on your acceptance of these terms and conditions.

- Legend**
- HIN Segments
 - King County Owned and Maintained Roads
 - ┌ ┐ County Boundaries



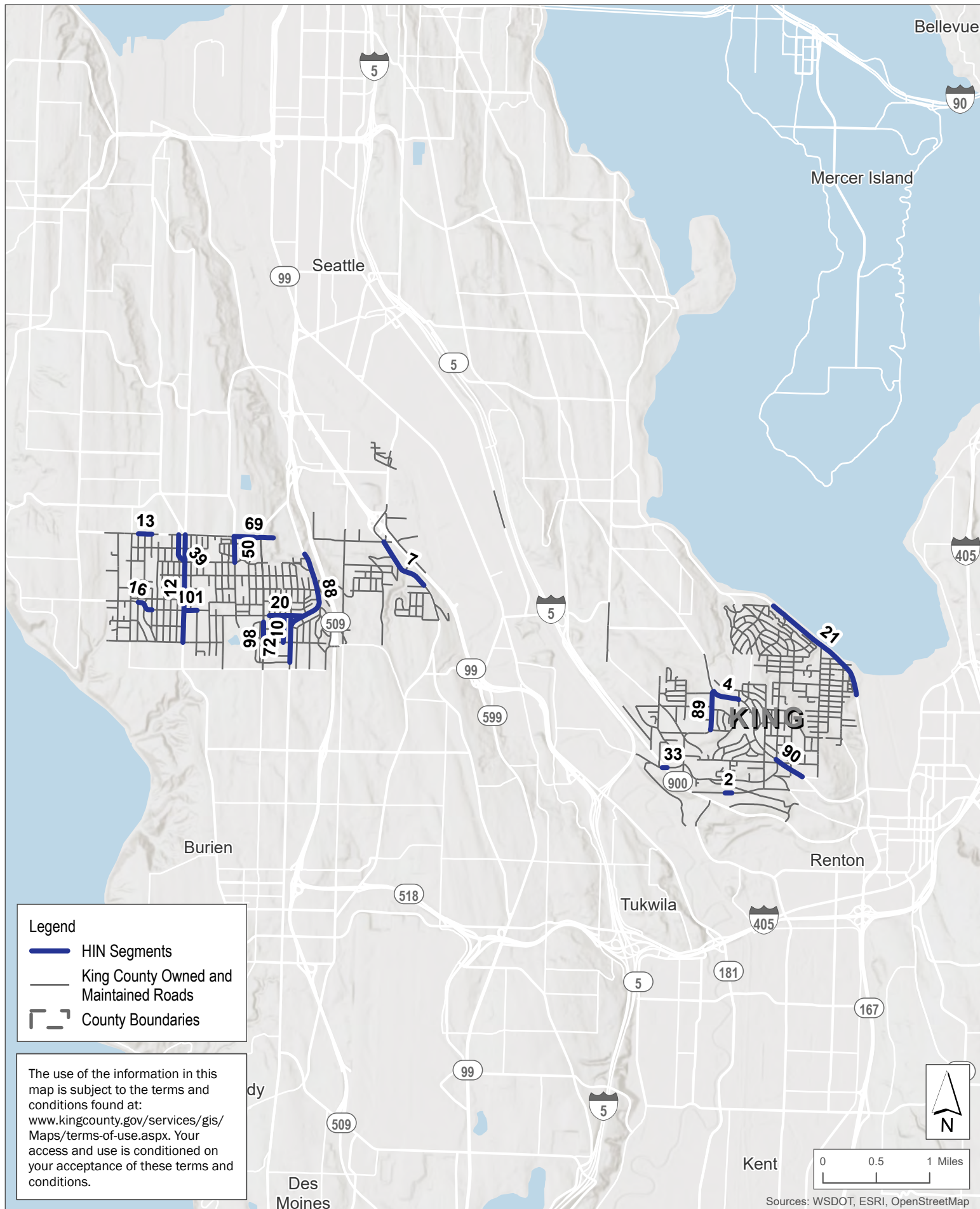
Sources: WSDOT, ESRI, OpenStreetMap

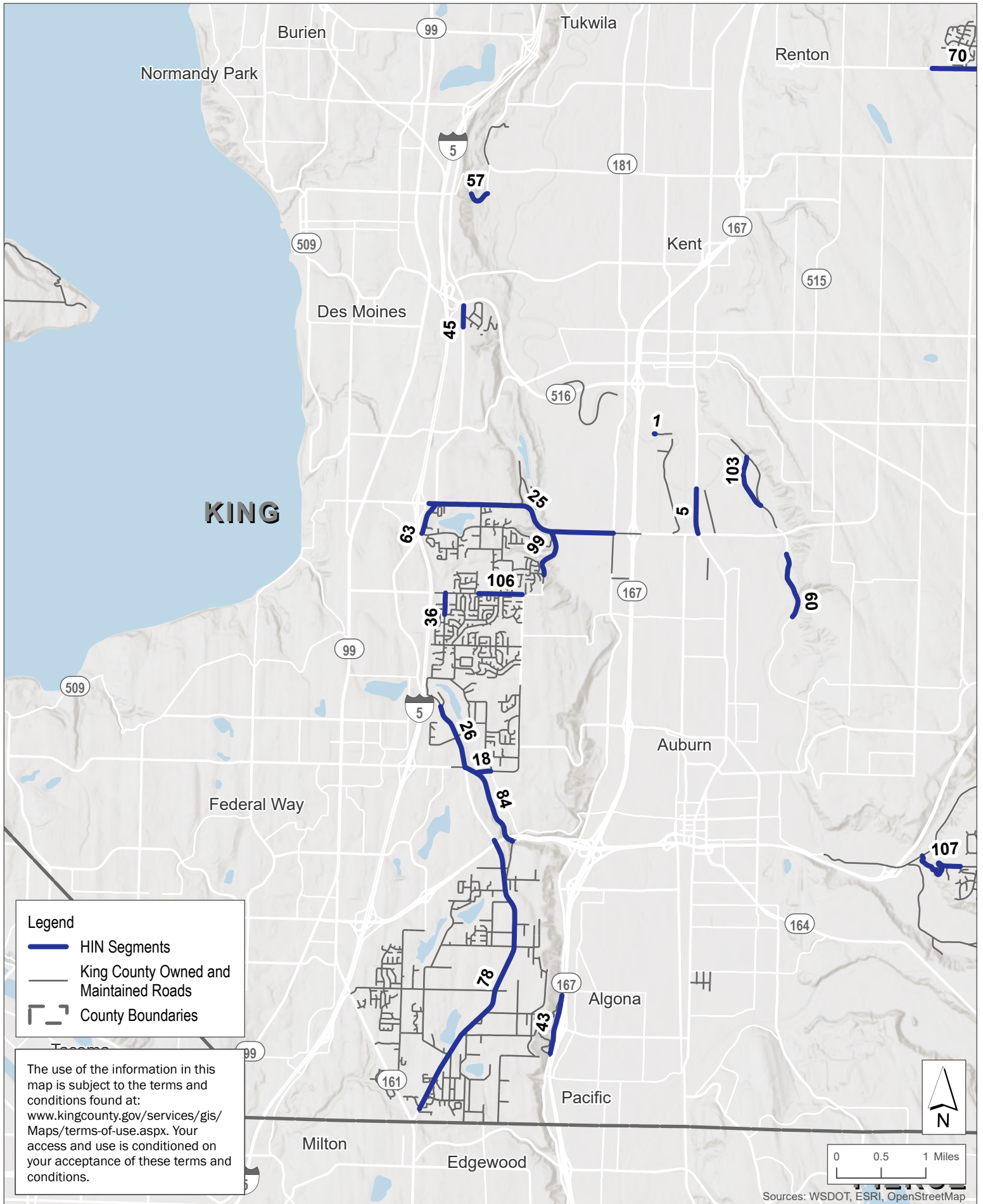




The use of the information in this map is subject to the terms and conditions found at: www.kingcounty.gov/services/gis/Maps/terms-of-use.aspx. Your access and use is conditioned on your acceptance of these terms and conditions.




- Legend**
- HIN Segments
 - King County Owned and Maintained Roads
 - County Boundaries

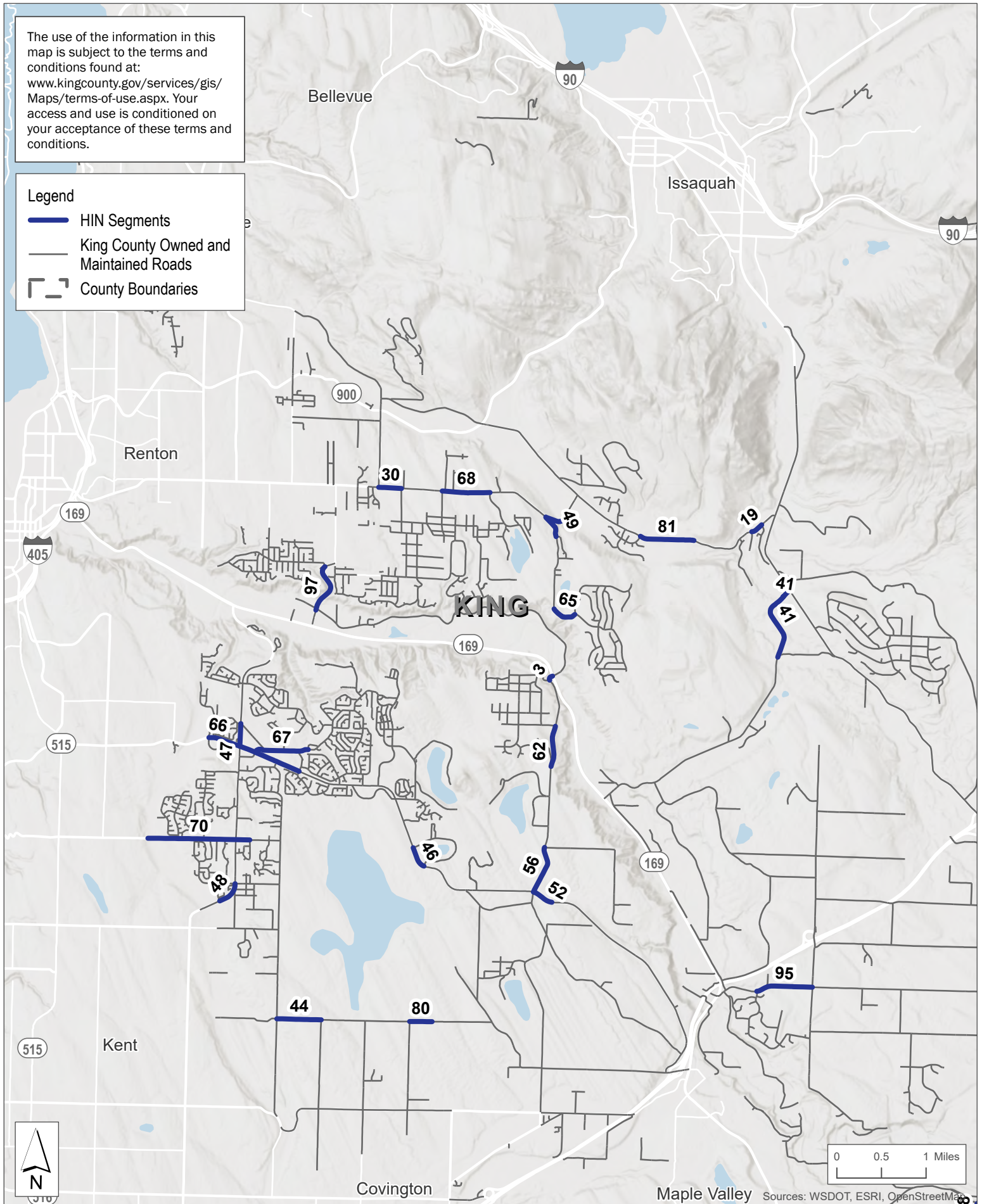




The use of the information in this map is subject to the terms and conditions found at: www.kingcounty.gov/services/gis/Maps/terms-of-use.aspx. Your access and use is conditioned on your acceptance of these terms and conditions.

Legend

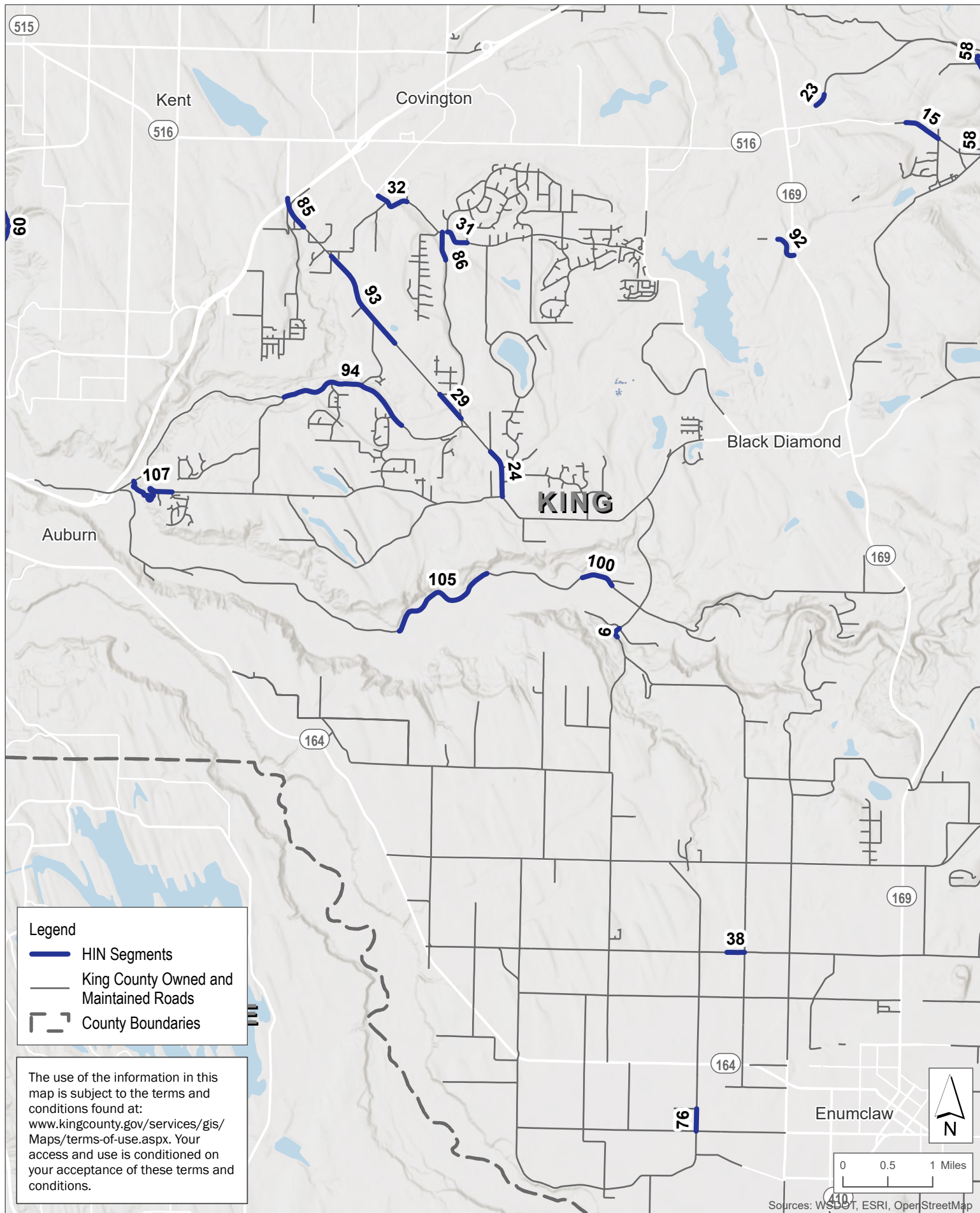
-  HIN Segments
-  King County Owned and Maintained Roads
-  County Boundaries

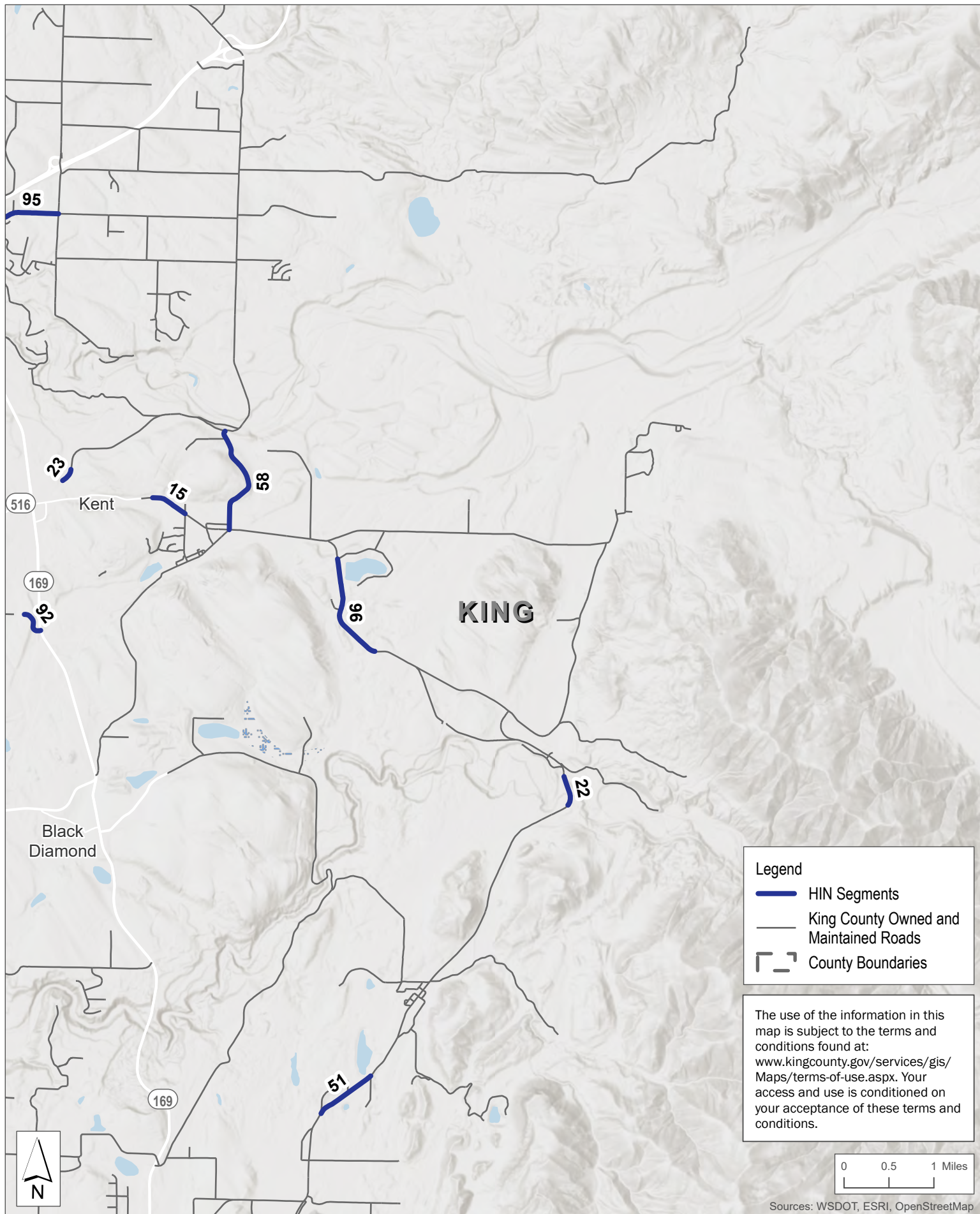


Parametrix

King County
Department of Local Services
Road Services Division

HIN Segments
K - Bellevue to Maple Valley





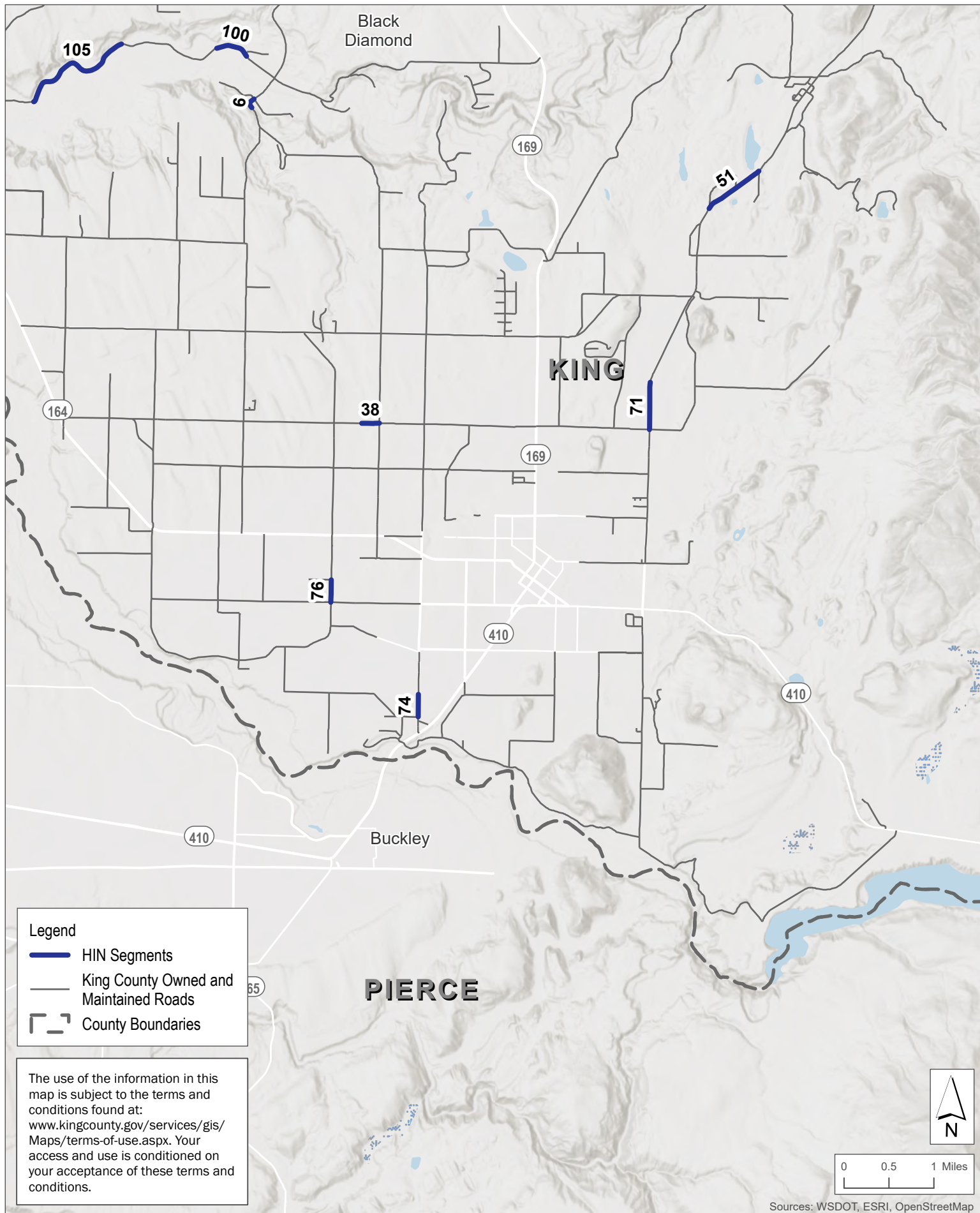
Parametrix



King County

Department of Local Services
Road Services Division

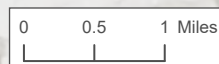
HIN Segments
M - Black Diamond W



Legend

- HIN Segments
- King County Owned and Maintained Roads
- County Boundaries

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Sources: WSDOT, ESRI, OpenStreetMap

Parametrix






King County

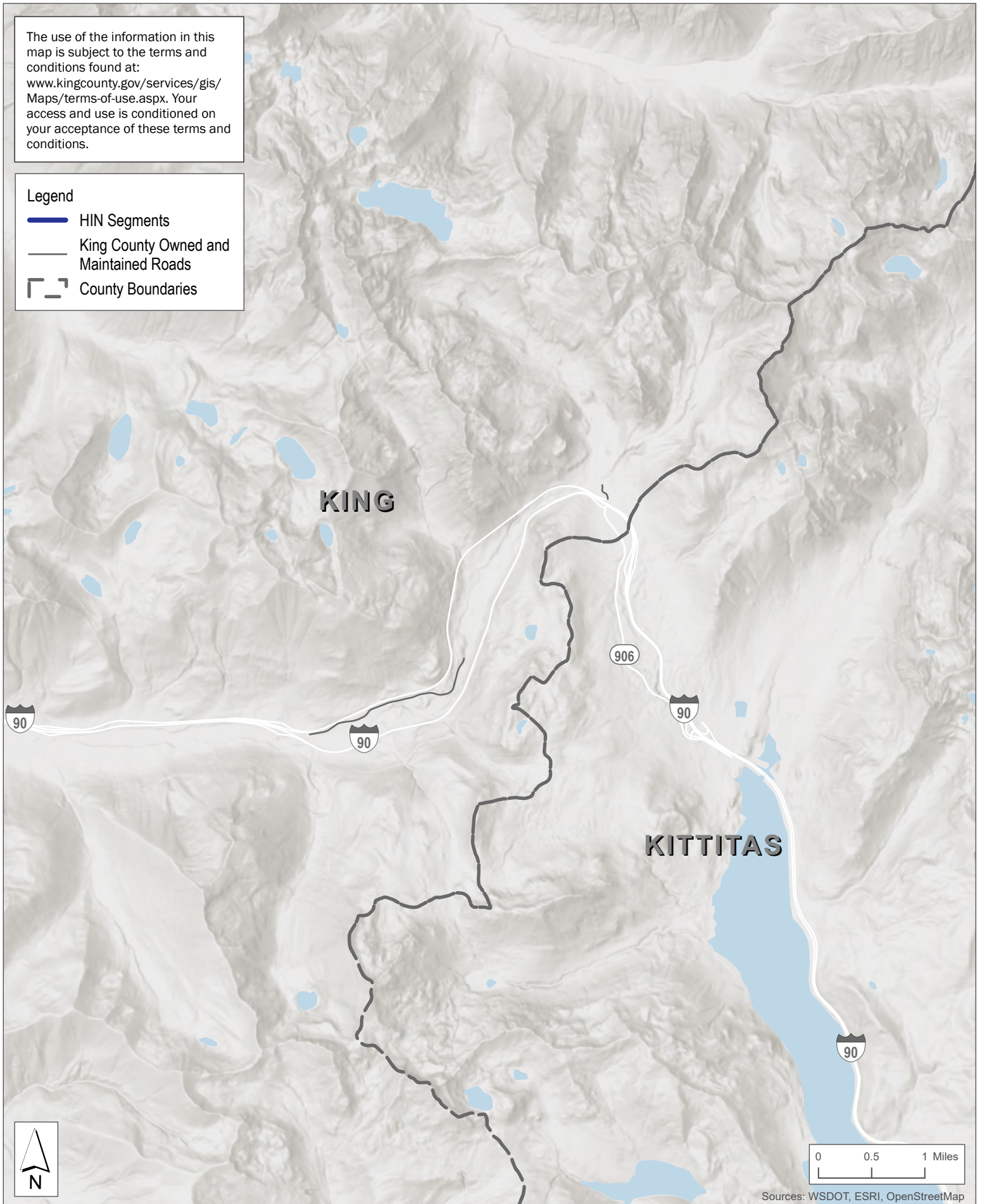
Department of Local Services
Road Services Division

**HIN Segments
N - Enumclaw**

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Legend

-  HIN Segments
-  King County Owned and Maintained Roads
-  County Boundaries



Sources: WSDOT, ESRI, OpenStreetMap

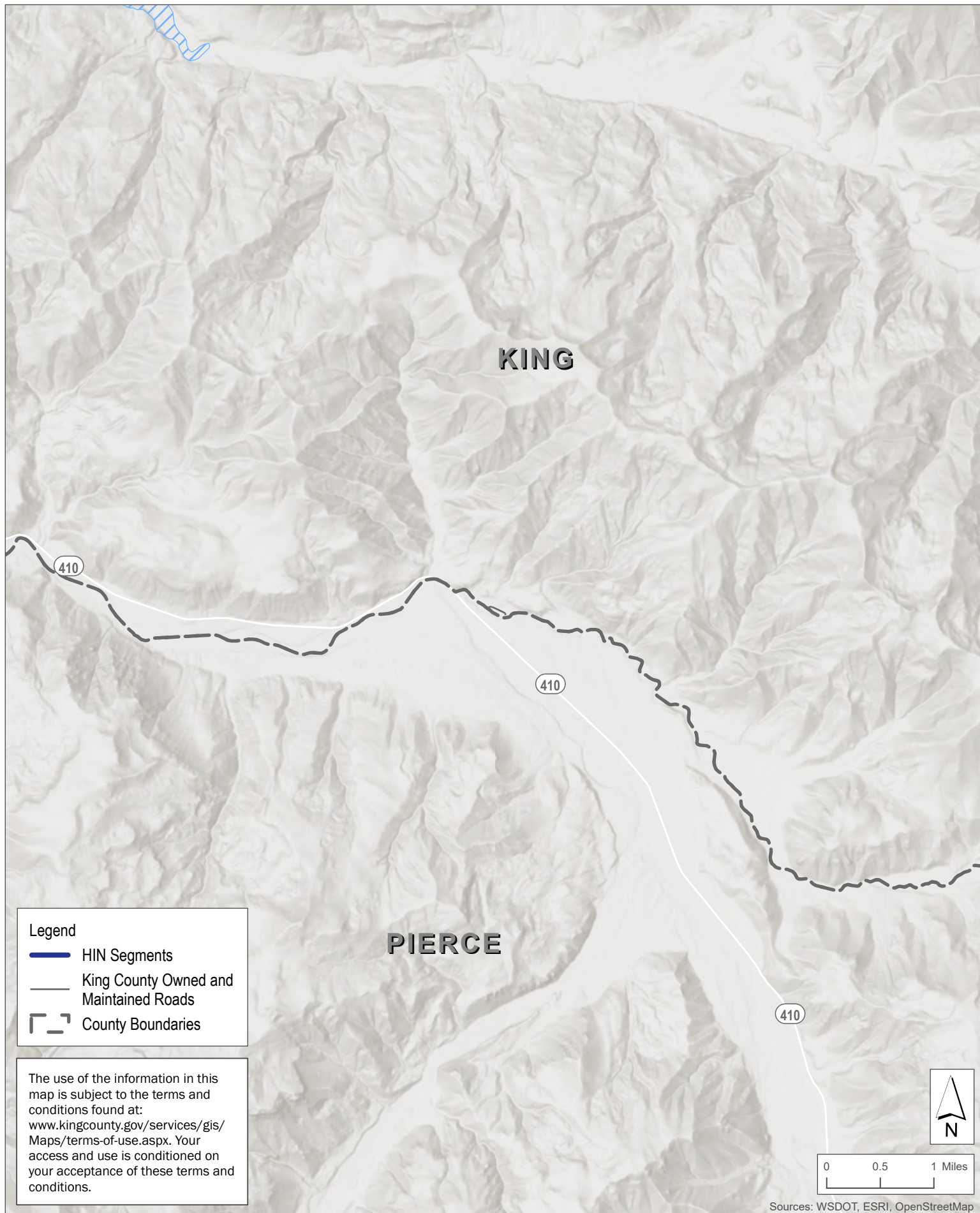
Parametrix



King County

Department of Local Services
Road Services Division

HIN Segments
O - E King County



Parametrix

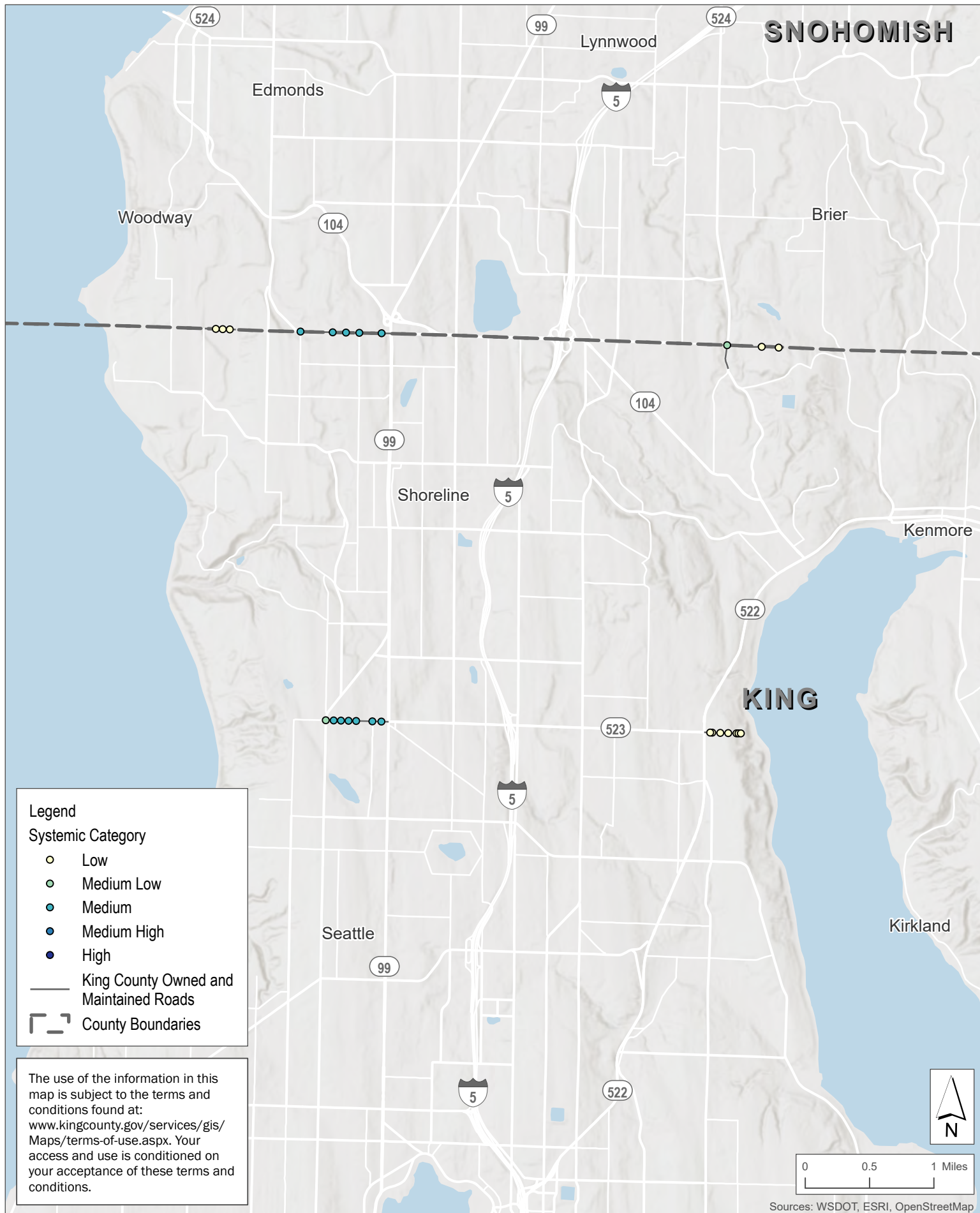


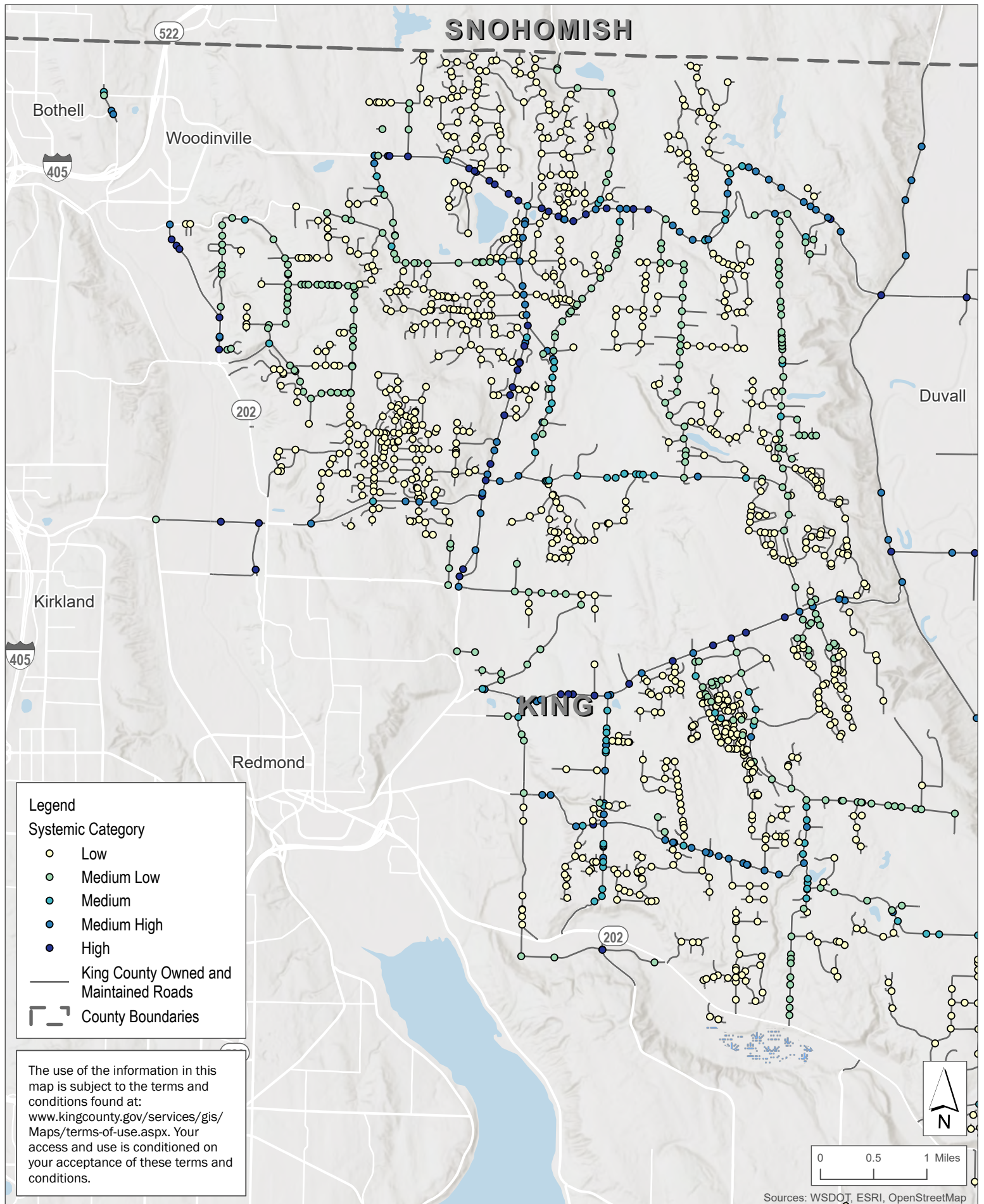
King County

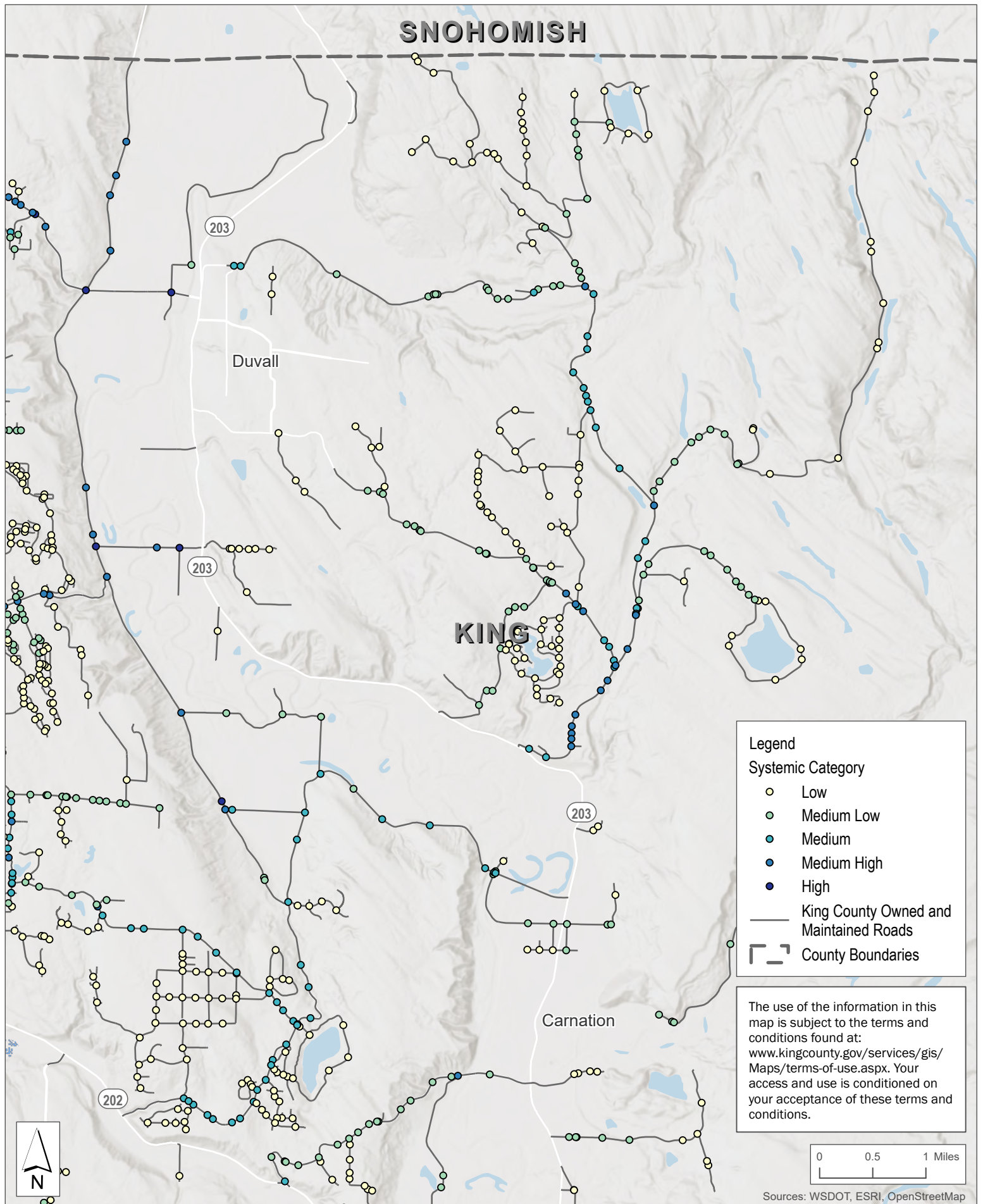
Department of Local Services
Road Services Division

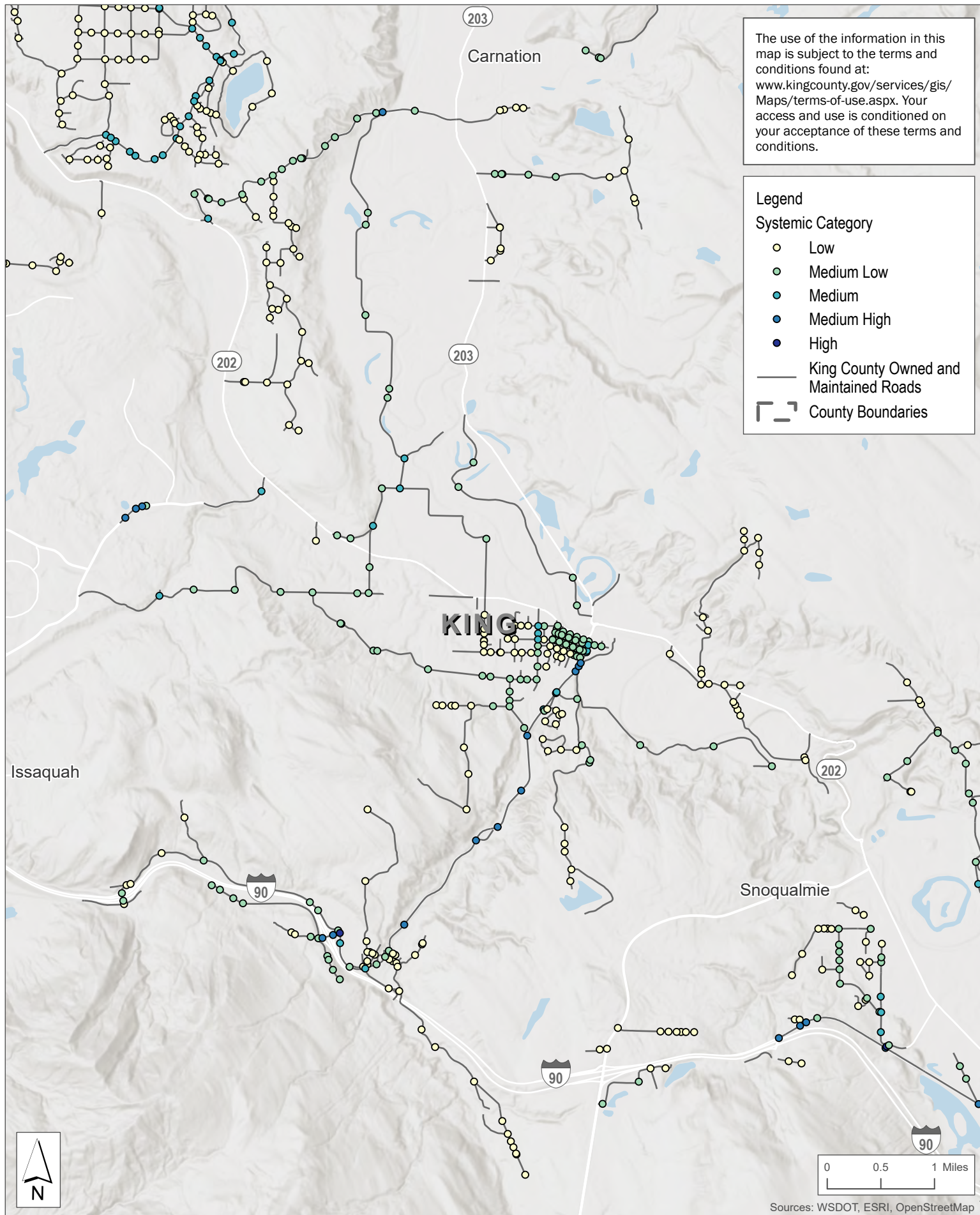
HIN Segments
P - Greenwater

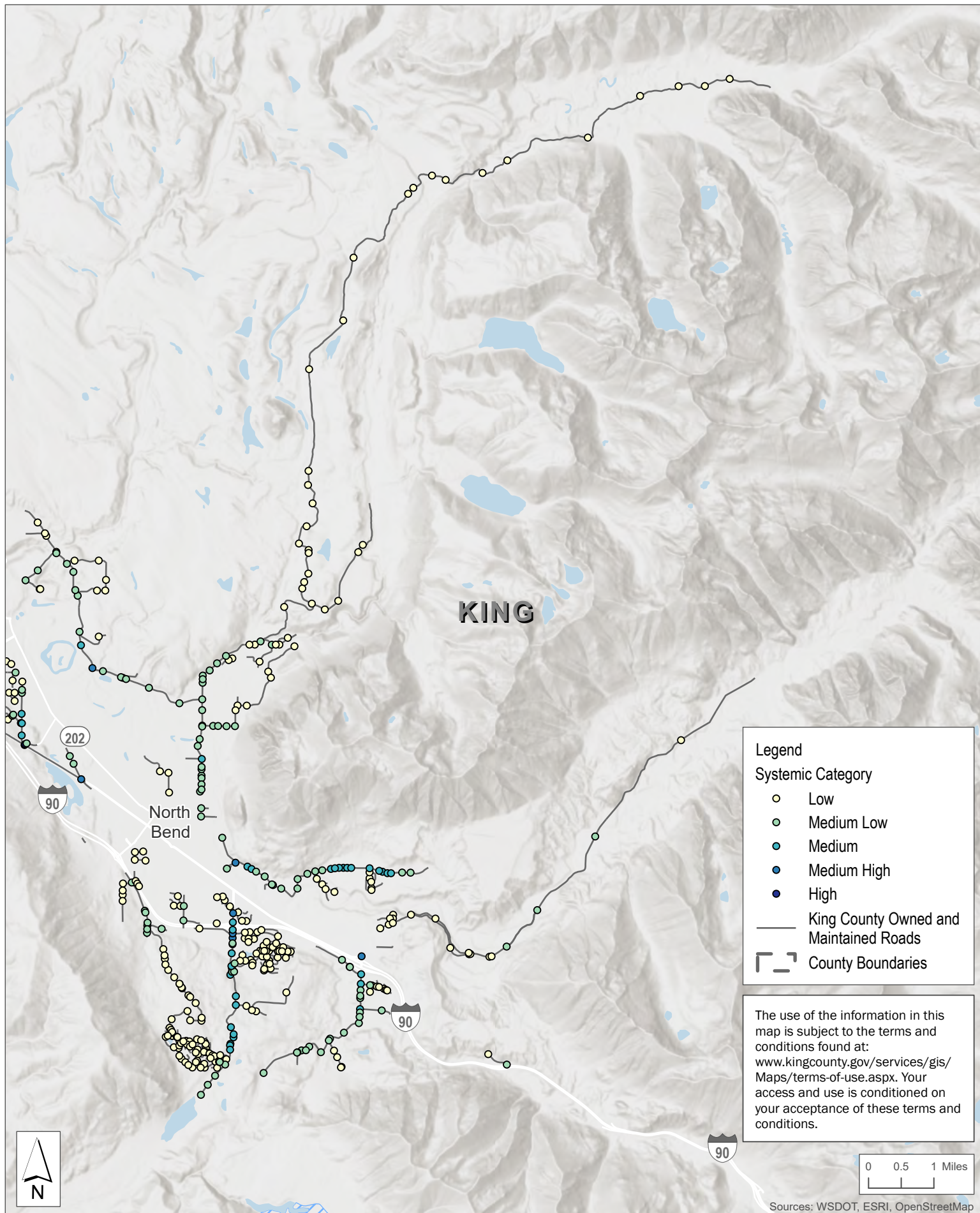
7. Systemic Intersections











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Legend

Systemic Category

- Low
- Medium Low
- Medium
- Medium High
- High

King County Owned and Maintained Roads


County Boundaries

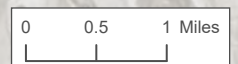
SNOHOMISH

KING

0 0.5 1 Miles

Sources: WSDOT, ESRI, OpenStreetMap

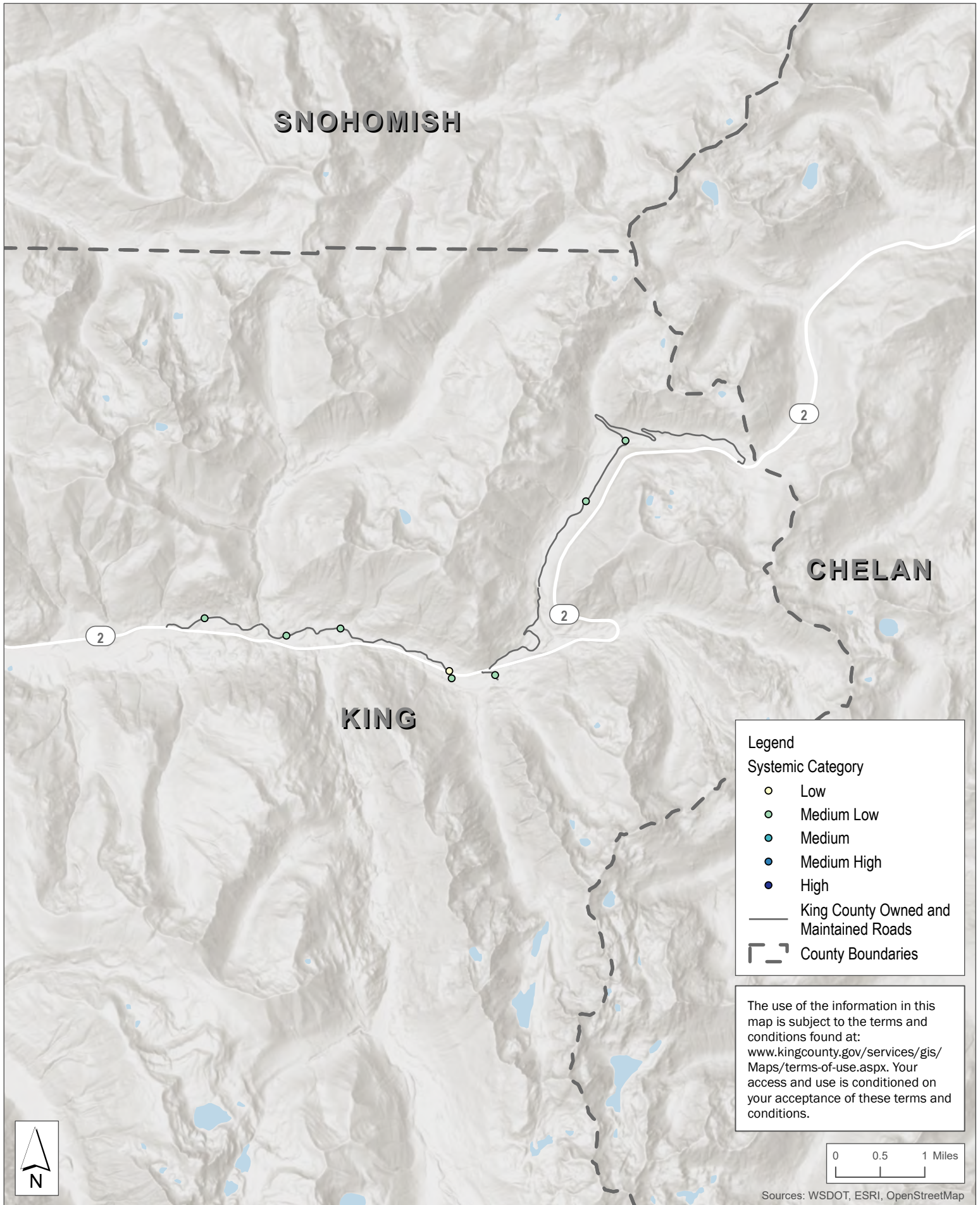
 King County Owned and Maintained Roads
 County Boundaries

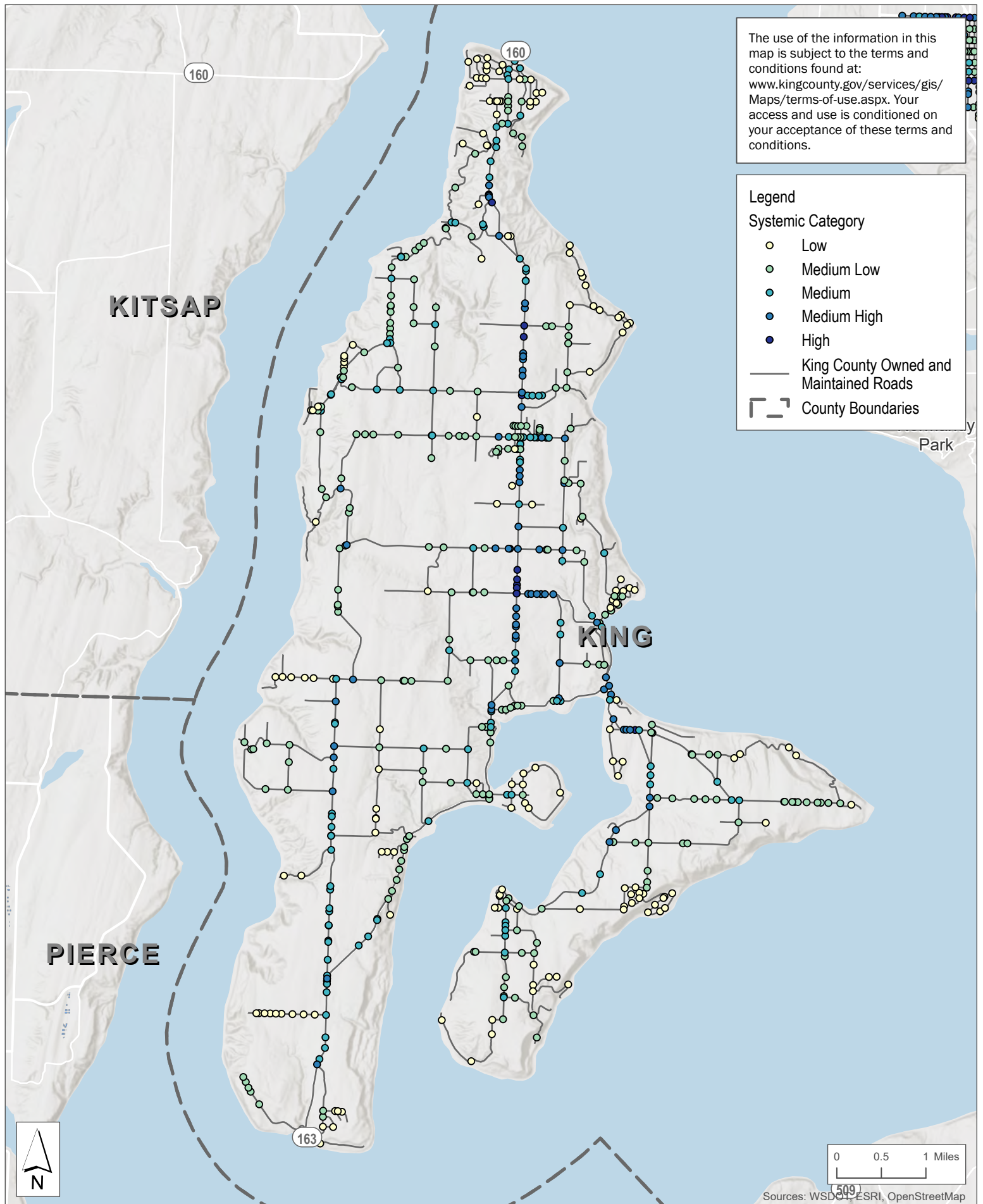


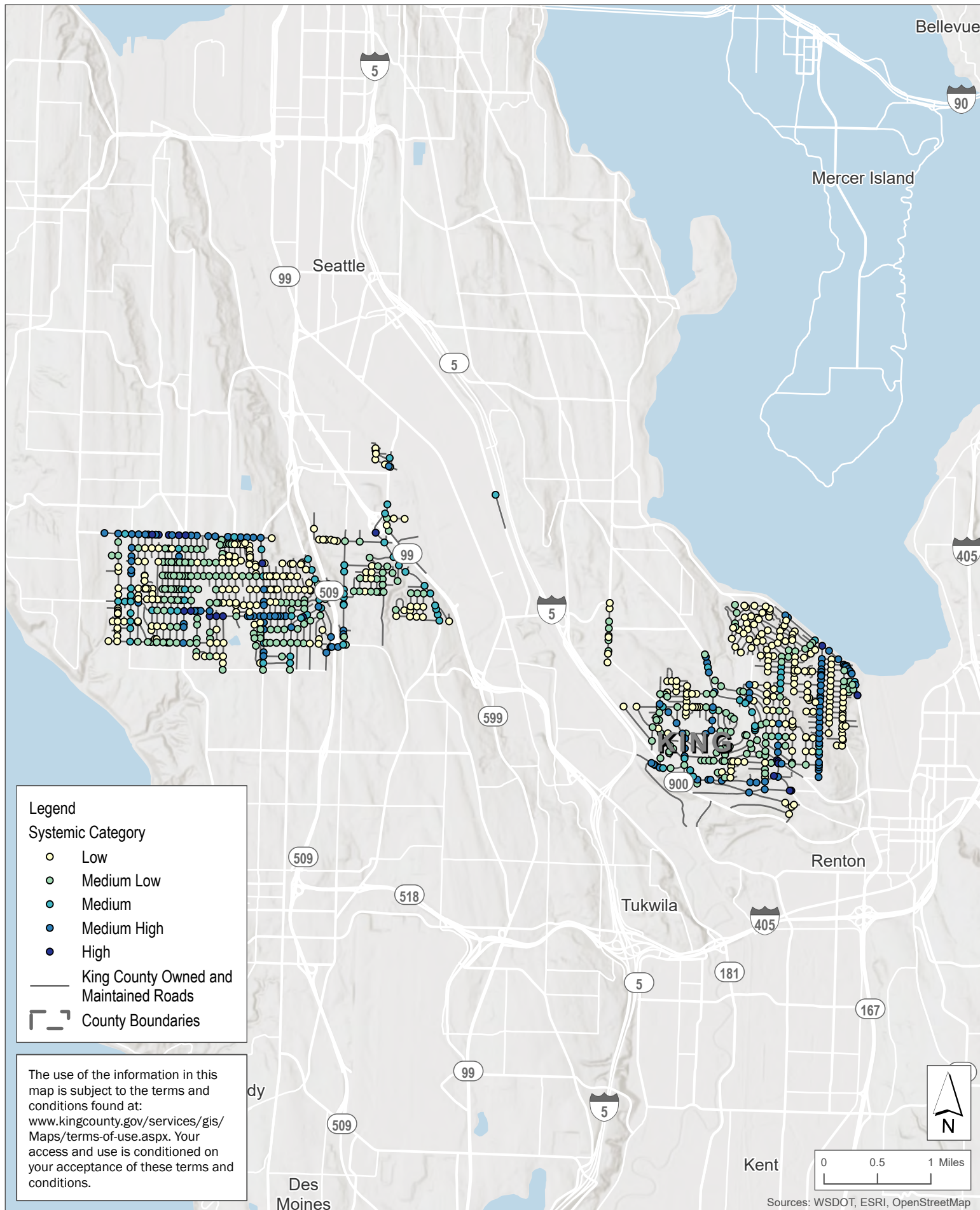
Parametrix
 **King County**
 Department of Local Services
Road Services Division

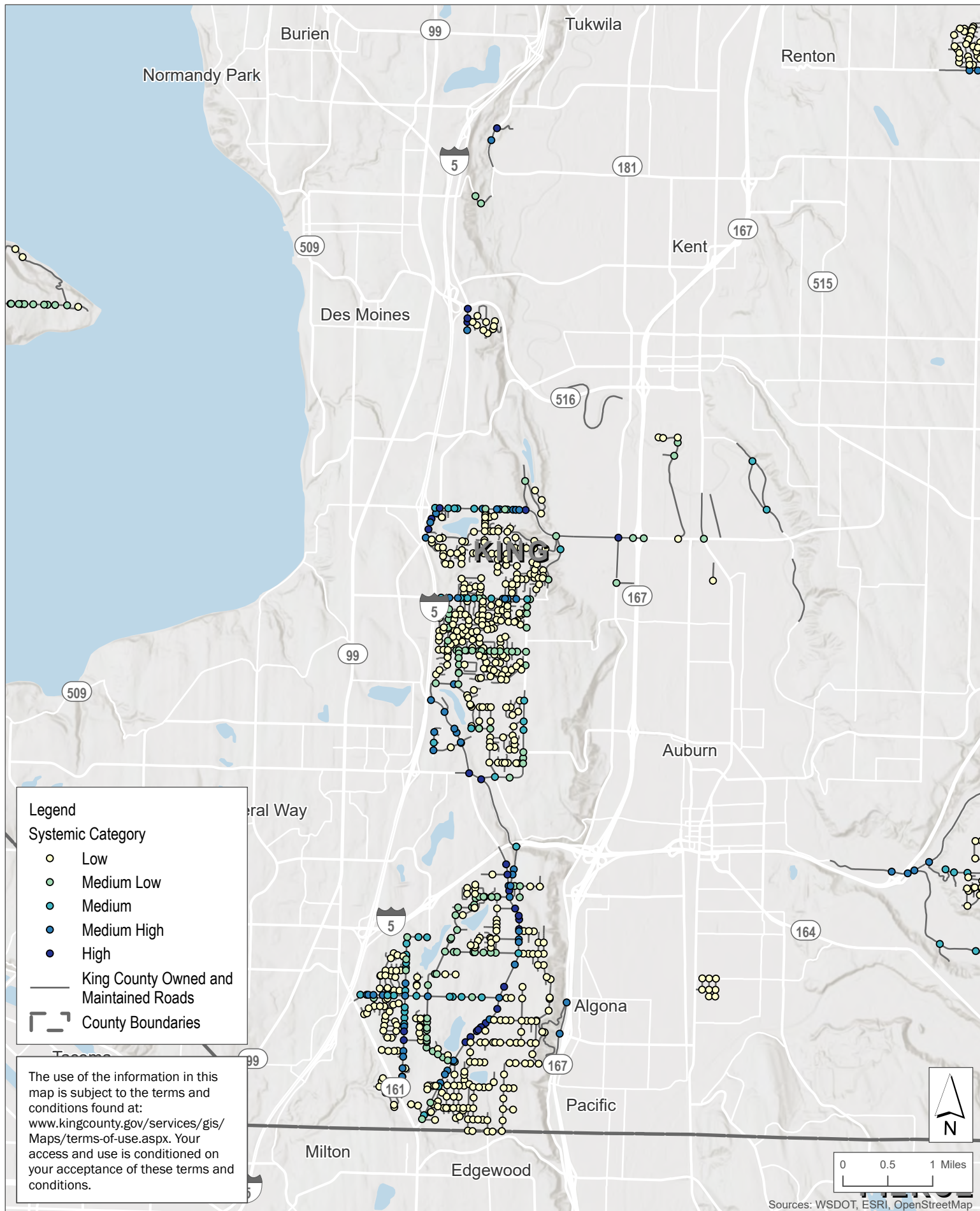
Systemic Intersections

F - Skykomish









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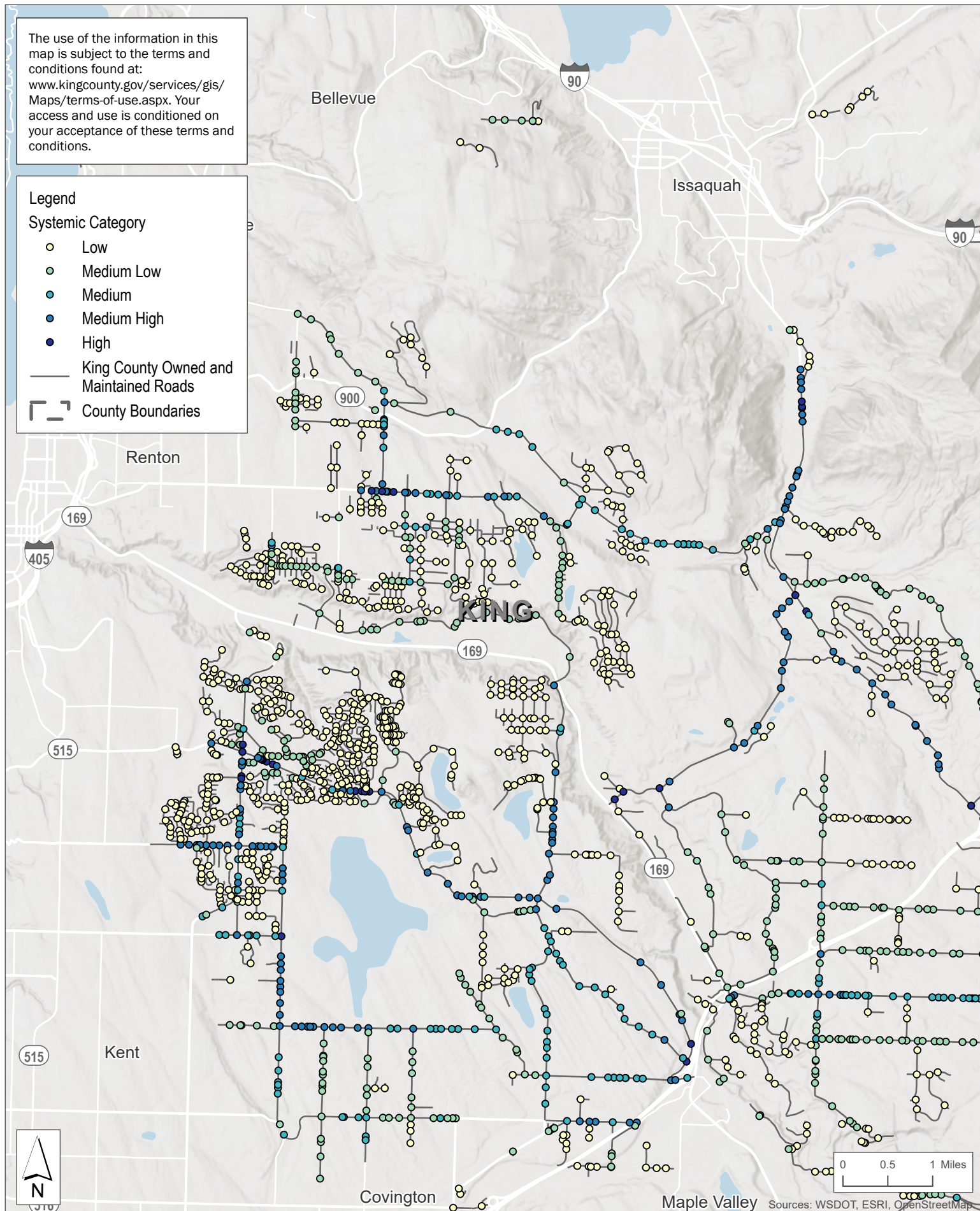
Legend

Systemic Category

- Low
- Medium Low
- Medium
- Medium High
- High

— King County Owned and Maintained Roads

▬ County Boundaries



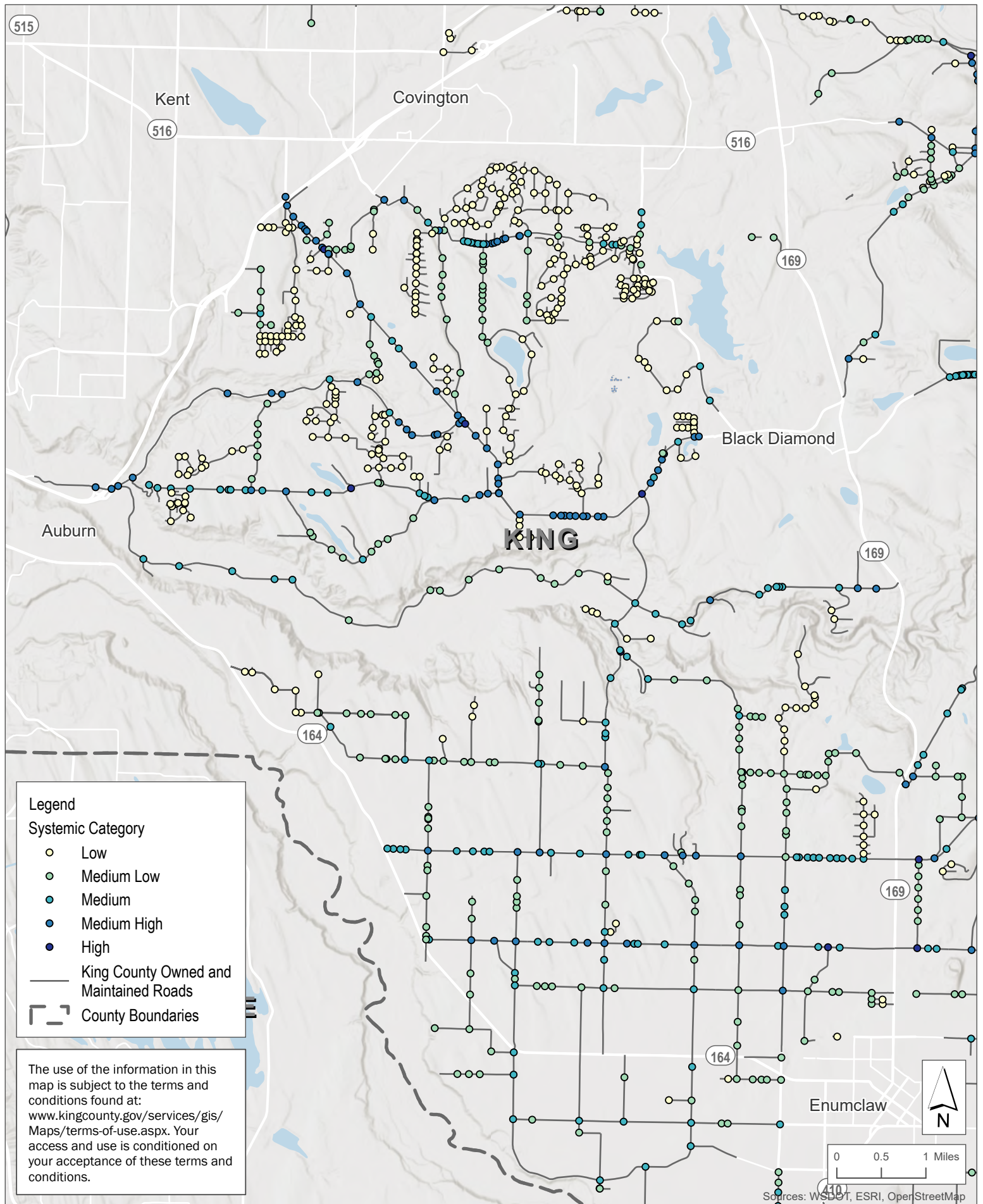
Parametrix

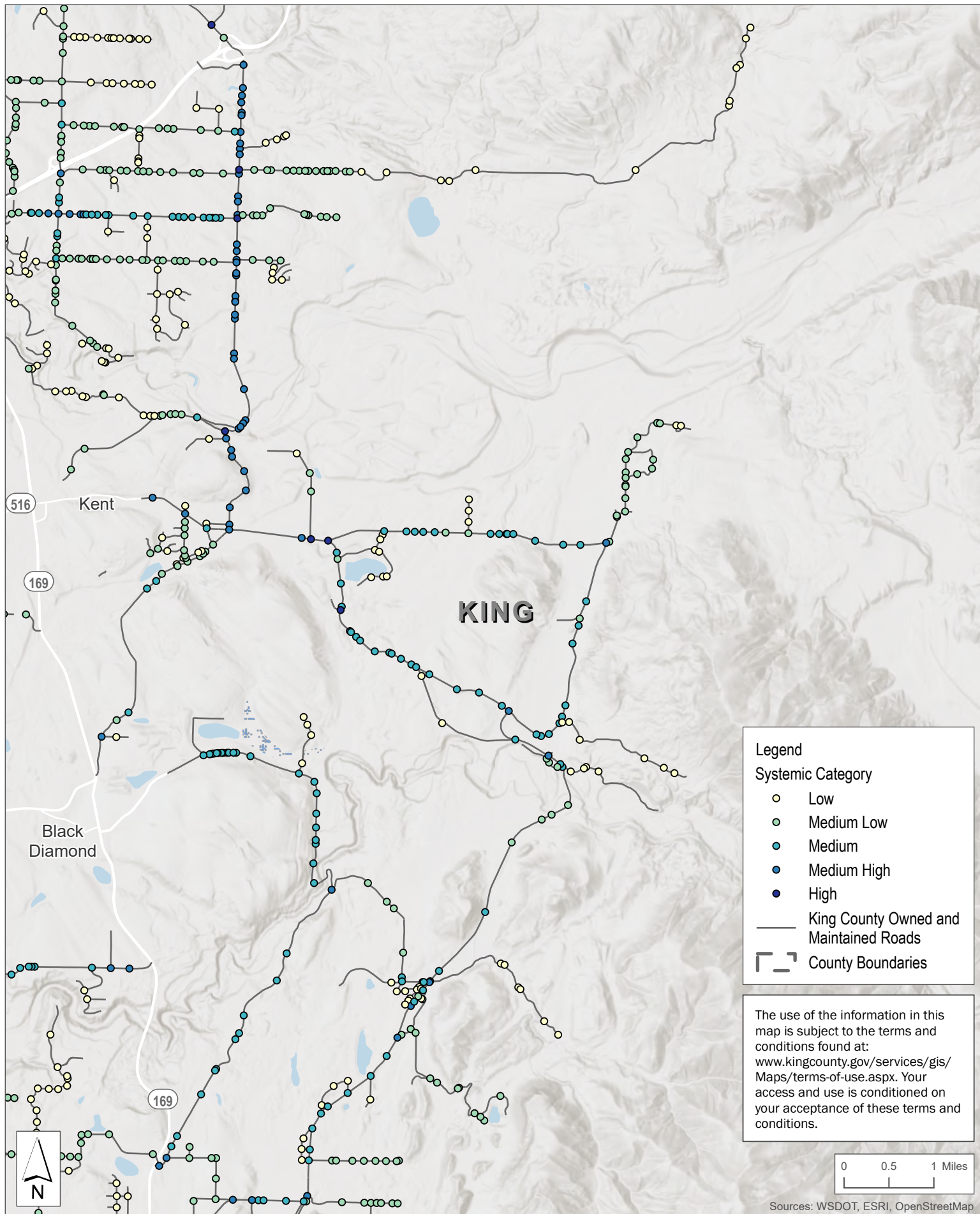


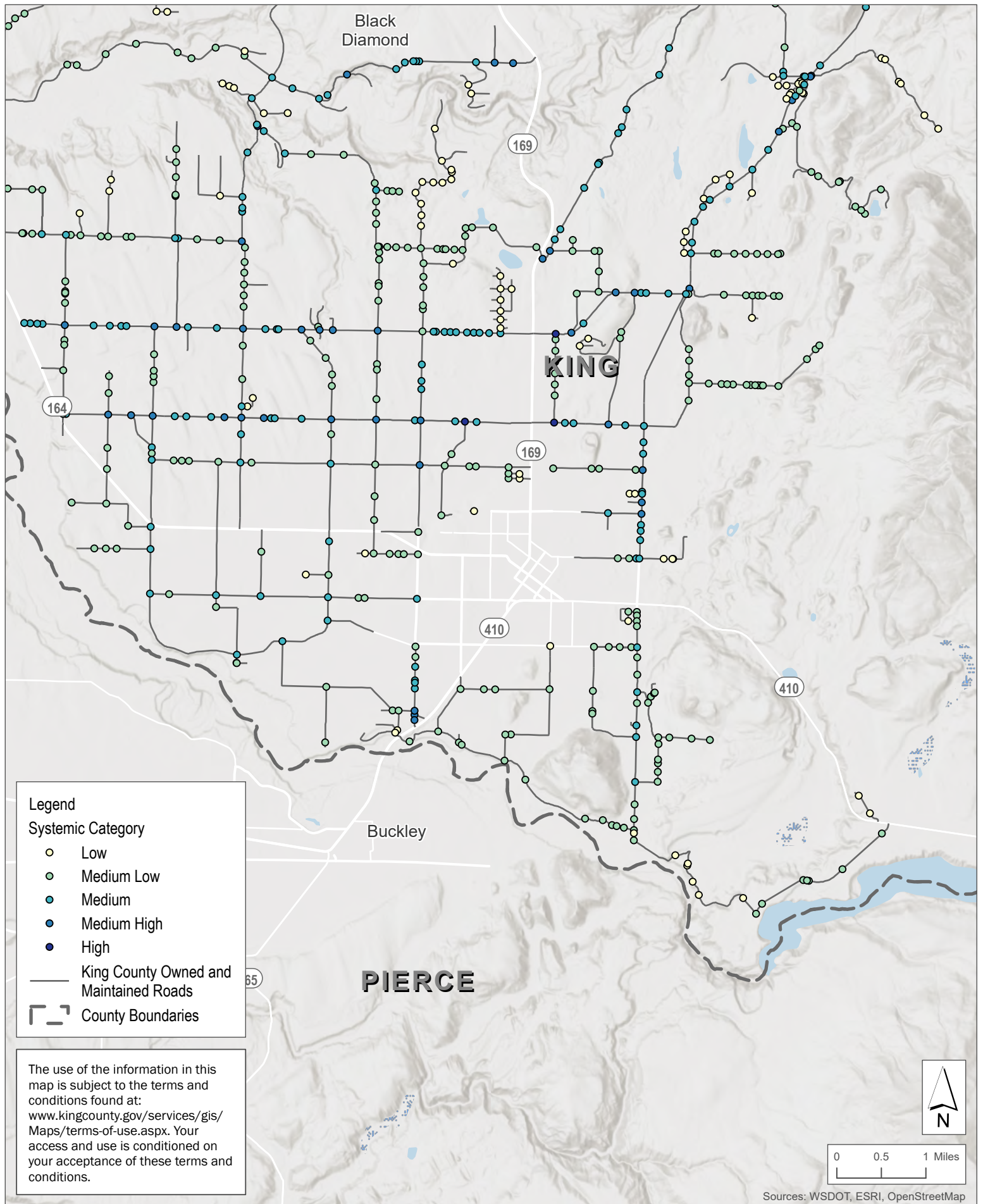
King County

Department of Local Services
Road Services Division

Systemic Intersections K - Bellevue to Maple Valley







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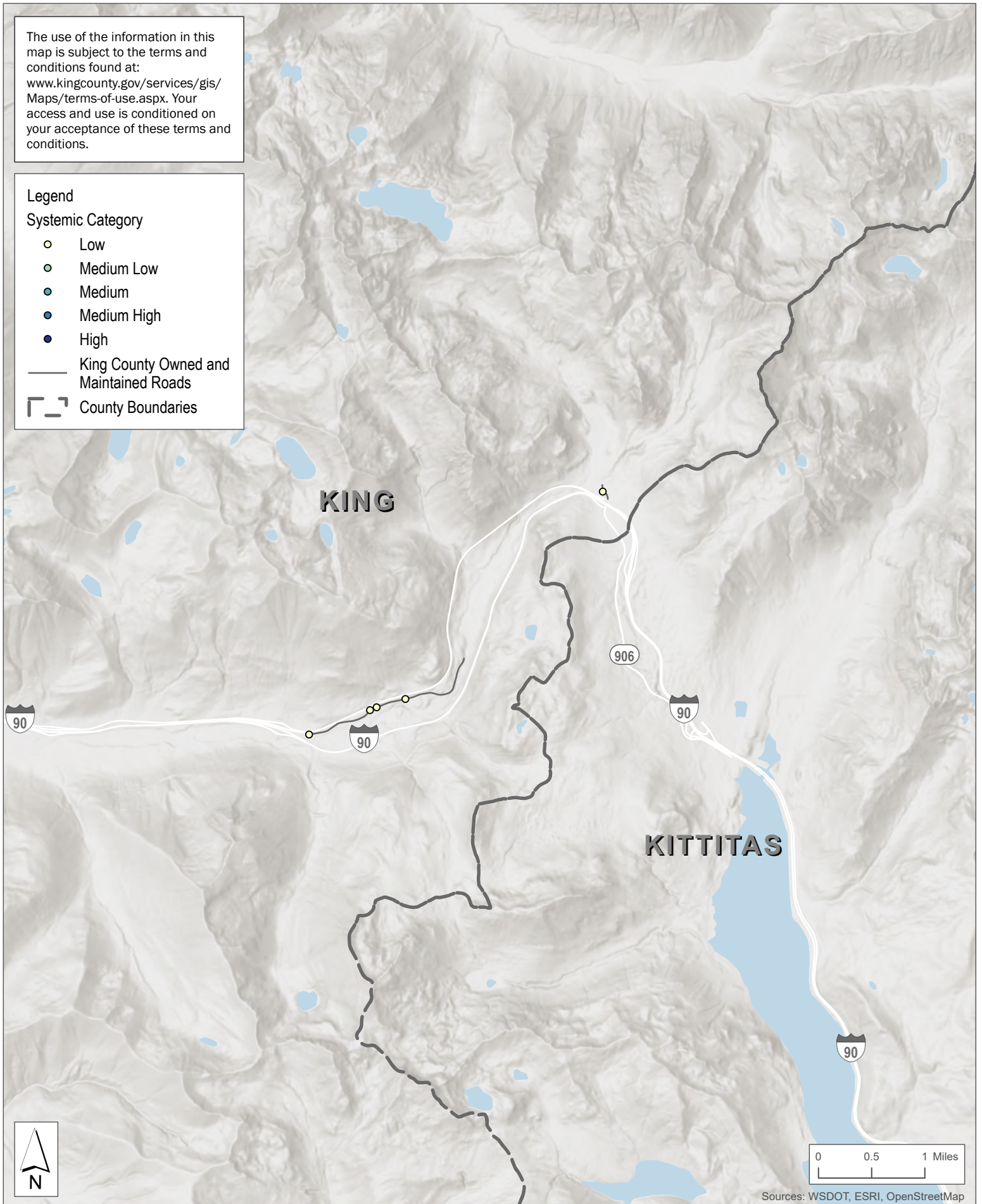
Legend

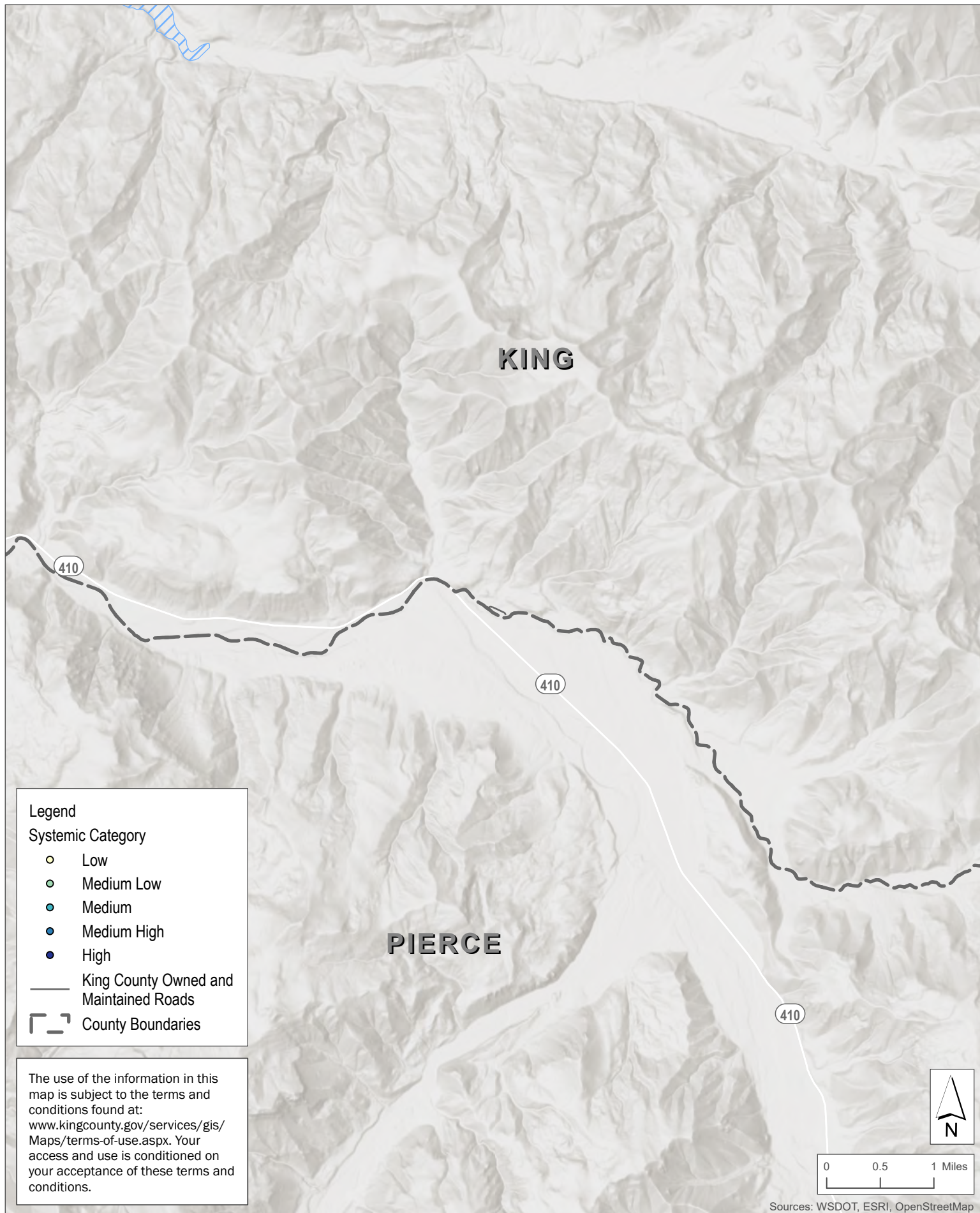
Systemic Category

- Low
- Medium Low
- Medium
- Medium High
- High

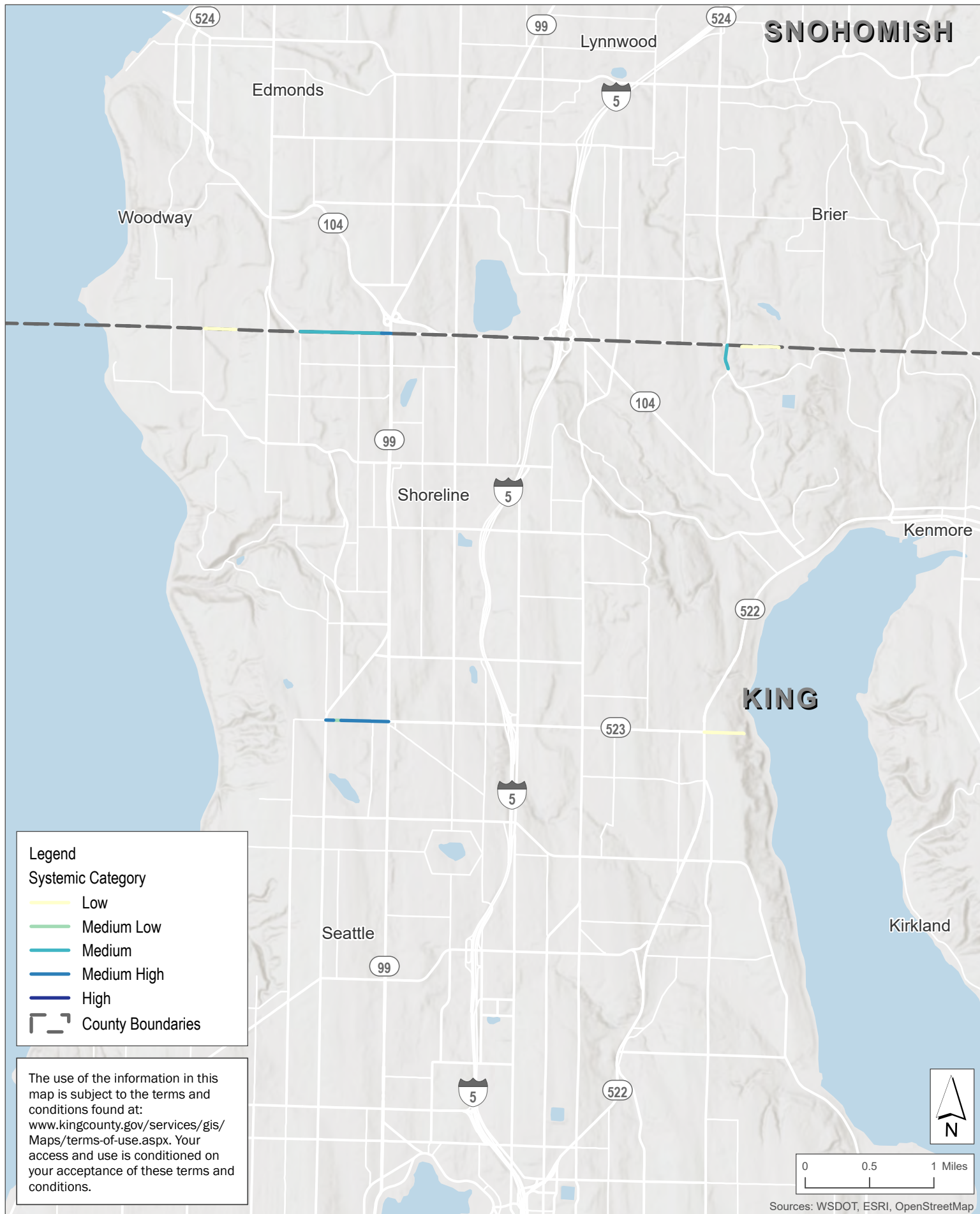
— King County Owned and Maintained Roads

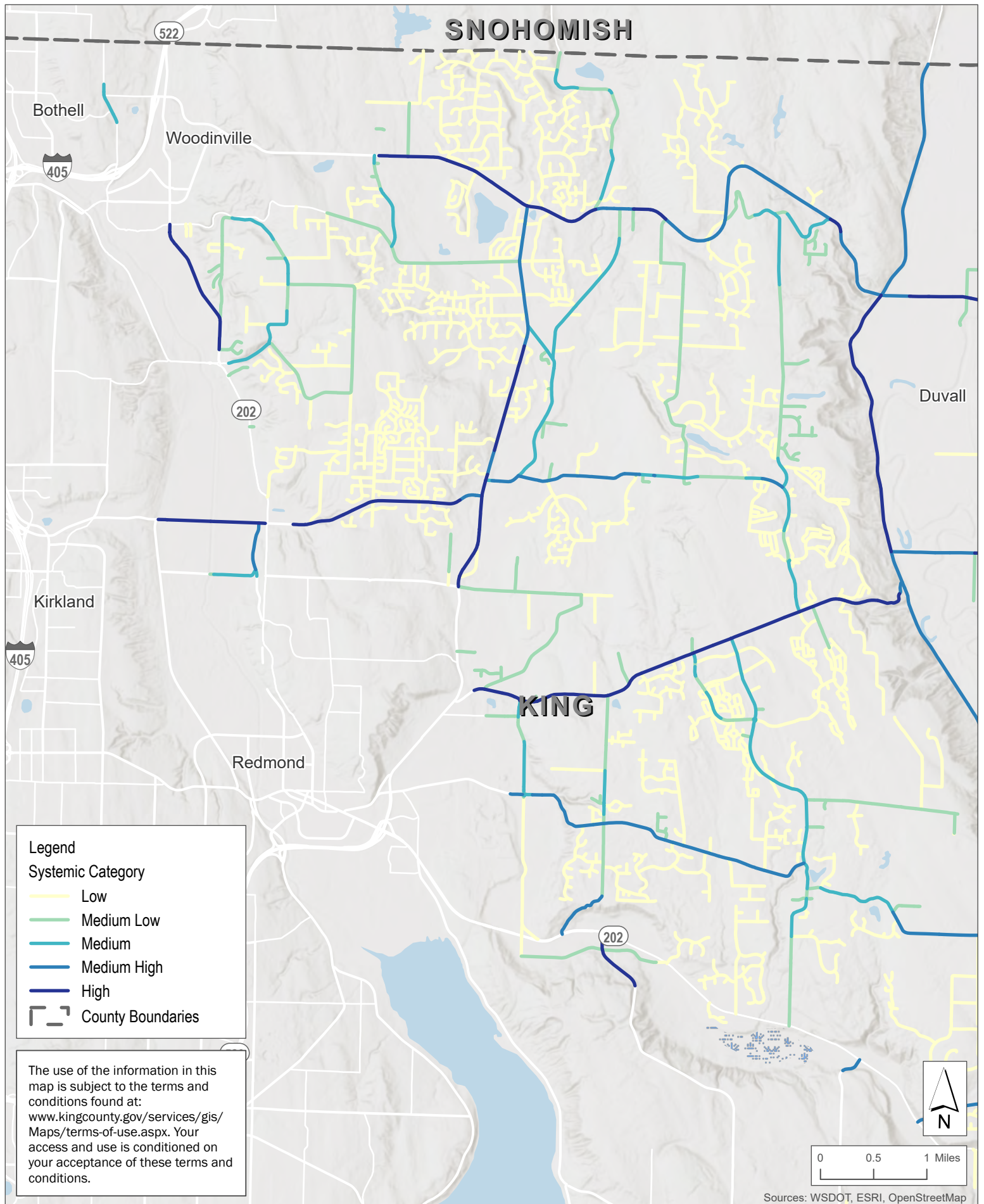
▬ County Boundaries

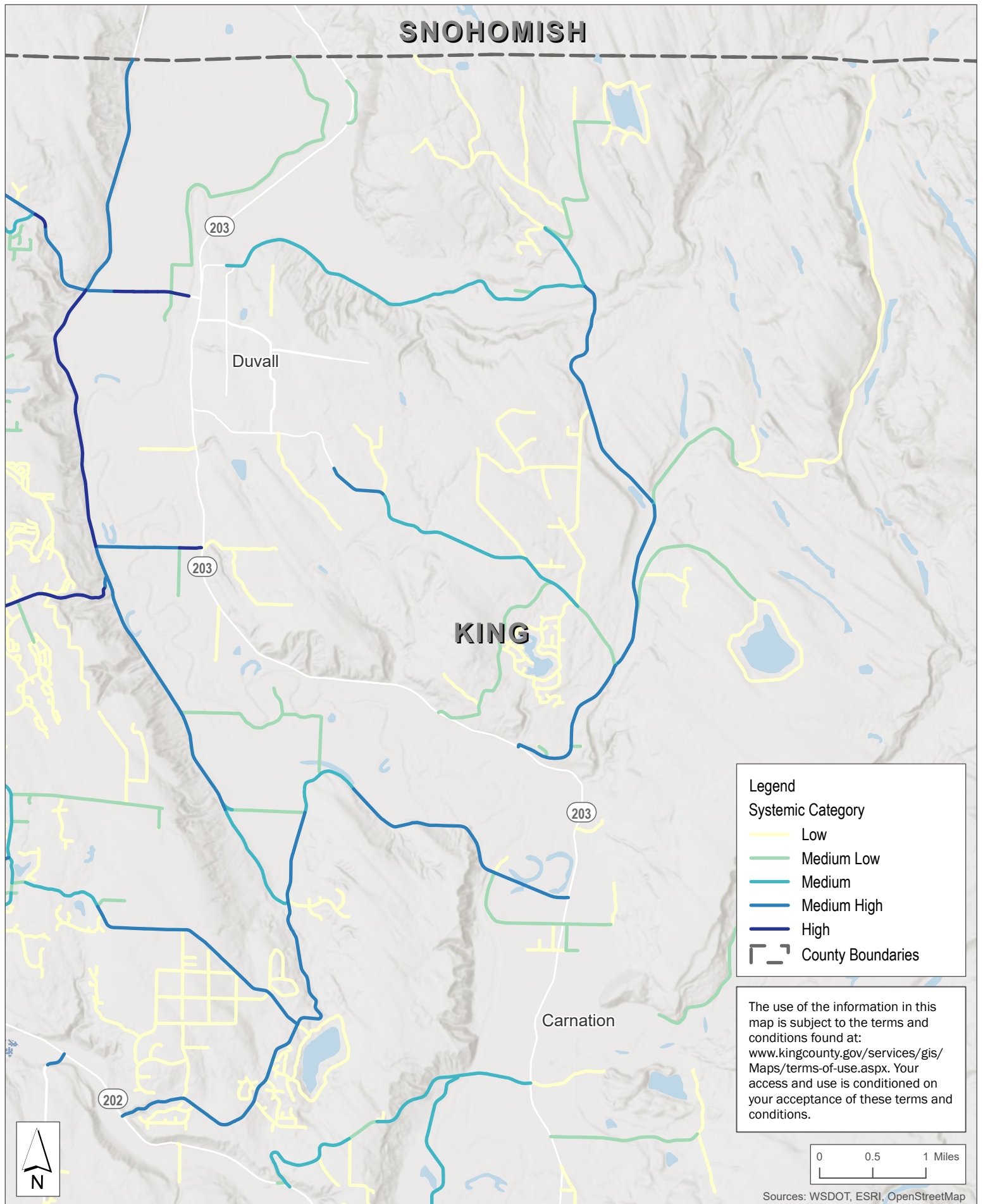


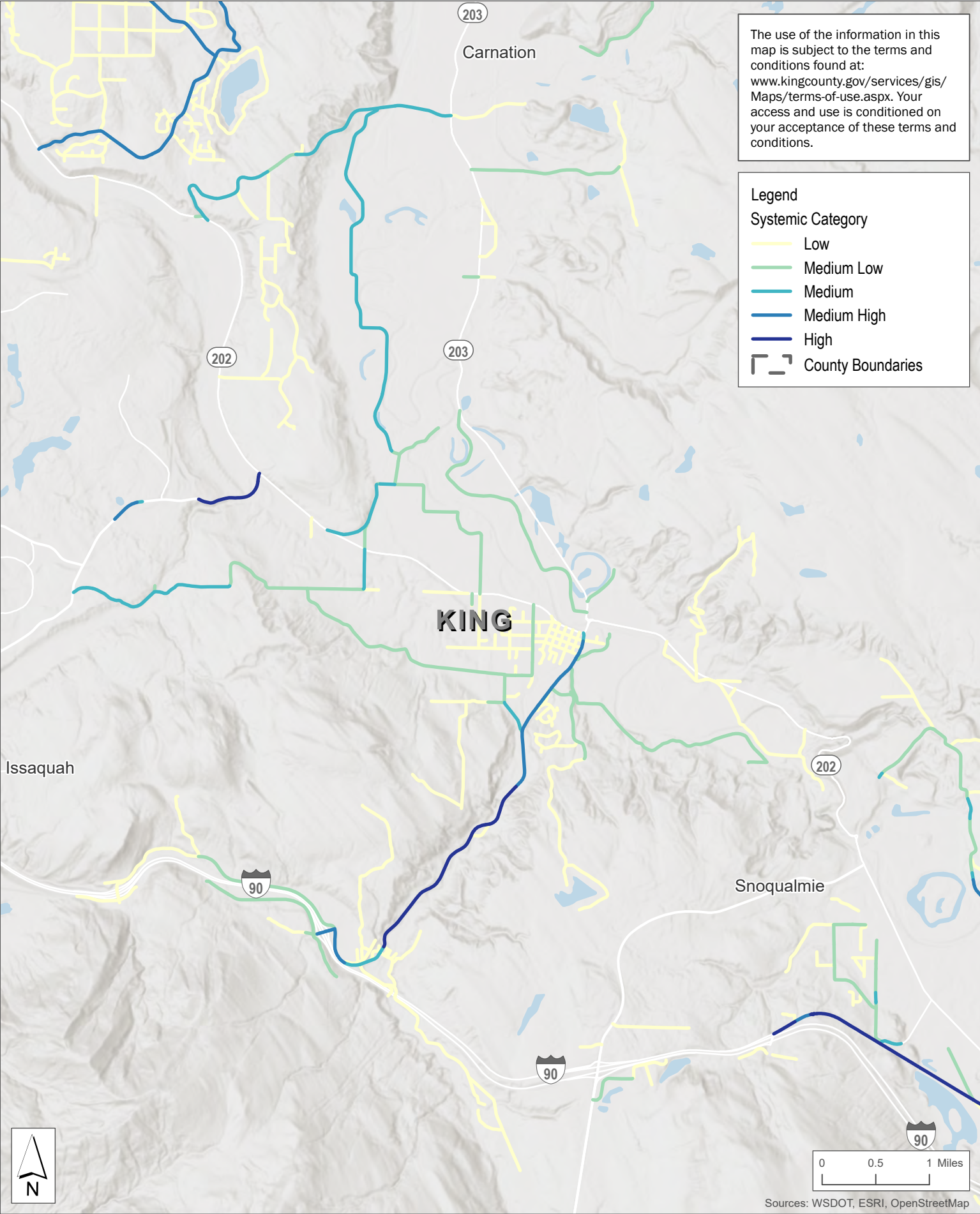


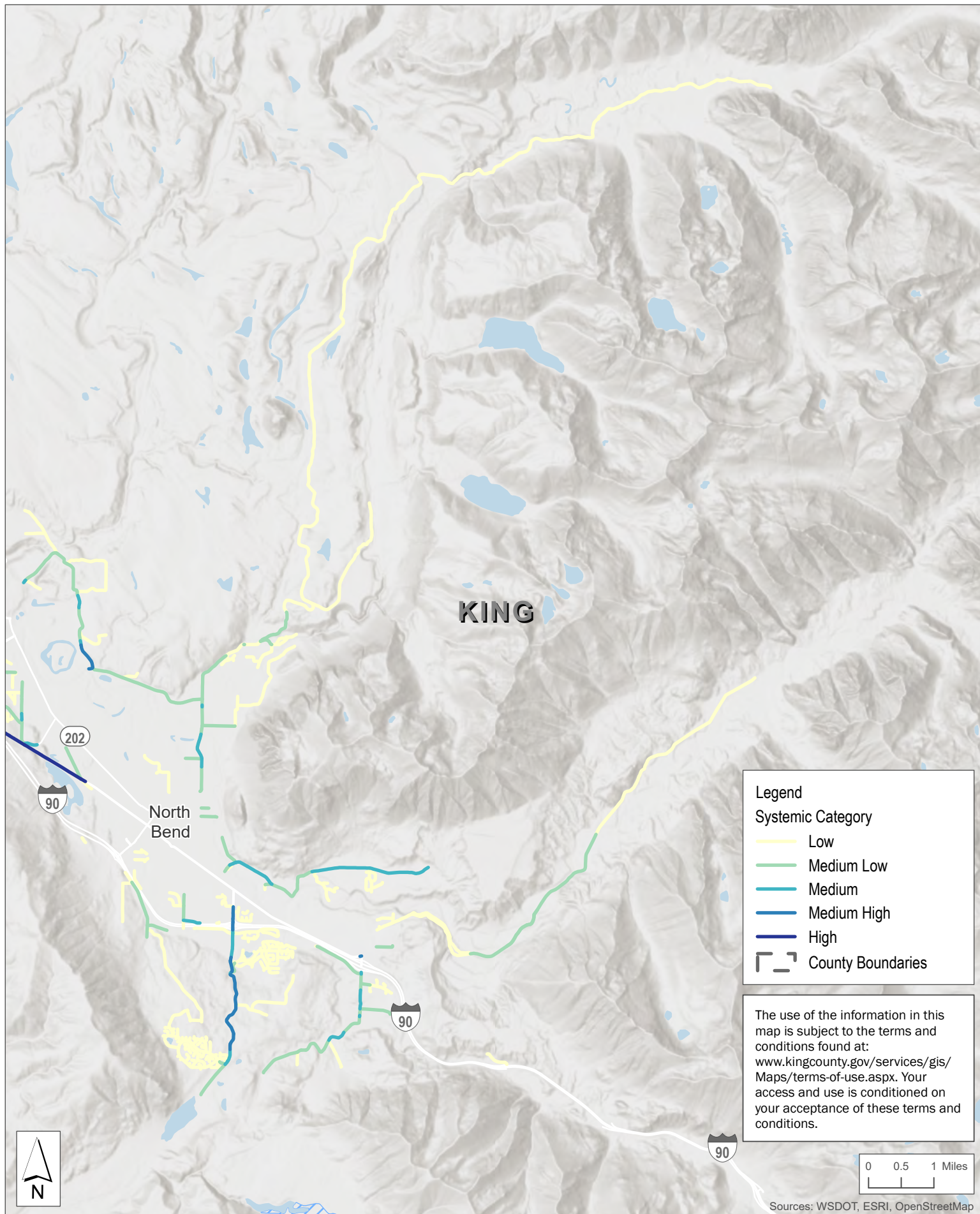
8. Systemic Segments

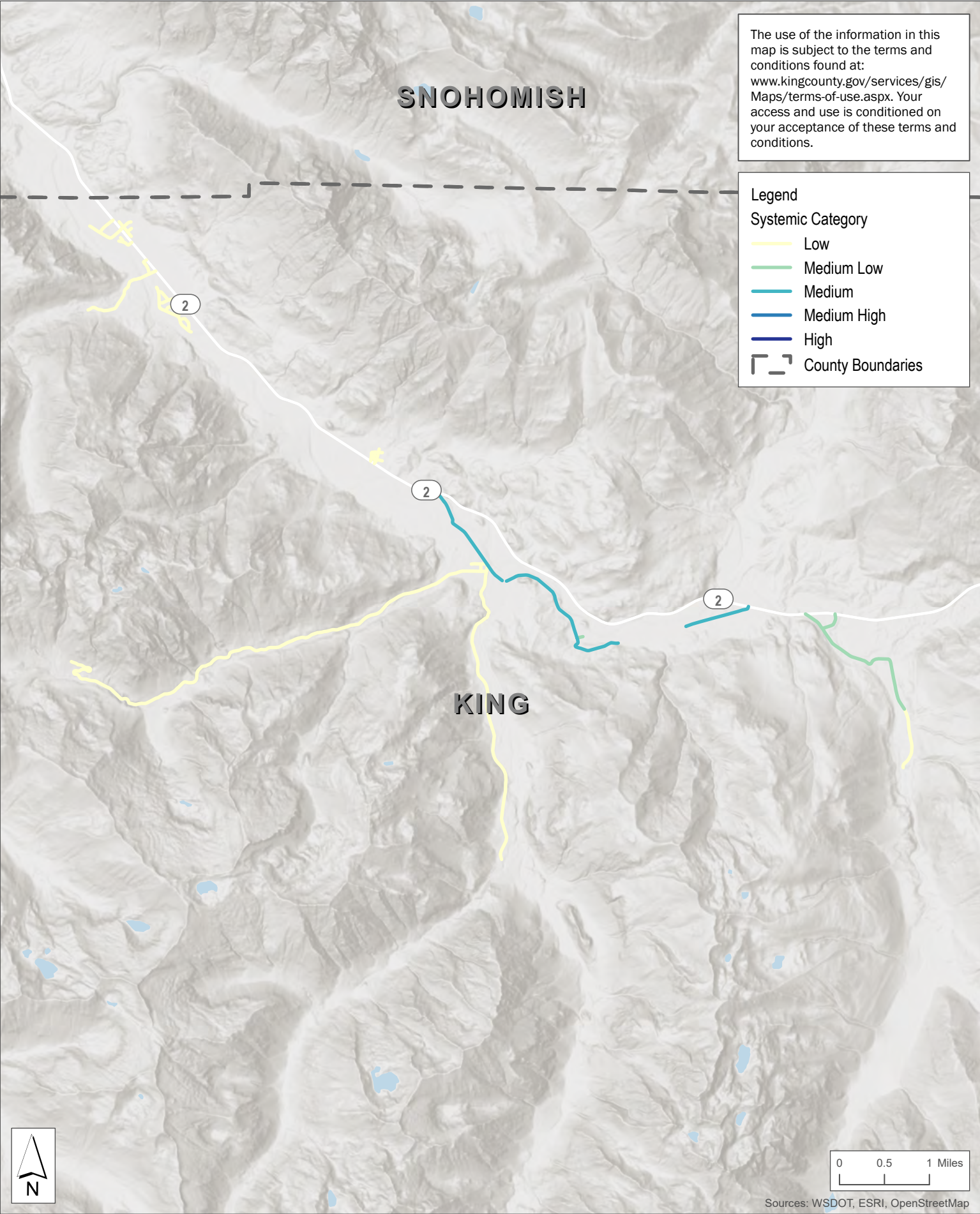




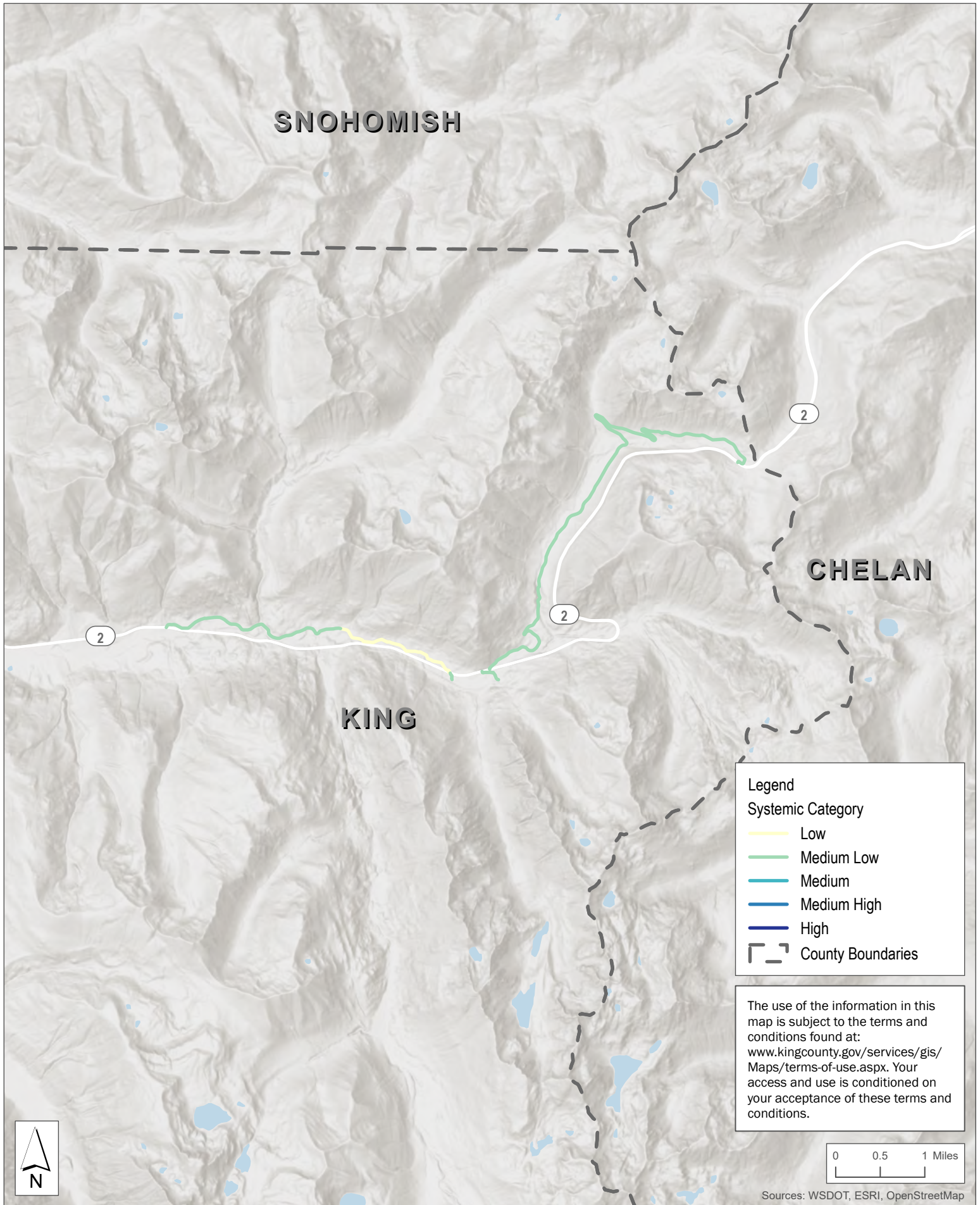


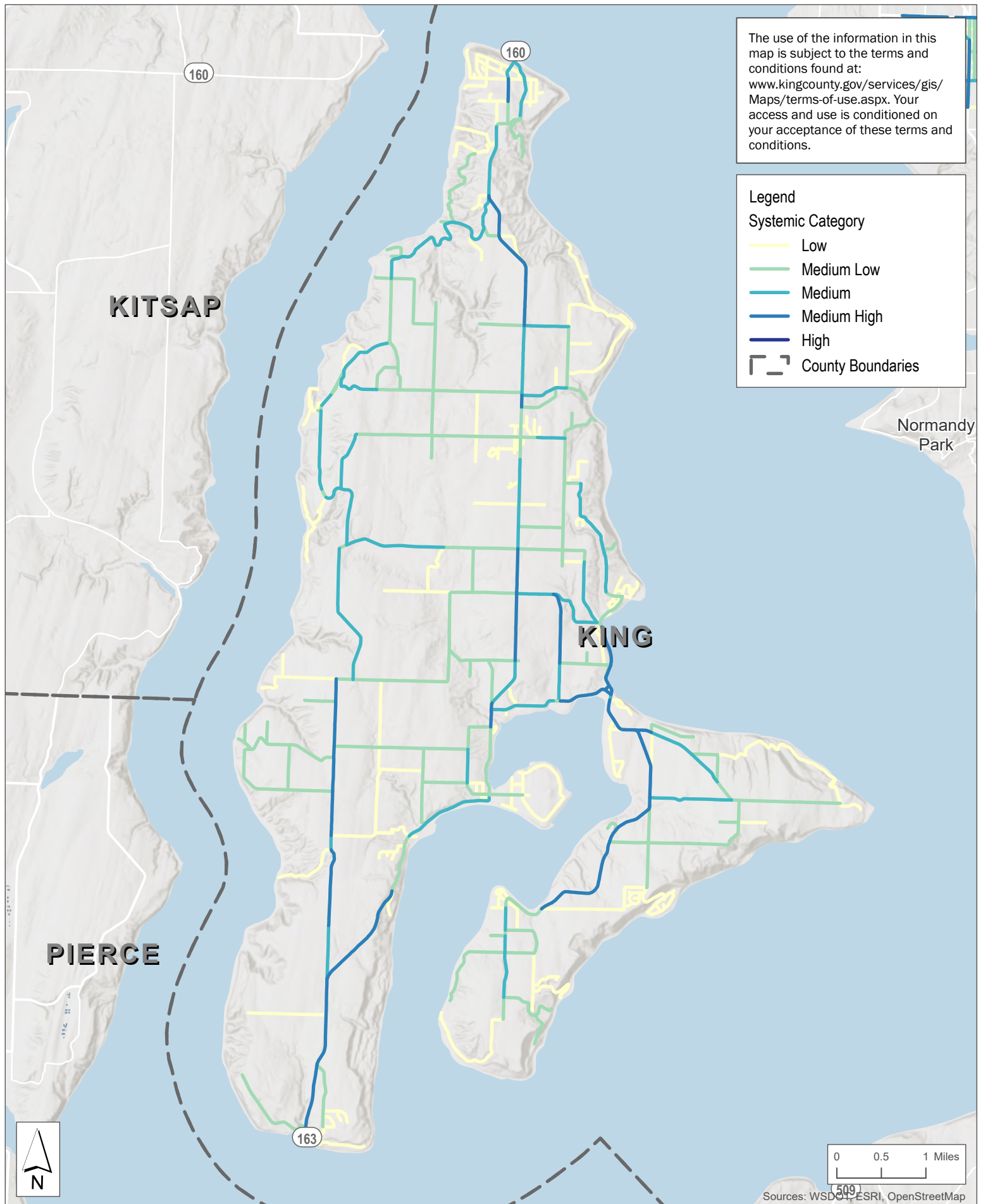


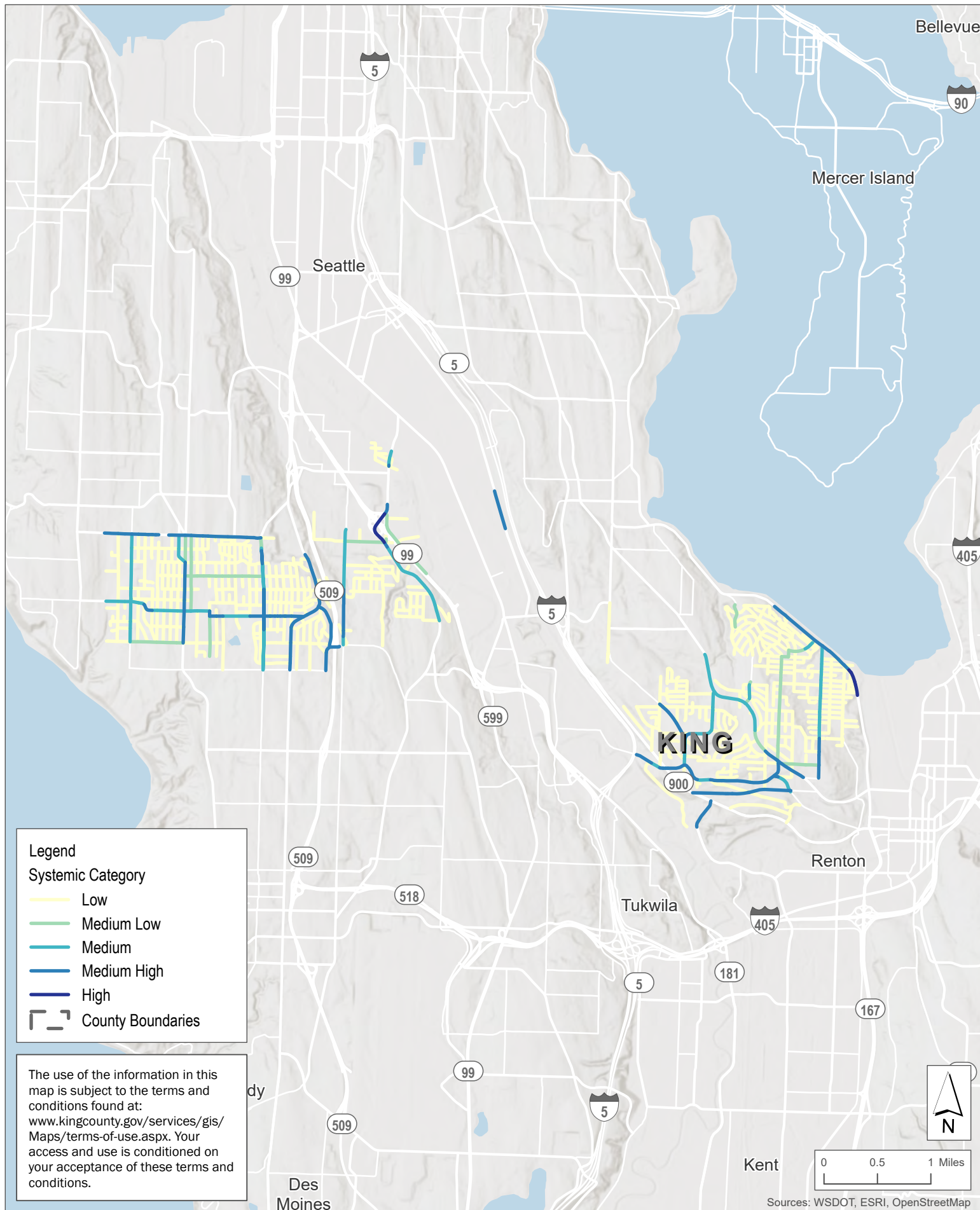


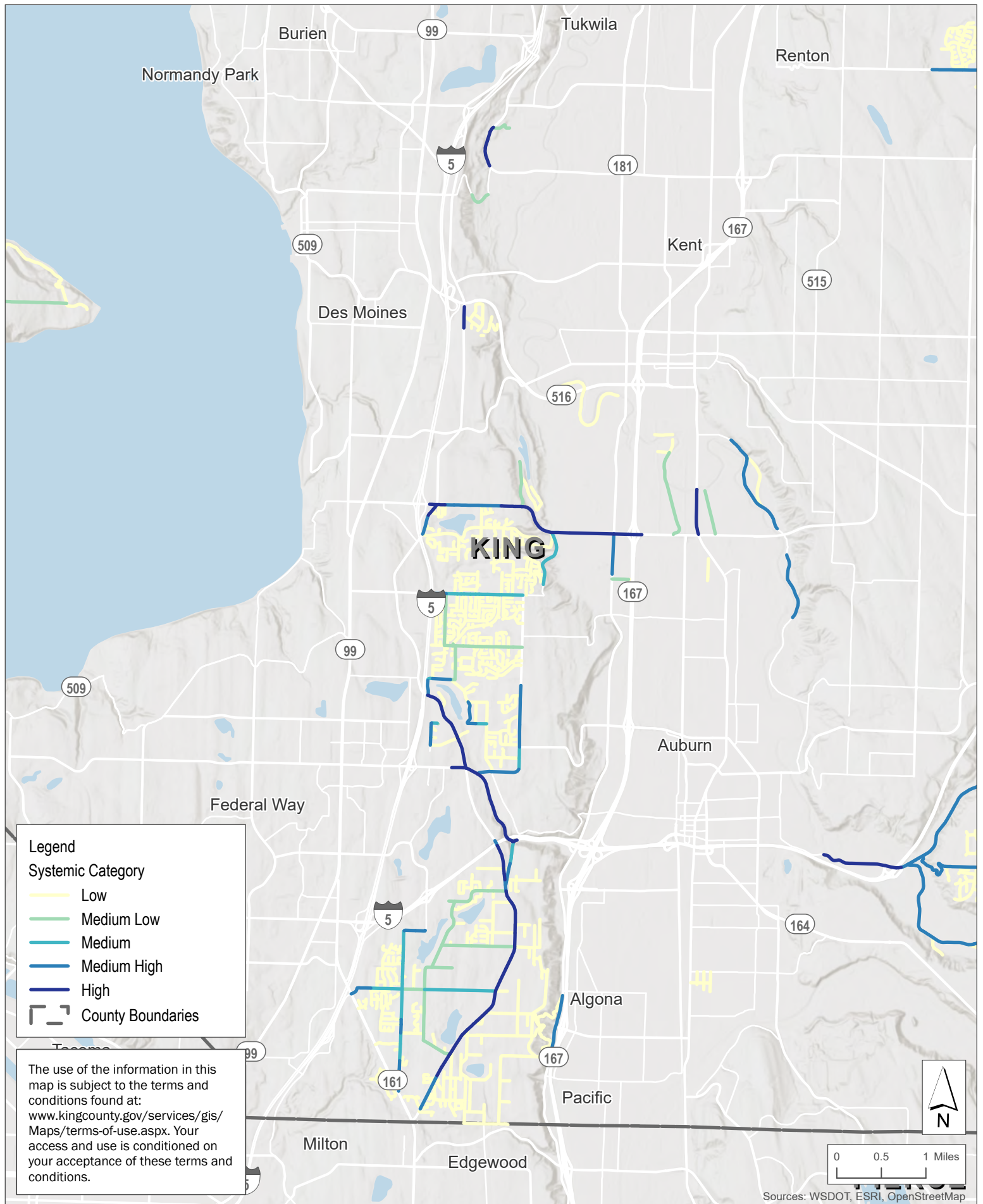


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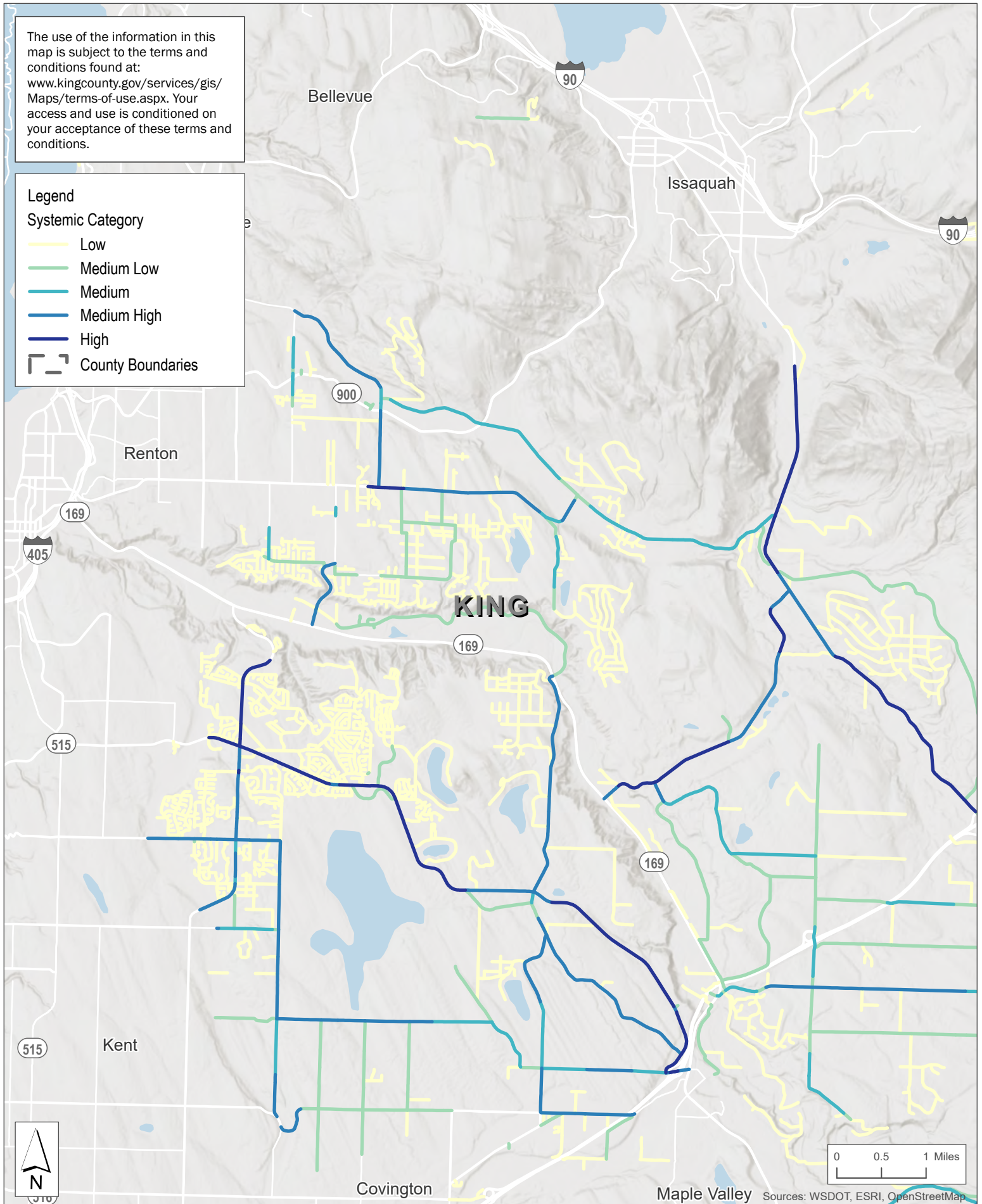


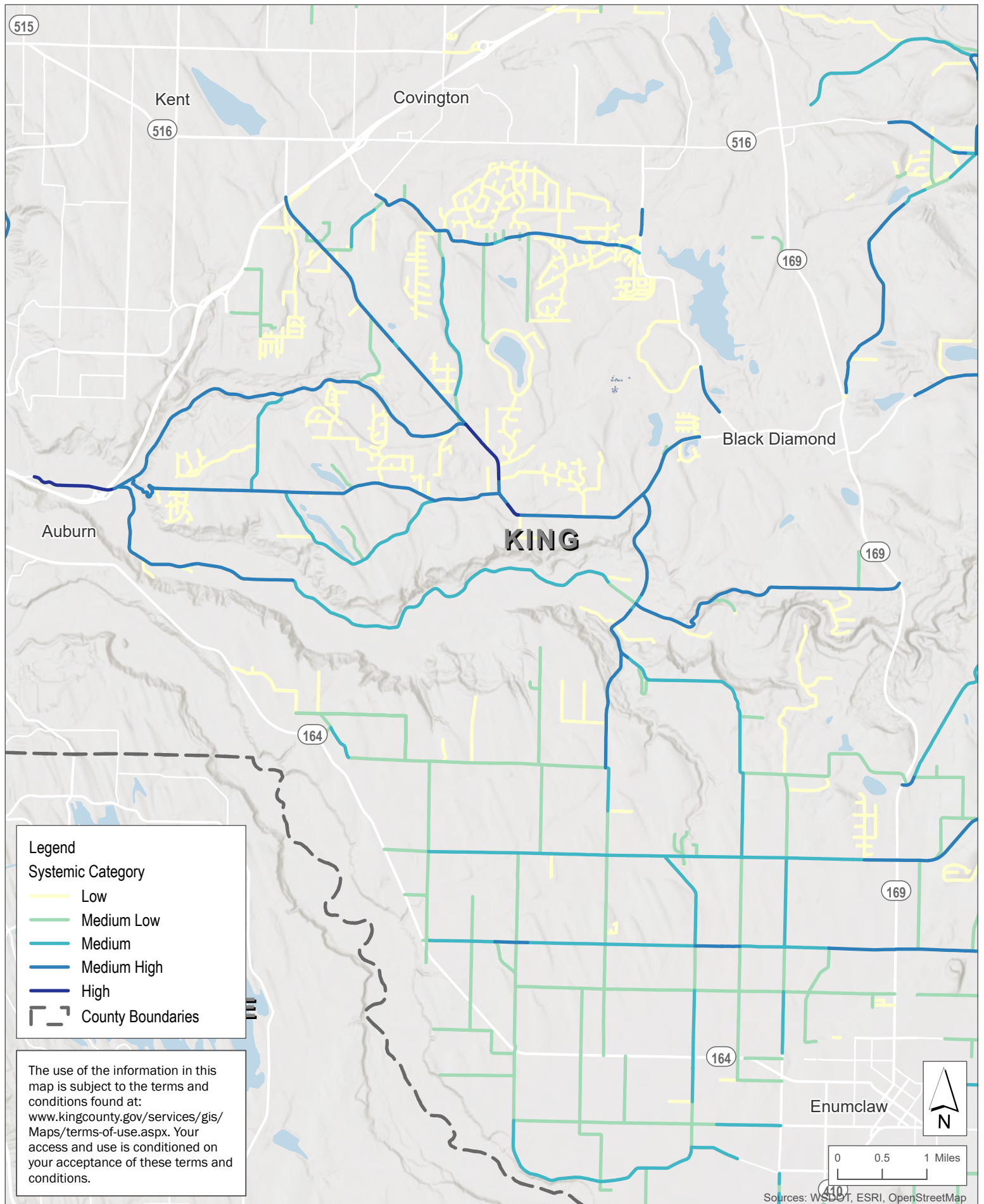


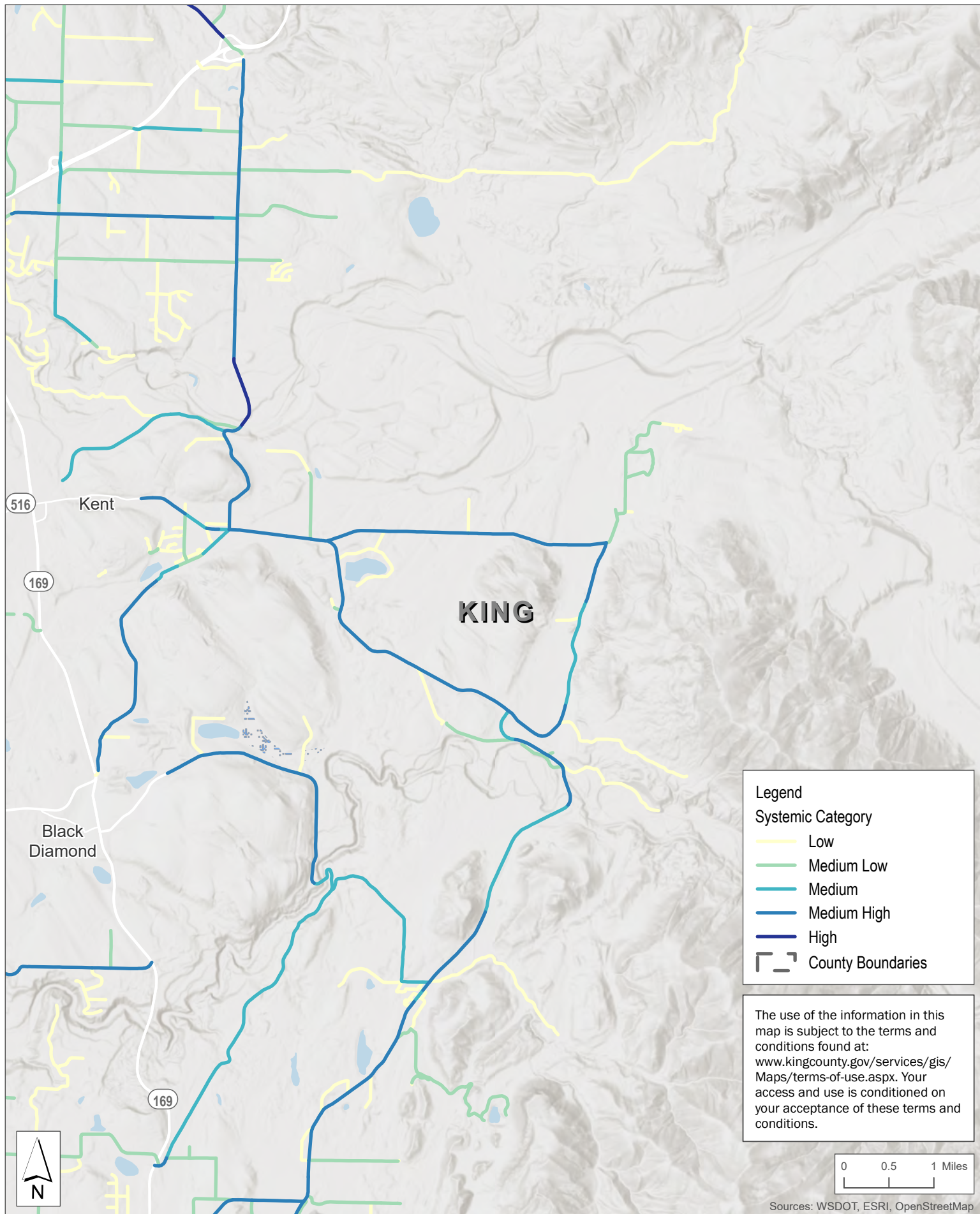


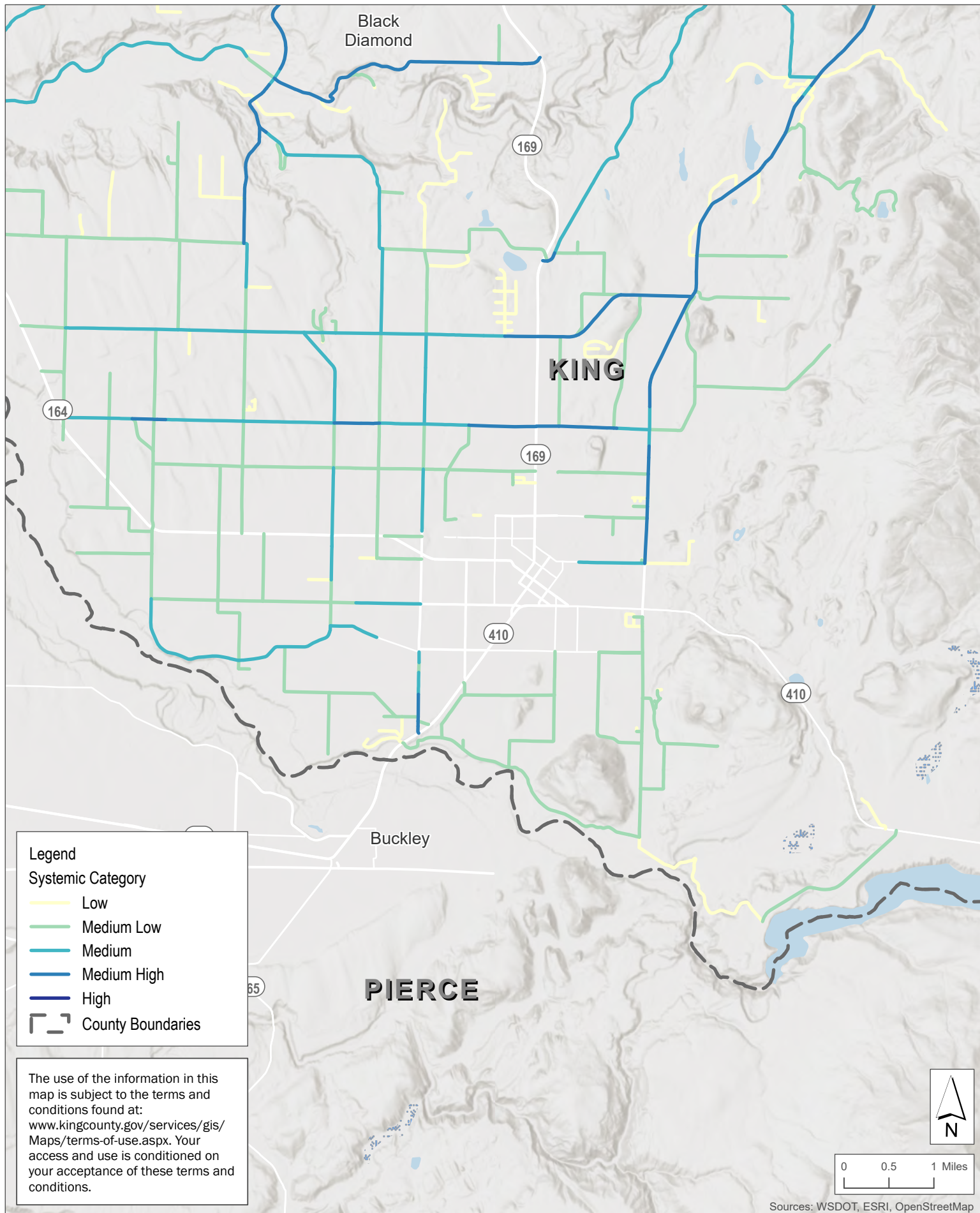
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- Legend**
- Systemic Category**
- Low
 - Medium Low
 - Medium
 - Medium High
 - High
 - County Boundaries









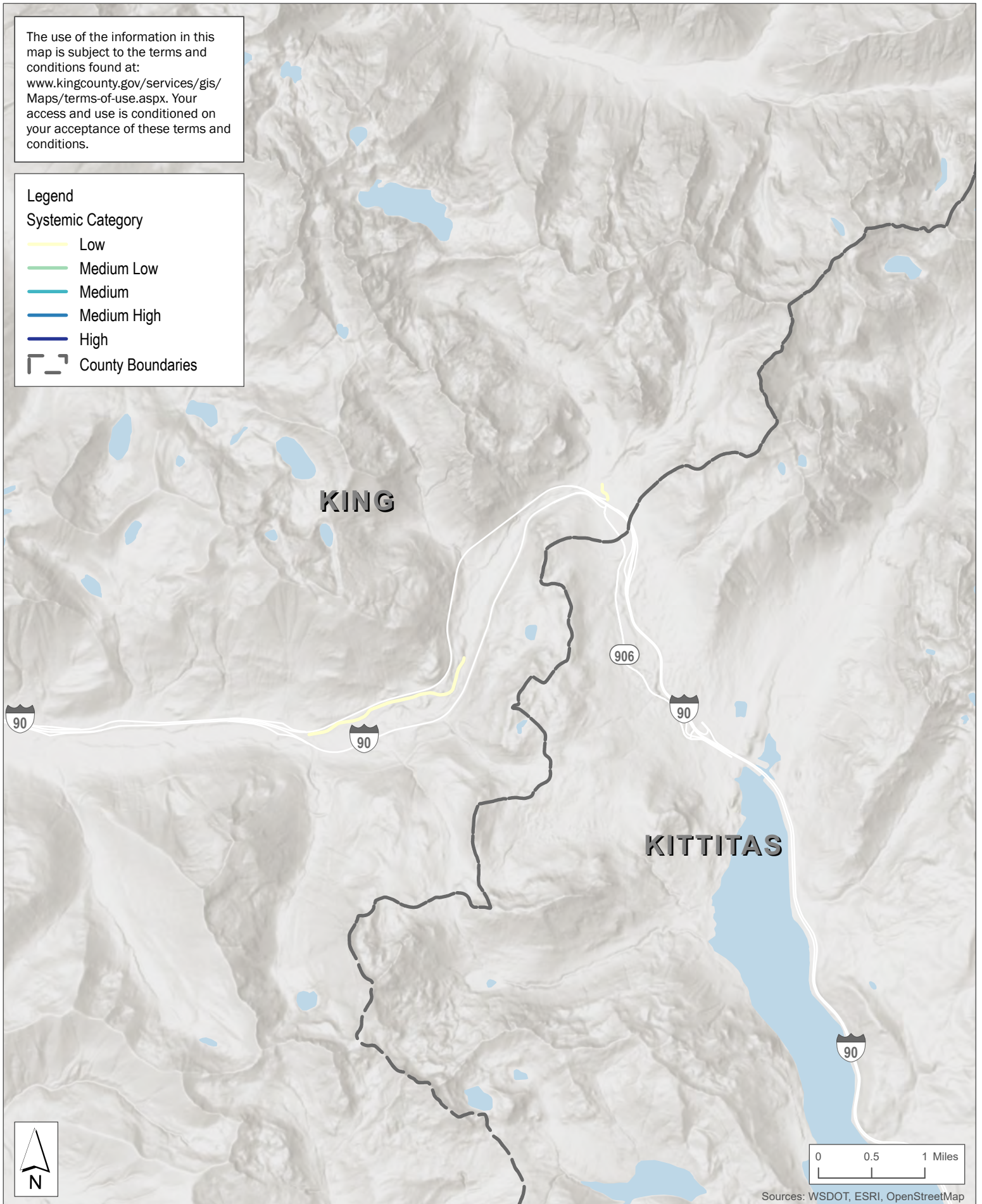
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Legend

Systemic Category

- Low
- Medium Low
- Medium
- Medium High
- High

County Boundaries



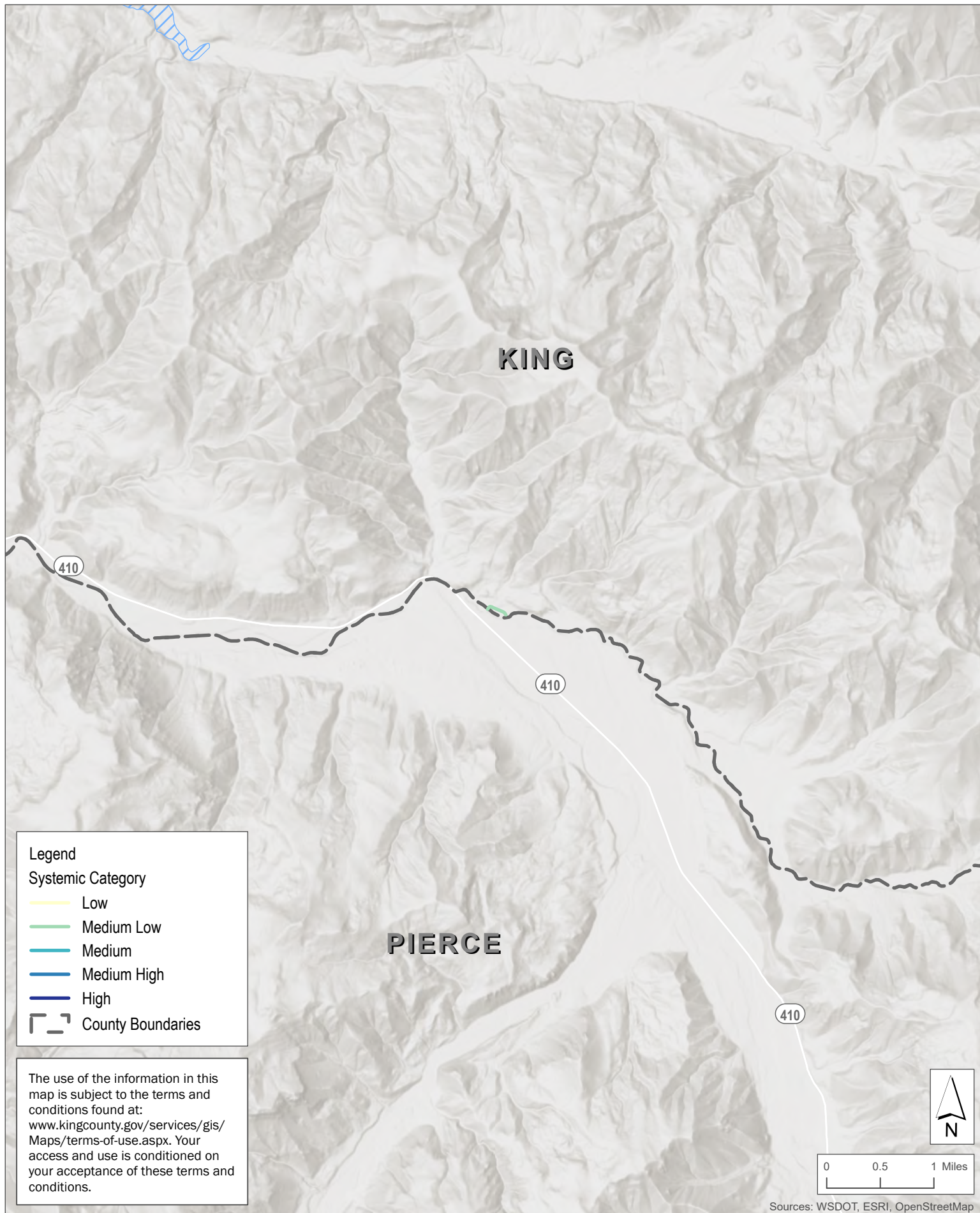
Parametrix



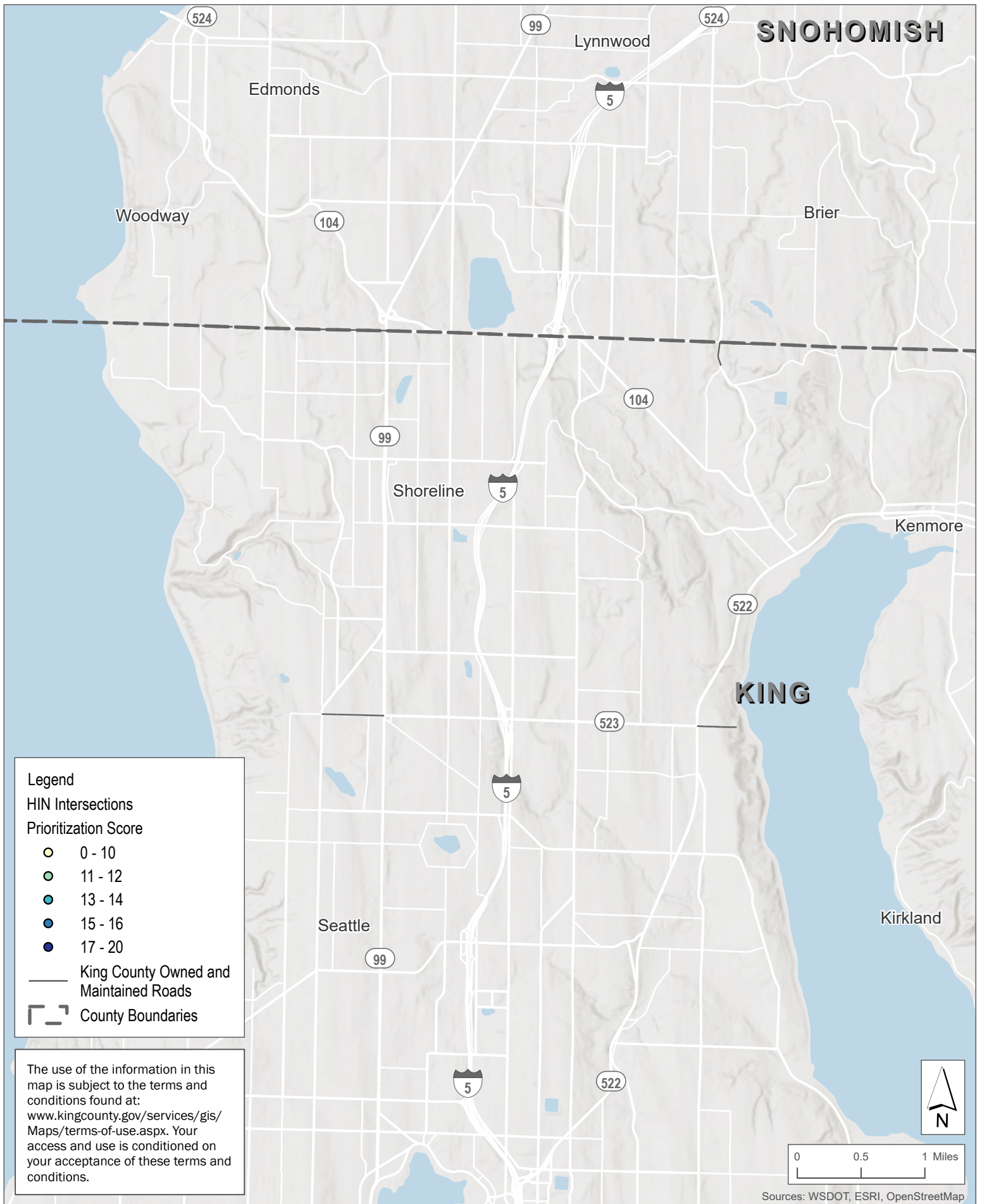
King County

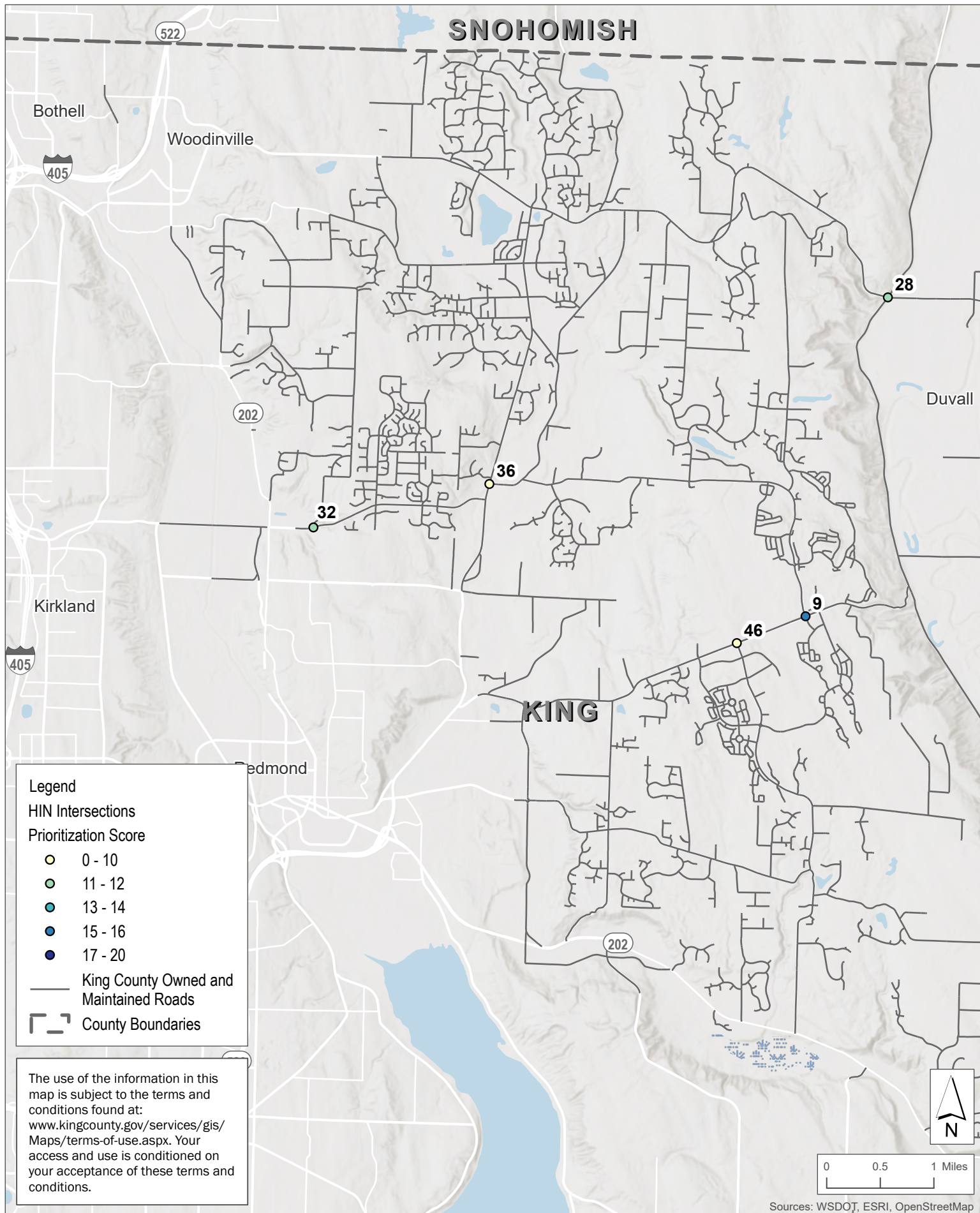
Department of Local Services
Road Services Division

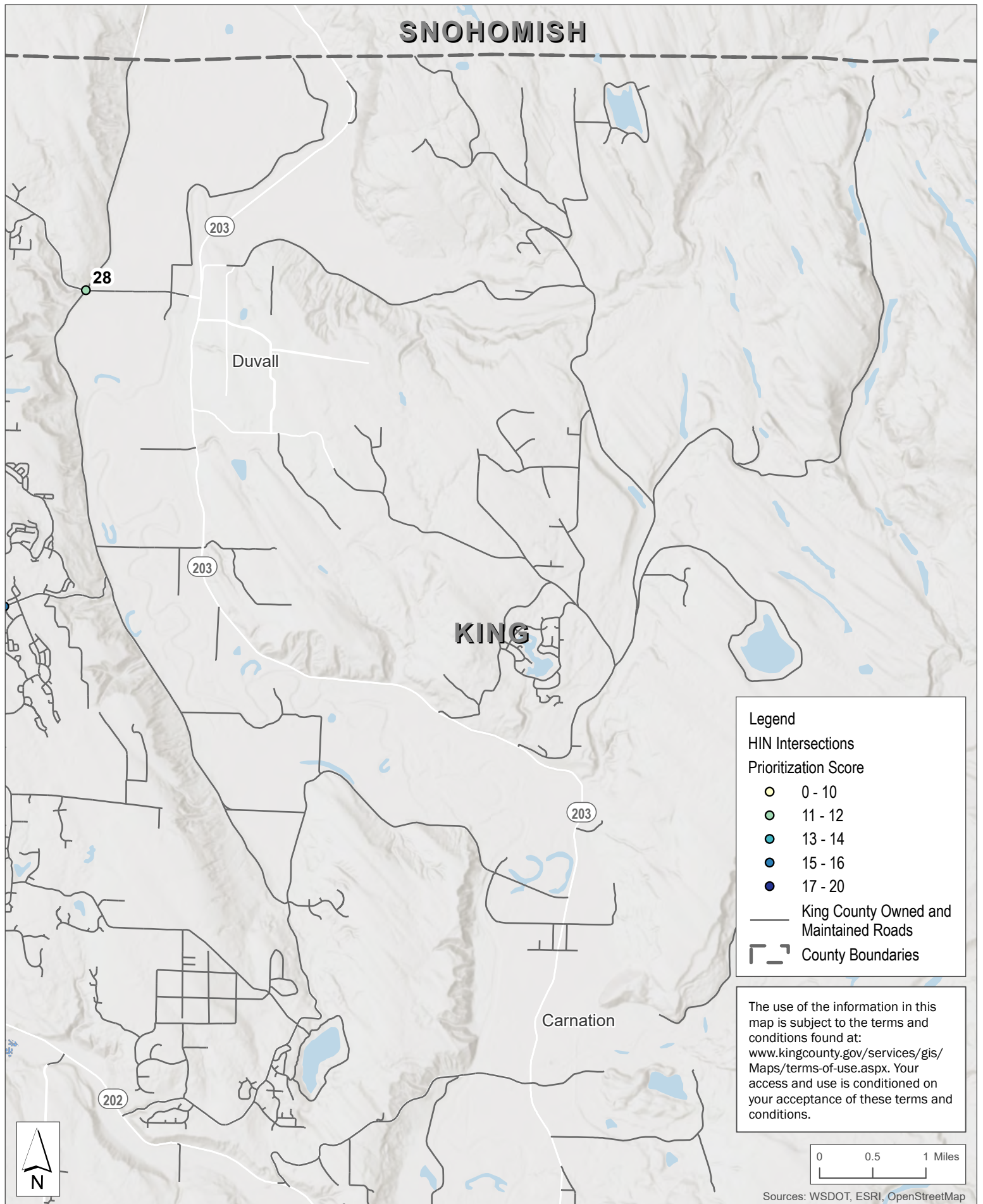
**Systemic Segments
O - E King County**

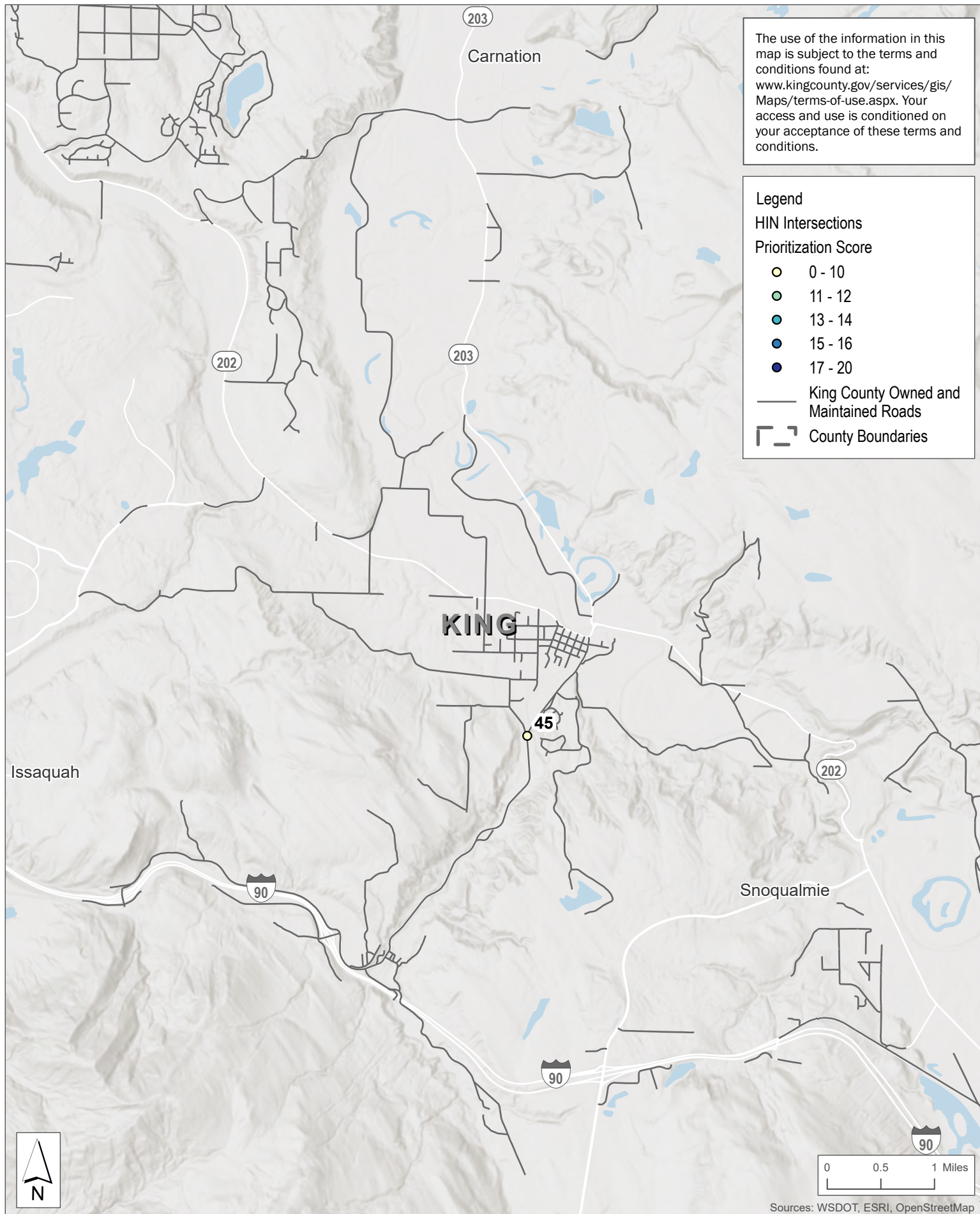


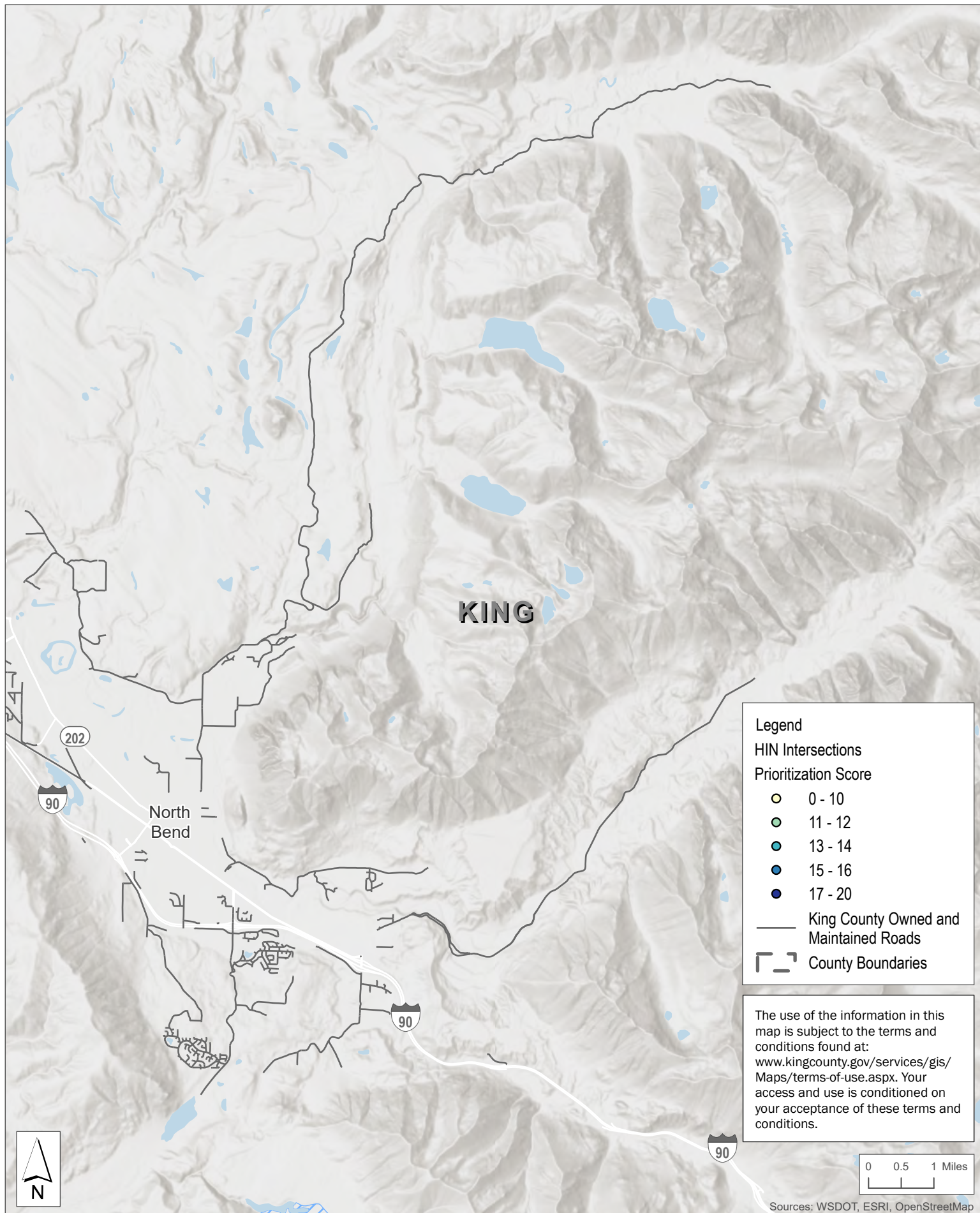
9. Prioritized Intersections

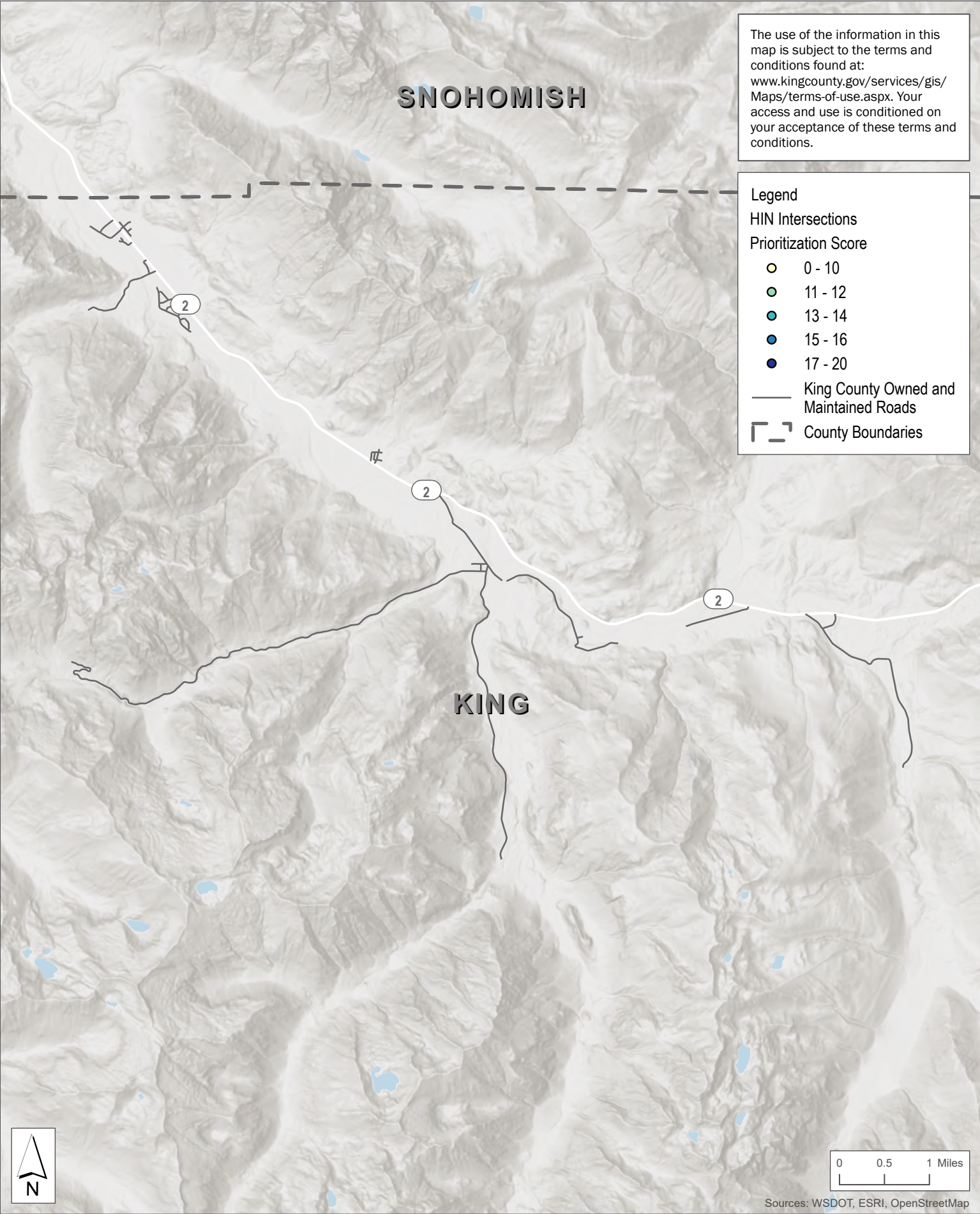












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Legend

HIN Intersections

Prioritization Score

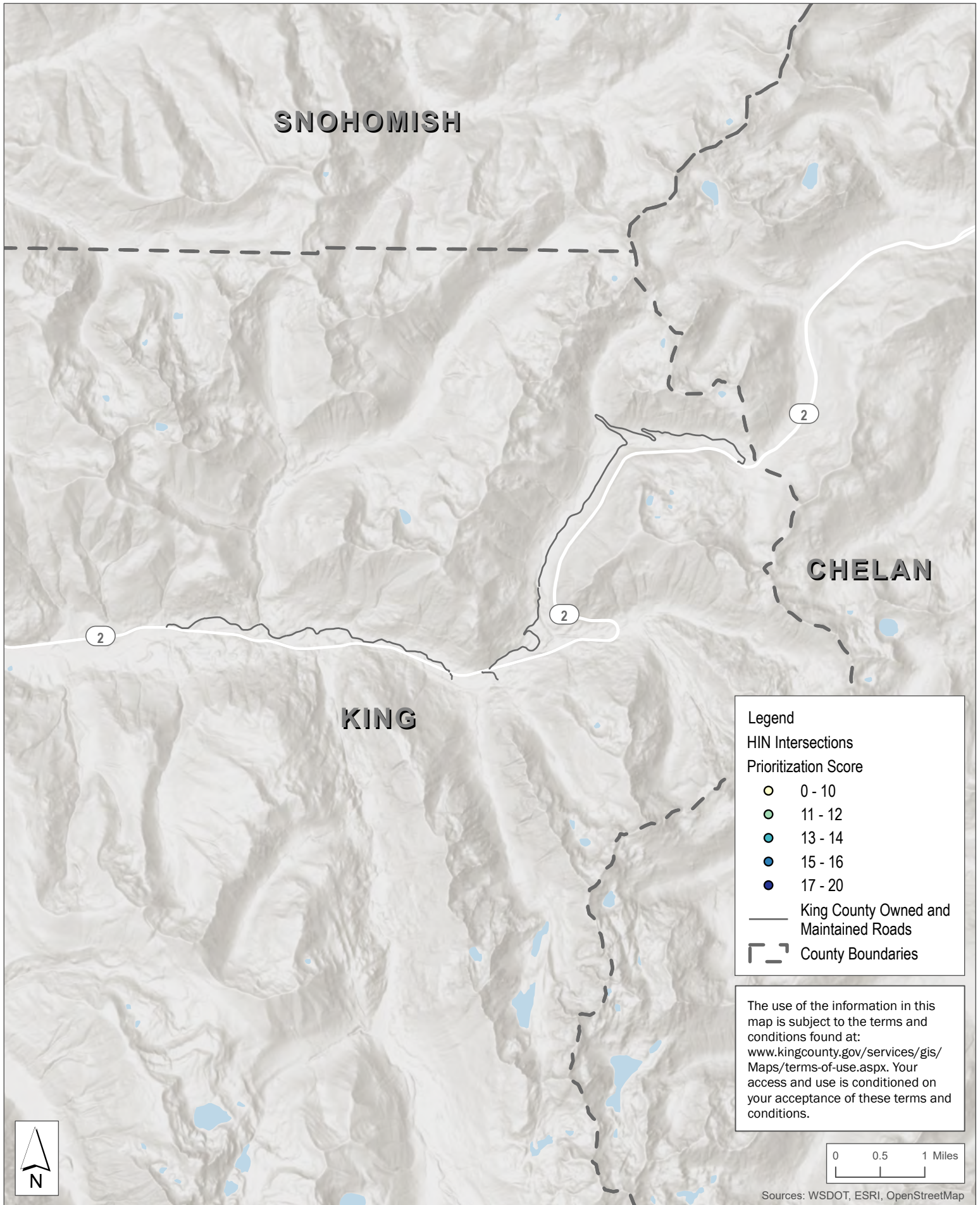
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- 13 - 14
- 15 - 16
- 17 - 20

— King County Owned and Maintained Roads

┌ ┐ County Boundaries



Sources: WSDOT, ESRI, OpenStreetMap



Legend

HIN Intersections

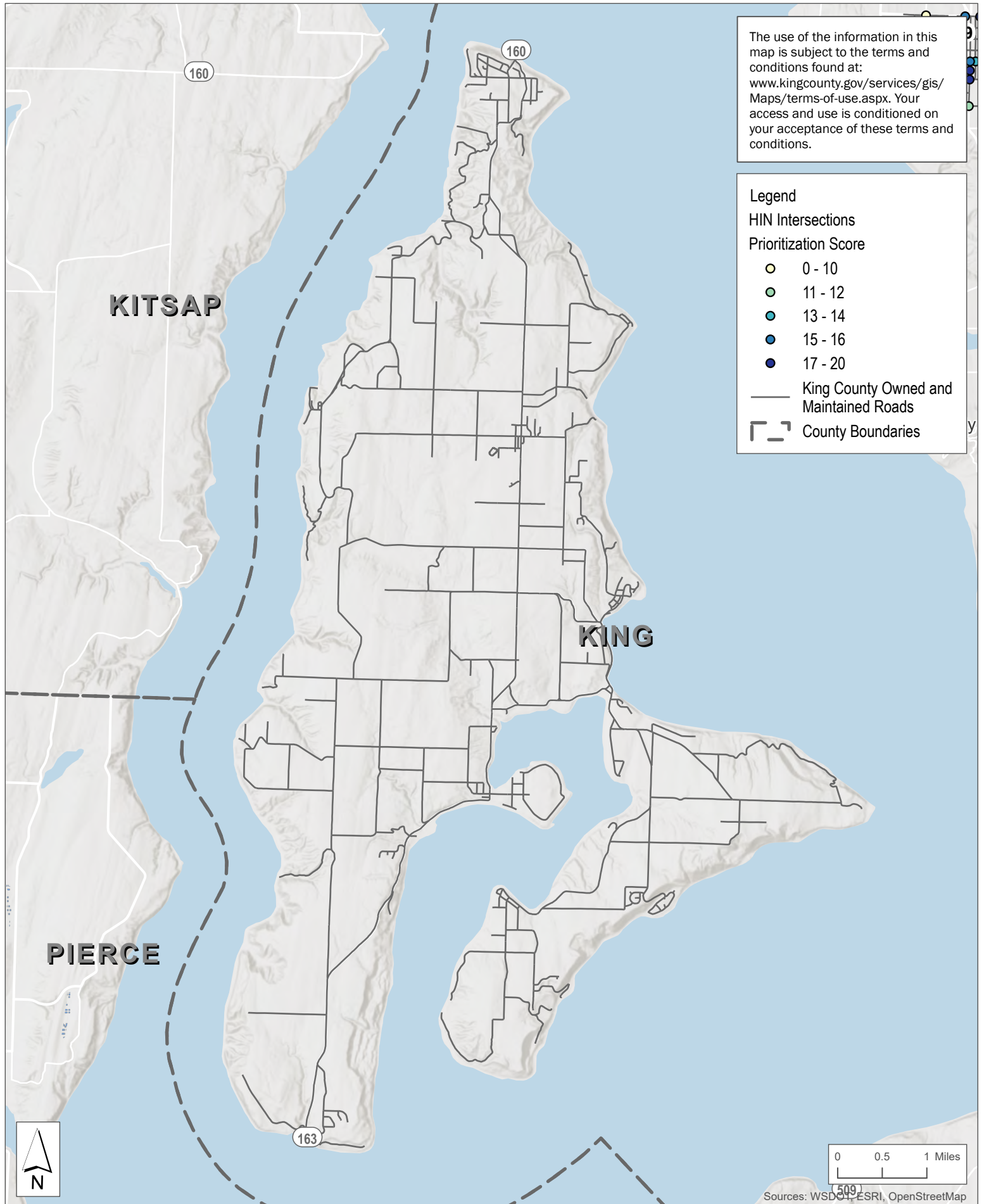
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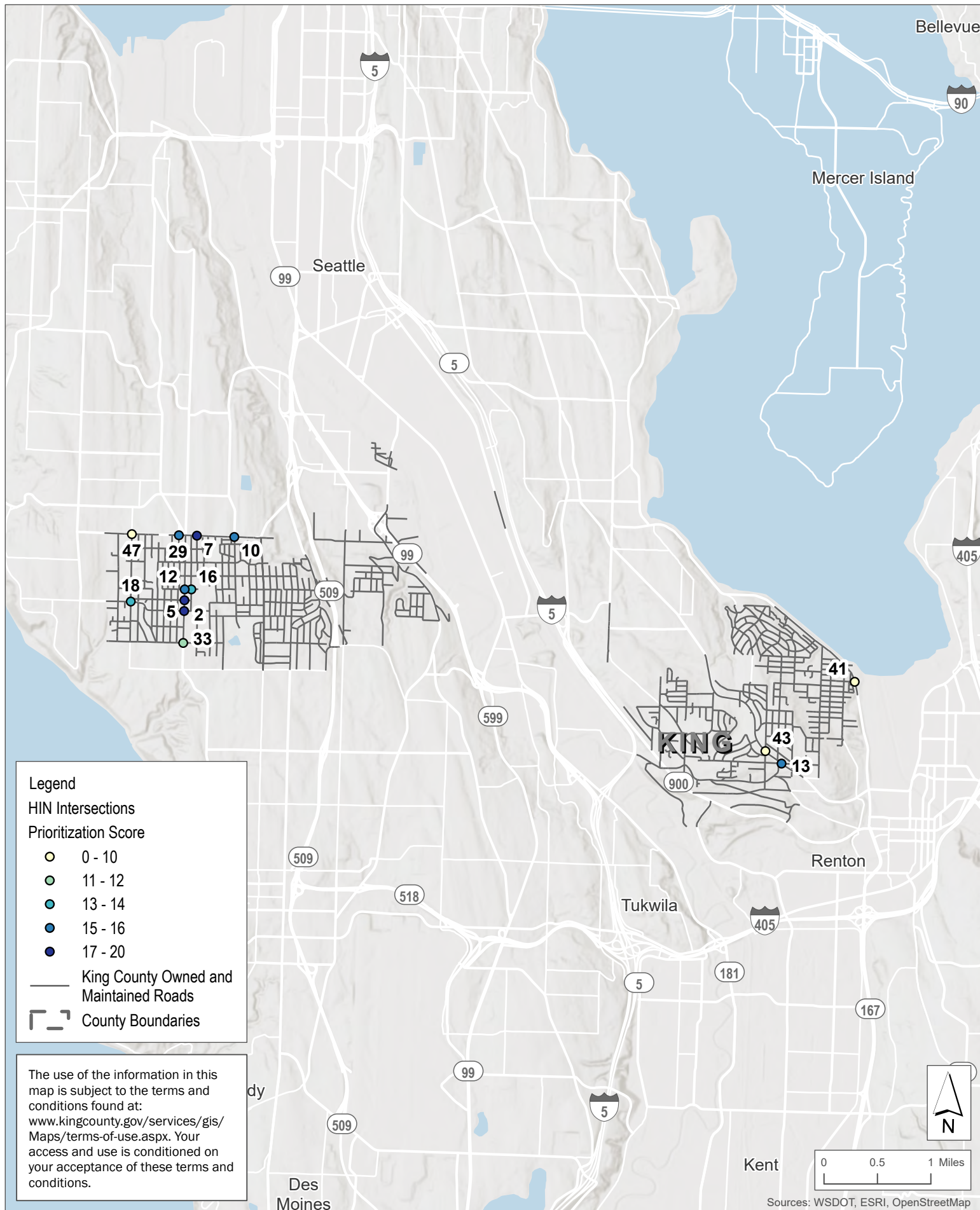
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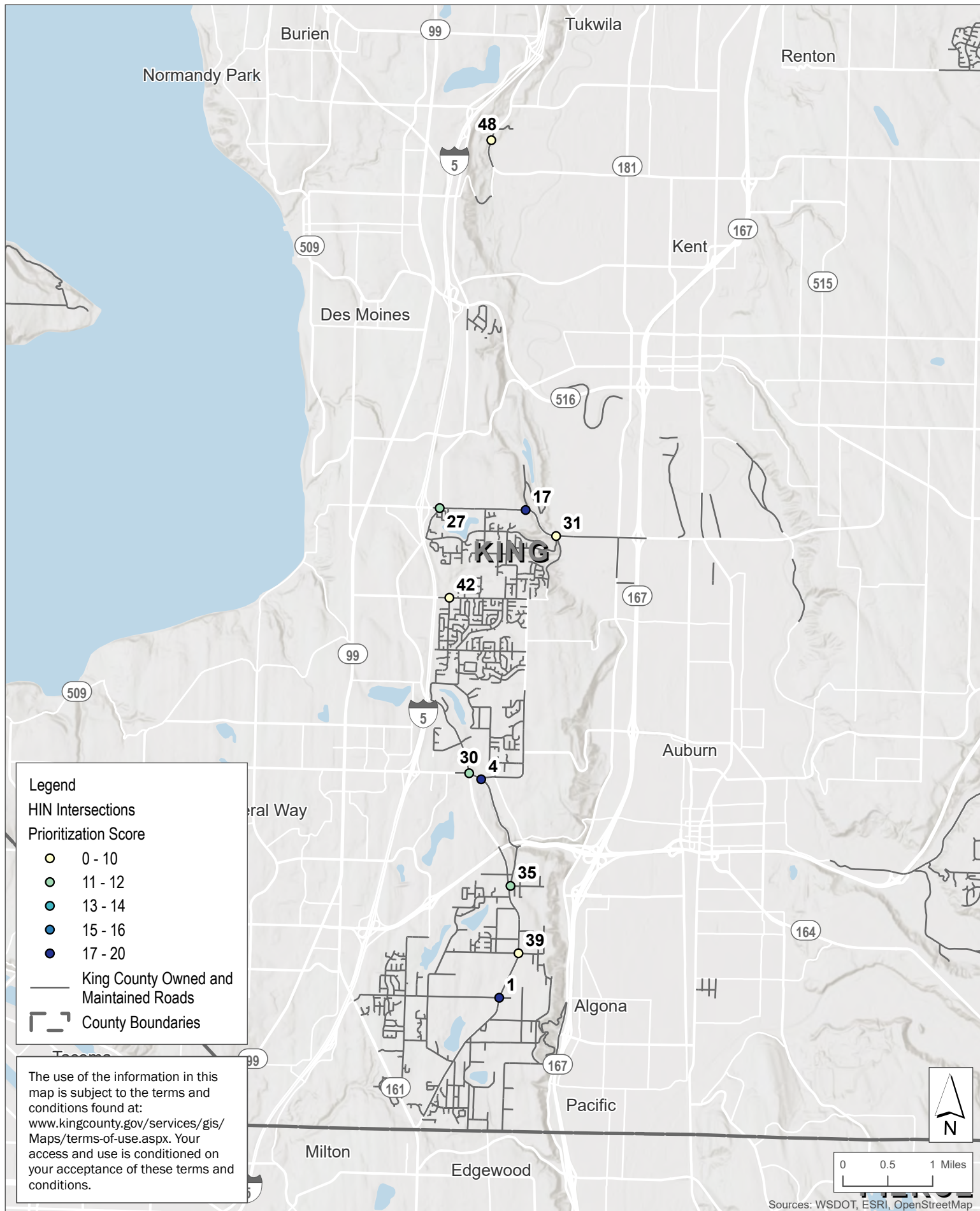
— King County Owned and Maintained Roads

┌ ┐ County Boundaries

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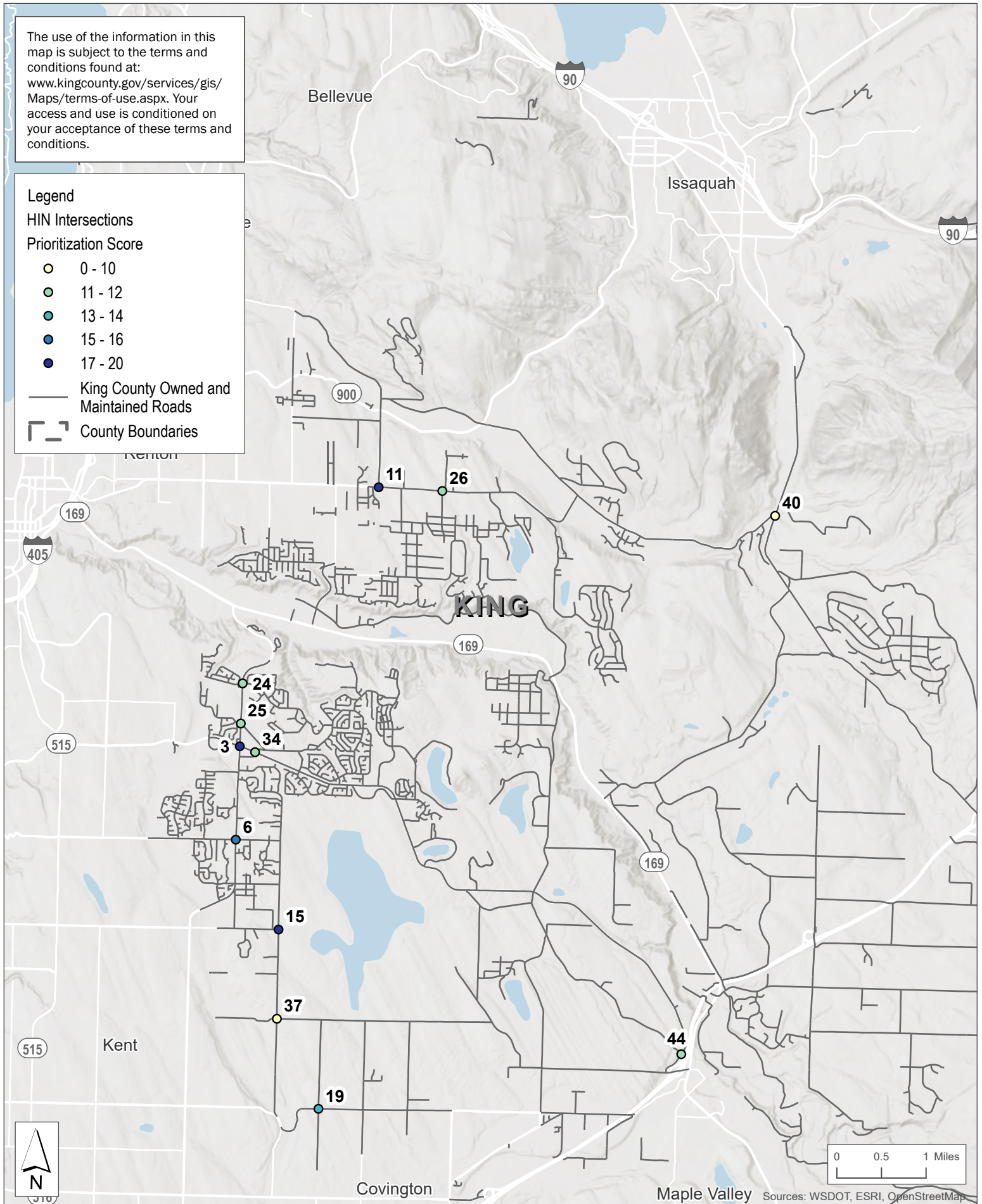
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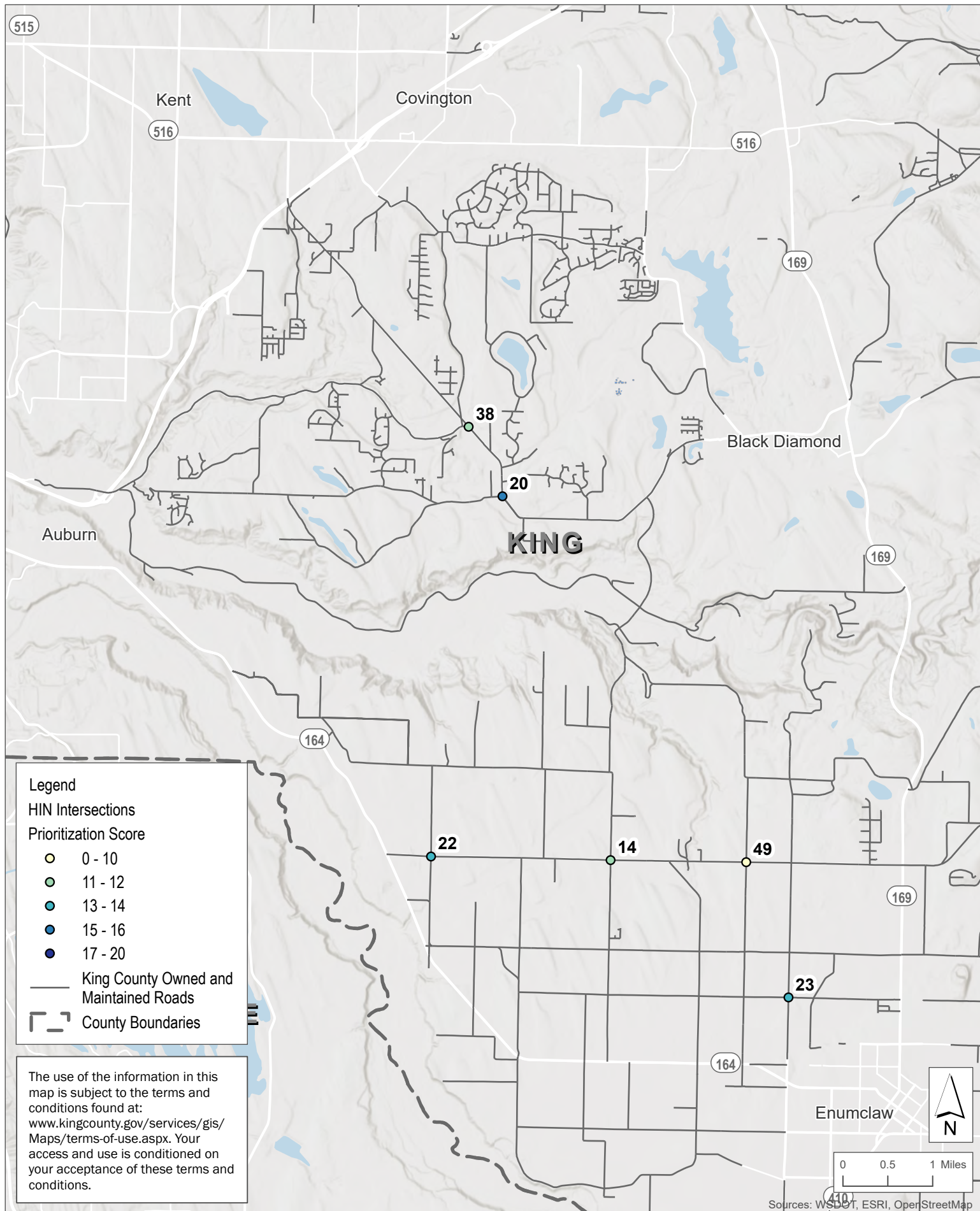
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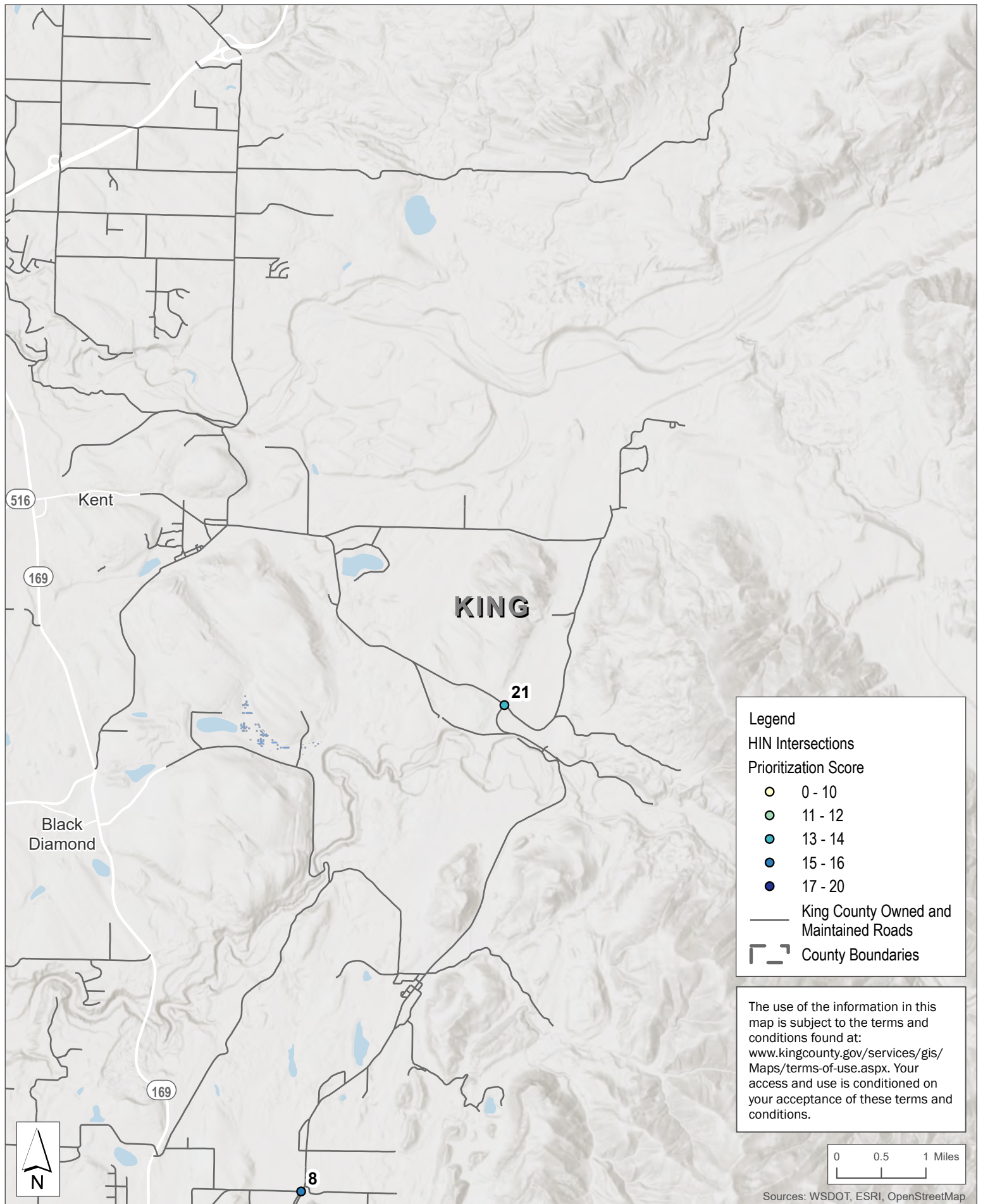
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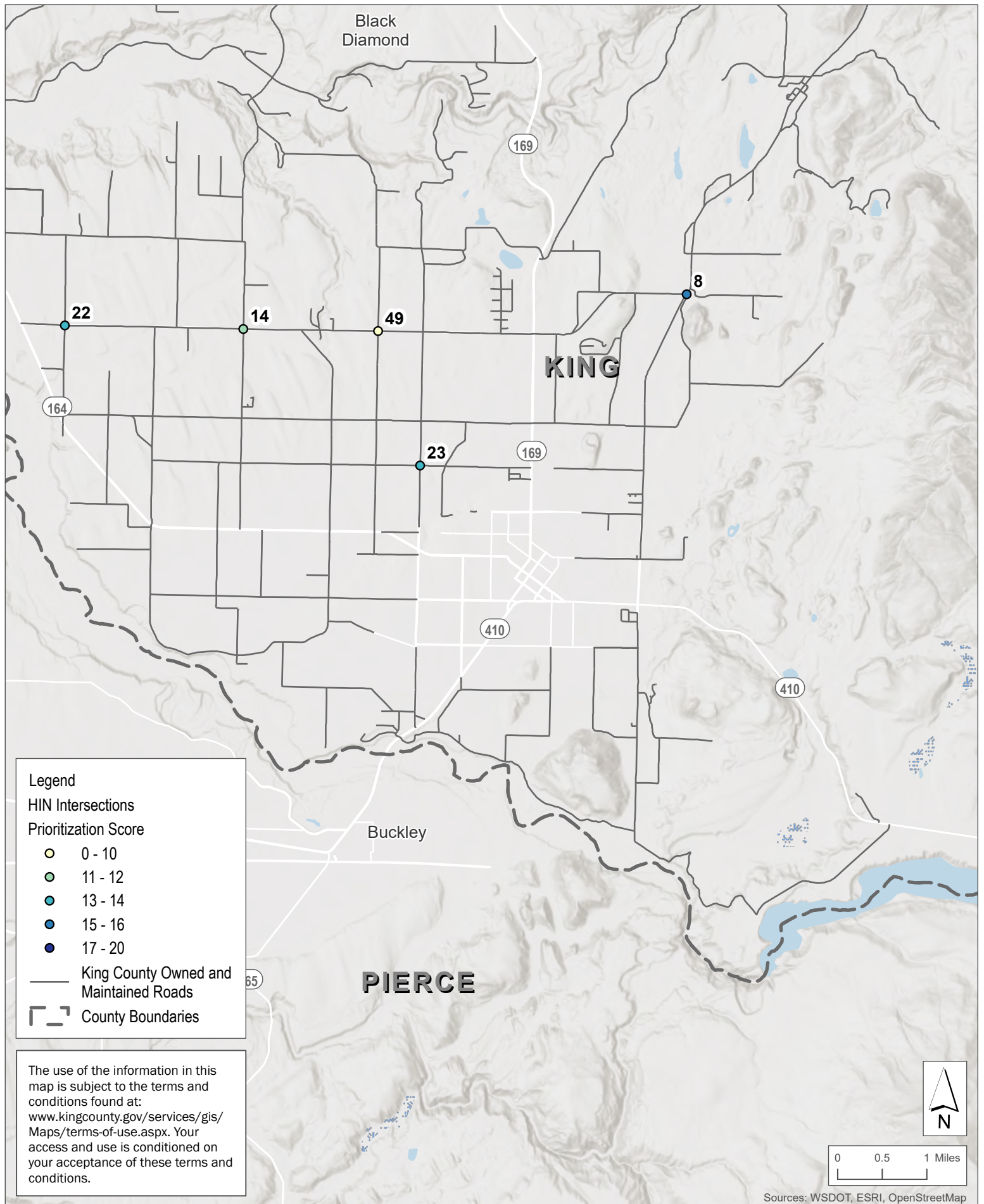
— King County Owned and Maintained Roads

▬ County Boundaries









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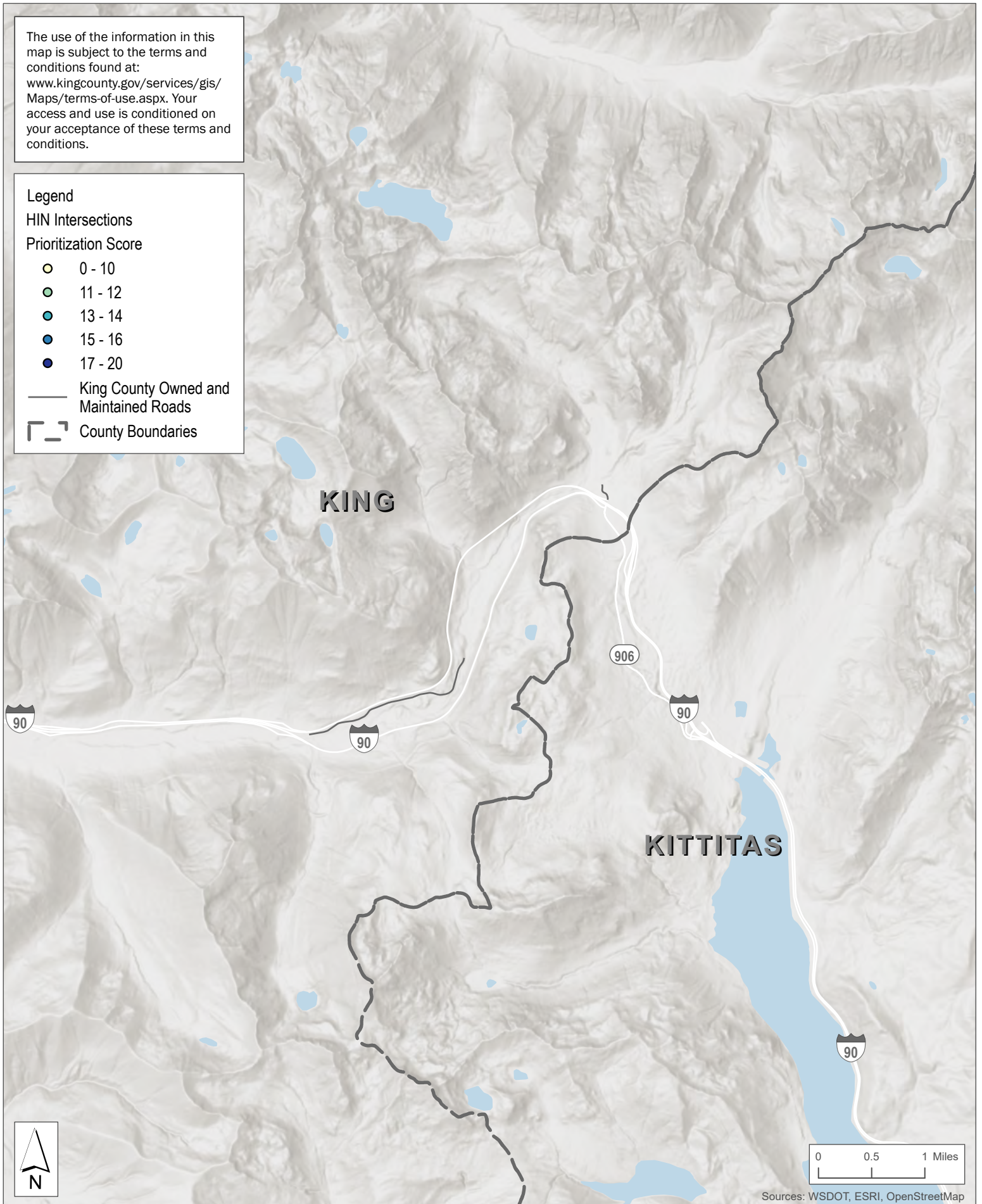
HIN Intersections

Prioritization Score

- 0 - 10
- 11 - 12
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- 15 - 16
- 17 - 20

— King County Owned and Maintained Roads

▬ County Boundaries



Sources: WSDOT, ESRI, OpenStreetMap

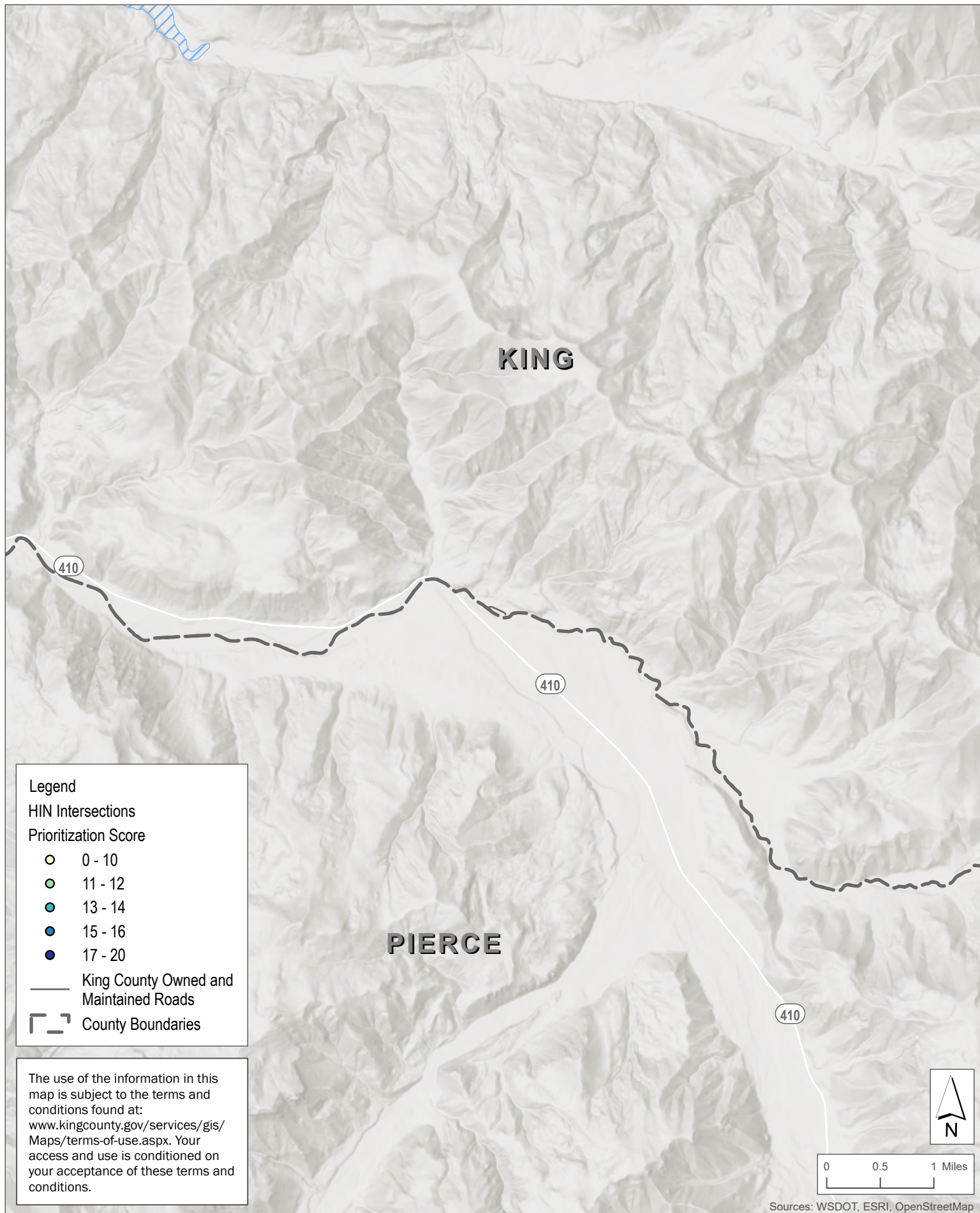
Parametrix



King County

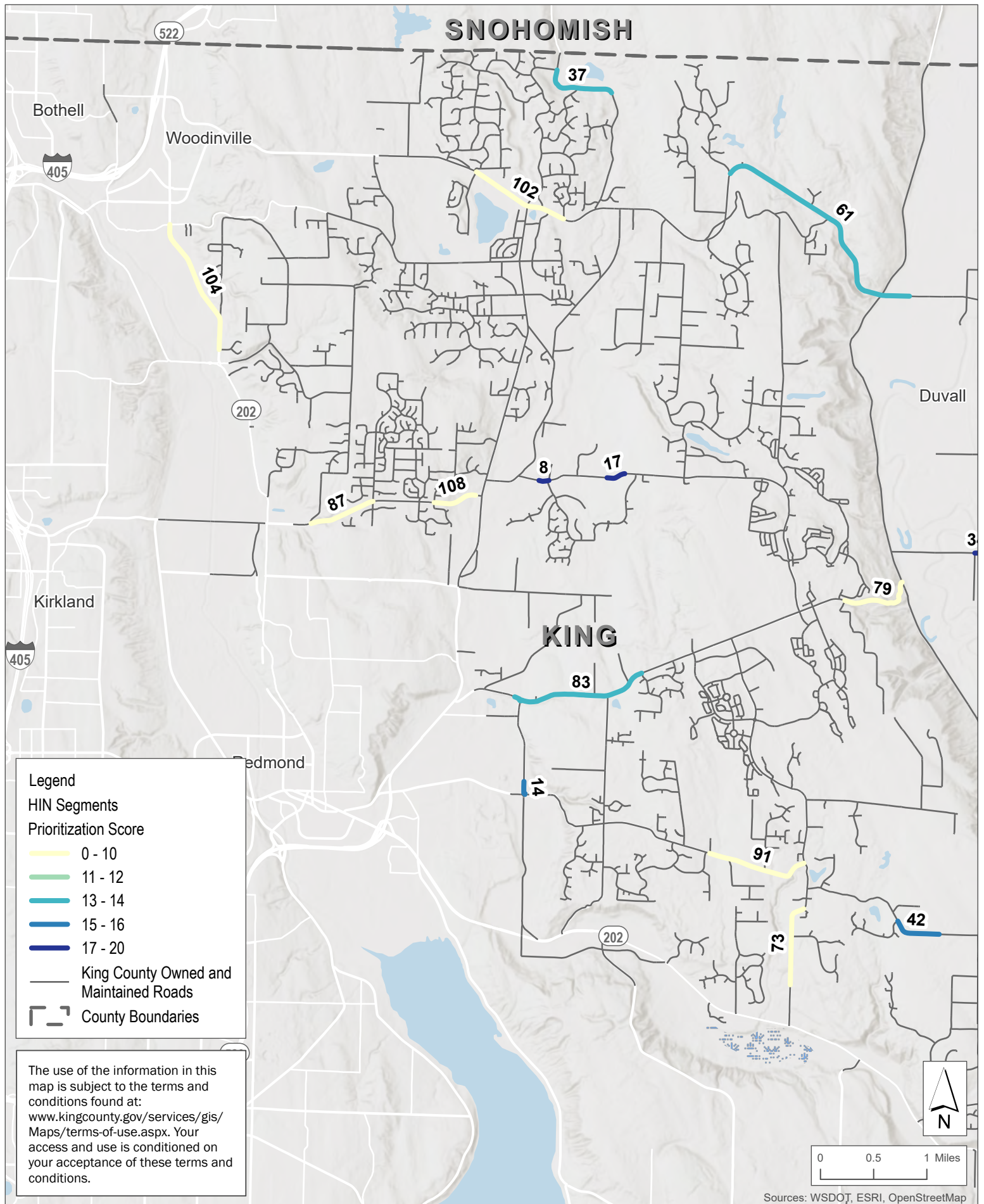
Department of Local Services
Road Services Division

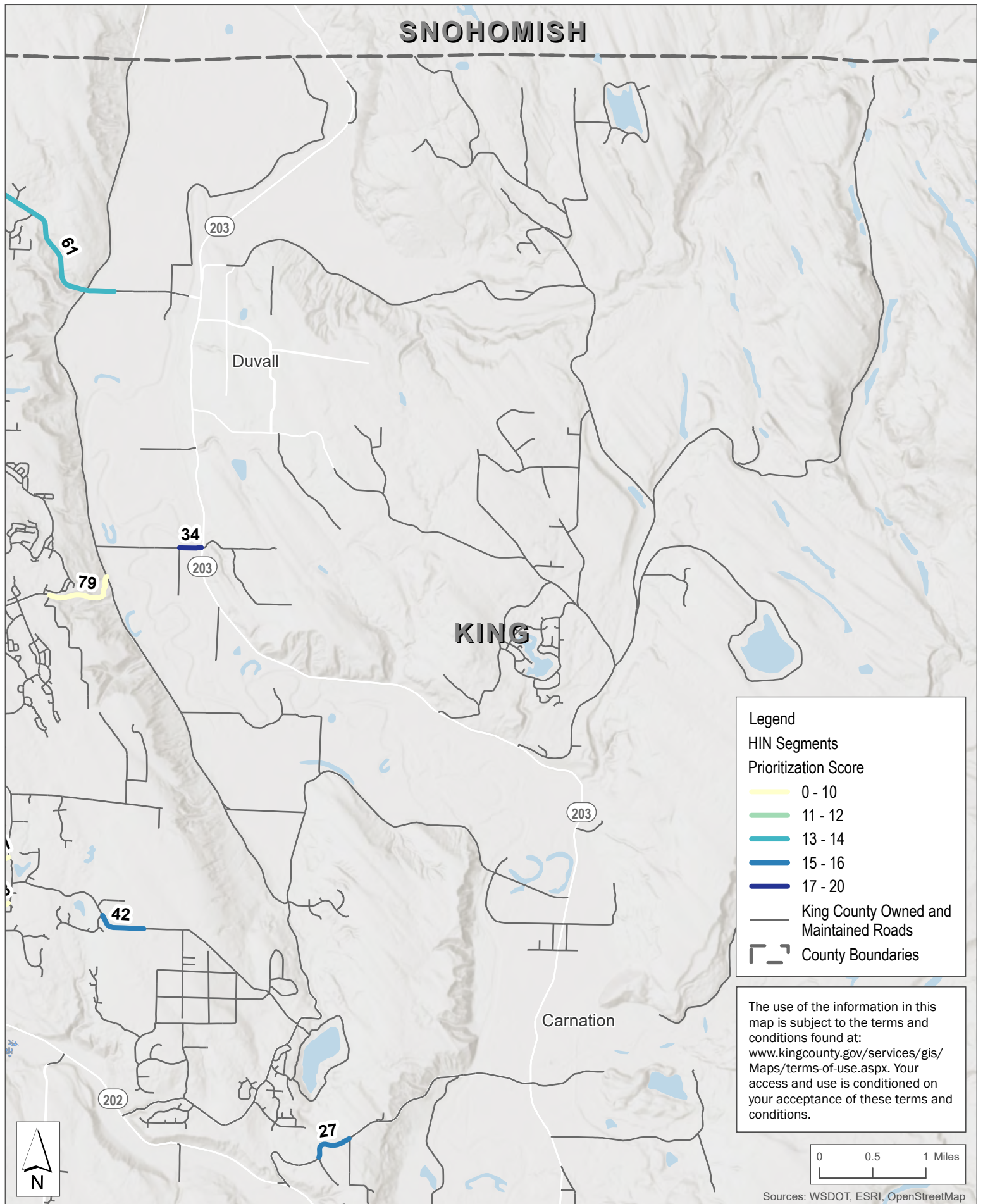
**Prioritized Intersections
O - E King County**

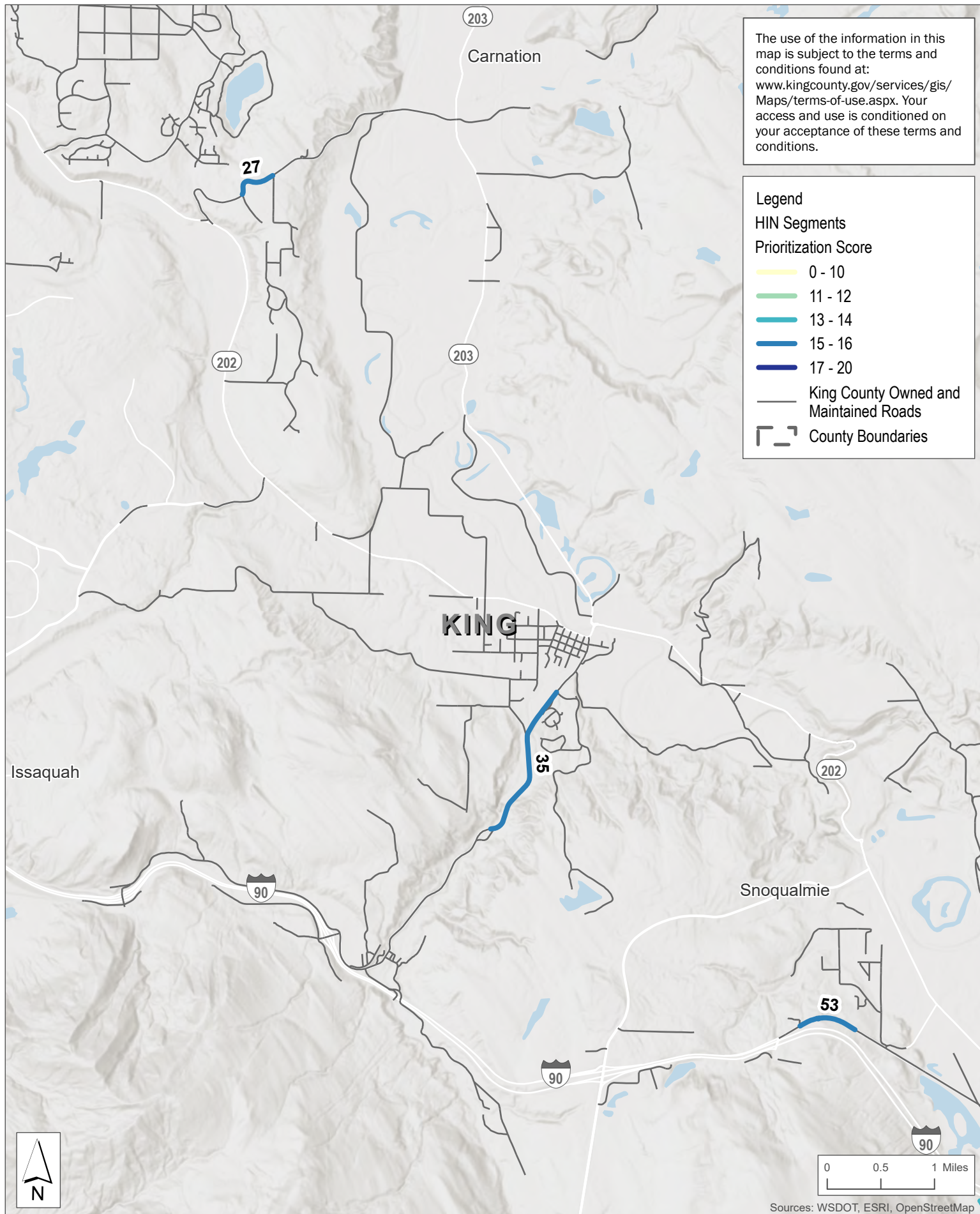


10. Prioritized Segments









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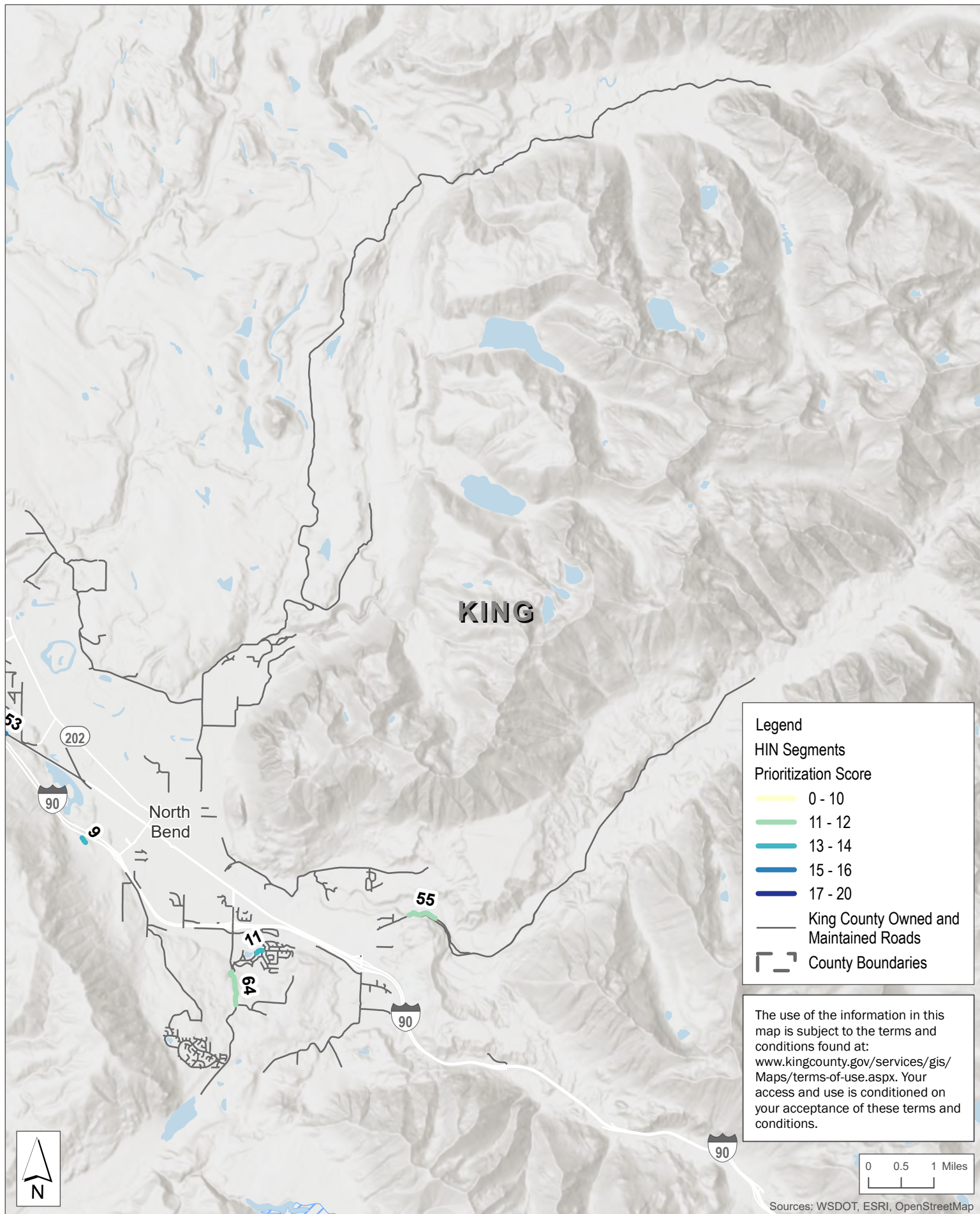
HIN Segments

Prioritization Score

- 0 - 10
- 11 - 12
- 13 - 14
- 15 - 16
- 17 - 20

— King County Owned and Maintained Roads

— County Boundaries



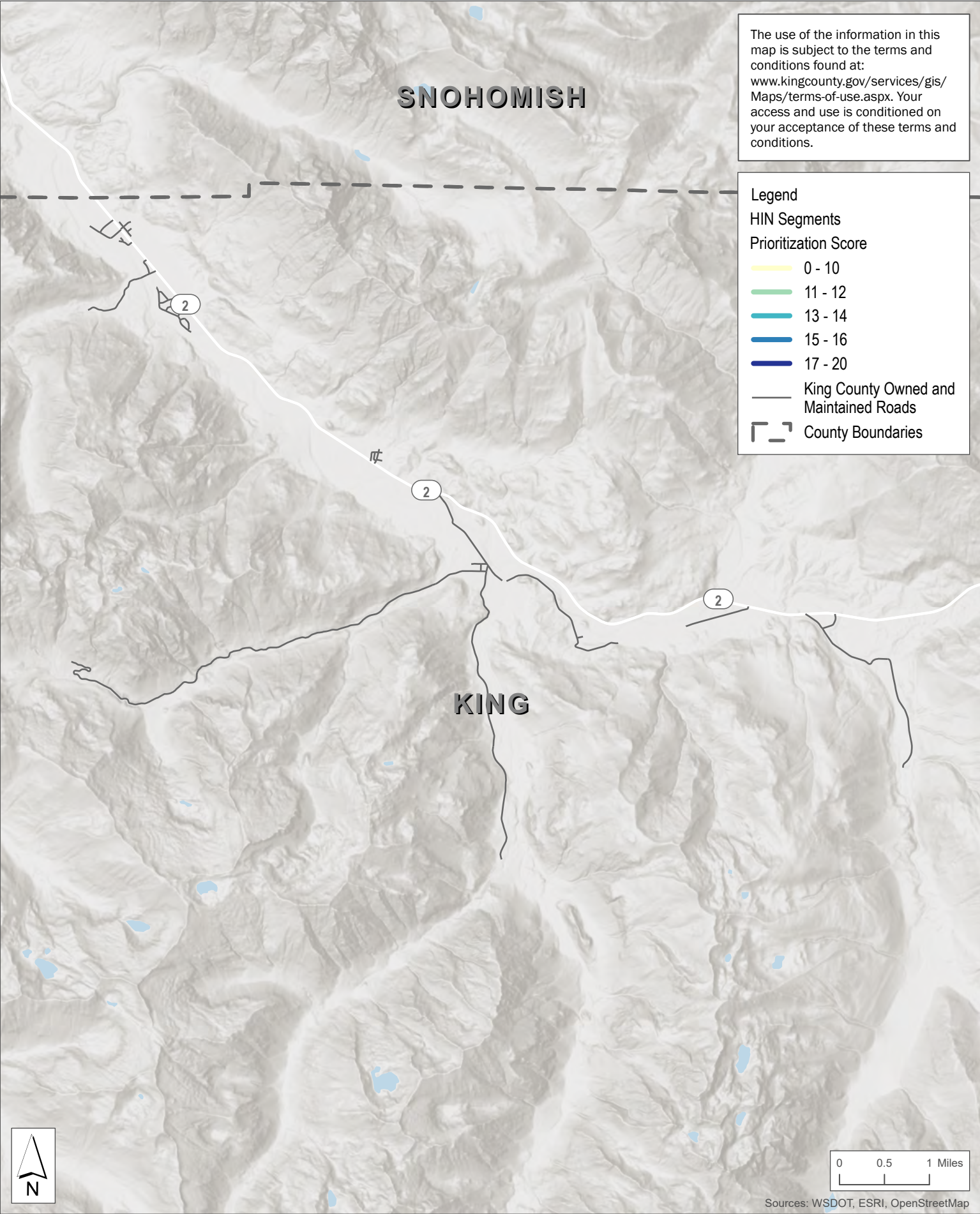
Parametrix



King County

Department of Local Services
Road Services Division

Prioritized Segments E - Alpine Lake Wilderness



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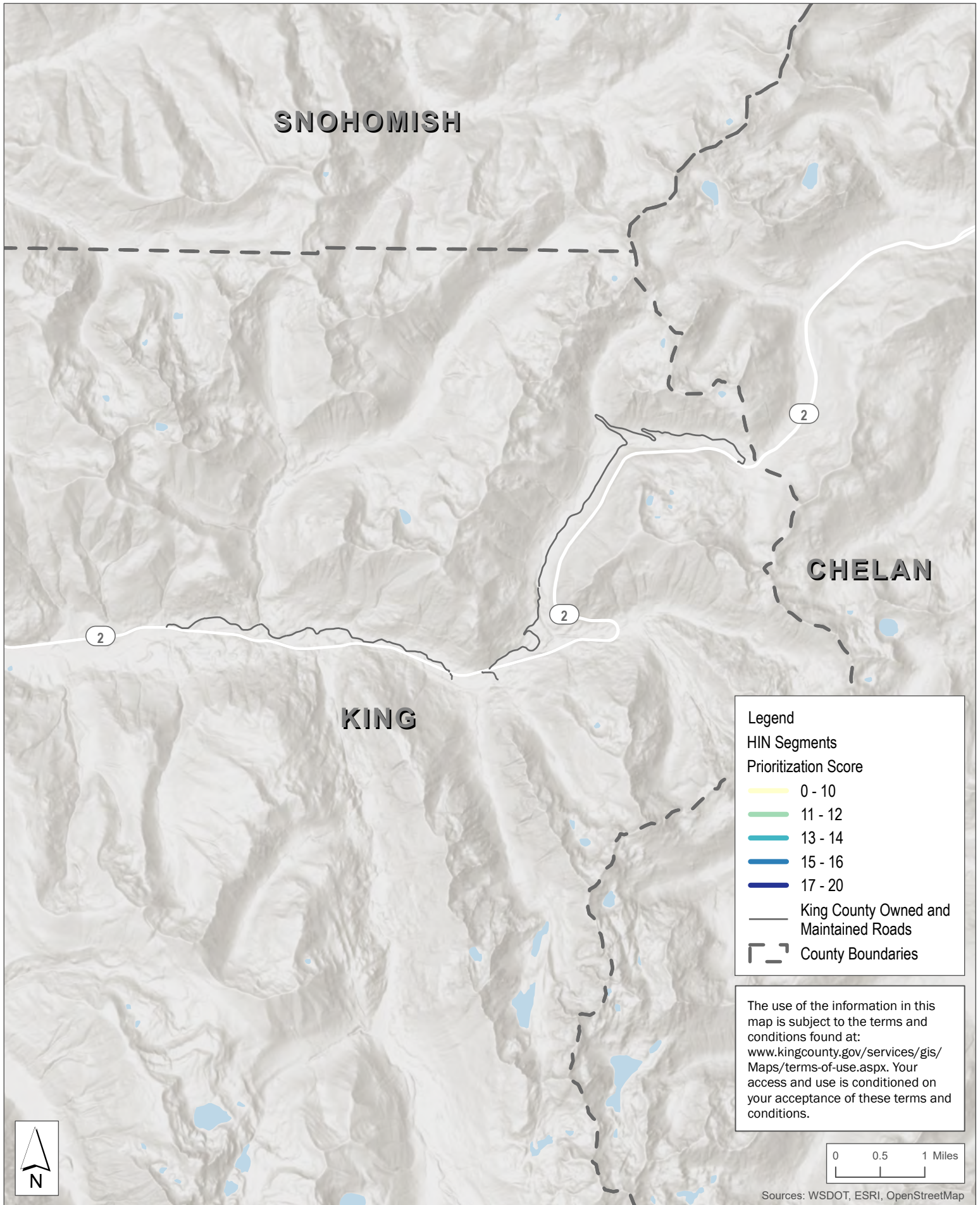
HIN Segments

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- 13 - 14
- 15 - 16
- 17 - 20

King County Owned and Maintained Roads

County Boundaries



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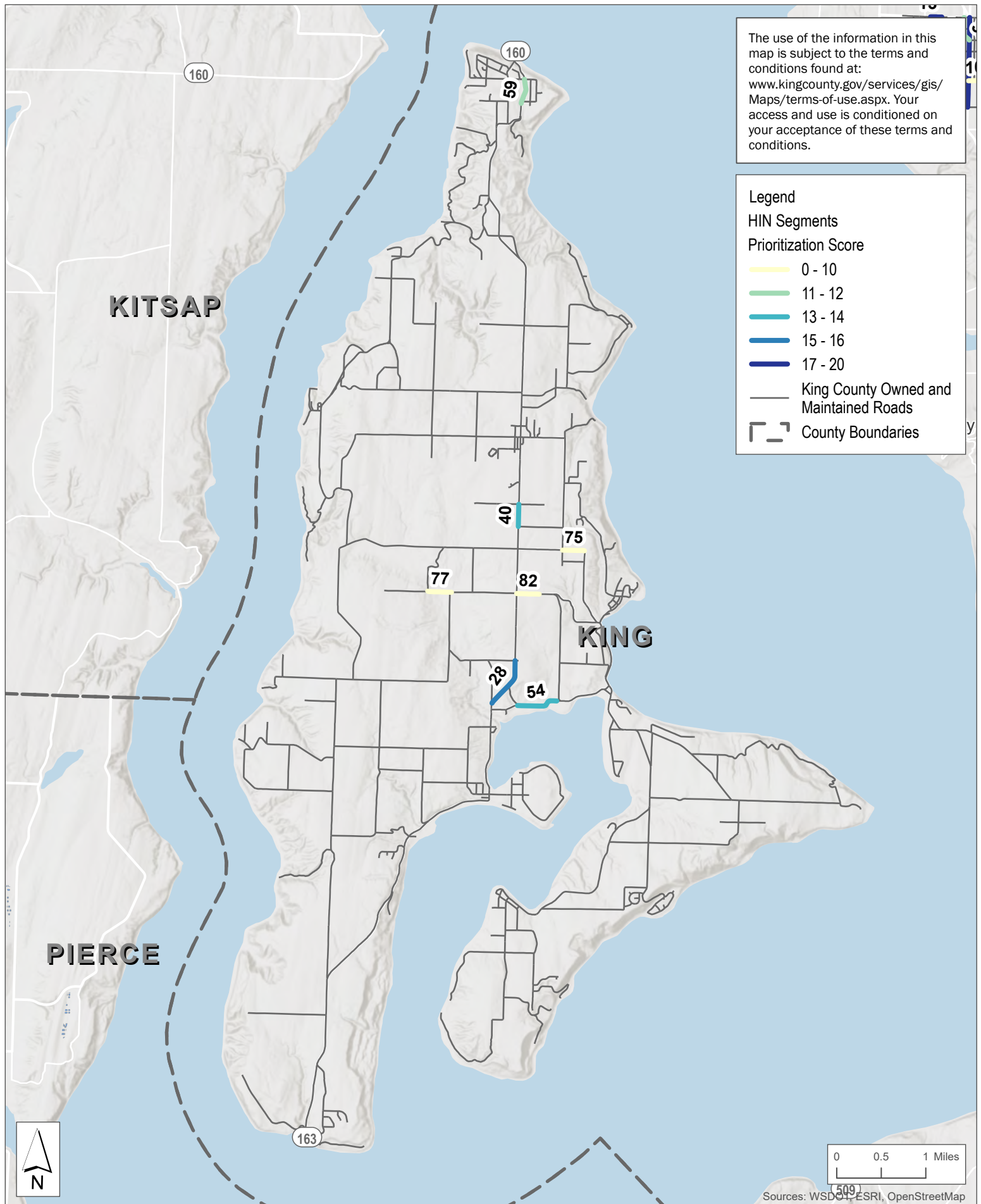
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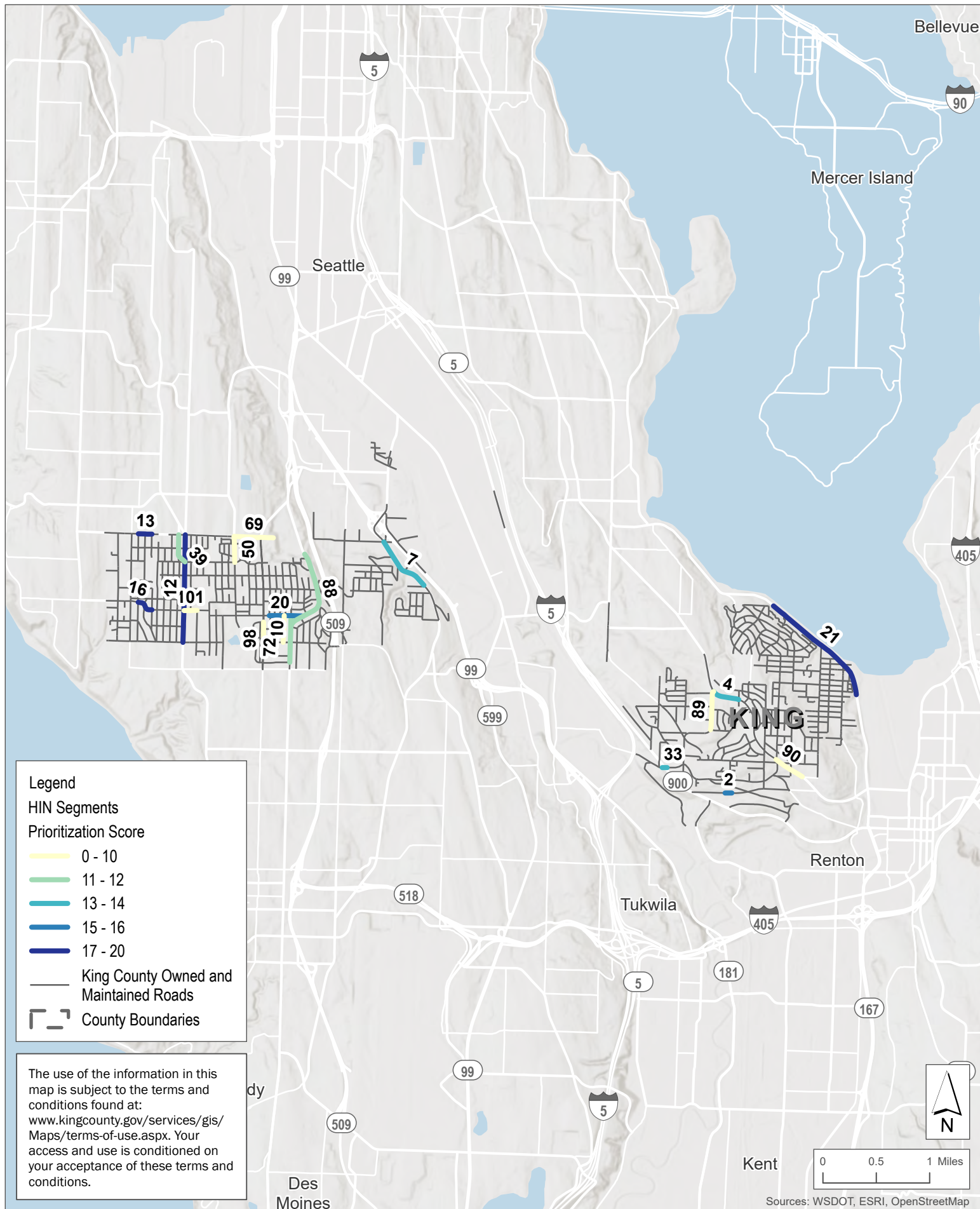
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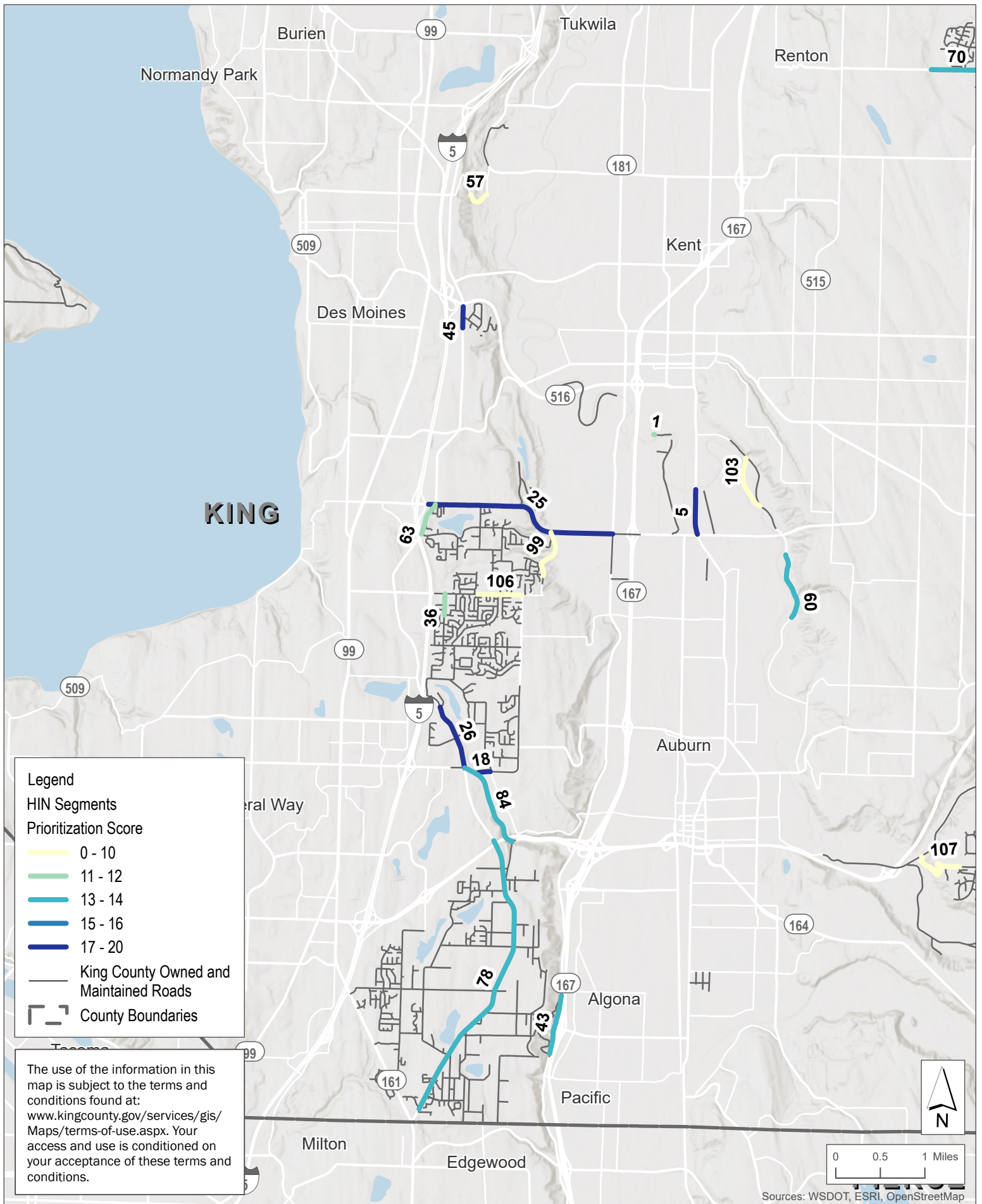
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- 17 - 20

— King County Owned and Maintained Roads

— County Boundaries







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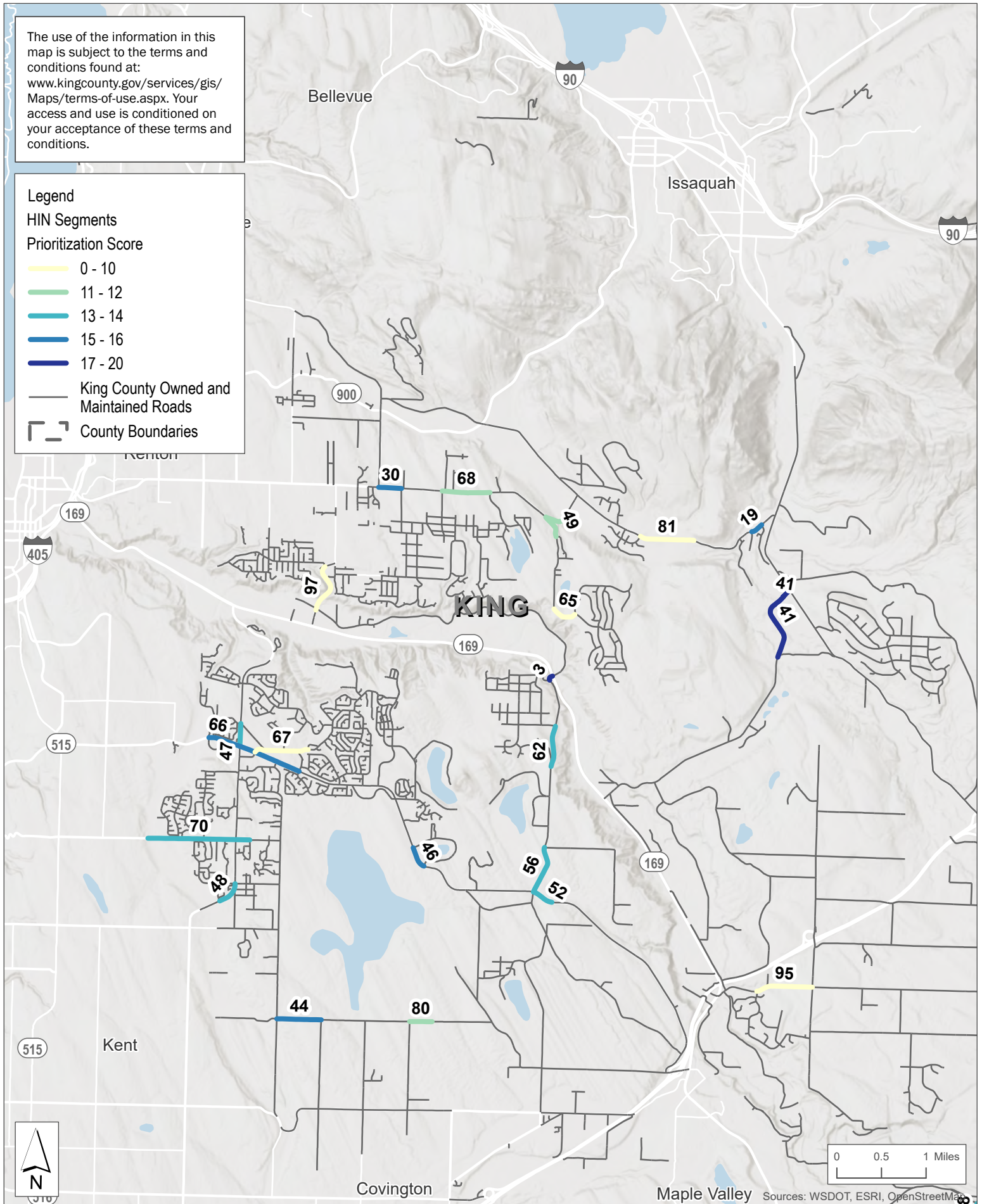
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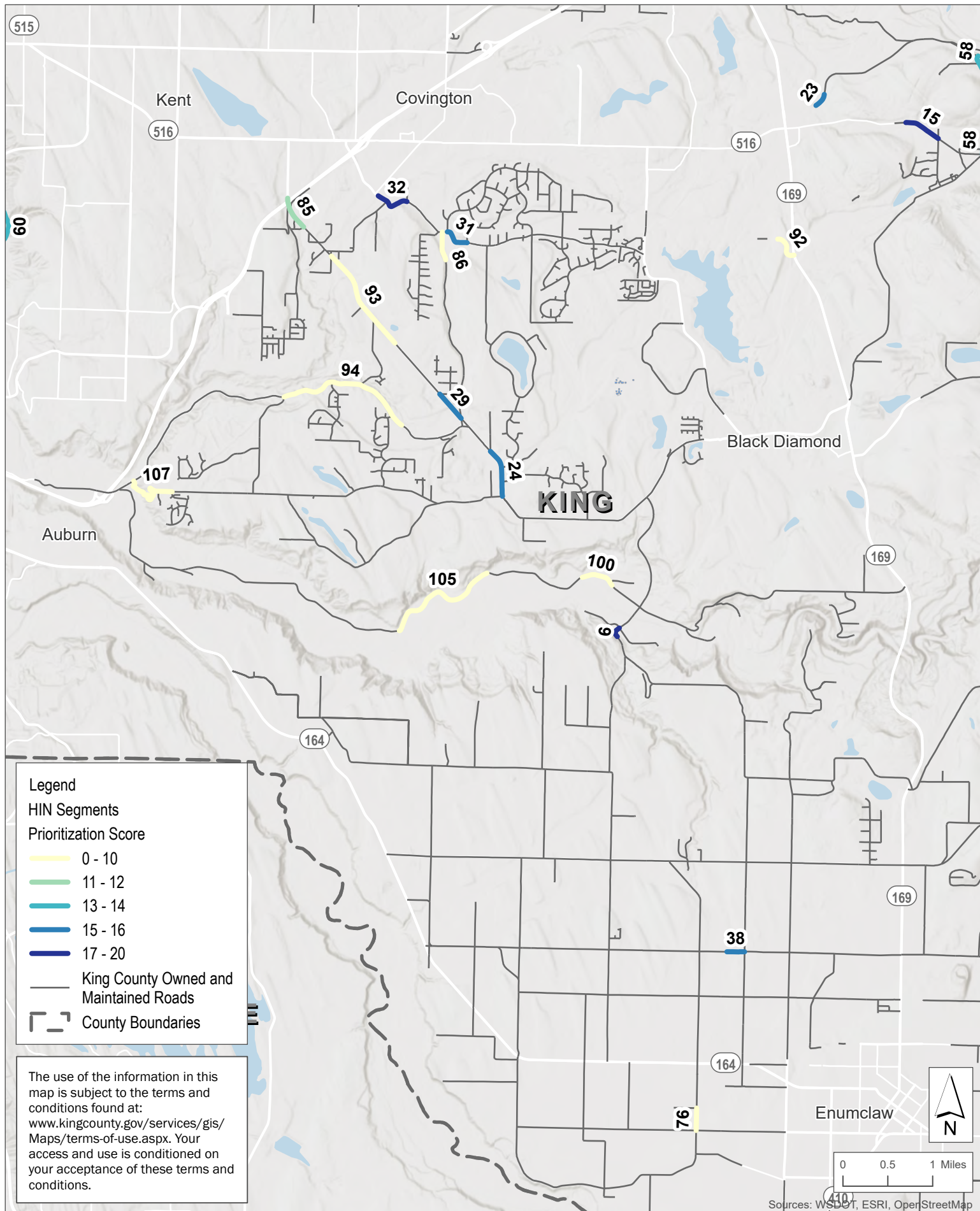
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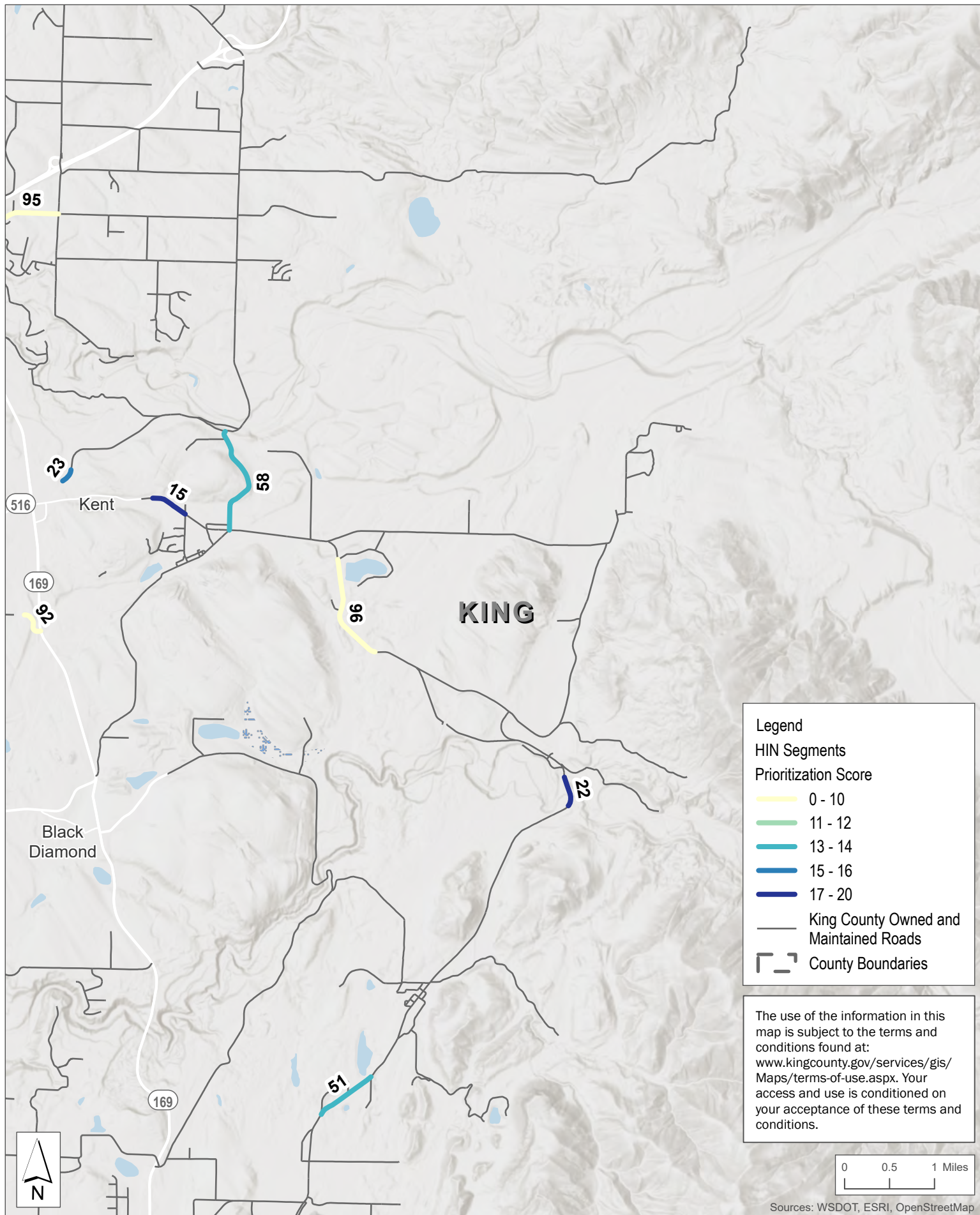
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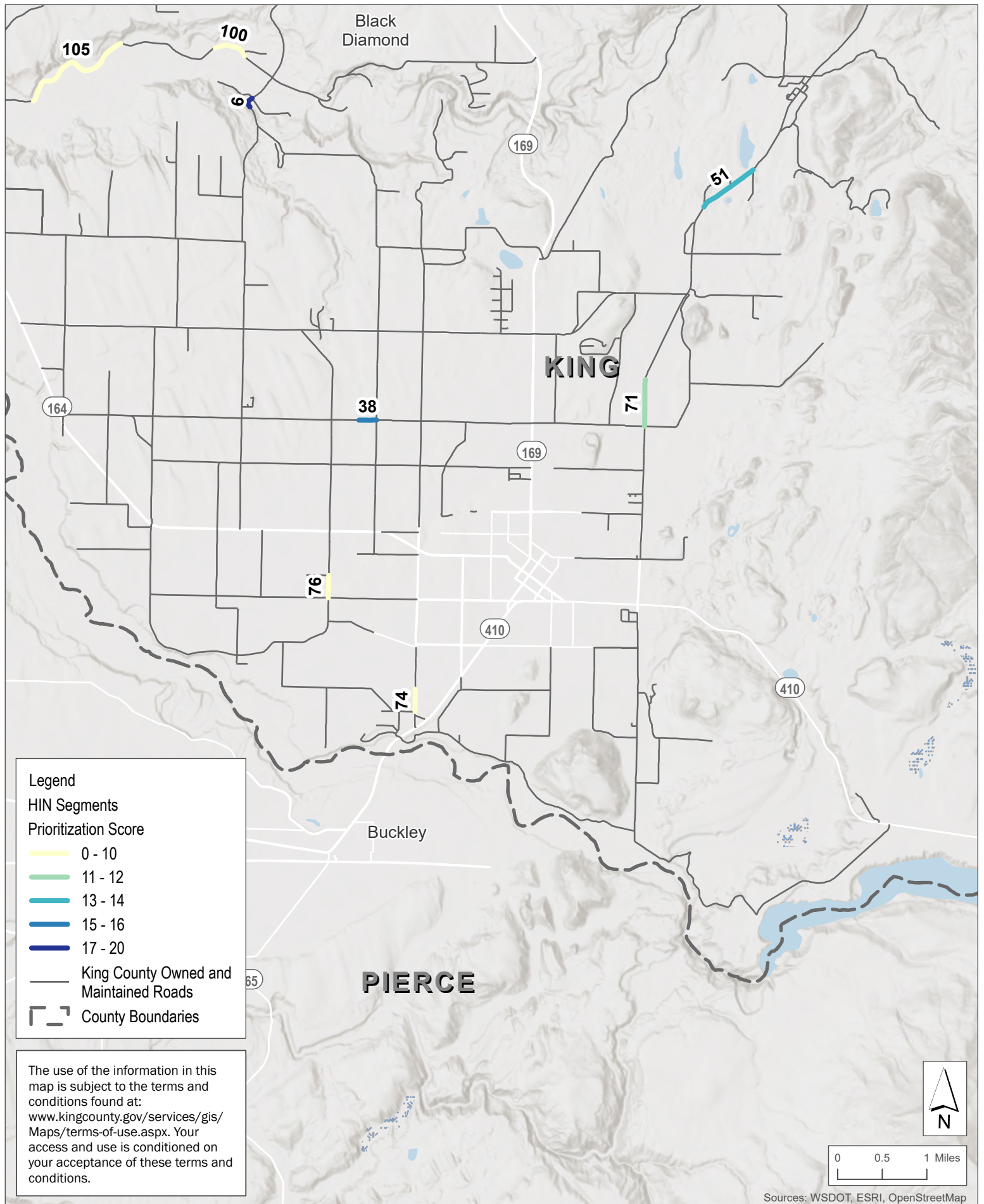
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- King County Owned and Maintained Roads
- County Boundaries









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Legend

HIN Segments

Prioritization Score

0 - 10

11 - 12

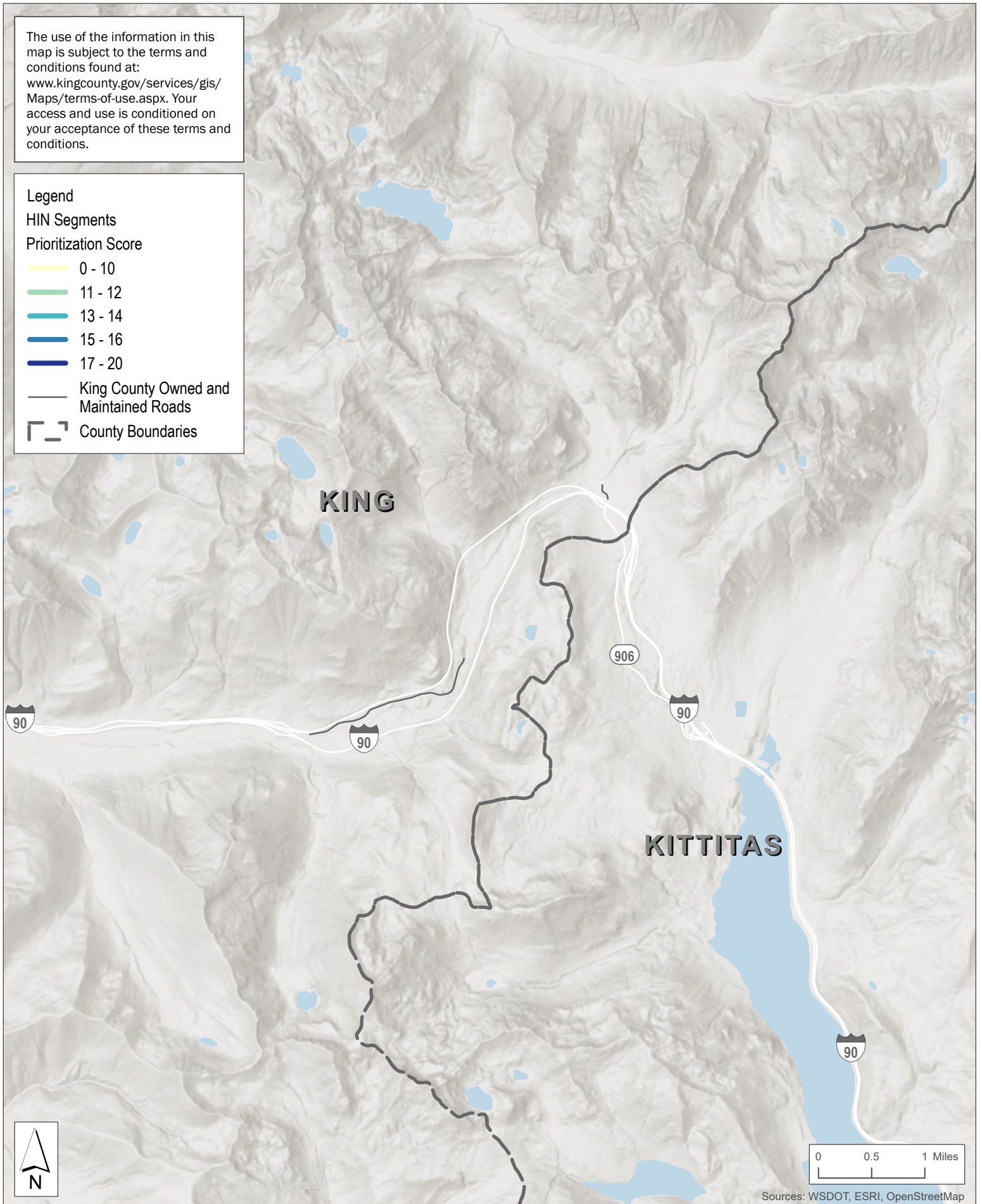
13 - 14

15 - 16

17 - 20

King County Owned and Maintained Roads

County Boundaries



Sources: WSDOT, ESRI, OpenStreetMap

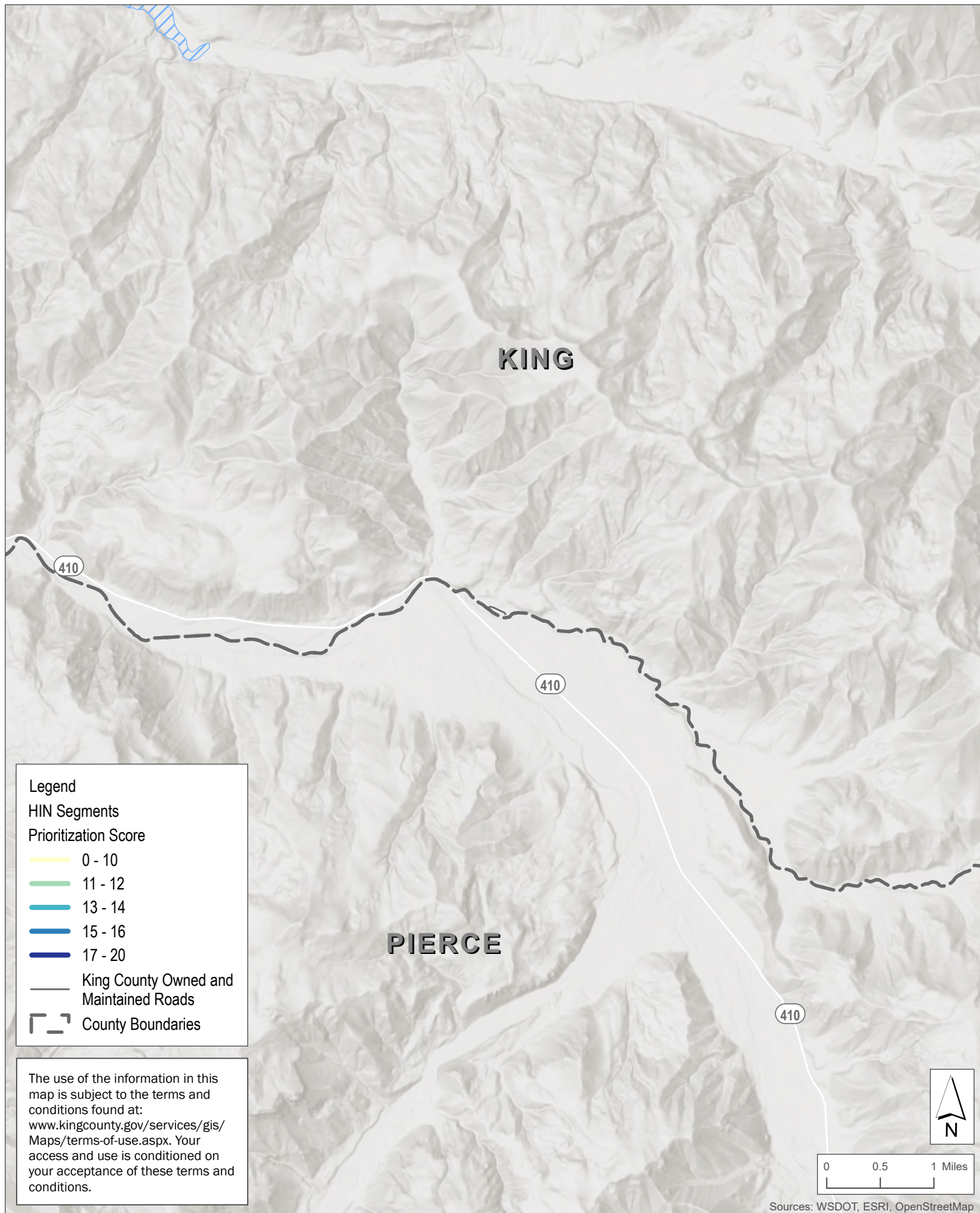
Parametrix



King County

Department of Local Services
Road Services Division

**Prioritized Segments
O - E King County**



Appendix C

Prioritization Approach Memorandum



DATE: September 22, 2025

TO: John Vander Sluis, King County Roads Services Division

FROM: Kate Bradbury and Mitch Hadfield, Parametrix

SUBJECT: Draft Prioritization Approach Memorandum

PROJECT NAME: King County Traffic Safety Action Plan

Prioritization Approach

Introduction

This document outlines the approach and methodology that will be used to identify and prioritize locations for potential project implementation. The prioritization process will include three primary steps. The first step will prioritize high-injury network (HIN) locations (intersections and roadway segments) based on the collision analysis results and identify locations for further review. The second step will identify potential countermeasures for the highest scoring locations to address any identified trends. Finally, more detailed project information will be developed for each potential countermeasure, including planning-level cost estimates and implementation timelines.

HIN Location Prioritization

The rubric used to prioritize HIN locations for further investigation will aim to incorporate all collision analysis components including equivalent property damage only (EPDO) analysis, systemic analysis, overrepresented emphasis area analysis, and equity considerations. The initial location prioritization rubric is shown in Table 1. Scoring will only be applied to locations on the HIN.

Each HIN location will be given a score based on the following categories:

- HIN EPDO percentile as follows:
 - HIN intersections will receive points based on the EPDO score percentile; HIN roadway segments will receive points based on the EPDO per mile score percentile. For roadway segments, EPDO percentiles will be based on the smoothed HIN roadway segment EPDO per mile scores. EPDO percentiles reflect a location's score relative to other HIN locations.
 - The maximum possible score is 10 (50% of the total possible prioritization score).
- Systemic analysis as follows:
 - HIN locations receive points based on the systemic analysis category.
 - The maximum possible score is 6 (30% of the total possible prioritization score).

- Emphasis area analysis as follows:
 - HIN locations receive 3 points if at least one fatal or serious injury crash falls into one of the identified overrepresented emphasis areas (i.e., speeding, distracted driving, lane departure, intersections, or motorcyclists). If not, the location receives 0 points.
 - This category accounts for 15% of the total possible prioritization score.
- Demographics as follows:
 - The King County Consolidated Demographics Index data—specifically, the weighted total attribute layer—will be used to assign equity information to each HIN location. The King County Consolidated Demographic Index combines American Community Survey census tract data for English proficiency, race/ethnicity, and household income. Demographic categories are scored relative to the rest of the county and then combined into an equally weighted score. Residents of tracts with higher scores tend to be less wealthy, more racially diverse, and less likely to be proficient in English.¹
 - HIN locations with a weighted total > 3 receive 1 point. HIN locations with a weighted total ≤ 3 receive 0 points.
 - This category accounts for 5% of the total possible prioritization score.

¹ For more information, see https://www5.kingcounty.gov/sdc/?Layer=demographic_index.

Table 1. HIN Location Prioritization Rubric

Category	Tiers	Points	Maximum Points	Percentage of Score
HIN EPDO percentile	< 10th percentile	1	10	50%
	10th percentile to 20th percentile	2		
	20th percentile to 30th percentile	3		
	30th percentile to 40th percentile	4		
	40th percentile to 50th percentile	5		
	50th percentile to 60th percentile	6		
	60th percentile to 70th percentile	7		
	70th percentile to 80th percentile	8		
	80th percentile to 90th percentile	9		
	> 90th percentile	10		
Systemic analysis category	Low	1	6	30%
	Medium-low	2		
	Medium	3		
	Medium-high	4		
	High	6		
Emphasis areas	No overrepresented emphasis area crashes	0	3	15%
	Overrepresented emphasis area crashes	3		
Consolidated Demographic Index category	Weighted total score ≤ 3	0	1	5%
	Weighted total score > 3	1		
Total Possible Score			20	

After applying this scoring to all HIN locations, locations will be ranked by the total score. Because the analysis spans 2014–2023, some HIN locations may already have had treatments implemented or have improvements planned in the near future, which could address the collision trends. To account for this, King County staff will review the ranked HIN locations and provide information on projects previously completed and/or planned projects at those locations. Parametrix will review this information to identify locations that have relevant past or planned projects and omit them from further analysis as needed. Locations with planned projects will be included in the final prioritized project list.

In coordination with King County, adjacent high-scoring HIN locations may be combined, where applicable.

Potential Countermeasure Identification

Crash trends and existing geometric conditions will be analyzed at 25 locations. The number of locations to be analyzed is based on the funding available for this study and King County's anticipated capacity to implement projects considering the county road funding crisis. A variety of countermeasures that may have the potential to address the crash trends at each of the 25 locations will be identified. To define the preferred potential project for each of the 25 locations, King County will review this list of potential countermeasures and identify those

measures that are preferred treatments and potentially feasible for King County to implement. Potential countermeasures identified through this process are planning level and based on the data available at the time of analysis. Future analysis would be necessary at the time of implementation to confirm the appropriateness and feasibility of each countermeasure.

Project Details

Project details will be developed for each project including planning-level cost estimates, safety benefits, implementation timelines, and the Safe Systems Approach² objectives addressed. Information about existing planned projects will be incorporated with the list.

Washington State Department of Transportation unit bid information and other recent, relevant projects will be used to identify unit cost estimates. Table 2 summarizes the cost assumptions applied to the unit costs. All costs will be reviewed and approved by King County.

Table 2. Cost Estimate Assumptions

Category	Percentage of Construction Cost
Design	40%
Construction management	25%
Mobilization	10%
Temporary erosion/sediment control and traffic control	10%
Right-of-way	10% (rural areas), 20% (urban areas)
Contingency	30%

Prioritized Project List

The prioritized project list will include all of the top HIN locations with identified projects. The order of these projects will be based on the HIN location scores (see Table 1). Further considerations of project costs, timelines, and benefits may also be incorporated.

² For more information, see <https://www.transportation.gov/safe-system-approach>.

Appendix D

Prioritized HIN Locations

Prioritized HIN Intersections

HIN INT ID	INT NAME	URBAN / RURAL	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes	Possible Injury Crashes	Property Damage Only Crashes	EPDO	HIN Percentile Score	Systemic Analysis Score	Emphasis Area Score	Equity Score	Prioritization Score
2	16th Avenue SW & SW 107th Street	Urban	0	3	4	14	40	899	10	6	3	1	20
4	Peasley Canyon Road S & S 321st Street	Urban	0	2	10	21	54	849	10	6	3	1	20
3	SE Petrovitsky Road & 140th Avenue SE	Urban	1	1	8	27	78	895	10	6	3	0	19
1	S 360th Street & Military Road S	Urban	1	2	3	18	23	902	10	4	3	1	18
11	SE 128th Street & 164th Avenue SE	Urban	0	2	6	11	31	672	8	6	3	1	18
5	16th Avenue SW & SW 106th Street	Urban	0	3	4	7	18	814	10	3	3	1	17
7	SW Roxbury Street & 14th Avenue SW	Urban	0	3	2	4	15	752	9	4	3	1	17
15	148th Avenue SE & SE 208th Street	Rural	0	2	2	5	13	536	8	6	3	0	17
17	S 272nd Street & Lake Fenwick Road S	Urban	0	2	2	5	8	531	7	6	3	1	17
6	SE 192nd Street & 140th Avenue SE	Urban	0	2	10	14	40	772	9	4	3	0	16
9	NE Novelty Hill Road & Trilogy Parkway NE	Urban	1	1	8	11	35	708	9	4	3	0	16
10	SW Roxbury Street & 8th Avenue SW	Urban	0	2	5	14	51	703	9	3	3	1	16
13	Renton Avenue S & S 128th Street	Urban	1	1	3	5	7	546	8	4	3	1	16
20	192nd Avenue SE & SE Lake Holm Road	Rural	0	2	3	2	2	514	7	6	3	0	16
8	Veazie-Cumberland Road SE & SE 392nd Street	Rural	0	3	0	4	8	713	9	3	3	0	15
12	16th Avenue SW & SW 104th Street	Urban	2	0	4	4	11	557	8	3	3	1	15
29	SW Roxbury Street & 17th Avenue SW	Urban	0	1	6	12	17	444	5	6	3	1	15
18	26th Avenue SW & SW 106th Street	Urban	0	2	3	1	14	517	7	3	3	1	14
16	SW 104th Street & 15th Avenue SW	Urban	0	2	2	6	3	535	7	2	3	1	13
19	156th Avenue SE & SE 240th Street	Rural	0	2	2	3	10	515	7	2	3	1	13
21	Retreat Kanasket Road SE & Cumberland Kanasket Road SE	Rural	0	2	1	3	6	495	6	4	3	0	13
22	SE 400th Street & 180th Avenue SE	Rural	0	2	1	3	2	491	6	4	3	0	13
23	244th Avenue SE & SE 424th Street	Rural	1	1	1	2	3	483	6	4	3	0	13
14	SE 400th Street & 212th Avenue SE	Rural	0	1	11	14	15	540	8	4	0	0	12
24	SE Fairwood Boulevard & 140th Ave SE	Urban	0	1	10	9	16	480	6	2	3	1	12
25	140th Avenue SE & SE 171st Place	Urban	1	0	7	12	28	471	6	3	3	0	12
26	SE 128th Street & 175th Avenue SE	Rural	1	1	0	1	7	462	5	4	3	0	12
27	S 272nd Street & Military Road S	Urban	0	0	11	22	81	455	5	6	0	1	12
30	S 320th Street & Military Road S	Urban	0	0	13	19	49	428	5	6	0	1	12
33	16th Avenue SW & SW 112th Street	Urban	0	1	7	5	7	387	4	4	3	1	12
35	S 340th Street & Peasley Canyon Way S	Urban	1	0	4	8	17	376	4	4	3	1	12
38	Kent Black Diamond Road & Auburn Black Diamond Road	Rural	0	1	5	5	7	355	3	6	3	0	12
28	NE Woodinville Duvall Road & West Snoqualmie Valley Road NE	Rural	0	1	5	14	25	454	5	6	0	0	11
32	NE 124th Street & 162nd Place NE	Urban	0	1	7	9	7	423	4	4	3	0	11
34	SE Petrovitsky Road & 143rd Avenue SE	Urban	0	1	4	8	21	380	4	4	3	0	11
44	SE Petrovitsky Road & Sweeny Road SE	Urban	0	1	3	6	7	332	2	6	3	0	11
31	S 272nd Way & 55th Avenue S	Urban	0	1	3	11	55	425	4	2	3	1	10
37	SE 224th Street & 148th Avenue SE	Rural	0	1	3	7	32	366	3	4	3	0	10
39	Military Road S & S 352nd Street	Urban	0	1	4	6	9	350	3	3	3	1	10
40	SE May Valley Road & Issaquah Hobart Road SE	Rural	0	1	1	10	18	347	3	4	3	0	10
46	NE Novelty Hill Road & Redmond Ridge Drive NE	Urban	0	1	2	5	13	313	1	6	3	0	10
36	Avondale Road NE & NE 132nd St	Rural	1	0	3	8	27	370	3	6	0	0	9
41	Rainier Avenue S & S 115th Place	Urban	0	1	4	4	15	338	2	3	3	1	9
45	328th Way SE & Preston Fall City Road SW	Rural	0	1	2	6	8	317	2	4	3	0	9
47	SW Roxbury Street & 26th Avenue SW	Urban	0	1	1	6	13	306	1	4	3	1	9
48	Orillia Road S & 39th Way S	Urban	0	1	1	7	4	306	1	4	3	1	9
43	Renton Avenue S & 76th Avenue S	Urban	0	1	2	7	18	336	2	2	3	1	8
42	S 288th Street & 34th Avenue S	Urban	0	0	11	15	27	338	2	4	0	1	7
49	SE 400th Street & 236th Avenue SE	Rural	0	1	4	1	5	301	1	4	0	0	5

Prioritized HIN Segments

SEG HIN ID	SEG NAME	Length Mile	URBAN / RURAL	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes	Possible Injury Crashes	Property Damage Only Crashes	EPDO SUM	EPDO Per Mile	HIN Percentile Score	Systemic Analysis Score	Emphasis Area Score	Equity Score	Prioritization Score
5	83rd Avenue S from S 277th Street to Kent City Limits	0.50	Rural	5	1	2	5	14	1429	2,830	10	6	3	1	20
25	S 272nd / S 277th Street from I-5 junction to 68th Avenue S	2.22	Urban	2	7	22	50	160	2969	1,339	9	6	3	1	19
26	Military Road S from S 320th SE to 34th Place S	0.75	Urban	0	2	15	28	61	999	1,330	9	6	3	1	19
12	16th Avenue SW from SW 112th Street to SW Roxbury Street	1.01	Urban	1	6	21	17	124	2174	2,156	10	4	3	1	18
13	SW Roxbury Street from 22nd Avenue SW to 25th Avenue SW	0.13	Urban	0	1	2	2	0	273	2,145	10	4	3	1	18
16	SW 107th Way from 22nd Avenue SW to 25th Avenue SW	0.16	Urban	0	1	3	1	10	290	1,785	10	4	3	1	18
18	S 321st Street from S Peasley Canyon Road to 46th Place S	0.16	Urban	0	1	1	3	12	278	1,726	10	4	3	1	18
21	Rainier Avenue S from S 106th Street to S 116th Street	1.17	Urban	2	3	11	41	97	1757	1,501	10	4	3	1	18
45	Military Road S north of S 240th Street	0.24	Urban	0	1	0	1	18	250	1,043	8	6	3	1	18
3	196th Avenue SE from SE 162nd Street to SR 169	0.07	Rural	0	1	0	1	4	236	3,589	10	4	3	0	17
6	212th Way SE west of SE 358th Street	0.12	Rural	0	1	4	4	18	341	2,743	10	4	3	0	17
8	NE 133rd Street from 198th Avenue NE to Bear Creek	0.10	Rural	1	0	1	0	1	240	2,502	10	4	3	0	17
15	SE Kent Kangley Road from 268th Avenue SE to 262nd Avenue SE	0.42	Rural	1	2	3	2	12	747	1,797	10	4	3	0	17
17	NE 133rd Street from 206th Avenue NE to 2019th Place NE	0.18	Rural	0	1	4	1	12	308	1,748	10	4	3	0	17
22	Cumberland Kanaskat Road SE north of SE Green River Headworks Road SE	0.34	Rural	2	0	1	2	1	481	1,435	10	4	3	0	17
32	Covington Way SE from 173rd Place SE to SE Wax Road	0.39	Rural	0	1	9	7	53	483	1,251	9	4	3	1	17
34	NE 124th Street from 262nd Avenue NE to SR 203	0.21	Rural	0	1	0	2	6	247	1,190	8	6	3	0	17
41	Cedar Grove Road SE from SE 156th Street to Issaquah Hobart Road SE	0.90	Rural	0	4	1	4	15	959	1,068	8	6	3	0	17
19	SE May Valley Road from 231st Place SE to 233rd Way SE	0.14	Rural	0	1	0	0	3	226	1,637	10	3	3	0	16
24	192nd Avenue SE from SE Lake Holm Road to 190th Avenue SE	0.55	Rural	1	2	2	3	16	744	1,364	9	4	3	0	16
29	Kent Black Diamond Road SE from Thomas Road SE to SE 317th Street	0.36	Rural	2	0	0	2	5	469	1,298	9	4	3	0	16
30	SE 128th Street from 164th Avenue SE to Patriot Way SE	0.26	Urban	1	0	2	7	11	329	1,286	9	6	0	1	16
31	SE Covington Sawyer Road from 181st Avenue SE to 184th Place SE	0.29	Rural	1	0	4	7	14	364	1,265	9	4	3	0	16
46	SE Petrovitsky Road from SE 192nd Drive to SE 196th Drive	0.25	Urban	0	1	1	1	11	259	1,042	7	6	3	0	16
53	SE North Bend Way east of 372nd Avenue SE	0.56	Urban	0	2	3	5	20	559	997	7	6	3	0	16
2	S 133rd St at Cambridge Park Villa Apartments	0.06	Urban	0	1	2	0	2	257	4,079	10	4	0	1	15
14	196th Avenue NE north of NE Union Hill Road	0.13	Rural	0	1	0	2	4	245	1,892	10	2	3	0	15
20	SW 108th Street from Myers Way S to 3rd Avenue SW	0.31	Urban	1	1	0	4	16	498	1,587	10	4	0	1	15
23	SE Summit Landsburg Road south of SE 262nd Street	0.16	Rural	0	1	0	0	4	227	1,423	9	3	3	0	15
27	NE Tolt Hill Road from 285th Place NE to 290th Avenue NE	0.40	Rural	1	1	3	3	9	530	1,325	9	3	3	0	15
28	Vashon Highway SW from 103rd Avenue SW to SW 216th Street	0.58	Rural	0	3	4	1	5	747	1,299	9	3	3	0	15
35	Preston Fall City Road SE south of SE 47th Street	1.51	Rural	1	6	8	8	31	1792	1,184	8	4	3	0	15
38	SE 416th Street west of 236th Avenue SE	0.20	Rural	0	1	0	0	2	225	1,142	8	4	3	0	15
42	NE Union Hill Road from NE Patterson Way to 258th Avenue	0.45	Rural	0	2	1	1	5	476	1,061	8	4	3	0	15
44	SE 224 Street from 148th Avenue SE to 156th Avenue SE	0.50	Rural	0	2	2	3	15	520	1,045	8	4	3	0	15
66	SE Petrovitsky Road from 134th Avenue SE to 151st Avenue SE	1.09	Urban	1	2	5	19	84	1004	924	6	6	3	0	15
4	Renton Avenue S from 68th Avenue S to 72nd Avenue S	0.25	Urban	1	2	3	6	18	789	3,097	10	3	0	1	14
7	Des Moines Memorial Drive S from S 96th Steet to S 103rd Street	0.57	Urban	1	5	5	5	33	1496	2,625	10	3	0	1	14
9	415th Way SE west of SE 122nd Street	0.09	Rural	1	0	0	0	2	225	2,498	10	1	3	0	14
11	442nd Ave SE from SE 147th Street to 44TH Avenue SE	0.11	Urban	0	1	0	1	2	234	2,163	10	1	3	0	14
37	NE 198th Street from 202nd Place to 204th Lane NE	0.68	Rural	0	3	3	5	15	777	1,144	8	3	3	0	14
40	Vashon Highway SW from SW 188th Street to SW 192nd Street	0.25	Rural	0	1	2	2	4	277	1,102	8	3	3	0	14
48	SE Lake Youngs Way from 137th Avenue SE to SE 200th Street	0.28	Urban	0	1	3	1	11	291	1,040	7	4	3	0	14
51	Veazie-Cumberland Road SE near Nolte State Park	0.70	Rural	2	1	0	4	8	713	1,021	7	4	3	0	14
52	SE Petrovitsky Road east of 196th Avenue SE	0.24	Rural	1	0	1	0	2	241	1,002	7	4	3	0	14
56	196th Avenue SE from SE 192nd Street to SE Petrovitsky Road	0.55	Rural	0	2	3	3	16	537	984	7	4	3	0	14
58	Landsburg Road SE north of SE Kent Kangley Road to	1.28	Rural	1	4	5	4	23	1254	981	7	4	3	0	14
60	Green River Road south of S 277th Street	0.76	Urban	0	3	2	3	9	737	976	6	4	3	1	14
78	Military Road S south of SR 18	3.38	Urban	4	6	21	40	112	3038	898	4	6	3	1	14
33	S 129th Street east of Martin Luther King Junior Highway	0.05	Urban	0	0	1	3	13	56	1,203	8	4	0	1	13
43	W Valley Highway from 1st Avenue N to 56th Place S	0.67	Urban	1	2	1	1	6	700	1,047	8	4	0	1	13
47	140th Avenue SE from S Petrovitsky Road to SE 171st Way	0.26	Urban	0	0	6	13	53	266	1,041	7	6	0	0	13
54	SW Quartermaster Drive from Dugway Road SW to Monument Road SW	0.47	Rural	0	2	1	0	1	463	988	7	3	3	0	13
61	NE Woodinville Duvall Road east of 222nd Way NE	2.33	Rural	4	5	7	12	36	2263	972	6	4	3	0	13
62	196th Avenue SE south of SE 170th Street	0.46	Rural	0	2	0	0	1	447	967	6	4	3	0	13
70	SE 192nd Street from 124th Avenue SE to 142nd Place SE	1.14	Urban	0	4	3	9	23	1044	913	5	4	3	1	13
83	NE Novelty Hill Road west of 214th Avenue NE	1.31	Rural	2	1	14	20	63	1136	870	4	6	3	0	13
84	S Peasley Canyon Road east of Military Road S	1.05	Urban	1	1	12	21	74	901	860	3	6	3	1	13

SEG HIN ID	SEG NAME	Length Mile	URBAN / RURAL	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes	Possible Injury Crashes	Property Damage Only Crashes	EPDO SUM	EPDO Per Mile	HIN Percentile Score	Systemic Analysis Score	Emphasis Area Score	Equity Score	Prioritization Score
1	S 259th Street west of 5th Avenue S (Railroad undercrossing)	0.01	Urban	0	1	4	0	6	293	25,884	10	1	0	1	12
10	1st Avenue S from SW 108th Street to Myers Way S	0.11	Urban	0	1	0	0	6	229	2,178	10	1	0	1	12
39	17th Avenue from SW Roxbury Street to 10th Avenue SE	0.28	Urban	0	1	3	4	11	318	1,139	8	3	0	1	12
49	SE 128th Street and 196th Avenue SE	0.46	Rural	0	2	1	1	4	475	1,029	7	2	3	0	12
59	Vashon Highway from SW 112th Street to SW 116th Street	0.28	Rural	0	1	3	0	5	276	979	6	3	3	0	12
64	Cedar Falls Road SE north of SE 160th Street	0.56	Rural	0	2	2	4	5	519	934	6	3	3	0	12
68	SE 128th Street from 175th Avenue SE to 184th Avenue SE	0.54	Rural	1	1	1	3	3	492	919	5	4	3	0	12
71	284th Avenue SE north of SE 416th Street	0.53	Rural	1	1	1	2	2	482	913	5	4	3	0	12
36	34th Avenue S from S 288th Street to 292nd Street	0.24	Urban	0	1	2	2	8	281	1,168	8	2	0	1	11
55	SE Middle Fork Road west of 486th Avenue SE	0.45	Rural	0	2	0	0	2	448	987	7	1	3	0	11
63	Military Road S from S Star Lake Road to S 272nd Street	0.37	Urban	0	1	3	7	18	352	945	6	4	0	1	11
80	SE 224th Street from 172nd Avenue SE to 176th Avenue SE	0.25	Rural	0	1	0	0	2	225	893	4	4	3	0	11
85	Kent Black Diamond Road SE south of SR 18	0.38	Rural	1	0	2	7	7	325	854	3	4	3	1	11
88	Myers Way S/1st Avenue S north of SW 115th Street	1.18	Urban	1	2	12	8	55	988	840	3	4	3	1	11
57	40th Place S & 37th Place S	0.26	Urban	0	1	1	1	7	255	982	7	2	0	1	10
65	SE 150th Street west of 200th Avenue SE	0.28	Rural	0	1	0	3	8	258	930	6	1	3	0	10
73	236th Avenue NE north of NE 45th Place	0.78	Rural	3	0	2	0	10	711	912	5	2	3	0	10
75	SW Cemetery Road from Beal Road SW to 87th Avenue SW	0.25	Rural	1	0	0	0	1	224	908	5	2	3	0	10
79	NE Novelty Hill Road east of 243rd Avenue NE	0.71	Rural	0	2	4	12	14	632	893	4	6	0	0	10
81	SE May Valley Road east of SE 135th Street	0.61	Rural	1	1	4	2	8	536	882	4	3	3	0	10
91	NE Union Hill Road west of 238th Avenue NE	0.97	Rural	1	2	5	3	22	798	824	3	4	3	0	10
93	Kent Black diamond Road SE from 160th Avenue SE to 168th Avenue SE	1.22	Rural	2	2	3	4	17	993	812	3	4	3	0	10
102	Woodinville Duvall Road east of 185th Avenue NE	0.94	Rural	0	2	3	20	48	722	766	1	6	3	0	10
104	104th Avenue NE south of NE 171st Street	1.31	Rural	0	3	10	13	54	1000	761	1	6	3	0	10
50	8th Avenue SW from SW Roxbury Street to SW 100th Street	0.24	Urban	0	1	0	2	8	249	1,029	7	1	0	1	9
67	SE 176th Street east of SE Petrovitsky Road	0.61	Urban	0	2	3	5	26	565	921	5	1	3	0	9
69	SW Roxbury Street east of 8th Avenue SW	0.37	Urban	0	1	3	5	22	338	914	5	3	0	1	9
74	244th Avenue SE north of SE 468th Street	0.25	Urban	1	0	0	0	4	227	908	5	4	0	0	9
77	SW 204th Street west of 111th Avenue SW	0.27	Rural	1	0	0	2	1	242	901	5	1	3	0	9
87	NE 124th Way east of 164th Avenue NE	0.62	Urban	0	2	3	2	15	527	844	3	6	0	0	9
94	SE Auburn Black Diamond Road east of 148th Way SE	1.57	Rural	1	4	7	3	19	1273	811	2	4	3	0	9
95	SE 216th Street west of 244th Avenue SE	0.64	Rural	1	1	1	5	5	512	804	2	4	3	0	9
96	SE Retreat Kanaskat Road south of SE Lake Retreat North Drive	1.22	Rural	1	3	3	3	8	975	801	2	4	3	0	9
98	4th Avenue SW north of SW 114th Street	0.63	Urban	0	2	2	0	22	500	795	2	3	3	1	9
103	Green River Road South of 94th Place S	0.61	Urban	0	2	1	0	6	468	764	1	4	3	1	9
107	SE Lake Holm Road south of SE Auburn Black Diamond Road	0.75	Rural	1	1	2	3	23	528	700	1	4	3	1	9
86	180th Avenue SE south of SE Covington Sawyer Road	0.32	Rural	1	0	2	1	5	269	847	3	2	3	0	8
90	Renton Avenue S north of 130th Street	0.29	Urban	0	1	0	2	4	245	832	3	4	0	1	8
92	SE 288th Street west of SR 169	0.31	Rural	1	0	1	1	2	250	812	3	2	3	0	8
100	SE Green Valley Road west of 212th Avenue SE	0.38	Rural	0	1	4	1	6	302	790	2	3	3	0	8
106	S 288th Street from 42nd Avenue S to 51st Avenue S	0.49	Urban	0	1	2	7	29	347	707	1	3	3	1	8
72	1st Avenue SW from SW 108th Street to 112th Street	0.25	Urban	0	1	0	0	6	229	913	5	1	0	1	7
76	228th Avenue SE north of SE 448th Street	0.25	Rural	0	1	0	0	4	227	906	5	2	0	0	7
82	SW 204th Street e/o Vashon Hwy SW	0.25	Rural	0	1	0	0	1	224	880	4	3	0	0	7
89	68th Avenue S south of Renton Avenue S	0.36	Urban	0	1	1	5	21	305	838	3	3	0	1	7
97	154th Place SE north of SE Jones Road	0.58	Urban	0	1	8	10	24	465	799	2	4	0	1	7
105	SE Green Valley Road from 4.13 to 5.5 (measure)	1.36	Rural	0	4	5	3	22	1021	752	1	3	3	0	7
108	NE 128th Way east of 181st Avenue NE	0.41	Urban	1	0	1	3	5	271	660	1	6	0	0	7
99	55th Avenue S south of S 272nd Way	0.57	Urban	0	1	8	7	39	453	793	2	3	0	1	6
101	SW 107th Street east of 16th Avenue SW	0.12	Urban	0	0	4	3	6	97	781	1	3	0	1	5

Appendix B: Policy Review Technical Report



Final Policy Review Technical Report

King County Road Services Division Traffic Safety Action Plan

December 2025

Prepared for King County Road Services Division by:

DKS

Parametrix



King County

Department of Local Services

Road Services Division

Contents

Purpose.....	4
Methodology.....	4
Population Characteristics and Potential Equity Impact.....	5
Proposed Improvement Type.....	5
Safe System Element	6
Impact to County Operations	6
Safety Impact.....	6
Planning Level Cost Estimate	7
Time Range for Implementation.....	7
Plan and Policy Review.....	8
Plan/Policy 1 - 2024 King County Comprehensive Plan	8
Plan/Policy 2 - 2024 King County Comprehensive Plan – Appendix C1 Transportation Needs Report.....	15
Plan/Policy 3- King County Code 12.28 (Roadside Stands), 14 (Roads and Bridges), 14A (Traffic Code), and 17 (Fire Code)	20
Plan/Policy 4 - King County Complete Streets Ordinance	25
Plan/Policy 5 - The Strategic Plan for Road Services	28
Plan/Policy 6- The King County Road Design and Construction Standards	32
Plan/Policy 7 - The King County Road Services Division 6-Year Capital Improvement Program	1
Plan/Policy 8 - Traffic Signal Priority Process	3
Plan/Policy 9 - King County High Collision Safety Report.....	7
Plan/Policy 10 - King County Roadside Barrier Program Priority Array Development, Phase 2.....	9
Plan/Policy 11 - School Zone Safety Improvements – Priority Process	11
Plan/Policy 12 - King County Road Services Division Traffic Operations Manual – Section 9 Pedestrian Crossing Policy	13
Plan/Policy 13 - King County Road Services Division Traffic Operations Manual – Section 8 Speed Limit Studies	16
Plan/Policy 14 - King County Road Services Division Traffic Operations Manual – Section 5.6 Radar Speed Signs	19
Other Best Practices	23

List of Figures

Figure 1. Washington Target Zero Safe System Approach	5
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List of Tables

Table 1. Impact to County Categories	6
Table 2. Safety Impact Categories	6
Table 3. Planning Level Cost Estimate Ranges	7
Table 4. Time Range Categories	7

Purpose

King County is developing a Traffic Safety Action Plan which will lead to actionable safety programs and projects, helping the County to work toward eliminating fatalities and serious injuries on its roadway network.

The plan is funded through the Safe Streets and Roads for All (SS4A) program, which requires an assessment of the County's existing policies, plans, guidelines, and standards to identify opportunities to improve how these processes can consider, incorporate, and improve safety. This technical report identifies and documents relevant countywide and division-level policies and programs.

The findings and recommendations from this report will be reviewed for incorporation into the King County Traffic Safety Action Plan.

Methodology

As part of the King County Traffic Safety Action Plan, a comprehensive review of existing plans and policies was conducted to evaluate their effectiveness in addressing roadway safety. This review is required under the [Safe Streets and Roads for All](#) grant program. Each document was identified by the County for review, and reflect a range of internal guidance materials and strategic plans used in transportation planning and engineering.

Recognizing that infrastructure projects alone cannot achieve lasting safety outcomes, this review was grounded in the understanding that transformative change requires integrated action across all facets of transportation policy, planning, and operations.

This policy review was conducted using the Safe System approach adopted by the 2024 Washington State Strategic Highway Safety Plan. Each plan, policy, and standard was assessed based on its alignment with the six foundational Safe System elements (shown in Figure 1).



Figure 1. Washington Target Zero Safe System Approach

Each document was also compared to the latest research and best practices, including sources from Federal Highway Administration (FHWA), American Association of State Highway and Transportation Officials (AASHTO), National Association of City Transportation Officials (NACTO), and Illuminating Engineering Society (IES).

This analysis focused on identifying potential improvements that were high impact, low cost, and most likely to be feasible for the County to implement—rather than identify all potential improvements.

The following criteria were used to assess each proposed improvement’s type, scale, and potential impact to County operations.

Population Characteristics and Potential Equity Impact

This criterion assessed whether the potential improvement may affect certain populations more than others by providing benefits or causing disproportionate impacts. Attention is given to historically underserved communities when evaluating this criterion.

Proposed Improvement Type

The potential improvements are categorized into the “4 E’s” of safety management, listed below. Some potential improvements fall under multiple categories.

- Engineering/Planning/Infrastructure
- Enforcement
- Community Engagement
- Emergency Response

Safe System Element

The analysis highlights which Safe System element is addressed by each proposed improvement. Some potential improvements fall under multiple elements.

- Safer Road Users
- Safer Roads
- Safer Vehicles
- Safer Speeds
- Post Crash Care
- Safer Land Use

Impact to County Operations

Each proposed improvement was assessed to determine the likely impact to County operations. Impacts were categorized as low, medium, or high based on the level of impact on internal partners, the technical risk involved, the extent of operational changes required to implement the improvement, and the extent of ongoing maintenance requirements (see Table 1).

Table 1. Impact to County Categories

Category	Impact to County Operations		
	Low	Medium	High
Impacted Internal Staff	Small team or function	Cross-functional teams	Many staff or County leadership
Technical Risk	Low	Moderate	High
Operational Changes	Minor or localized	Moderate	Large-scale
Ongoing Maintenance	None or minimal	Moderate	Extensive

Safety Impact

Each proposed improvement was qualitatively assessed to determine its safety benefit, measured in terms geographic extent, number of affected road users, and intensity of benefit. The levels of safety impacts are categorized as low, medium, or high, as shown in Table 2.

Table 2. Safety Impact Categories

Category	Low	Medium	High
Geographic Extent	Corridor or neighborhood	Region of the county	All county roads
Safety Impact	Improves safety for a small number of people or a minimal improvement to safety	Improves safety for a moderate number of people or a moderate improvement to safety	Improves safety for most or all road users or a large improvement to safety

Planning Level Cost Estimate

Planning level cost estimates were generated for each proposed improvement. These estimates may include the cost of County staff, external staff, materials, and other associated expenses. Some improvements are guidelines that would apply to all future projects. In those cases, the cost estimate only includes the cost of setting the guideline in place. Costs indicated in this criterion do not include the cost for implementing physical improvements.

Ultimately, implementing many of the policy and guideline improvements may result in higher projects costs, and in doing so provide an increased level of societal value. A benefit cost ratio analysis can help the County compare the costs and benefits of any resource expenditure. Dollar signs are used to indicate the approximate cost ranges, as shown in Table 3.

Table 3. Planning Level Cost Estimate Ranges

Relative Cost	Planning Level Cost Estimate Range
\$	\$0 - \$10,000
\$\$	\$10,001 - \$100,000
\$\$\$	\$100,001 - \$500,000
\$\$\$\$	Over \$500,000

Time Range for Implementation

This category defines the time to plan and implement potential improvements. The time range does not account for time to obtain funding or to construct infrastructure improvements, if required. In some cases, potential improvements are ongoing, and time ranges are provided in order to implement the first cycle of the proposed improvement. The time ranges are categorized as short, medium, or long, shown in Table 4.

Table 4. Time Range Categories

Timeframe	Definition
Short	Less than 1 year
Medium	1 to 10 years
Long	Greater than 10 years

Plan and Policy Review

Plan/Policy 1 - 2024 King County Comprehensive Plan

Status:

Adopted December 10, 2024

Description:

The 2024 King County Comprehensive Plan is a 20-year policy framework guiding land use, transportation, housing, environmental stewardship, and public services in unincorporated King County. The plan emphasizes racial equity, climate resilience, and affordable housing, aligning with the Washington State Growth Management Act and regional planning efforts. This review includes the following chapters:

- Chapter 1 REGIONAL GROWTH MANAGEMENT PLANNING establishes guiding principles for equitable and climate-responsive growth and regional planning with emphasis on coordination with cities, tribes, and special districts.
- Chapter 2 URBAN COMMUNITIES focuses on urban land use, identifying types of “centers” (e.g., unincorporated activity centers, neighborhood, community, and regional) and their appropriate densities, land uses, and transportation priorities. The chapter promotes mixed-use, transit-oriented, and multimodal development by encouraging the co-location of residential, commercial, and civic uses in close proximity to transit infrastructure.
- Chapter 3 RURAL AREAS & NATURAL RESOURCE LANDS addresses planning for rural areas; it includes policies to protect working farms, forests, rural character, and environmental and cultural resources by limiting urban development and promoting appropriate rural land uses.
- Chapter 8 TRANSPORTATION details King County’s transportation framework, including system inventories, concurrency requirements, level-of-service standards, and funding capacity. It integrates Transportation Demand Management (TDM) strategies, active transportation planning (e.g., trails, sidewalks, bicycle lanes, and other walking and biking infrastructure), and Puget Sound Regional Council transportation models.

What are some notable insights?

- Chapter 1 lists safety as a priority in multiple policies. Several of the guiding land use and related principles align with Safe System Approach elements.
- Chapter 2 identifies a variety of types of centers in urban areas. Each center has different uses, density requirements, and different priorities for various modes of travel. Multiple policies prioritize pedestrian, bicyclist, and transit connectivity in centers.

- Chapter 3 identifies a variety of types of communities in rural areas. The primary purpose of these policies is to preserve existing rural areas and their rural character, such as low-density housing and a small-town atmosphere. The chapter's land use goals encourage the design of roadways that match surrounding land use. While Chapter 2 identifies transportation facilities that enhance traffic safety in the urban land use context (for example, U-202), no corresponding policy exists in Chapter 3.
- Chapter 8 includes policies that consider the safety, needs, and abilities of active transportation users in the planning, design, construction, maintenance and operations of road infrastructure. There may be an opportunity to reference the Safer Speeds element in the priorities listed in the beginning of the chapter by encouraging improved roadway design to support appropriate speeds. Other potential improvements listed may include consideration of vulnerable roadway users when establishing level of service standards.

How does this document prioritize safety?

Chapter 1 (Regional Growth Management Planning, pages 1-1 to 1-15):

- Policies listed in this section prioritize building safe communities. Policy RP-102 establishes creating “safe, and accessible communities” as a key objective.
- Guiding principles include the following, which advance the Safe System elements Safer Land Use and Safer Road Users:
 - directing development toward existing communities
 - providing a variety of transportation choices
 - addressing health, equity, displacement, and racial/social/environmental justice.

Chapter 2 (Urban Communities, pages 2-1 to 2-6):

- Multiple policies establish that safety is a priority by requiring that new and redeveloped urban areas provide safe, accessible, and context-sensitive infrastructure for all users. Policies U-102, U-201, and U-202 emphasize creating healthy communities through safe walkways, bikeways, and connections to schools, jobs, and services.
- Policies U-231 and U-251 integrate safety into neighborhood and mixed-use design, ensuring mobility for pedestrians and bicyclists of all ages and abilities. Policy U-258 further mandates that infrastructure standards (e.g., sidewalks, lighting, bicycle facilities, and safe transit access) balance vehicle movement with pedestrian and bicycle safety. Together, these policies make safety a central principle in shaping urban growth and development, which is an important part of Safer Land Use.

Chapter 3 (Rural Areas & Natural Resource Lands, pages 3-1 to 3-23):

- In rural centers with pedestrian generators, pedestrian and bicyclist facilities are listed as priorities. (R-407 and R-411)
- Several policies encourage new development in rural areas to include connections for active transportation and programs such as Safe Routes to School; these policies benefit vulnerable road users. (R-320 and R-322)
- Policy R-604 recognizes equestrian users on county roads and requires the King County Road Design and Construction Standards to support safe equestrian travel within the road right-of-way.

Chapter 8 (Transportation, pages 8-1 to 8-27):

- Roadway safety, encouraging active transportation use, and transit connections are all established as priorities of the County.
- Policies T-101 and T-103 call for a safe and accessible transportation system that serves all community members and reduces vehicle dependence by implementing a multimodal system. T-203 calls for the County to provide reliable, safe, and accessible public transportation, with a focus on meeting the needs of underserved communities. T-216 requires new schools to provide safe walking and biking routes, and T-309 allows for safety to be incorporated into concurrency testing for new development. Collectively, these policies promote the integration of safety into system design, project prioritization, and land use decisions. Safety is framed not just as preventing crashes but also as enabling accessible, reliable, and context-sensitive mobility across the system.

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Chapter 1
- **Improvement:** Add a reference to the King County Target Zero Traffic Safety Coalition or the King County Target Zero Traffic Safety Strategic Plan for 2024-2027.
- **Reasoning:** The purpose of the King County Target Zero Traffic Safety Coalition and the new strategic plan is to support traffic safety planning to reduce the number and severity of collisions of those walking, rolling, driving and travelling by car. A reference to the King County Target Zero efforts could emphasize a shared County vision of reducing roadway collisions.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure, Community Engagement

- **Safe System Approach Elements:** All
- **Impact to County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 2

- **Location:** Chapter 2, pages 2-9
- **Improvement:** Add recommendations that new development in centers shall have safe and comfortable transit access.
- **Reasoning:** Transit access promotes multimodal use and overall safety on roads.
- **Population Characteristics and Potential Equity Impact (if applicable):**
Improved access to transit benefits all road users, but it has a particular benefit in the county's urban low-income areas where car ownership is low and for people with disabilities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Land Use, Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 3

- **Location:** Chapter 3, page 3-11
- **Improvement:** Add a policy that lists relevant safety elements of new development in rural areas, such as adequate shoulders, and (where appropriate) access control, median barriers, connection to transit. (Similar to policy U-202.) See [proven safety countermeasures in rural communities guidelines from FHWA](#).
- **Reasoning:** Specific design elements can inform development early in the process.
- **Population Characteristics and Potential Equity Impact (if applicable):** Travelers in rural areas would benefit most from this proposal.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Land Use
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 4

- **Location:** Chapter 8, page 8-8
- **Improvement:** Adopt Bicycle and Pedestrian Level of Traffic Stress (LTS) in addition to Level of Service standards to evaluate corridors and intersections.
- **Reasoning:** LTS is an industry standard evaluation of factors that influence comfort and safety for bicycle and pedestrian travel. WSDOT has adopted LTS to inform project development, including grant funding opportunities (see [WSDOT Design Manual 1520](#), [Design Bulletin 2022-01](#), and [other WSDOT documents](#)). This measure could provide a proactive approach to improve safety for people who walk, roll, or bicycle, consistent with the Safe System element of Safer Roads. LTS could be considered by the County as it develops a multimodal level of service standards in response to HB 1181 (2023).
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian and bicycle facilities benefit all people walking and biking, but they have a particular benefit in the county's urban low-income areas where car ownership is low and for pedestrians with disabilities. However, bicycle facility expansion may raise concerns about gentrification in these communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** High

- **Safety Impact:** High
- **Cost Estimate Range:** \$\$\$
- **Time Range for Implementation:** Medium

Potential Improvement 5

- **Location:** Chapter 8
- **Improvement:** Add a Safer Speeds-related bullet to the list of County transportation priorities on page 8-1. Example language could include “design roadways that encourage appropriate speeds based on roadway use and surrounding land use.” Establish Safer Speeds policies for establishing posted speed limits consistent with national best practices for setting (examples include [NCHRP Report 966: Development of a Posted Speed Limit Setting Procedure & Tool](#), [Washington State Injury Minimization and Speed Management Policy Elements](#), FHWA [USLIMITS2](#), [NACTO City Limits](#), etc).<https://nap.nationalacademies.org/catalog/26216/posted-speed-limit-setting-procedure-and-tool-user-guide> This approach is more safety-oriented than traditional 85th percentile-based methods.
- **Reasoning:** Speed limits should be context-sensitive, reflecting the surrounding land use and transportation needs. Formal policies can help advance projects that may adjust speed limits on roadways, which is an essential strategy for improving safety outcomes for all users, especially people who walk, bike, and roll.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Speeds
- **Impact To County:** High
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$\$\$\$. Estimated costs reflect the need to research and develop an effective policy, incorporate into policies and standards, and complete legislative process.
- **Time Range for Implementation:** Medium

Potential Improvement 6

- **Location:** Chapter 8, T-501
- **Improvement:** Include specific examples of partner jurisdictions and organizations, such as the *Puget Sound Regional Council (PSRC)*, that King County should collaborate with on transportation safety initiatives. Clearly identify coordination areas with these partners, such as traffic safety policies and strategies, joint project development, performance monitoring, and data sharing.

- **Reasoning:** Providing concrete examples can provide readers with clear direction.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Plan/Policy 2 - 2024 King County Comprehensive Plan – Appendix C1 Transportation Needs Report

Status:

Adopted December 10, 2024

Description:

Appendix C1 to the King County Comprehensive Plan is the Transportation Needs Report—an assessment of transportation system needs over a 20-year planning period. The report includes an inventory and analysis of county-owned roadways, bridges, drainage, traffic control systems, and regional maintenance facilities. It describes the process through which roadway needs are prioritized, and identifies needed projects, cost estimates, and funding gaps.

What are notable insights?

The document references national safety standards, such as Americans with Disabilities (ADA) and Manual on Uniform Traffic Control Devices (MUTCD), as well as Washington Traffic Safety Commission Target Zero program goals and criteria. The descriptions of County prioritization processes, maintenance, and operations in Chapter 2 could be expanded to include details on additional phasing options, pedestrian safety measures, and intersection improvement selection.

How does this document prioritize safety?

- The report states throughout that critical safety work remains the County's top priority for its limited funds. (ex. C1-6)
- Chapter 2 of the report describes the critical role that operations and maintenance play in roadway safety.
- Chapter 2 describes how safety is used to prioritize investments in each category—including detailed discussions of traffic control devices and the High Collision Location Analysis.
- The report identifies 65 Intersection and Traffic Safety Operations projects which typically incorporate one or more traffic safety measures, 80 Active Transportation projects to provide people with space to walk or bike outside of the general purpose travel lane, 49 Guardrail projects, and 16 Intelligent Transportation System (ITS) projects which typically include traffic safety elements. (p. C1-9)

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Section 2.3.a

- **Improvement:** Describe the signal phasing options that the County may consider to improve bicyclist and pedestrian safety, such as leading pedestrian intervals, prohibition of permissive left turns when pedestrians are present, longer pedestrian walk phases, right-turn-on-red prohibitions, etc.
- **Reasoning:** Discussion of these low-cost countermeasures would highlight County consideration of vulnerable road user safety.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian and bicycle facilities benefit all pedestrians and bicyclists, but have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 2

- **Location:** Section 2.3.a
- **Improvement:** Add a subsection about midblock crossing improvements. Identify criteria that can be used to prioritize locations that could benefit from midblock crossing improvements, such as distances to the next safe crossing opportunity.
- **Reasoning:** While Chapter 2 provides a detailed description of the County's process to prioritize traffic control devices at intersections, it does not describe the process used to prioritize midblock pedestrian crossing improvements, such as signs, marked crosswalks, and rectangular rapid flashing beacons. These locations pose particular risk because drivers do not anticipate the presence of pedestrians.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian and bicycle facilities benefit all pedestrians and bicyclists, but have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities. Similarly, while all users may need education on how to use newer midblock crossing treatments, outreach should be tailored to the linguistic needs of communities where residents are less likely to speak English.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Road Users
- **Impact To County:** Low

- **Safety Impact:** Low
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 3

- **Location:** Chapter 3, page C1-31
- **Improvement:** Work with the PSRC to ensure that the regional model can be used to satisfy new planning requirements under RCW 36.70A.070(6)(a) to use a “multimodal” level of service. This might be accomplished through the use a Level of Traffic Stress measure (see potential improvement 4 under Plan/Policy 1 Comprehensive Plan).
- **Reasoning:** The use of the PSRC regional model meets the intent of growth management planning regulations in a manner consistent with the County’s levels of growth and limited financial resources. Incorporating multimodal LOS, through LTS or other means, would provide regionally consistent planning consistent with the updated RCW, while ensuring that the County Transportation Needs Report is informed by the safety needs of people who walk, roll, or bicycle.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian facilities benefit all pedestrians, but they have a particular benefit in the county’s low-income areas where car ownership is low and for people with disabilities. While bike facilities improve safety for all road users by providing a separate space for people on bikes, it may particularly benefit people in the county’s low-income areas where car ownership is low. However, more visible bicycle facilities may also raise concerns about gentrification in these communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** High
- **Safety Impact:** High
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 4

- **Location:** Chapter 2 Roadside, Section 2.2a Active Transportation Safety and Mobility; Exhibit A 2024 Transportation Needs Report Project List
- **Improvement:** Develop a Level of Traffic Stress (LTS) standard (see Plan/Policy 1 Comprehensive Plan Potential Improvement 4 above) and describe it in

Chapter 2. Use LTS to identify or prioritize needed capital projects for the list of needed projects in Exhibit A.

- **Reasoning:** LTS could be used to ensure the County's limited capital funds are directed to locations that would provide the greatest safety benefit for vulnerable users. Note that not all bicycle and pedestrian projects would necessarily require capital improvements and would therefore not be included in Exhibit A.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** High
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 5

- **Location:** Section 2.3.c, page C1-21
- **Improvement:** Add a paragraph that references the Traffic Safety Action Plan, particularly the High Injury Network.
- **Reasoning:** Describing the Traffic Safety Action Plan would meet the TNR goal to "describe the process through which roadway needs are prioritized." Incorporating Traffic Safety Action Plan projects into the TNR project list would meet the goal of developing "a comprehensive list of improvement needs."
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Plan/Policy 3- King County Code 12.28 (Roadside Stands), 14 (Roads and Bridges), 14A (Traffic Code), and 17 (Fire Code)

Status:

Adopted

Description:

- King County Code (K.C.C.) Chapter 12.28 governs the use and placement of structures, such as boxes or stands to sell or receive goods, along county roads and highways. The code permits any similar structure to encroach into the right-of-way by two feet. However, any similar structure that encroaches in the right-of-way or near the right-of-way that is determined to be a hazard to vehicles or people is declared a public nuisance and the County Road Engineer may remove such hazards without prior notice. Violations of this chapter are considered misdemeanors.
- K.C.C. Title 14 establishes the legal framework governing the construction, maintenance, and regulation of public roads, bridges, and rights-of-way in unincorporated areas of the county. It covers standards for road design, utility installations, right-of-way construction permits, and transportation concurrency management. The code aligns infrastructure projects with comprehensive planning goals, environmental regulations, and public safety requirements.
- K.C.C. Title 14A outlines traffic regulations, including speed limits, parking restrictions, vehicle impoundment, and the management of processions and parades.
- K.C.C. Title 17 of the King County Code establishes fire safety regulations, including building fire codes, emergency access, water supply, and fire protection systems. The code permits delegation to local fire chiefs for inspections and enforcement. It also outlines requirements for hydrant placement and access roads to support public safety and compliance with state and national standards.

What are some notable insights?

Under Title 17, the fire marshal has the authority to set certain fire access road specifications, meaning projects affecting such roads should be reviewed and approved by the fire marshal when appropriate. Otherwise, the fire access roads specifications generally align with national guidelines including IFC and National Fire Protection Association (NFPA) and no other potential improvements are identified in Title 17.

How does this document prioritize safety?

Chapter 12.28

- Improves roadway safety by empowering the County Road Engineer to remove encroaching or hazardous roadside structures to preserve clear sightlines and reduce the risk of run-off-the-road collisions (K.C.C. 12.28.010)

Title 14

- Adopts state (Revised Code of Washington) and national standards for design consistency and safety. (K.C.C 14.20.010, 14.20.020, 14.42)
- The code adopts the King County Road Standards and specifies that the Department of Local Services can develop public rules to better implement the standards. (K.C.C. 14.42.010)
- The Director of the Road Services Division may identify which snow emergency routes are to be sanded or cleared of snow first. (K.C.C. 14.48)
- The code defines maintenance requirements and enforcement mechanisms for the repair of sidewalks, which can encourage walking and provide safe travel opportunities for people without motor vehicles. It prohibits vegetation on private property that inhibits visibility of vehicles, pedestrians, signs, or signals. It provides an exception to tree trimming limitations to provide visibility of signs and maintain proper intersection sight distance. (K.C.C. 14.52)
- Establishes an active transportation program to support walking and biking. (K.C.C. 14.56.020)
- The required level of service and average travel speeds vary by road classification, accounting for surrounding land use context. (K.C.C. 14.70.220)
- Requires owners of new developments to build improvements or pay fair and equitable costs for intersection improvements based on the approach approved by the Director of the Department of Local Services. This approach recognizes intersections are higher risk areas and allows the County to improve safety.

Title 14A

- Requires speed limit studies by the County Road Engineer before establishing posted speed limits. Minimum and maximum speeds are listed in K.C.C. 14A.10.020, 14A.10.030, and 14.06.
- Promotes safe use of motorized foot scooters and bicycles. (K.C.C. 14A.40)
- The code prohibits parking in certain locations, such as in tow-away zones, in a manner that leaves less than ten feet of roadway width, in alleys blocking entrances, implementing safe parking restrictions to avoid impeding access for emergency response vehicles that are responding to collisions. (K.C.C. 14A.50.010, K.C.C. 14A.50.070, K.C.C.50.080)

Title 17

- References the International Fire Code (IFC) with specifications for fire access road roads, fire lane markings, and prohibiting obstructions on fire access roads to allow for reliable emergency access. (K.C.C. 17.04.370 through 17.04.425)

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Chapter 12.28
- **Improvement:** Reevaluate, and update if necessary, the allowed encroachment on County right-of-way.
- **Reasoning:** Currently, the code states that encroachment on any county road or highway shall not exceed two feet from the right-of-way line for business purposes. However, current land use across the County may have changed since the adoption of this code. For example, in rural areas where the right-of-way may be set behind the edge of the travel way, encroachment of two feet may not be a hazard. In comparison, in urban areas where the back edge of the sidewalk is at the right-of-way line, encroachment of two feet may restrict pedestrian access to facilities. Update 12.28 to be more context specific (especially in urban areas) if that is what the current land use supports, which may require some data collection by County staff.
- **Population Characteristics and Potential Equity Impact (if applicable):** Clear sidewalks benefit all pedestrians, but provide a particular benefit in the county's low-income areas where car ownership is low, for people with disabilities, and for people who are too young or old to drive.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 2

- **Location:** K.C.C. 14.52.080
- **Improvement:** Add language to clarify that street trees and plantings may be trimmed to prevent lighting obstruction of light poles.
- **Reasoning:** Unobstructed lighting is essential for nighttime visibility, especially for pedestrians.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian facilities benefit all pedestrians, but they have a particular

benefit in the county's low-income areas where car ownership is low and for people with disabilities.

- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 3

- **Location:** K.C.C. 14.06.030
- **Improvement:** Update speed limit setting policies to current best practices that incorporate other modes of travel and the surrounding land use context. For example, [NCHRP Report 966: Development of a Posted Speed Limit Setting Procedure & Tool](#), [Washington State Injury Minimization and Speed Management Policy Elements](#), FHWA [USLIMITS2](#), [NACTO City Limits](#), etc. See potential improvement 5 under Plan/Policy 1 Comprehensive Plan.
- **Reasoning:** Speed limit setting should use a context-sensitive approach and de-emphasize the 85th percentile speed. This procedure may result in different minimum and maximum speeds.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Speeds
- **Impact To County:** High
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$\$\$. Estimated costs reflect the need to research and develop an effective policy, incorporate into policies and standards, and complete legislative process.
- **Time Range for Implementation:** Medium

Potential Improvement 4

- **Location:** Not applicable
- **Improvement:** Standardize a process to consult with the fire marshal when road projects may affect emergency response.
- **Reasoning:** The fire marshal has the authority to require certain road specifications or approve deviations. An official review of projects that impact fire road access roads by the fire marshal can address any emergency response access needs of design elements that deviate from standards listed in Title 17.
- **Population Characteristics and Potential Equity Impact (if applicable):** None

- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Post Crash Care
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Plan/Policy 4 - King County Complete Streets Ordinance

Status:

Approved October 1, 2024

Description:

King County Ordinance 19825 endorses the concept of Complete Streets and states that the County will strive to require Complete Streets on newly constructed or reconstructed county roads. Complete Streets are roadways that are designed and operated to be safe and convenient for all users, regardless of age, ability, or mode of travel. This includes pedestrians, bicyclists, transit riders, motorists, children, older adults, and individuals with disabilities. The ordinance emphasizes equity by prioritizing safety, comfort and connectivity for underserved communities historically impacted by disinvestment. It highlights multiple benefits of Complete Streets, including safety for all road users, improving public health, and reducing carbon emissions. The ordinance aligns with FHWA guidance and with the policies of the King County Comprehensive Plan. The County Road Engineer retains discretion to grant exemptions if Complete Street elements are determined to be infeasible or unnecessary due to safety goals, environmental conflicts, or land-use conflicts.

What are some notable insights?

The Complete Streets ordinance is a safety-first approach to roadway design, emphasizing the safety and comfort of all users, rather than prioritizing vehicle throughput over all other interests. This proven framework is consistent with policies of other local agencies, WSDOT, and FHWA. The ordinance could be further strengthened by identifying other measures that can benefit road users and expanding the preamble to explicitly address the needs of transit users.

How does this document prioritize safety?

- By mandating that new and reconstructed roads be designed as Complete Streets, the ordinance promotes safety and accessibility for all road users, regardless of age, ability, or travel mode. This ordinance can increase the number of projects that align with Complete Streets that are planned and constructed in King County.
- This ordinance aligns with state law RCW 47.04.035 and federal guidance from FHWA, further reinforcing safety as a guiding principle.

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** After Line 65 on page 4
- **Improvement:** Add language that includes specific design elements, such as installing street and sidewalk lighting, pedestrian and bicycle safety

improvements, signal improvements, upgrading curb ramps to comply with the Americans with Disabilities Act, and installing street trees and landscaping.

- **Reasoning:** Including specific design elements provides the reader more examples of how to implement Complete Streets.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian and bicyclist facilities benefit all pedestrians and bicyclists, but they have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities. However, more visible bicycle facilities may also raise concerns about gentrification in these communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 2

- **Location:** Preamble
- **Improvement:** Add a reference to transit users and list projects that improve pedestrian and bicyclist access to transit stops.
- **Reasoning:** Complete Streets can also benefit transit users, and a specific reference can help fill pedestrian and bicyclist network gaps.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved access to transit benefits all road and transit users, but it has a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Land Use Planning
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 3

- **Location:** Add a new paragraph
- **Improvement:** Include requirements to measure and meet Level of Traffic Stress (LTS) standards. See potential improvement 4 under Plan/Policy 1 Comprehensive Plan.

- **Reasoning:** LTS is an industry standard evaluation of factors that influence comfort and safety for bicycle and pedestrian travel. WSDOT has adopted LTS as a part of Complete Streets as a standard measurement that informs various facets of project development, including grant funding opportunities. This measure could provide a proactive approach to improve safety for people who walk, roll, or bicycle, consistent with the Safe System principle of Safer Road Users. See WSDOT Design Manual 1510.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian and bicyclist facilities benefit all pedestrians and bicyclists, but they have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities. However, more visible bicycle facilities may also raise concerns about gentrification in these communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Plan/Policy 5 - The Strategic Plan for Road Services

Status:

The original plan was approved in 2010 and updated in 2014; the updated version was reviewed. The division plans to update the Strategic Plan in the near future.

Description:

The Strategic Plan for Road Services outlines King County's long-term policy direction for managing the unincorporated road network. It addresses funding challenges, prioritization strategies, system preservation, safety, and collaboration with external partners. Key changes to the 2014 update include re-ordering safety as the highest priority and meeting regulatory requirements as the second priority, adding policy for consideration of long-term closures, and elevating risk management.

What are some notable insights?

The plan is an important guide for future resource investment and consistently identifies safety as the County's top priority. Under "what we deliver" goals, the highest priority goal is to prevent and respond to immediate operational life safety and property damage hazards. Future plan updates could include safety targets and metrics to track progress, prioritizing vulnerable and underserved communities, and improving interagency coordination.

How does this document prioritize safety?

- Safety is identified as the first priority throughout the plan, with the acknowledgment that collaboration with other agencies is necessary due to constrained funding. (Page 4, 24)
- "Addressing safety needs and complying with legal mandates" is listed as the first responsibility of Road Services. (Page 20)
- "Protecting life safety" is listed as the first priority of the division's risk management approach. (Page 21)
- "Emergency response activities" during severe weather is listed as an important area of service (Page 10). Keeping emergency response times short is an important part of roadway safety.
- The plan mentions proactive safety maintenance activities, such as vegetation control, particularly maintaining sight distances at intersections, and shoulder maintenance. (Page 35)

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Page 10 callout box "Road Services operates within a legal, policy, and planning framework that includes the following:"

- **Improvement:** Add a reference to the Traffic Safety Action Plan.
- **Reasoning:** By including a reference to the King County Traffic Safety Action Plan, it can emphasize a shared county vision of reducing roadway collisions.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure, Community Engagement
- **Safe System Approach Elements:** Safer Roads, Safer Road Users
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 2

- **Location:** Page 37
- **Improvement:** Develop more specific and measurable safety performance metrics to assess progress. Align safety performance metrics in this document to the progress and transparency section of the King County Traffic Safety Action Plan.
- **Reasoning:** Clear, quantifiable goals strengthen accountability and can guide future investment decisions.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure, Community Engagement
- **Safe System Approach Elements:** Safer Roads, Safer Road Users
- **Impact To County:** Medium
- **Safety Impact:** Higher
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 3

- **Location:** Frameworks listed on pages 20-22
- **Improvement:** Include language to emphasize the safety needs of active transportation users (e.g., pedestrians and bicyclists) and transit riders in prioritization strategies. Prioritize areas near destinations such as parks, schools, and transit stops. This could result in prioritizing maintenance for intersections or corridors that are important to multimodal users.
- **Reasoning:** Includes consideration for multimodal users and high-demand locations in maintenance and safety efforts.

- **Population Characteristics and Potential Equity Impact (if applicable):** Improved access to transit via bicyclist and pedestrian facilities benefits all road and transit users, but it has a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities. However, more visible bicycle facilities may also raise concerns about gentrification in these communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 4

- **Location:** Framework listed on pages 20-22
- **Improvement:** Incorporate content to prioritize underserved populations and areas that have limited transportation access.
- **Reasoning:** This improvement may promote equity by directing resources to historically underserved communities.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improvements may particularly benefit historically underserved communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 5

- **Location:** Add strategy language under Goal 4 on page 25
- **Improvement:** Add language “promoting interagency coordination during project development to identify and implement low-cost safety enhancements that can be integrated into planned roadway projects” as a strategy for Goal 4. This should align with the Engagement and Collaboration section of the King County Traffic Safety Action Plan.
- **Reasoning:** Early coordination can help align projects, potentially leveraging improvements that can be added to planned construction projects.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure

- **Safe System Approach Elements:** Safer Roads, Safer Land Use Planning
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Plan/Policy 6- The King County Road Design and Construction Standards

Status:

Adopted in 2016, revised November 28, 2016. The revised version is reviewed.

Description:

The King County Road Design and Construction Standards provide engineering and design guidelines for new and reconstructed roadways within unincorporated King County.

- Chapter 1 outlines the legal foundation, applicability, definitions, and administrative procedures for implementing and interpreting the road standards, including variances and plan submittal requirements.
- Chapter 2 defines the classification and geometric design criteria for rural and urban roads, including standards for width, grades, access, sight distances, and connectivity requirements.
- Chapter 3 specifies the design and construction standards for driveways, sidewalks, curbs, ramps, bikeways, and trails to support safe, accessible infrastructure for all users.
- Chapter 4 establishes the surfacing standards for different types of roadways, including pavement types, structural sections, materials, and repair procedures.
- Chapter 5 provides guidelines for the design and installation of roadside features, such as landscaping, street trees, mailboxes, lighting, and guardrails.
- Chapter 6 sets the structural and geometric requirements for bridges, special culverts, and retaining walls to comply with engineering standards.
- Chapter 7 outlines requirements for roadway drainage systems, including ditches, storm sewers, catch basins, erosion control, and low impact development best practices.
- Chapter 8 details the standards for utility installations within the public right-of-way, including location, permitting, construction methods, and surface restoration.
- Chapter 9 establishes the procedures for construction control, inspections, materials testing, and compliance so that roadway work meets county-approved standards.

The County Road Engineer may incorporate minor changes to these Standards as they become necessary; however, changes typically must be approved by the Council (K.C.C. 14.42.010).

What are some notable insights?

This review and potential improvements focus on chapters 2, 3, 4, 5, and 6 as they are most relevant to the Safe System Approach's Safer Roads element, specifically regarding traffic calming conflict points, infrastructure for vulnerable roadway users, and speed management. Overall, the design standards encourage context-sensitive design (urban or rural roadways), include ADA-compliant curb ramp and driveway requirements, require street illumination at the most critical locations, and provide guidance on guardrails and embankment heights. However, some opportunities for improvement remain: the standards do not include FHWA-recommended traffic calming measures, and some sections (such as bike lane width guidance) may not reflect the current national and state guidance. Updating these sections and incorporating additional cost-effective measures could strengthen alignment with best practices.

How does this document prioritize safety?

- Context-sensitive designs vary based on roadway classification and whether the location is urban or rural. This aligns design elements with the operational characteristics and safety needs of the specific area. (Sections 2.02(A) to (C), 2.03(A) to (C))
- Provisions for sidewalks, bicycle lanes, crossings, and equestrian facilities enhance safety and accessibility for vulnerable active transportation road users. (Sections 3.02, 3.05, 3.08, 3.10, 3.11)
- References to the Americans with Disabilities Act (ADA) promote accessibility for individuals with disabilities through features such as curb ramps, accessible crossings, and ground materials. (Section 3.05, 4.06)
- The document incorporates established design references, including the Washington State Department of Transportation (WSDOT) and American Public Works Association (APWA) standards, for consistency across projects within the area. (Section 1.07)
- Street illumination is required in certain contexts, including arterial roadways with three or more travel lanes, intersections, and turn pockets and lane tapers. Adequate lighting has been proven to reduce nighttime collisions. (Section 5.05)
- Guardrail and embankment standards are included to protect roadway users from roadside hazards. (Section 5.09 and 5.10)

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Chapter 1.08
- **Improvement:** Include the Public Right-of-Way Accessibility Guidelines (PROWAG) as a general reference.

- **Reasoning:** PROWAG is a nationally recognized set of guidelines that promotes equitable access.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improvement may particularly benefit individuals with disabilities and all pedestrians by promoting accessible design.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact to County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 2

- **Location:** New sub-section or add to Sections 2.16, 3.09
- **Improvement:** Add stronger language requiring projects to connect pedestrian and bicyclist infrastructure with nearby destinations, such as parks, schools, trails, and transit stops, to support safe, multimodal access. NACTO describes these requirements in their [Creating Safe, Sustainable, Multi-modal Urban Transportation document](#). Refer to documents from FHWA for guiding language, such as the [Bicycle and Pedestrian Program](#) and the [Pedestrian Facilities Users Guide — Providing Safety and Mobility](#) document.
- **Reasoning:** Promoting safe access to essential destinations enhances walkability.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian and bicycle facilities benefit all pedestrians and bicyclists, but they have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities. However, more visible bicycle facilities may raise concerns about gentrification in these communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Land Use Planning
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 3

- **Location:** Add to Section 1.08 and 5.05
- **Improvement:** Add specific sidewalk, intersection crosswalk, and midblock crosswalk lighting requirements. Include requirements to check vertical

illumination to avoid backlighting pedestrians. Add language to include bicycle lanes within lighting analysis areas. Add ANSI/IES RP-8 as a reference and match the recommendations outlined. Lighting guidance is outlined in ANSI/IES RP-8, chapters 11 and 12.

- **Reasoning:** Enhanced lighting improves the visibility of pedestrians and cyclists at night and is proven to reduce crash frequency and severity.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian facilities benefit all pedestrians, but they have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 4

- **Location:** Update language in Section 5.03.H on page 5-5
- **Improvement:** The standard allows for tree block-outs to meet "ADA standards for minimum sidewalk clearance of 36 inches." Update language to require 4 feet of clearance for pedestrians.
- **Reasoning:** A 4-foot clearance is used for pedestrian access route requirements in PROWAG.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improvement may particularly benefit pedestrians, wheelchair users, and people pushing strollers who use sidewalks. This has a particular benefit in the county's low-income areas where car ownership is low.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 5

- **Location:** Add to Section 5.03, 5.05, 5.10
- **Improvement:** Add language requiring that sight distance (clear sight) triangles remain free of obstructions. This includes confirming that vegetation, utilities,

street furniture, and on-street parking are not proposed or existing near intersections, driveways, and pedestrian crossings. This improves visibility for motor vehicle drivers, pedestrians, bicyclists, and other road users to see each other. Optional language could restrict vegetation, fences, or similar features above certain heights within a specified distance of intersections or as directed by the County Road Engineer, which is particularly important at roundabouts. While Title 21A currently addresses sight triangles, cross-referencing it here would strengthen consistency in this document. Similar guidance is provided in NACTO resources and in the AASHTO Greenbook, Chapter 9.5.2.

- **Reasoning:** Improves visibility of all users and reduces collisions by removing sight obstructions.
- **Population Characteristics and Potential Equity Impact (if applicable):** Requiring residents to maintain their own property for sight distance requirements may place additional financial and time burdens on low-income residents.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 6

- **Location:** Update Section 3.10
- **Improvement:** Update the bicycle facility guidance to match the most recent guidance on bicycle facility types, widths, and requirements. See [FHWA Bikeway Selection Guide](#) for guidance regarding context-sensitive bicycle facility selection. The shared roadway diagram displayed in Figure 3-021 should be updated to match current guidance. Guidance on bike lane width and other requirements is outlined in the 2024 AASHTO Guide for the Development of Bicycle Facilities.
- **Reasoning:** Following best practices can support the safety of bicyclists and encourage multimodal connectivity.
- **Population Characteristics and Potential Equity Impact (if applicable):** While bike facilities improve safety for all road users by providing a separate space for people on bikes, these treatments may particularly benefit people in the county's low-income areas where car ownership is low. However, more visible bicycle facilities may also raise concerns about gentrification in these communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure

- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** High
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 7

- **Location:** Add to Section 2.02 and 2.03 and/or 3.10
- **Improvement:** Use Level of Traffic Stress (LTS) to determine the type of pedestrian/bicyclist facility that should be constructed by a developer or the County. Bicycle and Pedestrian Level of Traffic Stress (BLTS and PLTS) are outlined in [WSDOT Design Manual 1520](#). See potential improvement 4 under Plan/Policy 1 Comprehensive Plan.
- **Reasoning:** LTS is geared towards pedestrians and bicyclist safety. This measure could help identify which roadways should include pedestrian and/or bicyclist facilities.
- **Population Characteristics and Potential Equity Impact (if applicable):** While pedestrian and bike facilities improve safety for all road users by providing a separate space for pedestrians and bicyclists, they may particularly benefit people in the county's low-income areas where car ownership is low and for people with disabilities. However, more visible bicycle facilities may also raise concerns about gentrification in these communities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** High
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 8

- **Location:** Chapter 2
- **Improvement:** Add a section that incorporates a roadway-context approach when establishing design speeds. Under the Standards, the design speed is based on functional class without accounting for other contributing factors. Establish Safer Speeds procedures for determining design speed for context-specific design. Ensure tables in sections 2.02 and 2.03 match the outcomes of this potential improvement. See potential improvement 5 under Plan/Policy 1 Comprehensive Plan.

- **Reasoning:** Design speed and roadway use vary based on roadway contexts. Written policies can help advance projects that may change design speed on roadways. Lower vehicle speeds are critical for the safety of all users.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Speeds
- **Impact To County:** High
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$\$\$. Estimated costs reflect the need to research and develop an effective policy, incorporate into policies and standards, and complete legislative process.
- **Time Range for Implementation:** Medium

Plan/Policy 7 - The King County Road Services Division 6-Year Capital Improvement Program

Status:

Adopted

Description:

The King County Road Services Division Six-Year Capital Improvement Program (CIP) identifies and prioritizes planned investments for the County's transportation infrastructure. It organizes projects into categories such as Road Preservation, Bridge Rehabilitation/Replacement, Safety, Drainage, and Active Transportation improvements. Each project includes details on scope, budget, and status, providing a framework for maintaining, preserving, and enhancing the county road system. As a planning tool, the CIP helps guide resource allocation while allowing flexibility to respond to community needs and emerging priorities.

What are some notable insights?

The six-year CIP is updated annually, giving the County the ability to adapt to near-term transportation and community needs. However, the document does not provide an overarching narrative or set of goals. Instead, a Strategic Plan for Road Services (SPRS) goal is noted for each project; some projects have an SPRS goal of "Safety."

How does this document prioritize safety?

- Many projects identify safety as a core justification or include safety-related improvements directly in their scope of work.
- Safety-focused programs, such as Bridge Rehabilitation/Replacement and Active Transportation, contribute to reducing risks for both motorists and vulnerable users.

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Project goals descriptions
- **Improvement:** Each safety-oriented CIP project should assess and describe its safety benefits in the justification section. Traffic safety benefits should align with the safety performance metrics into the progress and transparency section of the King County Traffic Safety Action Plan.
- **Reasoning:** Making safety goals explicit emphasizes safety as a measurable and trackable project priority, and helps support funding, transparency, and community trust.

- **Population Characteristics and Potential Equity Impact (if applicable):** Each CIP project should assess and describe its safety benefits to the most vulnerable road users, such as people walking, biking, or subject to greater socioeconomic vulnerability.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Plan/Policy 8 - Traffic Signal Priority Process

Status:

Updated in 2018

Description:

The Traffic Signal Priority Process outlines King County's methodology for determining where traffic signals could be installed. The process adheres to federal and state regulations found in the Manual on Uniform Traffic Control Devices (MUTCD) and aligns with the King County Strategic Plan for Road Services (SPRS).

Signal installation is evaluated using a priority array that considers MUTCD warrants, proximity to schools, observed pedestrian activity, and collisions that have occurred in the past three years. To avoid skewing warrant calculations, this document also includes a detailed process for right-turn volume adjustments based on the assumption that many motorists turn right on red.

What are some notable insights?

The key output of the King County Traffic Signal Priority Process is the priority array, which ranks intersections as "High", "Medium", or "Low" priority. Intersections are selected and prioritized based on multiple factors, including safety concerns. Vulnerable users receive particular focus through the County's use of the Pedestrian Volume warrant and an additional factor for proximity to schools. When prioritizing potential signalizations, the County could consider additional weighting for vulnerable users by examining proximity to senior centers, transit stops, and low-income housing, or by incorporating bicycle volumes. The County could explore the use of new detection technology to identify and analyze "near-misses." The County could document its array update schedule and its post-implementation evaluation process to ensure responsiveness to emerging safety issues and help validate the effectiveness of intersection countermeasures.

How does this document prioritize safety?

- The document references the Strategic Plan for Road Services 2014 Update and explicitly states the division's top priority is to address safety concerns on roadways. (Page 3)
- Signals that satisfy Signal Warrant 7 (Crash Experience) are classified as "High" priority, directly linking installation decisions to documented safety concerns. (Page 3)
- School proximity is factored into prioritization, elevating intersections that in particular serve children, who have a high dependency on walking as a principal mode of transportation, are smaller, harder to see, can behave unpredictably, lack the experience to identify and navigate dangerous situations, and travel at unique times of the day. (Page 3)

- Before installing signals, engineers evaluate alternative safety improvements, such as roundabouts, lighting improvements, and channelization improvements to promote the most effective, context-sensitive solution.
- The formalized method for adjusting minor street right-turn volumes can improve safety by avoiding inappropriate signal installation that could introduce new risks.
- Within each ranking category, intersections with the highest number of correctable collisions in the past three years are prioritized, ensuring that the most safety-critical locations are addressed first.

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** “Signal Priority Rating Process” section
- **Improvement:** Integrate analysis of bicycle volumes. See [MUTCD Section 4C.01 paragraph 17](#) for reference.
- **Reasoning:** Using only pedestrian and vehicle volumes may fail to capture the full range of intersection users.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Potential Improvement 2

- **Location:** Page 4, second paragraph
- **Improvement:** Integrate the Traffic Safety Action Plan Collision Analysis into the signal evaluation process. This could be integrated into the ranking process, or into the alternatives analysis process. Alternatively, incorporate the High Injury Network into the County’s capital budgeting process.
- **Reasoning:** The Traffic Safety Action Plan’s analysis of severe injuries and fatalities over a 10-year period could provide additional context to the priority array’s use of 3-year collision data.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium

- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Potential Improvement 3

- **Location:** “Signal Priority Rating Process” section
- **Improvement:** Explore the potential to identify the location of senior centers and the feasibility of incorporating seniors’ unique traffic safety needs into the development and operation of nearby crossing improvements. Examples to consider could include investigation of the availability of geospatial land use data to inform field investigations, development of guidance for staff on how to use MUTCD-approved modifications for warrant analysis, review of senior-related factors during the next signal priority array methodology update, etc.
- **Reasoning:** Senior pedestrians have unique physical and cognitive needs that make them more vulnerable road users and senior centers may serve as a focal point for senior pedestrians. However, the availability and reliability of senior center data is unknown. Additionally, the County may want to consider legal and administrative factors associated with changing signal operation and prioritization.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improvement may particularly benefit vulnerable populations that travel near the locations listed above.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Land Use Planning
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Potential Improvement 4

- **Location:** “Section Signal Priority Rating Process” section
- **Improvement:** Investigate the feasibility of implementing “near-miss” detection technology.
- **Reasoning:** Reliance on crash data can overlook locations with recurring conflicts that haven’t resulted in reported collisions.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improvement may particularly benefit historically underserved communities that previously may have been excluded from engagement.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads

- **Impact To County:** Medium
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$\$. Estimated costs reflect the need to research and pilot the technology. Equipment acquisition, installation, operation, and maintenance costs are not included in this estimate.
- **Time Range for Implementation:** Medium

Potential Improvement 5

- **Location:** New section
- **Improvement:** Specify how often this priority array is updated.
- **Reasoning:** Documenting the desired update frequency improves knowledge transfer with staff turnover. The review cycle should reflect the division's business needs, the rate of unincorporated area traffic change, financial constraints, and the ability to detect and react to emerging safety concerns.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 6

- **Location:** New section
- **Improvement:** Document and implement a standardized post-installation evaluation process for intersection improvements. This could include measures such as a reduction in crashes and traffic operations performance.
- **Reasoning:** Completing post-installation evaluation can help assess whether the signal is meeting safety and operational goals; this also helps guide future investments.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Plan/Policy 9 - King County High Collision Safety Report

Status:

2024 Draft

Description:

This document analyzes King County intersections and roadway segments to identify locations that have experienced higher than normal reported crash rates. The document is updated periodically, allowing the County to track trends over time and respond with data-driven safety strategies. The report identifies and compares high-collision locations across years, discusses potential treatments, and notes challenges, such as limited CIP funding. In addition to countywide crash data, the report includes site-specific reviews, offering both systemwide perspective and localized detail.

What are some notable insights?

The King County High Collision Safety Report is particularly valuable because it provides both a high-level discussion of county-wide trends and site-specific safety discussion for individual sites that require a closer look. The methodology is clearly described in the report, and in some cases, conceptual countermeasures are included to guide potential improvements. A potential enhancement would be to incorporate additional land use context—such as nearby schools, senior centers, or transit stops—for each location. Doing so would strengthen the link between roadway safety performance and the surrounding environment, and better support prioritization of treatments for vulnerable road users.

How does this document prioritize safety?

- The document tabulates high crash locations and clearly explains its methodology.
- The document provides treatment recommendations and briefly explains the reasoning for them.
- The process for reviewing candidate sites combines multiple data sources with field investigations, ensuring that both statistical evidence and on-the-ground conditions inform safety decisions.

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** New section
- **Improvement:** Include a paragraph connecting these findings to the High Injury Network identified in the King County Traffic Safety Action Plan. The County may also benefit from a paragraph that states the difference between the High Collision Network and the High Injury Network, including how they are intended to be used.

- **Reasoning:** Comparing the High Collision Report with the High Injury Network may reveal overlapping locations, highlighting patterns that can inform County priorities for funding allocation and future project development.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Medium

Potential Improvement 2

- **Location:** Add to each location
- **Improvement:** Describe surrounding land use at each location.
- **Reasoning:** A description of surrounding land use, such as nearby schools or low-income housing, may help identify population characteristics of roadway users at that location. This may help determine the safety treatment, contributing factors, other patterns in high collision locations, or non-engineering countermeasures such as education, enforcement, or emergency-response based approaches.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Land Use Planning
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Medium

Plan/Policy 10 - King County Roadside Barrier Program Priority Array Development, Phase 2

Status:

Published September 2003

Description:

This document evaluates and prioritizes candidate sites for roadside safety mitigation across King County. It organizes findings into three separate priority arrays: (1) new barriers, (2) retrofit barriers, and (3) bridge rails. The array methodology scores sites based on two principal considerations: risk potential (likelihood of vehicles running off the road) and severity (likelihood of personal injury if a crash occurs). Each priority array is presented in a dedicated chapter, with appendices providing details on parameters, validation methods, finalized rankings, and user guidance. For the purposes of this policy review effort, only Chapter 1 (Introduction), Chapter 4 (Bridge Rail Array), and the bridge rail portion of Appendix A (Priority Array Parameters) were reviewed, as the new guardrail and retrofit programs have been substantially completed.

What are some notable insights?

The program provides a targeted framework for addressing roadside barrier needs, focusing on locations with the greatest risk of severe run-off-the-road crashes. However, because the methodology has not been significantly updated since 2003, it may not reflect current best practices. There is also an opportunity to align this work with the King County Traffic Safety Action Plan, particularly the High Injury Network, to help direct resources toward locations with the greatest safety needs.

How does this document prioritize safety?

- Run-off-the-road collisions from a five-year period are used to define risk potential for new and retrofit barriers. (pages 2-2 and 3-1)
- Safety deficiencies are identified at existing King County bridges through the bridge rail array. (Appendix H)
- A quantitative ranking system is used that links site selection directly to crash data and injury risk, reinforcing a systematic and data-driven approach to roadside safety.

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Appendix A
- **Improvement:** Review priority array inputs based on recent updates to the Washington State Bridge Inventory System (WSBIS) and WSDO Bridge Inspection Manual and update where appropriate. For instance, parameter B1 is calculated using a Deck Geometry factor per WSDOT Bridge Inspection Manual.

This factor is discontinued in the most recent [WSDOT Bridge Inspection Manual](#) (see WSBIS Item 1658 on page 2-D-60 of the WSDOT Bridge Inspection Manual).

- **Reasoning:** The WSDOT Bridge Inspection Manual has evolved which may affect data availability.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** High
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$-\$\$\$
- **Time Range for Implementation:** Medium

Potential Improvement 2

- **Location:** Chapter 4
- **Improvement:** Include alignment with the Traffic Safety Action Plan, particularly the High Injury Network.
- **Reasoning:** Comparing the run-off-the-road collisions with the High Injury Network may reveal overlapping locations, highlighting patterns that can inform County priorities for funding allocation and future project development.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Plan/Policy 11 - School Zone Safety Improvements – Priority Process

Status:

Draft (used in practice)

Description:

The School Zone Safety Improvements process includes guidelines and a spreadsheet tool to prioritize safety improvements in school speed zones. These guidelines define conditions that shall be met prior to installing school zone beacons and other safety improvements. They also include criteria that generate a prioritization array to rank candidate locations. The framework recommends that beacons be installed first at all locations meeting warrants before other improvements are considered. The spreadsheet tool scores potential project locations and lists screening criteria for identifying additional improvements.

What are some notable insights?

The listed warrants, priority arrays, and screening criteria consider a variety of factors. Documentation could be improved to better align the guidelines and the spreadsheet and to provide more instructions for tool users.

How does this document prioritize safety?

- The process uses both posted speed limit and 85th percentile speed. The use of both metrics aligns with current best practices and provides insight into observed behavior.
- Incorporates five years of collision history into the prioritization array, ensuring that data-driven safety performance informs decision-making.
- The spreadsheet scoring incorporates roadway characteristics (e.g., curved vs. straight alignment, rolling vs. level terrain), recognizing that certain conditions increase crash risk and merit targeted improvements.

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Spreadsheet: Section 1, Minimum Screening Criteria
- **Improvement:** List “pedestrian and bicyclist” instead of just “pedestrian” collisions in Section 1, Minimum Screening Criteria.
- **Reasoning:** Bicyclists are vulnerable roadway users and children may bike to school. Improvement may also benefit agency staff by making the screening criteria clear.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian and bicyclist facilities benefit all pedestrians and bicyclists,

but they have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities.

- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Road Users
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Potential Improvement 2

- **Location:** Spreadsheet: Section 1, Minimum Screening Criteria
- **Improvement:** Add a criterion for corridors or intersections that are located on the Traffic Safety Action Plan collision analyses.
- **Reasoning:** Best practices suggest focusing improvements along the High Injury Network to address areas with the greatest crash risk. Improvement may also benefit agency staff by making the screening criteria clear.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Potential Improvement 3

- **Location:** Spreadsheet
- **Improvement:** Develop a user guide that integrates the spreadsheet and guidelines.
- **Reasoning:** Directions may help new County staff understand and utilize both documents in the manner intended and improve knowledge transfer with staff turnover.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Plan/Policy 12 - King County Road Services Division Traffic Operations Manual – Section 9 Pedestrian Crossing Policy

Status:

April 2019 Draft

Description:

The King County Road Services Division's Pedestrian Crossing Policy is detailed in Section 9 of the Road Services Division Traffic Operations Manual. The Traffic Operations Manual describes standard County practice to assist traffic engineering staff in their day-to-day operations. The Pedestrian Crossing Policy guides the analysis of pedestrian safety.

What are some notable insights?

- The Pedestrian Crossing Policy states that street crossing locations should be routinely evaluated to determine whether to install a marked crosswalk or other crossing treatments.
- While the framework is useful, some of the references and guidelines cited are outdated and could benefit from alignment with current best practices.

How does this document prioritize safety?

- The policy emphasizes a context-sensitive approach by outlining three categories of crossing treatments, allowing engineers to tailor solutions to site conditions. (Page 37)
- The evaluation for crossing treatment includes a variety of safety-related factors, including posted speed limits, 85th percentile speeds, pedestrian volumes, and proximity to facilities that generate pedestrian activity, such as transit stops or senior citizen centers. This structured process prioritizes safety by integrating data-driven criteria into crosswalk decision-making. (Page 37)

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Throughout. Examples: page 37, graphic on page 39, and page 42.
- **Improvement:** Update language to reflect current state level and federal guidance. Refer to WSDOT Design Manual, [NACTO Urban Street Design Guide](#) and the [FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations](#). For example, actuated flashers may be referring to Rectangular Rapid Flashing Beacons and the minimum raised median width is listed as 7 ft in the WSDOT Design Manual Exhibit 1510-30, as opposed to the 4 ft listed in the

Pedestrian Crossing Policy. Additionally, clarify the purpose of the figure and the table on pages 39 and 40.

- **Reasoning:** Clear language helps all County staff understand crosswalk treatment requirements. Updated language can align this document with best practices at the state and national levels.
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian facilities benefit all pedestrians, but they have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Speeds
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Potential Improvement 2

- **Location:** Page 40
- **Improvement:** Assuming the first section is an RRFB warrant, update this policy so that locations are prioritized based on roadway characteristics, pedestrian volumes, and nearby features, such as schools and parks.
- **Reasoning:** Reliance on a warrant framework may prevent installation of RRFBs in locations with safety needs but insufficient volumes to warrant an RRFB. Prioritizing RRFB installation locations based on roadway characteristics is a more proactive approach to safety and aligns with best practices. See [FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations](#).
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian facilities benefit all pedestrians, but they have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Speeds
- **Impact To County:** Low
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Potential Improvement 3

- **Location:** Page 38, bullet #2
- **Improvement:** Add language that explicitly states that engineering judgement may be used in order to install a pedestrian-actuated signal.
- **Reasoning:** Pedestrians may choose not to use an existing unmarked or marked crossing because there is no crossing treatment, and the pedestrian warrant may be difficult to meet. [MUTCD Section 4C](#) also states that an engineering study may be used to justify the addition of pedestrian signal heads; additionally, restating it in the policy may encourage proactive use of this treatment. See [FHWA Guide for Improving Safety at Uncontrolled Crossing Locations](#).
- **Population Characteristics and Potential Equity Impact (if applicable):** Improved pedestrian facilities benefit all pedestrians, but they have a particular benefit in the county's low-income areas where car ownership is low and for people with disabilities.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Speeds
- **Impact To County:** Low
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$
- **Time Range for Implementation:** Short

Plan/Policy 13 - King County Road Services Division Traffic Operations Manual – Section 8 Speed Limit Studies

Status:

April 2019 Draft

Description:

King County's Traffic Operations Manual section on speed limit studies establishes the procedure for evaluating and revising posted speed limits on county roadways. The purpose of this policy is to provide guidance on how to analyze and evaluate the appropriateness of posted speed limits. The speed limit evaluation procedure was developed using criteria based on the Washington State Model Traffic Ordinance (WAC 303-308), the King County Code, and the FHWA Manual on Uniform Traffic Control Devices (MUTCD). Speed limits are set with the intention of encouraging motorists to drive in a manner that they feel is safe and appropriate for the roadway conditions. This approach is designed to minimize the number of motorists with significantly higher or lower speeds than the majority of motorists, foster respect for traffic laws, and support effective enforcement. The Traffic Operations Manual also references a spreadsheet tool to guide the evaluation process, which was included in the review.

What are some notable insights?

The speed limit setting policy relies primarily on the 85th percentile speed along with five years of collision data and roadway characteristics. The approach does not consider contextual factors, such as travel modes or surrounding land uses, nor does it describe the frequency of evaluating speed limits. Both of these practices are consistent with current best practices and allow for a more responsive approach. Additionally, the speed limit policy is set by K.C.C 14A.10.020, 14A.10.030, and 14.06; changes to the policy would require updates to the Code by the King County Council.

How does this document prioritize safety?

- The speed limit setting procedure includes a “Minimum Study” and a “Refined Study” that incorporate existing 85th percentile speeds, roadway characteristics, and collision data over a five-year period. (Page 35)
- The speed limit setting procedure requires staff to collect speed and volume data. Site visits are to be conducted to determine a safe and comfortable traveling speed and evaluate entering and stopping distances. (Page 35)
- The speed limit setting procedure uses historical collision data over a five-year period. (Page 35)

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Section 9
- **Improvement:** Develop and document a standard for when and how often to (re)evaluate speed limits. For example, MUTCD Section 2B.21 paragraph 11 states “State and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review (such as changes to roadway context, the addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the configuration of bicycle lanes, changes to road geometrics, changes in traffic control signal coordination, or significant changes in traffic volumes).” See potential improvement 5 under Plan/Policy 1 Comprehensive Plan.
- **Reasoning:** Repeated evaluations can help the division to respond to changing conditions, evaluate project effectiveness, and inform enforcement efforts.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Speeds, Safer Roads, Safer Road Users
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$\$\$. Estimated costs reflect the need to research and develop an effective policy, incorporate it into policies and standards, and complete the legislative process as needed.
- **Time Range for Implementation:** Medium

Potential Improvement 2

- **Location:** Section 9
- **Improvement:** Update speed limit setting policies to current best practices that incorporate other modes of travel and the surrounding land use context. For example, see [NCHRP Report 966: Development of a Posted Speed Limit Setting Procedure & Tool](#), [Washington State Injury Minimization and Speed Management Policy Elements](#), [US LIMITS2](#), [NACTO City Limits document](#), etc.
Note: The division is developing an initiative to review posted speed limits (and the spacing of speed limit signage) at certain locations with an increased emphasis on the surrounding land use context. This initiative will include an

assessment of effectiveness and potential for expansion. See potential improvement 5 under Plan/Policy 1 Comprehensive Plan.

- **Reasoning:** Recent best practices no longer primarily use the 85th percentile speeds to set speed limits.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Speeds, Safer Roads
- **Impact To County:** High
- **Safety Impact:** High
- **Cost Estimate Range:** \$\$\$. Estimated costs reflect the need to research and develop an effective policy, incorporate into policies and standards, and complete legislative process as needed.
- **Time Range for Implementation:** Medium

Potential Improvement 3

- **Location:** Spreadsheet
- **Improvement:** Add user instructions within the spreadsheet.
- **Reasoning:** Directions may help new County staff understand and correctly use the tool.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Speeds, Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Low
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Plan/Policy 14 - King County Road Services Division Traffic Operations Manual – Section 5.6 Radar Speed Signs

Status:

April 2019 Draft

Description:

Section 5.6 of the King County Traffic Operations Manual relates to radar speed signs, a traffic safety tool designed to reduce vehicle speeds by providing real-time driver feedback. Using radar technology, radar speed signs detect approaching vehicle speeds and display those speeds alongside the posted speed limit to encourage safer driving. The policy outlines three programs:

1. Radar Speed Trailer Program – Mobile units deployed weekly to specific roadways, usually Monday through Friday. Residents act as local sponsors and are trained to reset the radar unit if needed. Speed data from the radar speed trailers is made available to residents upon request.
2. Rotational Radar Speed Sign Program – Battery-powered signs rotated among two to three nearby locations on a two-week cycle. Speed data from the rotational radar signs is made available to residents upon request.
3. Permanent Radar Speed Sign Program – Sites are considered for fixed sign installation after speed data is monitored for two to five years.

Roadways are prioritized for rotational or permanent signs using a scoring system. Each location is typically treated with a temporary trailer (#1) first, then a rotational sign (#2), and after four to eight years of monitoring, consider a permanent sign (#3). These speed radar signs or speed data from these signs are not used for speed enforcement.

What are some notable insights?

The radar speed sign policy generally follows a process of escalation, progressively advancing locations through higher levels of monitoring and intervention. The general strategy of collecting speed data is acceptable, but there is room for improvement. The policy could be strengthened by expanding speed trailer deployments to cover full seven-day periods instead of weekdays only; clarifying the specific methods of data sampling; accounting for proportional speed differences between posted and observed speeds (instead of just absolute difference); defining pedestrian activity categories, and incorporating contextual factors (e.g., bike lanes or school zones).

How does this document prioritize safety?

- The document describes a process to identify locations that have speeding issues and uses a consistent set of criteria to determine the highest-scoring locations. King County staff and residents can recommend locations that may have speeding issues.

What are the potential improvements that could be made to this document to help prioritize safety?

Potential Improvement 1

- **Location:** Page 24
- **Improvement:** Review mobile speed trailer capacity and battery life to determine whether radar speed trailers can be deployed for seven days (i.e., include weekends).
- **Reasoning:** Weekend periods typically experience lower traffic volumes, creating conditions where higher speeds may be more likely. Including weekend periods provides a more representative dataset of both congested and free-flow conditions.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads, Safer Road Users
- **Impact To County:** Medium
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 2

- **Location:** Pages 25-26
- **Improvement:** Provide additional clarity on how traffic speed data is sampled for evaluation. In particular, provide additional clarity on the time periods that will be considered, such as the average of all data collected, peak periods, peak hours, or the highest peak hour.
- **Reasoning:** Sharing more specifics of traffic speed analysis improves knowledge transfer with staff turnover. Additionally, analyzing speed data consistently can help determine better locations to select radar speed signs and identify locations that may need other safety treatments.
- **Population Characteristics and Potential Equity Impact (if applicable):** Carefully consider the equity impacts of using this information for speed enforcement purposes. Evaluate radar speed sign placement to promote equitable distribution and avoid under concentration or overconcentration in historically disadvantaged neighborhoods. **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Medium

- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 3

- **Location:** Pages 25-26
- **Improvement:** Adjust traffic speed evaluation criteria so that scores are proportionate relative to the posted speed limits. Locations with lower posted speed limits would receive higher scores for speeds exceeding the limit compared to the locations with higher posted speed limits.
- **Reasoning:** Measuring the difference between observed and posted speeds as a proportion of the posted limit provides a more accurate reflection of safety risks. For instance, driving 8-mph over a 20-mph speed limit may pose a greater safety risk to vulnerable road users than driving 8-mph over a 50-mph speed limit. Under the current screening criteria, the context of the posted speed limit is not considered, which may undervalue risks in lower-speed areas.
- **Population Characteristics and Potential Equity Impact (if applicable):** A potential tradeoff is that this improvement could place less emphasis on the fact that higher absolute speeds are associated with more severe injury outcomes.
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Speeds, Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 4

- **Location:** Pages 25-26
- **Improvement:** Clarify how pedestrian activity is grouped into “light,” “medium,” and “heavy” categories and how the collision history evaluation is conducted. Add language regarding how to measure light, medium, or heavy pedestrians. Clarify what crashes are defined as “correctable” collisions.
- **Reasoning:** Clarifying the required pedestrian activity, even if only approximate quantity thresholds, would provide clarity to the screening process and improve consistency. Clear criteria can allow all County staff to understand radar speed sign implementation.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low

- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Potential Improvement 5

- **Location:** Pages 25-26
- **Improvement:** Include other street conditions and contextual items in the evaluation criteria, such as the presence of bike lanes, schools, transit stops, existing school speed zone or other pedestrian and bicyclist generators.
- **Reasoning:** More scoring opportunities for the presence of bicycle facilities and proximity to schools would help focus speed radar signs where there are more vulnerable road users.
- **Population Characteristics and Potential Equity Impact (if applicable):** None
- **Recommendation Type:** Engineering/Planning/Infrastructure
- **Safe System Approach Elements:** Safer Roads
- **Impact To County:** Low
- **Safety Impact:** Medium
- **Cost Estimate Range:** \$
- **Time Range for Implementation:** Short

Other Best Practices

The following best practices for policies and procedures do not relate to the policy documents reviewed above, but are relatively low-cost strategies that can help advance safety practices (if not already being implemented).

- Prioritize policy document management to ensure ease of use and consistency as new staff are hired. Standard practices include standard naming conventions, incorporation of instructions in spreadsheet-based tools, standardized filing locations, and assigned ownership of data and documentation.
- Review all capital projects during early design stages to identify opportunities to incorporate low-cost safety enhancements.
- Prioritize training on the Safe System approach and FHWA Proven Safety Countermeasures.
- Regularly update the King County Signal Timing Guidelines to reflect current safety measures and reflect countermeasures identified in the King County Traffic Safety Action Plan.
- Update the Intelligent Transportation System (ITS) strategic plan to include current safety technology for roads and intersections and countermeasures that may be identified in the King County Traffic Safety Action Plan.

Appendix C: Engagement Summary





DATE: December 8, 2025

SUBJECT: Engagement Summary

PROJECT NAME: King County Traffic Safety Action Plan

Executive Summary

The King County Department of Local Services Road Services Division (Road Services) conducted community outreach to inform the development of the Traffic Safety Action Plan. The division solicited input primarily through an online survey. The division promoted the survey via social media, e-newsletters, flyers, a community meeting, two targeted email blasts, messaging on the division homepage, and messaging appended to standard customer service response emails.

The survey was designed to understand unincorporated county road users¹ traffic safety concerns and priorities. Respondents identified specific locations using an online mapping tool, identified their top three traffic safety concerns, and identified their top three priorities for addressing traffic safety.

While concerns and priorities varied across Community Service Areas (CSAs), the most frequently indicated concern was vehicle speed (selected by 47% of respondents). A lack of safe places to walk and distracted driving were the second and third most commonly identified concerns (selected by 36% and 33% of respondents, respectively). Notable variations by CSA include the following:

- While a lack of protected bike lanes or paths was the fourth most frequently identified concern overall, it was the second most frequently identified concern by respondents who travel on Vashon-Maury Island.
- While a desire for more enforcement was the fifth most frequently identified concern overall, it was the second most frequently identified concern by respondents who travel in Skyway. It was the third most frequently identified concern for respondents who travel in East Federal Way/Lakeland South and Southeast King County.
- While crossing the street safely was the sixth most frequently identified concern overall, it was the third most frequently identified concern in North Highline.

When asked where the County should focus on making roads safer, respondents selected “busy roads” most frequently (selected by 31% of respondents), followed by “places where crashes have happened before” and “neighborhood roads” (both selected by 28% of respondents).

While some survey results align with the collision data analysis (e.g., speed and distracted driving were relatively frequently identified by respondents and are more common on the

¹ The County has established seven Community Service Areas to support planning and analysis that reflects the unique character of each part of the county. The West King County CSA is comprised of the discrete urban potential annexation areas.

unincorporated road network compared to other types of collisions), they are not aligned in other respects. For example, walking and biking safety concerns were commonly identified as a concern among survey respondents but run-off-the-road collisions were not, the collision data analysis identifies run-off-the-road as the most common type of crash and relatively low rates of pedestrian and bicycle crashes.

These findings will be used to inform the Traffic Safety Action Plan prioritization process and future engagement with the community. Map-based information provided by respondents will be further analyzed by the division to assess traffic safety needs.

Introduction

The King County Department of Local Services Road Services Division (Road Services) is developing a Traffic Safety Action Plan under the Safe Streets and Roads for All grant program. This project will use community engagement to inform collision and policy analysis. This report describes the engagement process and summarizes community input.

The project's engagement meets the Safe Streets and Roads for All program requirements:

Program Requirement		How this Plan Meets the Requirements
✓	Engagement with the public and relevant stakeholders, including the private sector and community groups	Public engagement is described in the Outreach section of this document and Attachment 1. It included outreach to county road users throughout the county, and leveraged online engagement to provide feedback opportunities to people across the county's widespread service area.
✓	Incorporation of information received from the engagement and collaboration into the plan	Feedback regarding traffic safety concerns and priorities were used to validate the analysis approach and prioritization strategies. Findings are described in the Survey section of this report. The Plan's strategies will include a strategy to develop partnerships with agencies that can address the concerns raised by respondents.
✓	Coordination that included inter- and intra-governmental cooperation and collaboration, as appropriate	The engagement effort included a focused effort to reach out to adjacent jurisdictions. This coordination is described in the Outreach section and Attachment 1 of this report. This effort was intended to raise awareness of safety issues on contiguous roads and to engage residents of other jurisdictions that may use county roads.
✓	This should include a description of public meetings, participation in public and private events, and proactive meetings with stakeholders	Public meetings are described in Attachment 1 of this report.

Outreach

Outreach for the Traffic Safety Action Plan was led by the division. The project subconsultant, PRR, provided feedback on proposed survey questions and prepared a promotional flyer. Information was available to the public in alternate languages and alternative formats as

needed. See Attachment 1 for outreach materials and details. The survey and promotional material were designed to use clear, concise, and plain language.

The online survey was promoted online via:

- social media
- the Unincorporated Area News e-newsletter
- an e-mail to over 700 people who had previously contacted the division to share traffic safety concerns
- an email to public works and related officials at eighteen cities near the unincorporated area
- messaging and links appended to standard customer service emails
- emails to potentially interested parties at community organizations, tribes, and other community contacts. Some of these organizations shared the survey link via their own outreach methods.

The survey was promoted via flyers distributed to libraries and community centers in or near the unincorporated area and at two events held in the unincorporated area.

Roads attended a Vashon-Maury Community Council meeting to discuss traffic safety, the survey, and the plan with community members.

Survey

Roads received 1,209 unique responses to the survey. Survey respondents were asked to select the areas of unincorporated King County they lived in or traveled through most often, the transportation modes they usually used to get around, their top three types of road safety concerns, and the top three types of location that the county should focus on making roads safer. Respondents were also asked to identify any roads, intersections or areas where they felt unsafe walking, biking, rolling or driving using a map-based comment tool. Demographic information was also solicited.

Travel Location

Responses were received from all Community Service Areas, although respondents were most likely to report that they lived in or traveled in Snoqualmie Valley/Northeast King County, Bear Creek/Sammamish/Novelty Hill, and Fairwood/East Renton. See Table 1 below. While respondents could select multiple areas, most only identified one area (78%); less than 8% selected more than two areas.

Table 1: Respondent Travel Areas

<i>What areas of unincorporated King County do you live in or travel through most often?</i>		
Subarea	Number of respondents	Share of respondents
Bear Creek/Sammamish/Novelty Hill	225	19%
East Federal Way/Lakeland South	43	4%
Fairwood/East Renton	222	18%
Four Creeks/Tiger Mountain	113	9%

<i>What areas of unincorporated King County do you live in or travel through most often?</i>		
Subarea	Number of respondents	Share of respondents
Greater Maple Valley/Cedar River	136	11%
Skyway	81	7%
Snoqualmie Valley/Northeast King County	382	32%
Southeast King County	128	11%
Vashon/Maury Island	146	12%
White Center/North Highline	57	5%
No response	40	3%

Note: Respondents could select more than one subarea

While respondents may not be familiar with the exact location of the Community Service Areas, these findings broadly align with zip code data provided by respondents (see Demographics section below).

Travel Mode

Nearly all respondents usually get around by driving (94%), while just under half usually walk (45%) and a quarter bike or scooter (respondents could select more than one travel mode). Most respondents who walk or bike also drive (96% and 93%, respectively). Nine people reported using a wheelchair. See Table 2.

Table 2: Travel mode

<i>How do you usually get around? Please check all that apply.</i>		
Mode	Number of respondents	Share of respondents
Drive	1,087	94%
Walk	523	45%
Bike or scooter	293	25%
Transit (bus or light rail)	121	10%
Rideshare (Uber or Lyft)	28	2%
Other (please specify)	15	1%
Wheelchair or mobility device	9	1%
Total unique respondents	1,156	

Note: Respondents could select more than one mode

Traffic Concerns

Respondents were asked to report their top three safety concerns. The multiple-choice options were derived from the Washington Strategic Highway Safety Plan emphasis areas and commonly heard concerns from previous engagement with the public. Nearly 1,200 respondents selected at least one type of traffic concern. The percentage of respondents selecting each

concern are shown in Figure 1. Results by subarea are shown in Table 3. The five most frequently selected concerns are shown below (and highlighted in Table 3).

- **Speed** (“cars go too fast”) was the most selected concern overall, and was the first or second most frequently selected concern for every subarea.
- **No sidewalks** was the second most selected concern overall. This concern was voiced by rural community service area road users as well as urban area road users. This is notable as rural road standards typically call for multi-use shoulders rather than sidewalks.
- **Distracted driving** was the third most frequently selected concern overall. It was the most selected concern for Four Creeks/Tiger Mountain and Greater Maple Valley/Cedar River.
- **No protected bike lanes or paths** was the fourth most selected concern overall. It was among the top five concerns for all subareas except Skyway.
- **More traffic enforcement needed** was the fifth most selected concern overall. It was within the top five for all subareas except Snoqualmie Valley/Northeast King County, Vashon/Maury Island, and White Center/North Highline.

Also of note, White Center respondents were more likely to select “crossing the street safely” than other subareas.

Interestingly, concerns identified by the survey did not perfectly align with the results of the collision data analysis (see Appendix A of the Traffic Safety Action Plan). For example, the emphasis area associated with the greatest share of fatal and serious injury crashes on unincorporated King County roads is run-off-the-road crashes (37%); only 3% of respondents identified this as one of their top three concerns. In contrast, pedestrian-involved fatal and serious injury collisions are less common on unincorporated area roads than most other emphasis areas (12%), but a lack of sidewalks and lack of safe places to bike were the second and fourth most selected concerns (36% and 25%, respectively). There are multiple potential reasons for the dissimilarities between collision and survey data, including:

- the wide variation of conditions across the county’s urban and rural road networks, in combination with the uneven distribution of survey respondents.
- concerns regarding walking and biking safety may prevent people from traveling by foot or by bike.
- collision data does not capture “near-miss” events
- the relative frequency of certain collision types, such as run-off-the-road collisions or young-driver involved collisions (32% of fatal and serious injury crashes on unincorporated King County roads), may not be visible to the public.

Figure 1: Top Road Safety Concerns

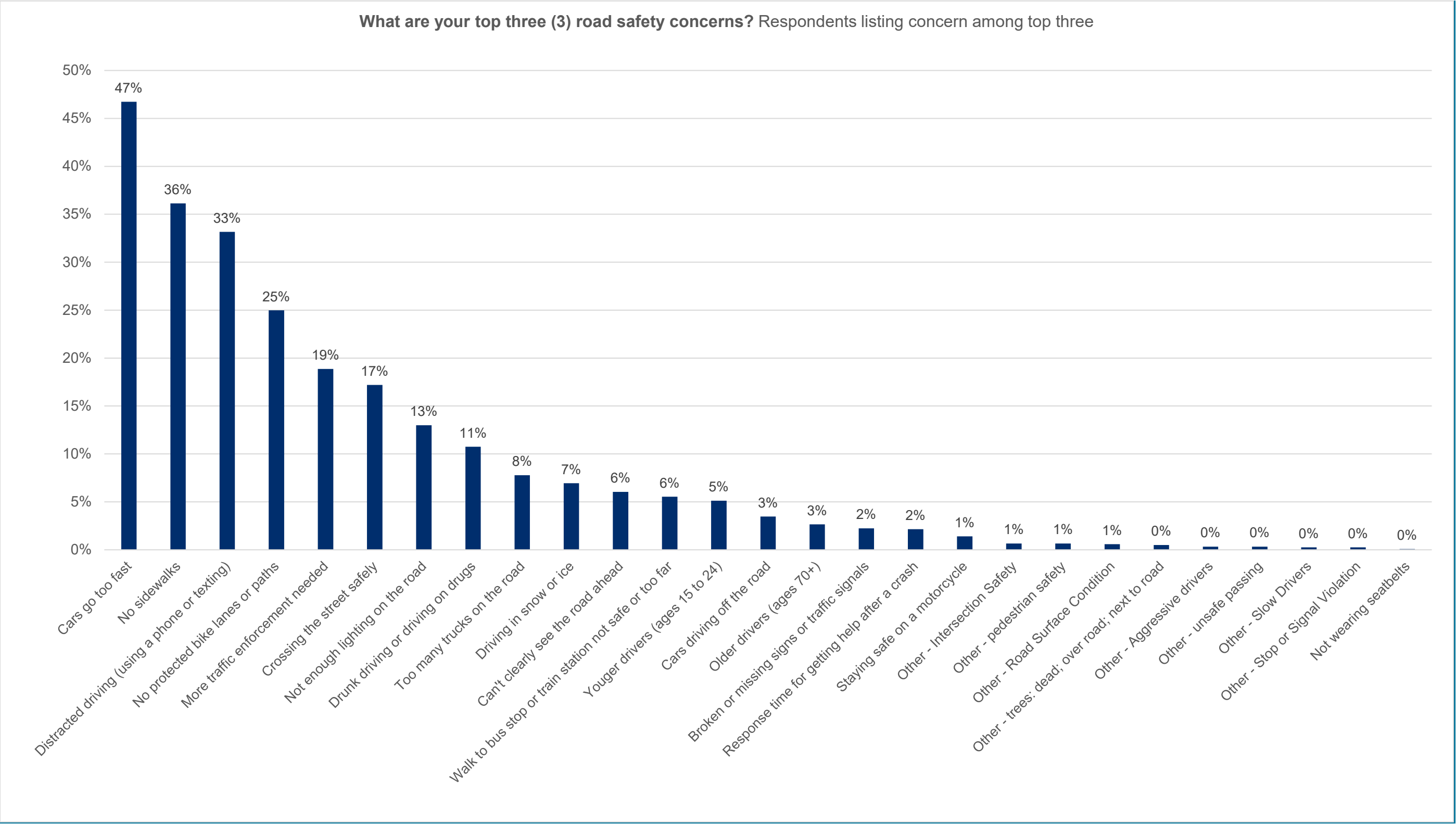


Table 3: Top Road Safety Concerns

What are your top three (3) road safety concerns? Results by traveled CSA

Concerns	Bear Creek/ Sammamish/ Novelty Hill		East Federal Way/ Lakeland South		Fairwood/ East Renton		Four Creeks/ Tiger Mountain		Greater Maple Valley/ Cedar River		Skyway		Snoqualmie Valley/ Northeast King County		Southeast King County		Vashon/ Maury Island		White Center/ North Highline		All	
	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share
Cars go too fast	1	41%	1	49%	1	47%	2	30%	2	40%	1	63%	1	40%	1	44%	1	51%	1	58%	1	47%
No sidewalks	2	40%	3	35%	2	39%	4	27%	3	28%	3	33%	3	32%	4	28%	4	28%	2	54%	2	36%
Distracted driving (using a phone or texting)	3	36%	2	37%	2	39%	1	38%	1	41%	4	27%	2	37%	2	36%	3	31%	4	32%	3	33%
No protected bike lanes or paths	4	28%	5	19%	5	21%	3	29%	4	25%	7	11%	4	27%	5	16%	2	40%	5	25%	4	25%
More traffic enforcement needed	5	16%	3	35%	4	25%	6	16%	5	18%	2	38%	6	14%	3	30%	7	12%	6	14%	5	19%
Crossing the street safely	7	10%	5	19%	7	14%	7	13%	9	11%	5	25%	5	17%	9	11%	5	21%	3	44%	6	17%
Not enough lighting on the road	6	14%	8	12%	6	19%	8	12%	6	17%	8	10%	6	14%	6	14%	9	5%	9	7%	7	13%
Drunk driving or driving on drugs	9	9%	7	14%	8	10%	13	5%	8	13%	6	16%	8	10%	7	13%	6	15%	7	11%	8	11%
Too many trucks on the road	12	5%	11	7%	9	8%	5	19%	7	15%	17	1%	10	8%	7	13%	16	1%	16	2%	9	8%
Driving in snow or ice	10	6%	14	2%	12	6%	9	11%	10	7%	13	2%	8	10%	16	2%	14	2%	11	4%	10	7%
Can't clearly see the road ahead	10	6%	10	9%	12	6%	12	6%	12	6%	13	2%	11	7%	10	7%	10	5%	18	0%	11	6%
Walk to bus stop or train station not safe or too far	8	9%	8	12%	10	8%	10	10%	10	7%	11	5%	13	3%	12	5%	10	5%	7	11%	12	6%
Younger drivers (ages 15 to 24)	14	3%	14	2%	10	8%	16	3%	13	4%	13	2%	12	5%	10	7%	12	4%	10	5%	13	5%
Cars driving off the road	14	3%	16	0%	14	3%	11	7%	16	3%	9	7%	13	3%	13	5%	12	4%	11	4%	14	3%
Older drivers (ages 70+)	13	4%	16	0%	18	1%	14	4%	17	2%	13	2%	16	2%	16	2%	8	8%	18	0%	15	3%
Broken or missing signs or traffic signals	16	2%	11	7%	15	3%	22	0%	14	4%	10	6%	18	2%	13	5%	14	2%	11	4%	16	2%
Response time for getting help after a crash	17	1%	13	5%	17	2%	16	3%	18	1%	12	4%	15	3%	15	4%	19	1%	11	4%	17	2%
Staying safe on a motorcycle	17	1%	16	0%	16	2%	14	4%	14	4%	17	1%	17	2%	16	2%	16	1%	18	0%	18	1%
Other - Intersection Safety	22	0%	16	0%	23	0%	22	0%	23	0%	20	0%	18	2%	22	0%	24	0%	18	0%	19	1%
Other - pedestrian safety	20	1%	16	0%	23	0%	22	0%	23	0%	20	0%	20	1%	22	0%	19	1%	11	4%	19	1%
Other - Road Surface Condition	17	1%	16	0%	23	0%	22	0%	23	0%	20	0%	20	1%	22	0%	16	1%	18	0%	21	1%
Other - trees: dead; over road; next to road	25	0%	16	0%	19	0%	16	3%	18	1%	20	0%	22	1%	22	0%	19	1%	18	0%	22	0%
Other - Aggressive drivers	25	0%	16	0%	19	0%	19	1%	18	1%	17	1%	24	0%	20	1%	19	1%	16	2%	23	0%
Other - unsafe passing	22	0%	16	0%	23	0%	22	0%	23	0%	20	0%	22	1%	22	0%	19	1%	18	0%	23	0%
Other - Slow Drivers	22	0%	16	0%	23	0%	19	1%	18	1%	20	0%	25	0%	19	2%	24	0%	18	0%	25	0%
Other - Stop or Signal Violation	20	1%	16	0%	19	0%	19	1%	18	1%	20	0%	25	0%	20	1%	24	0%	18	0%	25	0%
Not wearing seatbelts	25	0%	16	0%	19	0%	22	0%	23	0%	20	0%	25	0%	22	0%	24	0%	18	0%	27	0%
Respondents	225		43		222		113		136		81		382		128		146		57		1,209	

1st most frequently selected
2nd most frequently selected
3rd most frequently selected
4th most frequently selected
5th most frequently selected

Locations Where the County Should Focus on Making Roads Safer

Due to an error, respondents could choose “In neighborhoods or near homes” and/or “On neighborhood roads.” Only the latter was intended to be included as an option as homes can be located on busy roads. The results are shown below with the two options combined. Most frequently identified priority locations for making roads safer were, in order:

- Busy roads
- Places where crashes have happened before
- Around schools
- In neighborhoods or near homes / on neighborhood roads
- Near parks and playground

Results for the unincorporated King County network as a whole are shown in Figure 2, and by Community Service Area in Table 4.

There was variability across CSAs. For example, East Federal Way/Lakeland South road users most frequently identified a “neighborhood road option”, while White Center/North Highline selected “around schools” most frequently. Only Vashon/Maury Island road users identified “where people work or go shopping” within their top 5 most frequently identified priorities. This may reflect the relative lack of commercial centers in unincorporated King County.

Figure 2: Top Location Priorities for Traffic Safety Activities

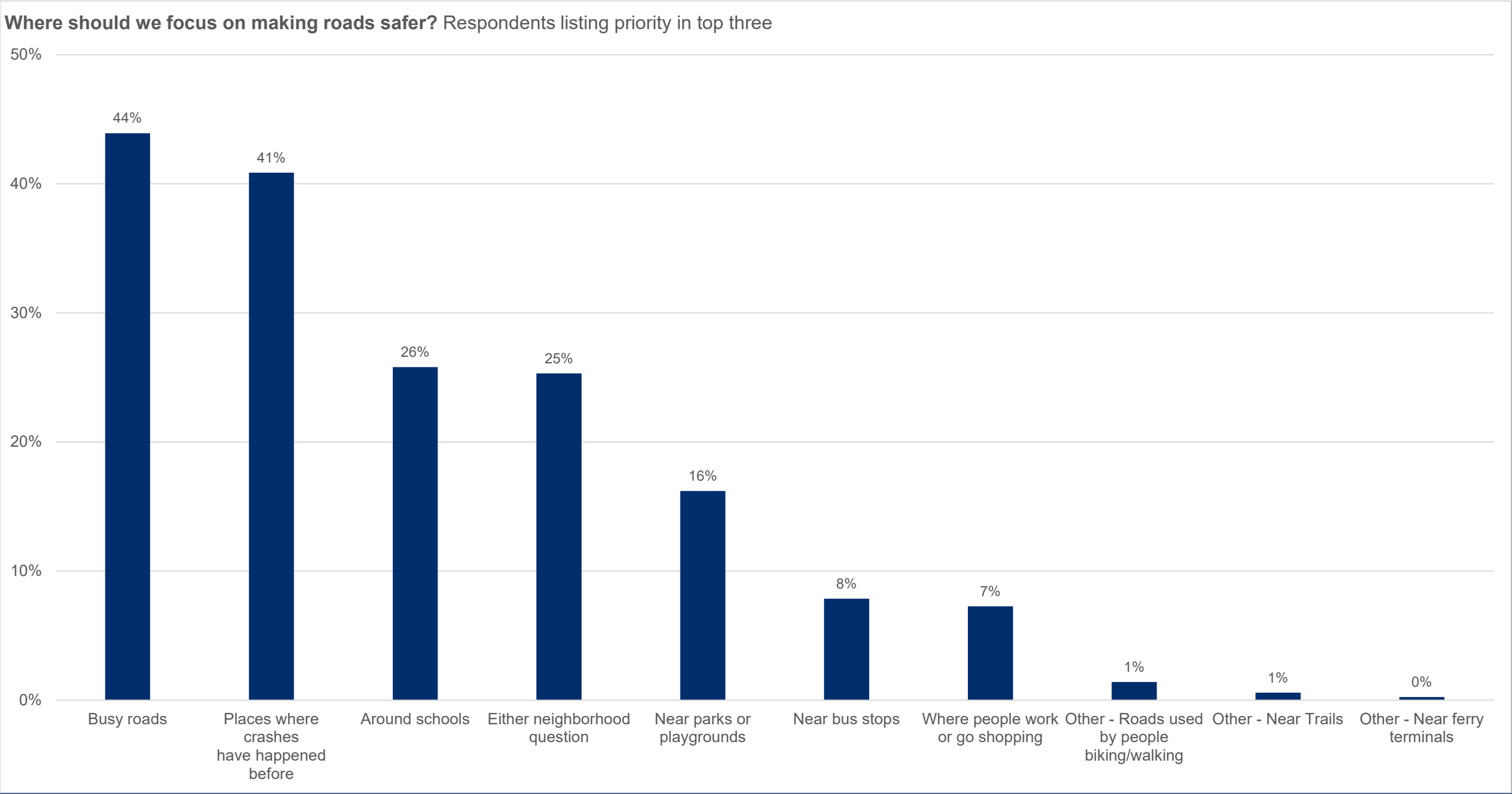


Table 4: Top Location Priorities for Traffic Safety Activities

Priorities	Bear Creek/Sammamish/Novelty Hill		East Federal Way/Lakeland South		Fairwood/East Renton		Four Creeks/Tiger Mountain		Greater Maple Valley/Cedar River		Skyway		Snoqualmie Valley/Northeast King County		Southeast King County		Vashon/Maury Island		White Center/North Highline		All	
	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share
Busy roads	1	44%	2	42%	3	35%	1	53%	2	49%	1	43%	1	49%	1	48%	2	40%	3	33%	1	44%
Places where crashes have happened before	2	42%	4	26%	1	45%	2	50%	1	56%	2	42%	2	44%	2	42%	1	42%	5	28%	2	41%
Around schools	4	22%	3	28%	2	39%	3	21%	3	26%	3	27%	3	21%	4	22%	3	24%	1	47%	3	26%
Either neighborhood question	3	38%	1	47%	4	23%	4	18%	5	19%	4	26%	4	15%	3	31%	4	22%	2	37%	4	25%
Near parks or playgrounds	5	12%	5	23%	5	22%	5	13%	4	22%	5	20%	5	13%	5	13%	7	10%	3	33%	5	16%
Near bus stops	6	8%	6	19%	7	6%	7	7%	7	6%	7	10%	7	4%	7	9%	6	13%	6	23%	6	8%
Where people work or go shopping	7	6%	7	9%	6	6%	6	10%	6	10%	6	11%	6	9%	6	11%	5	14%	7	11%	7	7%
Other - Roads used by people biking/walking	8	2%	8	0%	8	0%	9	0%	8	1%	8	0%	8	2%	8	1%	8	3%	8	0%	8	1%
Other - Near Trails	9	0%	8	0%	8	0%	8	1%	8	1%	8	0%	9	1%	9	0%	10	0%	8	0%	9	1%
Other - Near ferry terminals	10	0%	8	0%	8	0%	9	0%	10	0%	8	0%	10	0%	9	0%	9	2%	8	0%	10	0%
Respondents	225		43		222		113		136		81		382		128		146		57		1209	

1st most frequently selected
2nd most frequently selected
3rd most frequently selected
4th most frequently selected
5th most frequently selected

Roads, Intersection, or Areas that Feel Unsafe Walking, Biking, Rolling, or Driving

Respondents shared a variety of site-specific concerns throughout the unincorporated area. Over 1,160 virtual “pins” were placed on the survey mapping tool (see Figure 3). Half of the pins were related to driving, a third to walking, and the remainder to biking (see Table 5).

Figure 3: Locations Where Respondents Felt Unsafe

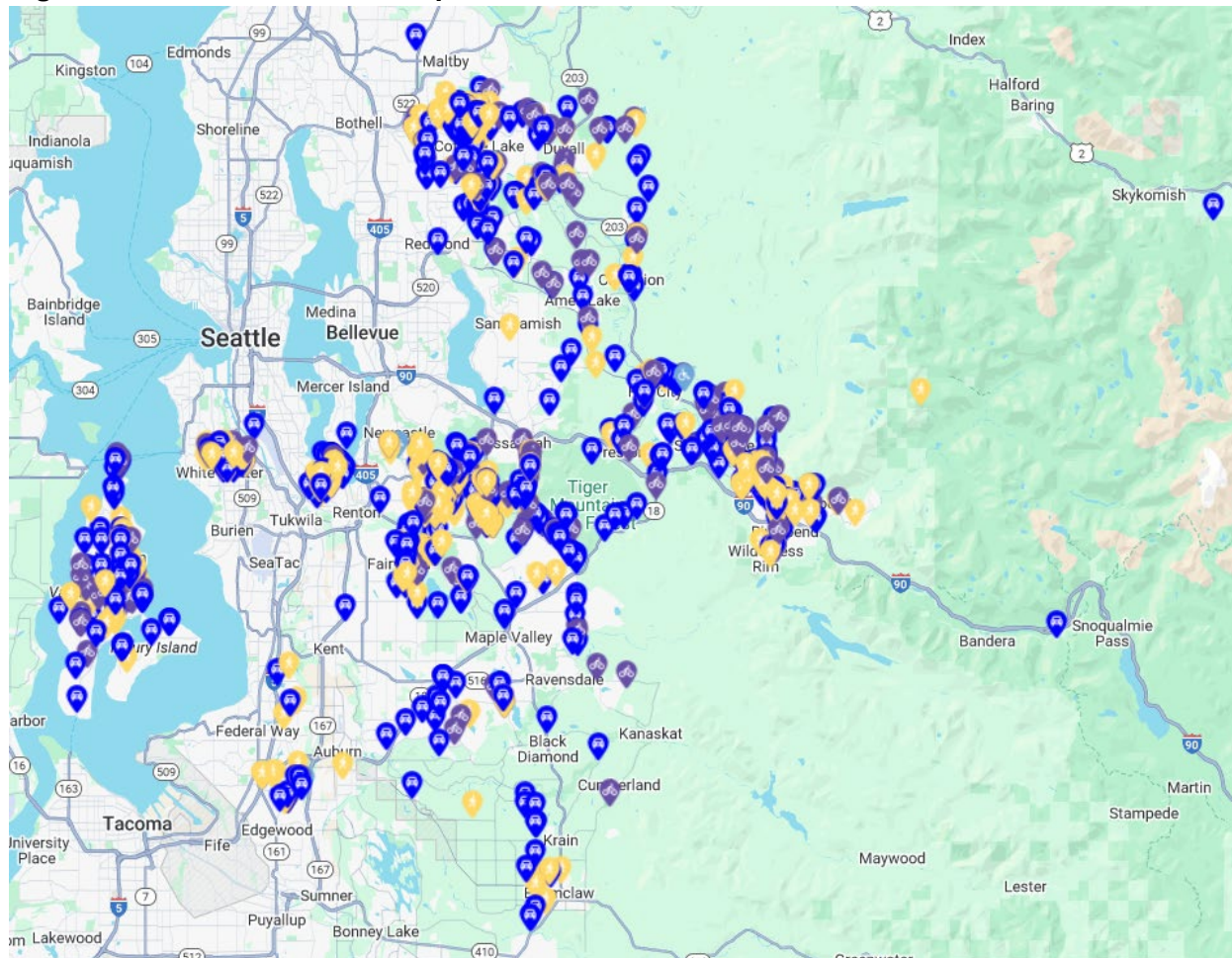


Table 5: Number of Pins by Type

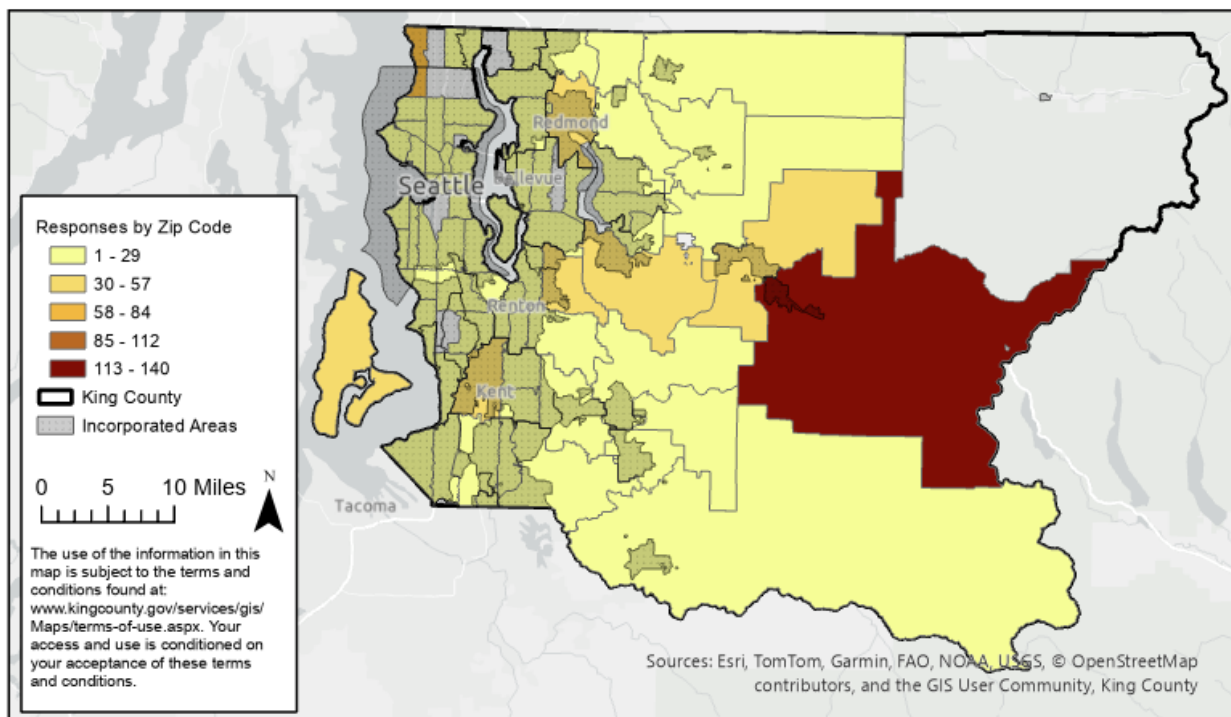
Pin Type	Number of Pins	Share of Pins
Unsafe biking	193	17%
Unsafe driving	555	48%
Unsafe rolling	12	1%
Unsafe walking	403	35%
Total	1,163	

Demographic information

Of the 1,143 respondents who provided a zip code, 87% were located in King County. An additional 6% of provided zip codes were located outside of the county, but within Washington. Most commonly provided out-of-state zip codes were in California, Oregon, and North Carolina. Zip codes outside of unincorporated King County may reflect respondents who live out of the area but use county roads, respondents who were unclear of the study location, or simply out-of-date or incorrect data.

Most King County zip codes—both incorporated and unincorporated areas—were represented in responses (see Figure 3). However, responses were much higher from the 98045 zip code, which includes the unincorporated areas of Riverbend, Riverpoint, and Wilderness Rim, as well as the city of North Bend.

Figure 4: Locations Where Respondents Felt Unsafe



Of the 667 respondents who answered “What is your gender identity?” the most common response was “female” (56%) and male (31%). See Table 6.

Table 6: Gender Identity

Gender Identity	Number of Respondents	Share of Respondents
Female	372	56%
Male	209	31%
Non-binary/gender non-conforming	21	3%
Transgender	10	1%
Other	8	1%
Prefer not to say	66	10%
Total respondents	667	

Note: Respondents could select more than one option

Of the 667 respondents who answered “Please select the population group or groups that you most closely identify with from the list below” the most common response was White (74%) followed by Asian or Asian-American (6%). See Table 7.

Table 7: Population Group

Population Group	Number of Respondents	Share of Respondents
White	493	74%
Asian or Asian-American	40	6%
Hispanic, Latina, Latino or Latinx	24	4%
American Indian or Alaska Native	16	2%
Black or African-American	10	2%
Native Hawaiian or Other Pacific Islander	4	1%
Middle Eastern or Northern African	3	0%
Other	15	2%
I prefer not to say	101	15%
Total respondents	666	

Note: Respondents could select more than one option

Of the 667 respondents who answered “What language(s) are spoken in your home?” most spoke English (see Table 8). Nearly 20% (125 respondents) reported speaking more than one language in the home.

Table 8: Language Spoken at Home

Language Spoken at Home	Respondents	Share of Respondents
English	607	91%
Spanish	19	3%
Chinese	9	1%
Arabic	3	0%
Russian	3	0%
Vietnamese	3	0%
Amharic	2	0%

Language Spoken at Home	Respondents	Share of Respondents
Korean	2	0%
Khmer	1	0%
Somali	1	0%
Ukrainian	1	0%
Other	34	5%
Prefer not to say	48	7%
Total Respondents	667	

Note: Respondents could select more than one option

Of the 670 respondents who identified their national origin, most originated in the United States (89%). See Table 9. Most respondents who selected “Other” did not identify their country of origin. Of those who did, “Canada” was the most frequent response (5 responses).

Table 9: National Origin

National Origin	Respondents	Share of Respondents
United States	594	89%
Other	42	6%
I prefer not to say	36	5%
Total Respondents	670	

Note: Respondents could select more than one option

Of the 670 respondents who identified their level of education, most had college degrees or an equivalent. (77%). See Table 10. Most respondents who selected “Other” had attained post graduate degrees (23 of 28 “other” respondents who identified another location).

Table 10: Level of education

Level of education	Respondents	Share of Respondents
College degree or equivalent	522	77%
Trade School graduate or equivalent	33	5%
High School diploma or equivalent	51	8%
Less than high school diploma	1	0%
Other	42	6%
I prefer not to say	46	7%
Total Respondents	674	

Note: Respondents could select more than one option

Respondents were typically between 30 and 67 years old. See Table 11.

Table 11: Age

Age	Respondents	Share of Respondents
-----	-------------	----------------------

18 or under	2	0%
19 to 30	14	2%
30 to 49	284	41%
50 to 67	214	31%
68 or older	111	16%
I prefer not to say	61	9%
Total Respondents	689	

Note: Respondents could select more than one option

Attachment 1: Promotional Materials and Events

Social Media



<https://www.instagram.com/p/DOotBMIEqUA/>



<https://www.instagram.com/p/DNqwgJXSyza/>



<https://www.facebook.com/share/p/1Bs5aHhTJU/>



<https://www.facebook.com/share/p/14TeM2PGvGK/>

September 2025 Unincorporated Area News e-newsletter

Full newsletter available [here](#). Excerpt below.



Road Services

Please share your thoughts about improving traffic safety in unincorporated King County

Road Services is working on a plan to improve traffic safety in unincorporated King County, and would like to hear from you. Your insight will help them build a clearer picture of what's happening in your community, and will help King County apply for grants to improve traffic safety.

Help make county roads safer to drive, bike, walk, and roll on. Please take a few minutes to share your thoughts at [Traffic safety planning - PublicInput](#).

Email Outreach

- 1) Email to 730 community members who had previously contacted the division with traffic safety concerns. Text:

Hello,

We're working on a plan to improve traffic safety in unincorporated King County and we want to hear from you. Your insight will help us build a clearer picture of what's happening in our communities – and will help us apply for grants to improve traffic safety.

What types of road safety issues are most important to you? Which unincorporated county roads feel safe? Where could safety be enhanced?

Your voice matters. Help us make our roads safer to drive, bike, walk and roll on. Please take a few minutes to share your thoughts at [Traffic safety planning - PublicInput](#).

- 2) Emails to contacts at eighteen cities in or near the unincorporated area, including the cities of Auburn, Black Diamond, Carnation, Maple Valley, Milton, North Bend, Pacific, Skykomish, Snoqualmie, Burien, Covington, Duvall, Enumclaw, Federal Way, Issaquah, Kent, Renton, and Woodinville. Text:

Good afternoon,

The King County Department of Local Services - Roads Services Division is currently developing a Traffic Safety Action Plan through the Safe Streets for All program. As part of our planning process, we're hoping to hear from people who use county roads in King County. We've created a web page to ask the public which types of county road safety issues are of greatest concern, where they feel safe, and where safety could be enhanced. I'm reaching out because we'd like to hear from city residents who use county roads. If you have the opportunity to connect with city residents who use county roads, would you share the message below?

Thank you in advance. Please feel free to contact me with any questions about our planning process.

- 3) Signature block message on standard e-mails from Roads Customer Service staff. Text:

Your voice matters! Share your feedback to help guide future safety improvements in unincorporated King County. Learn more and share input here: [Traffic safety planning - PublicInput](#).

Flyer

The flyer was distributed at the following locations and events:

- Covington Library
- Fall City Library
- Maple Valley Library
- Enumclaw Library
- Skyway Library
- Duvall Library
- Duvall Visitor Center
- Enumclaw Public Library
- White Center Library
- Black Diamond Library
- Fairwood Library
- Skyway Resource Center
- Vashon Chamber of Commerce
- Woodinville Library
- Department of Local Services
Community Office Hours
- White Center Night Market event
(9/27/25)
- Community Celebration Picnic Event
hosted by Community Alliance to
Reach Out & Engage (9/27/25)

Survey flyer:



The front side of the survey flyer features a green header with white icons for a cyclist, a car, a person in a wheelchair, and a pedestrian, followed by the text "SHARE YOUR TRAFFIC SAFETY CONCERNS". Below this, a paragraph states: "We're working on a plan to make it safe to walk, bike, drive, and roll in unincorporated King County. Your input will help us understand where we can improve traffic safety and helps us apply for funding to safety improvement projects." This is followed by the text "SHARE YOUR FEEDBACK BY SEPTEMBER 30, 2025" in blue. A QR code is positioned to the left of the URL "bit.ly/traffic-safety-survey". At the bottom right is the King County Department of Local Services Road Services Division logo.

SHARE YOUR TRAFFIC SAFETY CONCERNS

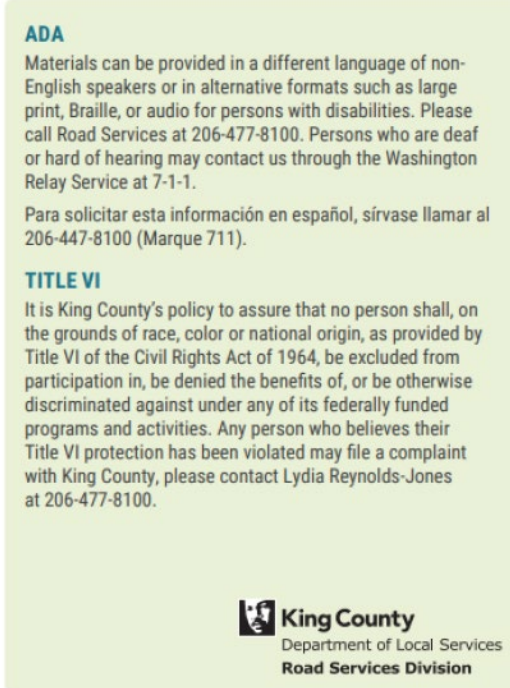
We're working on a plan to make it safe to walk, bike, drive, and roll in unincorporated King County. Your input will help us understand where we can improve traffic safety and helps us apply for funding to safety improvement projects.

SHARE YOUR FEEDBACK BY SEPTEMBER 30, 2025

 bit.ly/traffic-safety-survey

 **King County**
Department of Local Services
Road Services Division

(Front)



The back side of the survey flyer has a light green background. It contains two sections: "ADA" and "TITLE VI". The ADA section explains that materials can be provided in different languages or formats for people with disabilities and provides contact information for Road Services. The TITLE VI section states King County's policy to ensure no person is discriminated against based on race, color, or national origin and provides information on how to file a complaint. Both sections include the phone number 206-477-8100. The King County Department of Local Services Road Services Division logo is at the bottom right.


ADA

Materials can be provided in a different language of non-English speakers or in alternative formats such as large print, Braille, or audio for persons with disabilities. Please call Road Services at 206-477-8100. Persons who are deaf or hard of hearing may contact us through the Washington Relay Service at 7-1-1.

Para solicitar esta información en español, sírvase llamar al 206-447-8100 (Marque 711).

TITLE VI

It is King County's policy to assure that no person shall, on the grounds of race, color or national origin, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes their Title VI protection has been violated may file a complaint with King County, please contact Lydia Reynolds-Jones at 206-477-8100.

 **King County**
Department of Local Services
Road Services Division

(Back)

Public Meeting Presentation

Roads staff attended the Vashon-Maury Community Council meeting on September 18th 2025. The live presentation was made virtually via videoconference. The Department of Local Services Director attended in person. Both the presenter and Director answered questions from the attendees after the presentation. Approximately 20 community members were in attendance, along with staff from the King County Sheriff's Office and (virtually) Seattle-King County Public Health Violence and Injury Prevention Program.

Project website

At the conclusion of the survey, the project created a [project website](#) to share information on the planning process, the safe systems approach, collision data, and traffic safety basics. The site included opportunities for readers to share their contact information to be included in future updates about the planning process. Excerpts are shown below.

Project Website Excerpt 1

[HOME](#) / [LOCAL SERVICES](#) / [PROJECTS AND PROGRAMS](#) / [TRAFFIC SAFETY ACTION PLAN](#)

King County Traffic Safety Action Plan

↓ GET INVOLVED

↓ THE SAFE SYSTEMS APPROACH

↓ UNDERSTANDING THE PROBLEM

↓ SAFER SPEEDS

↓ SAFER PEOPLE

↓ SAFER STREETS

↓ SAFER LAND USE

↓ SAFER VEHICLES AND POST-CRASH CARE

↓ YOUR ROLE – STAY SAFE, SAVE LIVES

Road Services

Projects +

Traffic cameras

My Commute Map

24/7 Road Helpline

Road Alerts

About Roads

CONTACT


Amy Bresslour, Communications

Email: abresslour@kingcounty.gov


Phone: [206-477-9223](tel:206-477-9223)

To request this information in another format or language, call [206-477-8100](tel:206-477-8100) (Relay 711) or email AskLocalServices@kingcounty.gov.

Social: [X \(Twitter\)](#) [Instagram](#) [Facebook](#)



Project Website Excerpt 2



A graphic representation of the Safe System Approach, including: Safer road users, land use, vehicles, speeds, roads, and post-crash care.

The Safe Systems Approach:

- Acknowledges death and serious injury as unacceptable
- Accounts for human vulnerability and mistakes
- Recognizes that responsibility is shared and redundancy is crucial to strengthen transportation systems.
- Aligns with State and Federal approaches to address traffic deaths and serious injuries.

This approach centers our work around the understanding that safety is proactive; serious injuries and fatalities are preventable; and that road safety depends on collaboration between road managers, public health organizations, law enforcement agencies, emergency responders, road users, and others. When everyone works together to implement the Safe System approach, the result is "the Swiss Cheese Model"—more layers of safety to reduce the risk of serious collisions.

The Swiss Cheese Model

More Safety Layers on our Roads = Fewer Chances for Things to Go Wrong

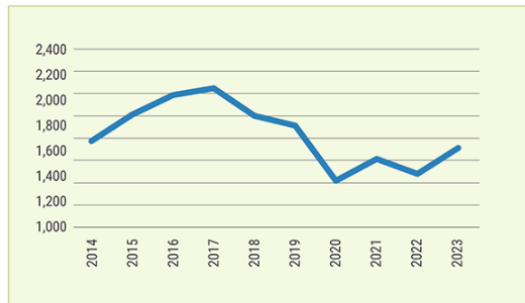
Project Website Excerpt 3

Understanding the problem: Fatal and serious crashes in unincorporated King County

As we strive towards zero traffic deaths and serious injuries, it's important to understand how and why crashes happen in unincorporated King County. The vast majority of crashes on county roads do not result in a serious injury or fatality. Between 2014 and 2023, there were 17,324 crashes on county roads—of these, 545 crashes resulted in a death or serious injury on county roads. Annual serious crashes reached a low of 38 in 2018, while 2023 saw 67—the highest number in a decade.

All Crashes

Unincorporated King County, 2014 to 2023



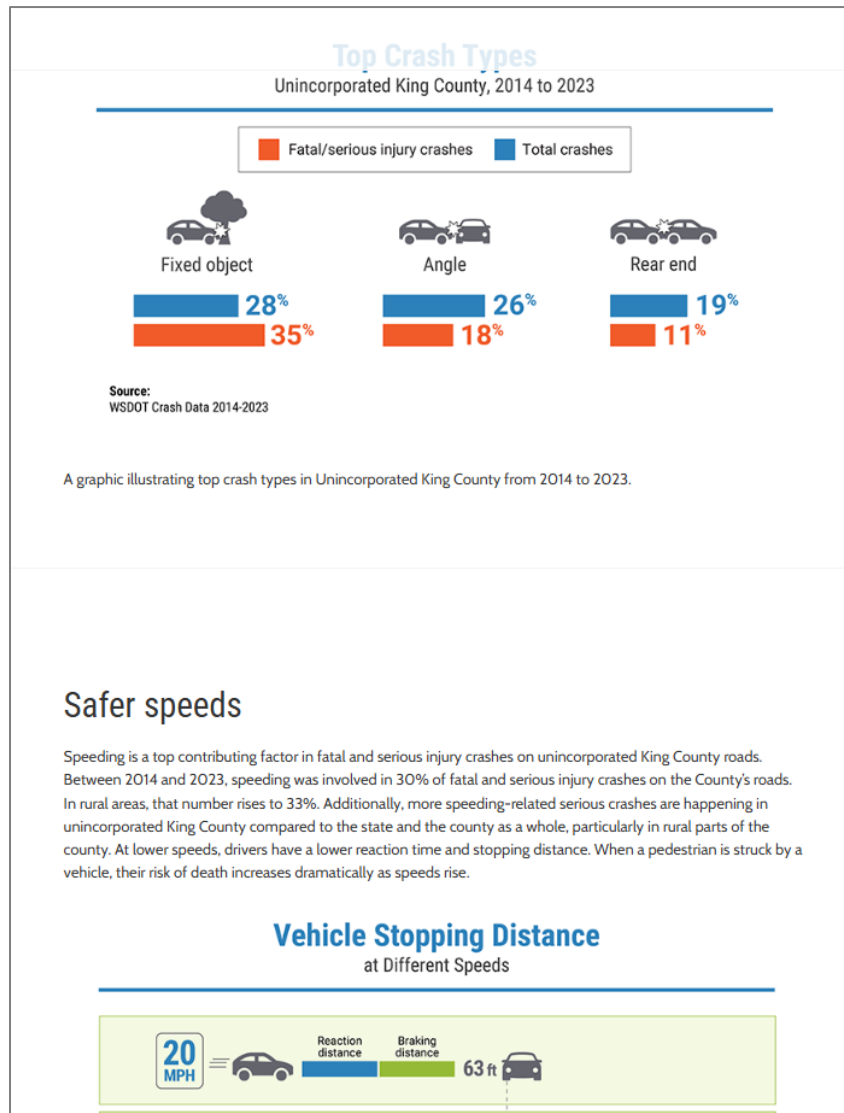
Source:
WSDOT Crash Data 2014-2023

A graphic illustrating number of crashes in Unincorporated King County, from 2014 to 2023.

Fatal and Serious Injury Crashes

Unincorporated King County, 2014 to 2023

Project Website Excerpt 4



Attachment 2: Survey Questions and responses

1. What areas of unincorporated King County do you live in or travel through most often?

Please check all that apply.

- Snoqualmie Valley/Northeast King County
- Bear Creek/Sammamish/Novelty Hill
- Fairwood/East Renton
- Vashon/Maury Island
- Greater Maple Valley/Cedar River
- Southeast King County
- Four Creeks/Tiger Mountain
- Skyway
- White Center/North Highline
- East Federal Way/Lakeland South

Note: Respondents could select multiple areas of UKC or skip the question. 19% of respondents who answered the question selected more than one CSA subarea.

Number of subareas selected by respondent	Number of respondents	Share of respondents
0	40	3%
1	945	78%
2	138	11%
3	56	5%
4	16	1%
5	9	1%
6	3	0%
7	1	0%
10	1	0%
Total	1,209*	100%

2. How do you usually get around? Please check all that apply.

- Drive
- Walk
- Bike or scooter
- Transit (bus or light rail)
- Rideshare (Uber or Lyft)
- Other (please specify)
- Wheelchair or mobility device

3. What are your top three (3) road safety concerns?
 - Cars go too fast
 - No sidewalks
 - Distracted driving (using a phone or texting)
 - No protected bike lanes or paths
 - More traffic enforcement needed
 - Other (please specify)
 - Crossing the street safely
 - Not enough lighting on the road
 - Drunk driving or driving on drugs
 - Too many trucks on the road
 - Driving in snow or ice
 - Can't clearly see the road ahead
 - Walk to bus stop or train station not safe or too far
 - Younger drivers (ages 15 to 24)
 - Cars driving off the road
 - Older drivers (ages 70+)
 - Response time for getting help after a crash
 - Broken or missing signs or traffic signals
 - Staying safe on a motorcycle
 - Not wearing seatbelts
4. Are there any roads, intersections or areas where you feel unsafe walking, biking, rolling or driving?
5. Where should we focus on making roads safer? (Choose 3)
 - Busy roads
 - Places where crashes have happened before
 - Around schools
 - In neighborhoods or near homes
 - On neighborhood roads
 - Near parks or playgrounds
 - Near bus stops
 - Where people work or go shopping
 - Other (please specify)
6. Is there anything else you'd like us to know? Use the space below to share any other thoughts, stories or ideas to help us better understand your traffic safety concerns.
7. What language(s) are spoken in your home? Please select all that apply:
 - English
 - prefer not to say
 - Other
 - Spanish
 - Chinese

- Russian
 - Arabic
 - Vietnamese
 - Amharic
 - Korean
 - Khmer
 - Somali
 - Ukrainian
8. What is your gender identity? Please select all that apply.
- Female
 - Male
 - Non-binary/ gender non-conforming
 - Transgender
 - Other
 - I prefer not to say
9. Please select the population group or groups that you most closely identify with from the list below. Select all that apply.
- White
 - Asian or Asian-American
 - Hispanic, Latina, Latino or Latinx
 - American Indian or Alaska Native
 - Black or African-American
 - Native Hawaiian or Other Pacific Islander
 - Middle Eastern or Northern African
 - Other
 - I prefer not to say
10. My national origin is:
- United States
 - Other
 - I prefer not to say
11. My level of education is:
- College degree or equivalent
 - High School diploma or equivalent
 - I prefer not to say
 - Other
 - Trade School graduate or equivalent
 - Less than High School diploma
12. What is the age of the person filling out this form?
- 18 or under
 - 19 to 30
 - 30 to 49

- 50 to 67
- 68 or older
- I prefer not to say

Appendix D: Progress Tracking Summary

PLEASE
DRIVE
SAFELY

DATE: December 22, 2025

SUBJECT: Progress Tracking Summary

PROJECT NAME: King County Traffic Safety Action Plan

Purpose

King County is developing a Traffic Safety Action Plan which will lead to actionable safety programs and projects, helping the County to work toward eliminating fatalities and serious injuries on its roadway network.

The Plan is being funded by the U.S. Department of Transportation Safe Streets and Roads for All program. This following describes how the King County Traffic Safety Action Plan will meet the program requirements for a description of how progress will be measured over time (including the requirement that progress measurement include outcome data).

Implementation of the plan will be constrained by the county road funding crisis. The lack of sufficient revenue will significantly impact the County's ability to implement traffic safety projects. The County will continue to pursue sustainable funding sources and will report on the progress it is able to make towards traffic safety with its limited resources.

King County intends to produce an online annual report of collision outcomes on unincorporated King County roads. This reporting will include, at a minimum, the number of fatalities and serious injuries during the previous reporting period, first contributing circumstance, and the number of collisions involving pedestrians and bicyclists. Outcome data performance reporting will be completed based on the County's existing process to produce Traffic Safety Reports.¹ The County will explore the feasibility of adding additional data to the reports.

Additional online public reporting on the strategies and countermeasures identified in the report will be completed on a biennial basis (every two years). This reporting will include, at a minimum, the number of the Plan's safety projects that have been studied and/or implemented, significant collaboration activities, and other relevant traffic safety updates.

These two types of performance monitoring and tracking are summarized in Table 1 below. A draft reporting matrix for implementation reporting is shown in Table 2 with field descriptions shown in Table 3. Tracking and reporting may be modified as the County explores the feasibility of new data reporting elements and as it responds to the county road funding crisis.

¹ [Traffic safety reports for unincorporated King County](#), King County, Washington

Table 1. Anticipated Reporting: Outcome Data

Type	Metric	Status
Outcome	Number of Fatal Collisions	Existing Traffic Safety Report Data Point
Outcome	Number of Serious Injury Collisions	Existing Traffic Safety Report Data Point
Outcome	Number of Collisions by Contributing Circumstance	Existing Traffic Safety Report Data Point
Outcome	Number of Pedestrian-Involved Fatal and Serious Injury Collisions	Existing Traffic Safety Report Data Point
Outcome	Number of Intersection Collisions	Will Explore for Feasibility
Outcome	Number of Lane Departure Collisions	Will Explore for Feasibility
Outcome	Additional Reporting by Emphasis Area	Will Explore for Feasibility
Implementation (Output)	Number of Detailed Studies and/or Projects Implemented at Priority Locations	New Reporting
Implementation (Output)	Status of Non-Engineering Strategies / Collaboration Efforts	New Reporting
Implementation (Output)	Other Significant Traffic Safety Efforts (Narrative)	New Reporting

Table 2. Draft Implementation Reporting Matrix

Project Number	Project Name/ Location	Project Description	Current Status	Planning Timeframe	Schedule	Funding	Additional Notes and/or Next Steps

Table 3. Draft Implementation Reporting Matrix Field Descriptions

Field	Purpose	Potential Responses
Current Status	Provide a snapshot of progress and readiness	<ul style="list-style-type: none"> • Not started • Started • On-going • Complete • No longer needed
Planning Timeframe	Help align short-, medium-, and long-range planning and resource allocation	<ul style="list-style-type: none"> • Near-Term: Less than 1 year • Medium-Term: 1 to 10 years • Long-Term: Greater than 10 years
Schedule	Help identify where interventions or schedule adjustments may be needed	<ul style="list-style-type: none"> • On schedule • Behind schedule
Funding	Support budgeting, grant planning, and strategic funding prioritization	<ul style="list-style-type: none"> • Funded • Unfunded