



CRITICAL AREA ORDINANCE UPDATES

PLANNING COMMISSION STUDY SESSION
July 24, 2025

TONIGHT'S AGENDA



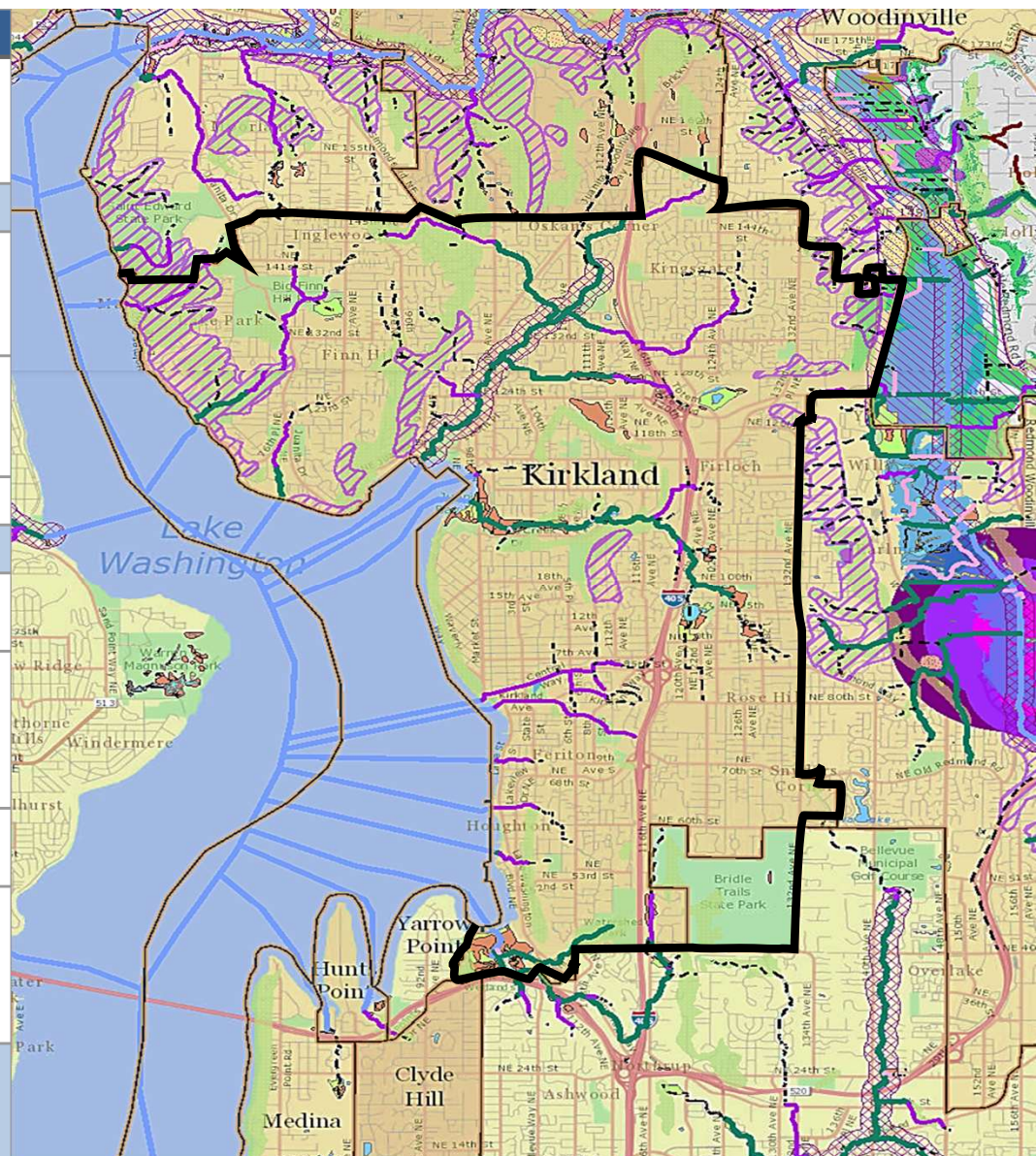
- ▷ Summary of Council and PC questions
- ▷ Chapter 85 potential updates
- ▷ Chapter 90 Fish and Wildlife Habitat Decision Matrix: Current Conditions and BAS
- ▷ Chapter 90 Fish and Wildlife Habitat Decision Matrix: Impacts of BAS Buffer Increases
- ▷ Chapter 90 Fish and Wildlife Buffer Options and BAS Solutions

SUMMARY OF COUNCIL AND PC QUESTIONS



- ▷ Coverage of Critical Areas across the city
- ▷ Average number of Critical Area permits (*per year*)
- ▷ Average costs of Critical Area permits
- ▷ Average time for permit reviews

Critical Area Coverage in the City of Kirkland			
	Percent of Land Coverage	Impacted Parcels (percent)	Impacted Parcels (number)
Chapter 90			
Stream and Buffer (Type N 50' or Type F 100')	7%	7%	1,876
Wetland and Average Buffer (150')	11%	11%	2,886
Floodplain	1%	0.1%	20
Chapter 85			
High Landslide Area	8%	35%	8,982
High and Medium Landslide Area (combined)	38%	88%	22,260
High Liquefaction	10%	11%	2,814
High and Medium Liquefaction (combined)	40%	43%	10,850
Impact by At least One Critical Area	65%	68%	17,032



CRITICAL AREA PERMITS *(per year)*



Critical Area Permits Per Year (2022 – 2024)		
	Average Number of Permits Per Year	Number of Significant Impact Permits Per Year
KZC Chapter 90	26	<2
KZC Chapter 85	44	34

CRITICAL AREA PERMIT COSTS



Rounded Average Permit Cost – Chapter 90				
	Determination Permit Review	Project Permit Review	Monitoring and Maintenance	
			Mitigation Installations	Monitoring Reports (per year)
Large Projects	\$6,000	\$7,900	\$170,000	\$6,000
Residential Projects	\$5,800	\$6,400	\$22,500	\$2,800

Rounded Average Permit Cost – Chapter 85			
	Peer Review Fees	City Review Fees	Total Cost
2022 - 2024	\$3,000	\$1,000	\$4,000

Data is rounded to the nearest hundred

Large Projects (KZC 90): Larger impacts to critical areas (e.g. Reasonable Use Exceptions, subdivisions, etc.)

Residential Projects (KZC 90): Smaller impacts to critical areas (e.g. new single-family homes, additions, decks, etc.)



AVERAGE PERMIT TIMELINE – Detached Dwelling Unit *(initial application through permit approval)*

No Mapped Critical Areas



5 Months

Building Permit: 07/2024 – 12/2024

Geologically Hazardous Area



4 Months

*Building Permit: 10/2023 – 02/2024
Geotech Permit: 10/2023 – 02/2024*

Stream and Wetlands



14 Months

*Building Permit: 06/2022 – 08/2023
(inclusive of determination review)*



CHAPTER 85 – POTENTIAL UPDATES

- ▷ Landslide Hazard Definitions
- ▷ Peer Review Exemptions
- ▷ Structural Setbacks
- ▷ Vegetation Requirements
- ▷ Natural Greenbelt Protective Easement (NGPE)

CHAPTER 85 – POTENTIAL UPDATES



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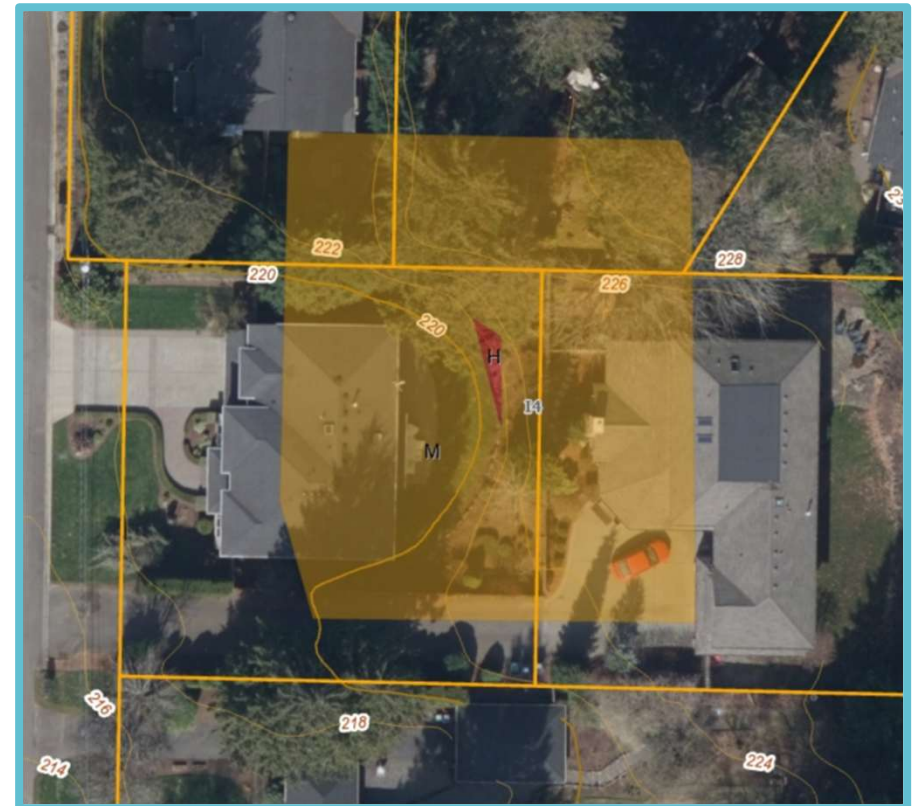
CHAPTER 85 – LANDSLIDE HAZARD DEFINITIONS



Existing Moderate Landslide Hazard

Definition: Areas with slopes between 15% and 40% which do not meet the definition of high landslide area.

Proposed Change: Revise the moderate landslide hazard definition to establish a minimum slope height.



CHAPTER 85 – PEER REVIEW EXEMPTIONS



- ▷ Fences
- ▷ Deck Additions
- ▷ Limited SF Expansions (Additions)
- ▷ Retaining Walls

Lower Risk Projects Requiring Peer Review
(2022 – 2024)

Approximate Total Number of Peer Reviews: 85

Small Projects (Moderate Landslide): 3
Small Projects (High Landslide): 25

CHAPTER 85 – STRUCTURAL SETBACKS



Potential Outcomes

- ▷ Reduced Requirements in Geotech Report
- ▷ Exemption from Peer Review



CHAPTER 85 – VEGETATION REQUIREMENTS



- ▷ Vegetation Requirements
- ▷ **KZC 85.05:** See Chapter 95 for additional regulations that address trees and other vegetation within and outside of geologically hazardous areas.
- ▷ **KZC 90.135** Trees in Critical Areas and Critical Area Buffers



CHAPTER 85 – PROTECTIVE EASEMENT

- ▷ Natural Greenbelt Protective Easement (NGPE)
- ▷ **KZC 85.25.8 Performance Standards:** The City *may* require a dedication of one or more natural greenbelt protective easements or tracts.
- ▷ **KZC 85.40 Dedication:** The City *may* require that the applicant dedicate development rights, air space, or an open space easement to the City to avoid impacts associated with a landslide hazard area or seismic hazard area on the subject property.





CHAPTER 85 – PUBLIC FEEDBACK

- ▷ State supported potential code updates
- ▷ Threshold for low-risk projects
- ▷ Clarify requirements and permit review process
- ▷ Clarify responsible party for geotechnical recommendations
- ▷ Natural and engineered slopes



CHAPTER 85 – PC GUIDANCE

- ▶ Landslide Hazard Definitions
- ▶ Peer Review Exemptions
- ▶ Structural Setbacks
- ▶ Vegetation Requirements
- ▶ Natural Greenbelt Protective Easement (NGPE)

CHAPTER 90 - WAC 365-196-830

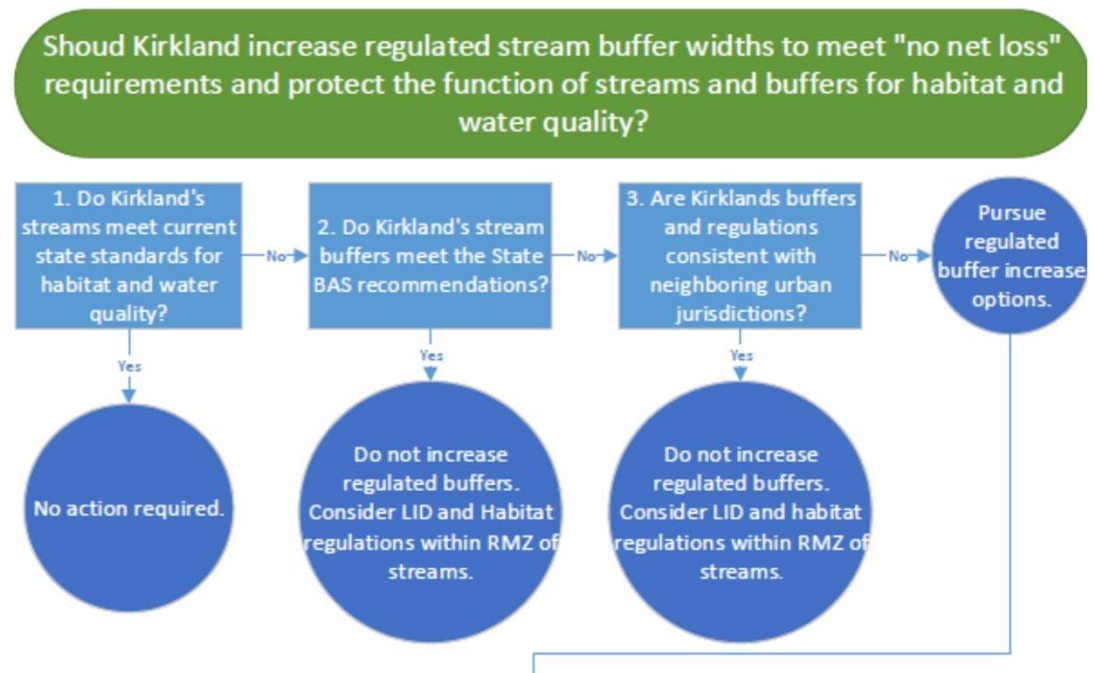


- ▷ (4) Although counties and cities may protect critical areas in different ways or may allow some localized impacts to critical areas, or even the potential loss of some critical areas, development regulations **must preserve the existing functions and values** of critical areas. Avoidance is the most effective way to protect critical areas. If development regulations allow harm to critical areas, they must require compensatory mitigation of the harm. **Development regulations may not allow a net loss of the functions and values of the ecosystem** that includes the impacted or lost critical areas.

CHAPTER 90 - Decision Making Matrix



- ▶ Do Kirkland's streams meet current standards for habitat and water quality?
- ▶ Do Kirkland's stream buffers meet the State BAS recommendations?
- ▶ Are Kirkland's buffers and regulations consistent with neighboring urban jurisdictions?



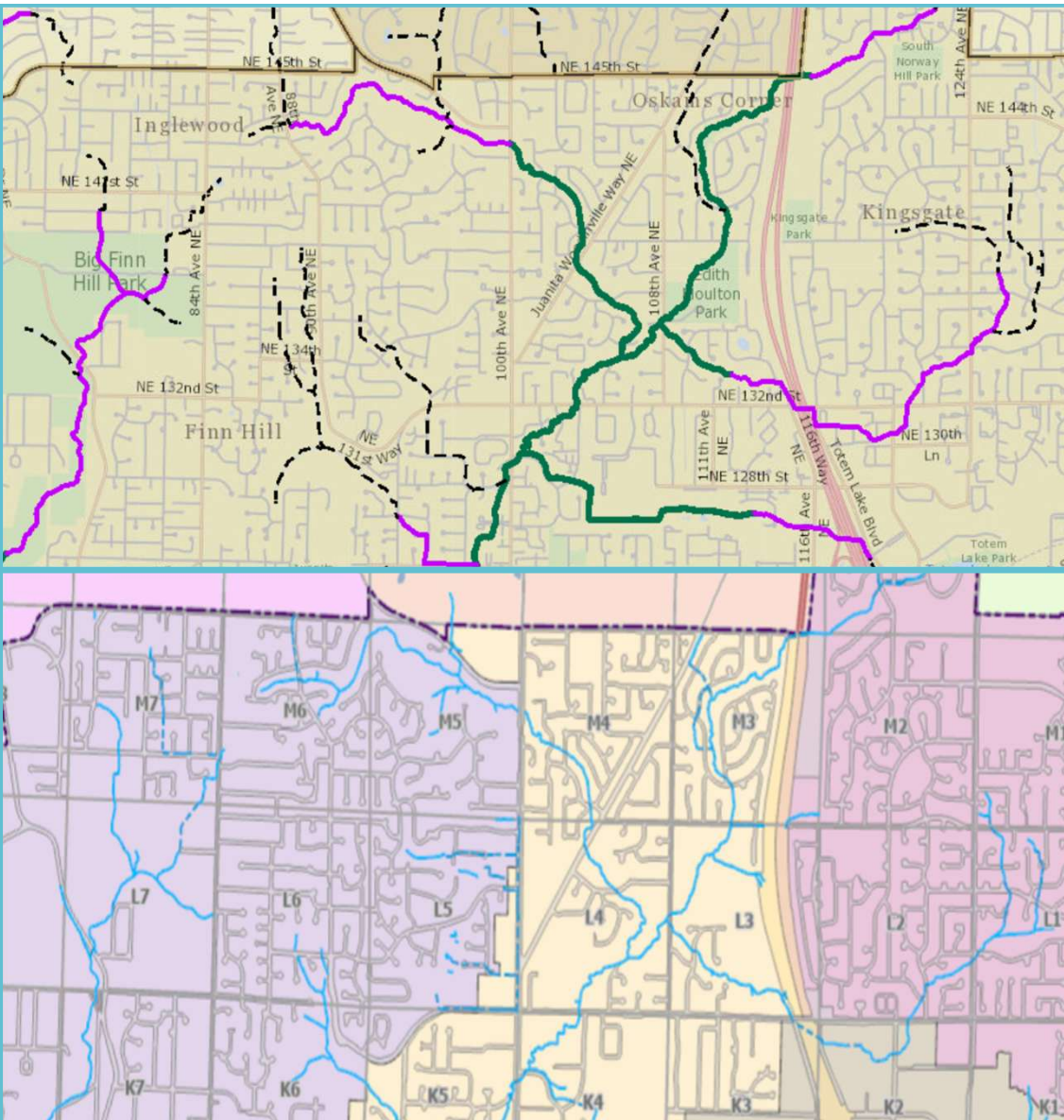


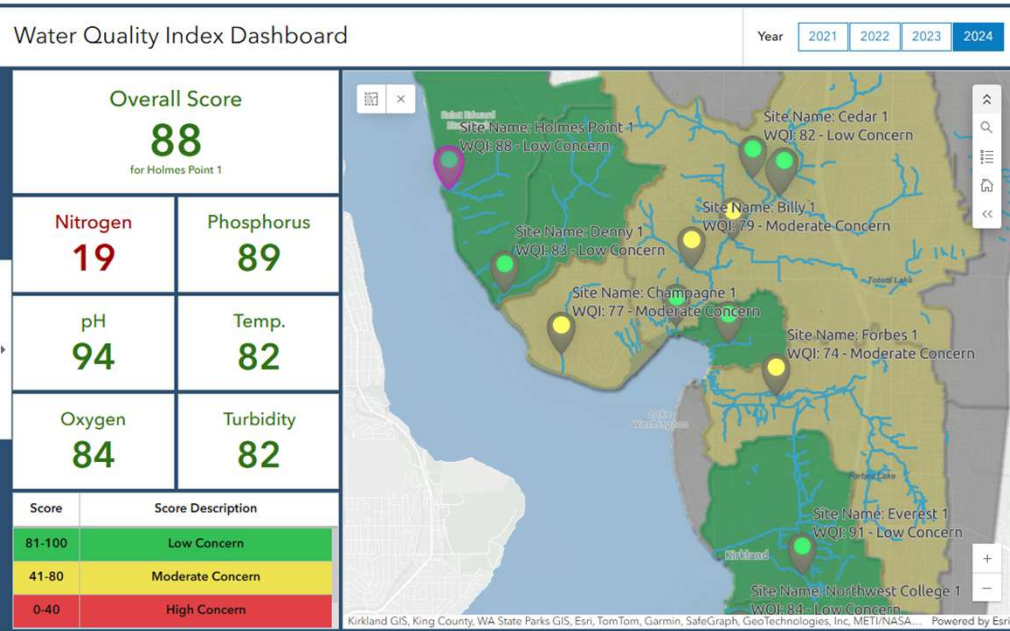
Habitat Stream Classification

- Priority Habitats
- Fish and Non- Fish Stream Habitat
- Include Anadromous Fisheries
- Waters of the State

	stream miles	% of stream
Miles of open streams	64	79%
Miles of open Type N streams (non-fish)	43	68%
Miles of open Type F streams (fish)	21	32%
Total miles of culverted streams	17	21%

Bold is % of all stream miles. Underline is % of open stream 19

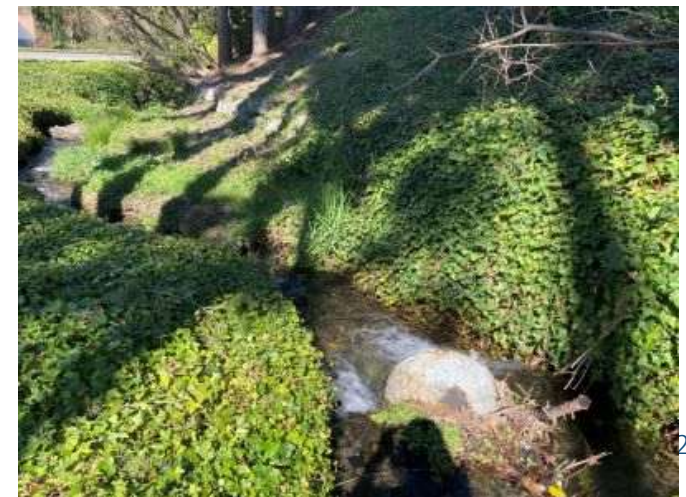




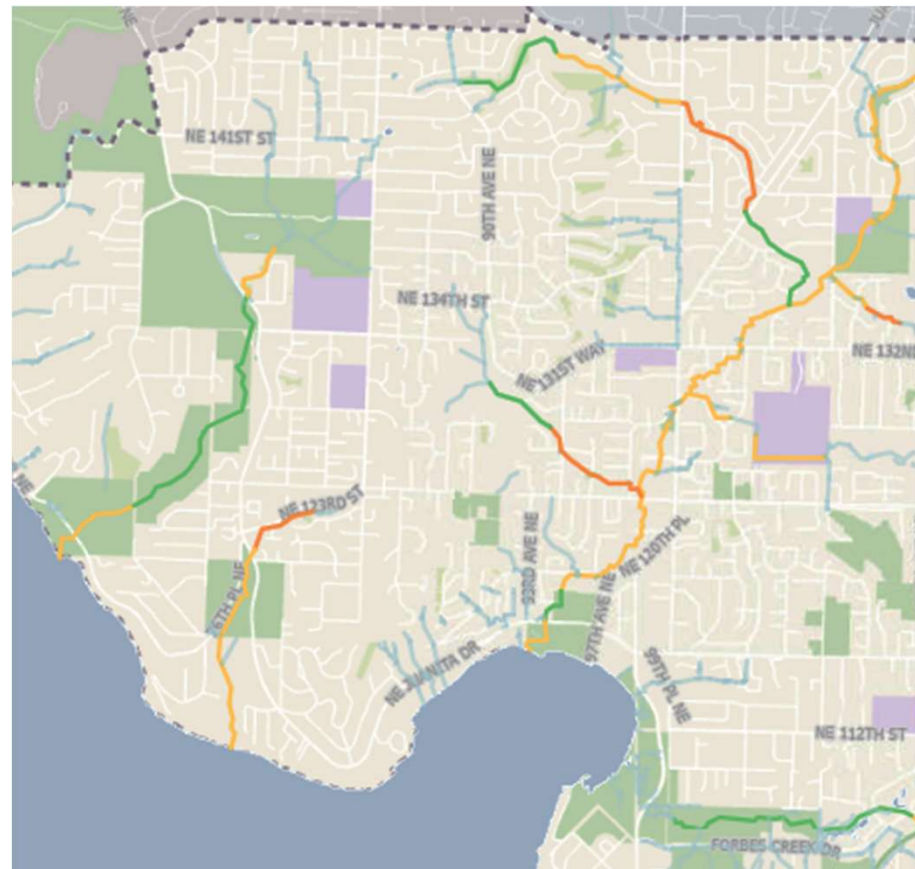
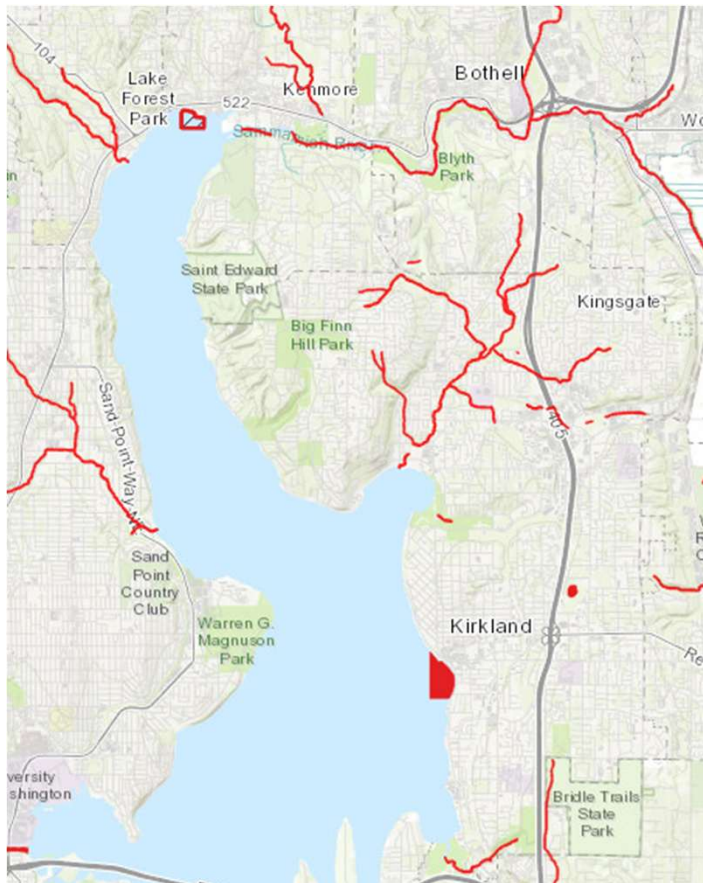
Water Quality



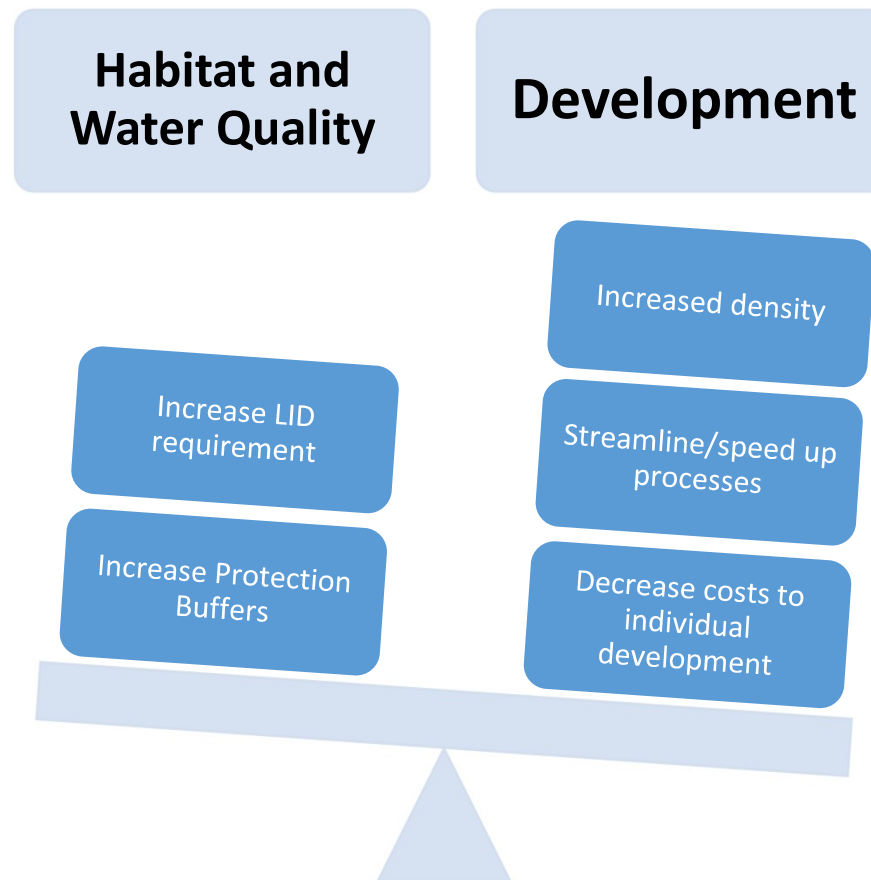
- Many pollutants are not at high concern
- High variability
- Different programs measure different pollutants.



Water Quality and Habitat Quality



Water, Habitat, and Urban Development



CHAPTER 90 – BAS for Riparian Areas

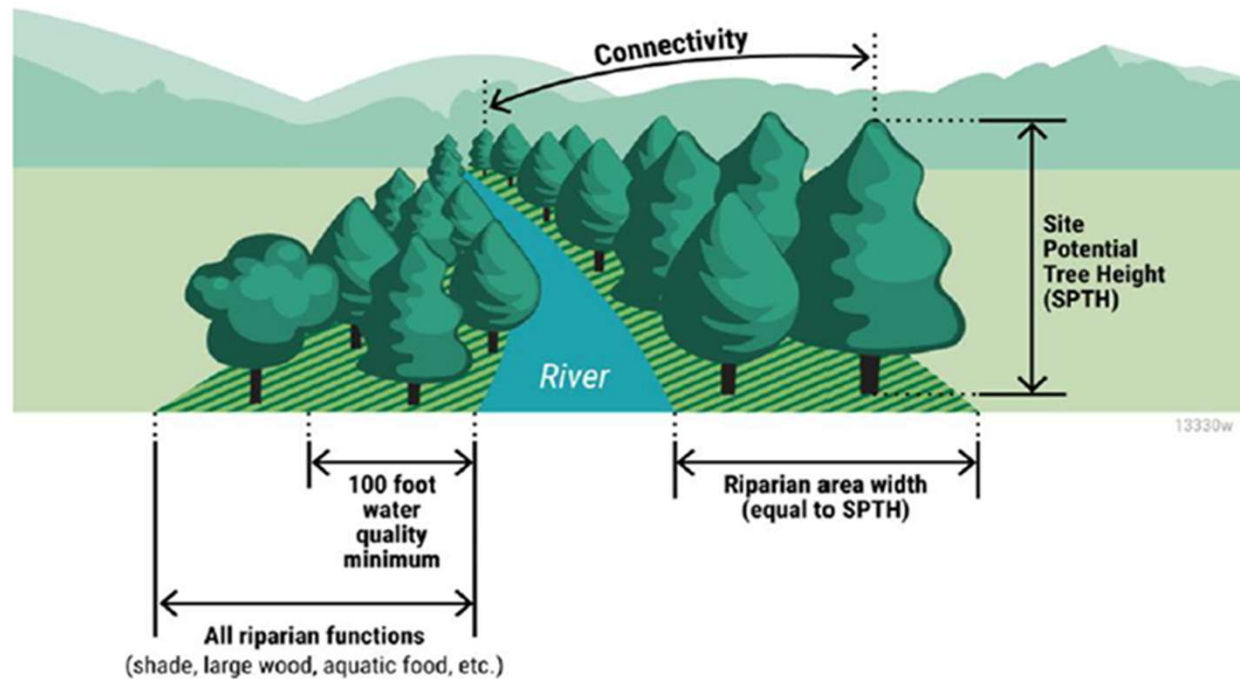


Figure 5.1 Key riparian concepts discussed and integrated into the BAS review.

Site Potential Tree Height

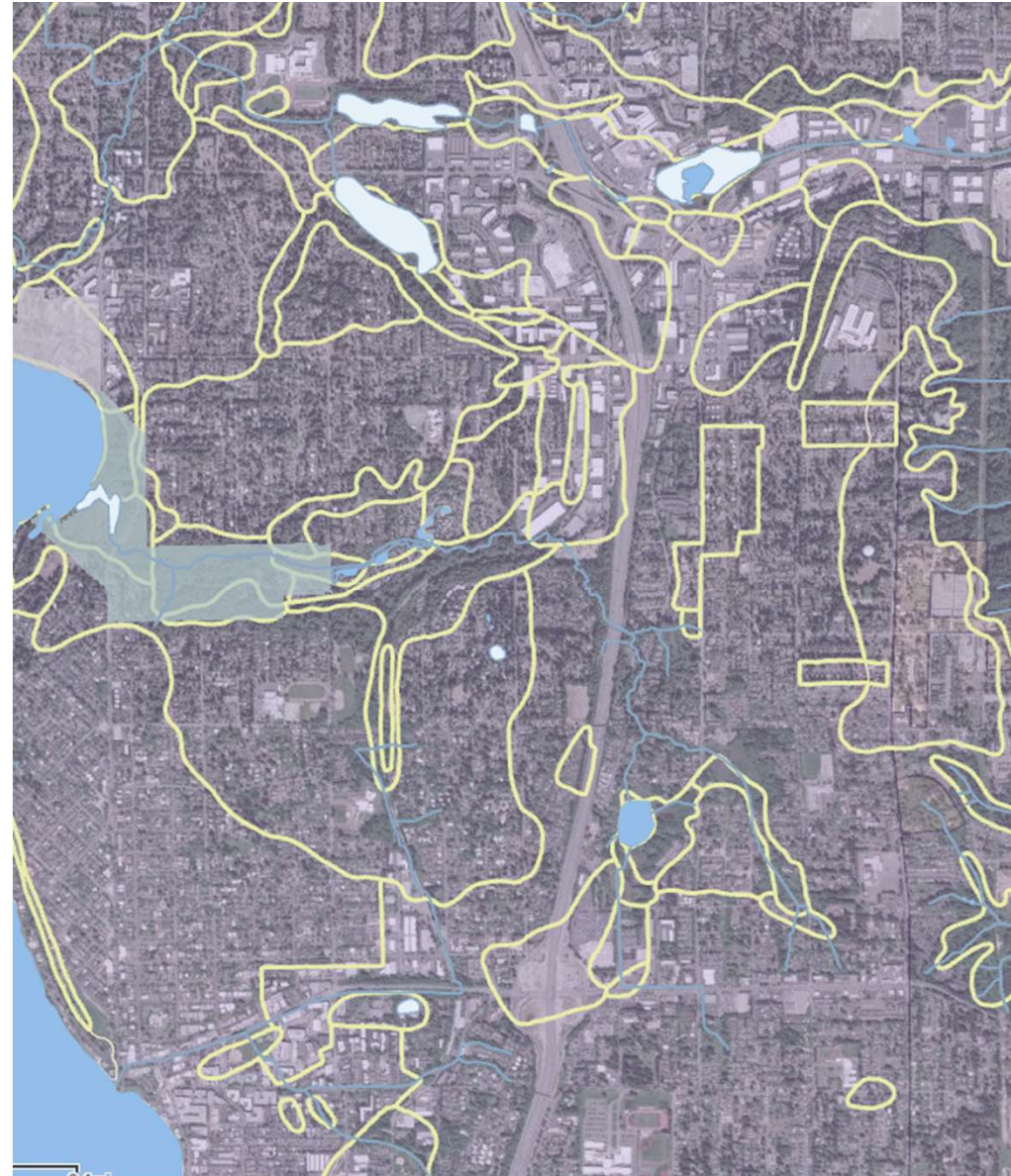
Reasons to simplify SPTH:

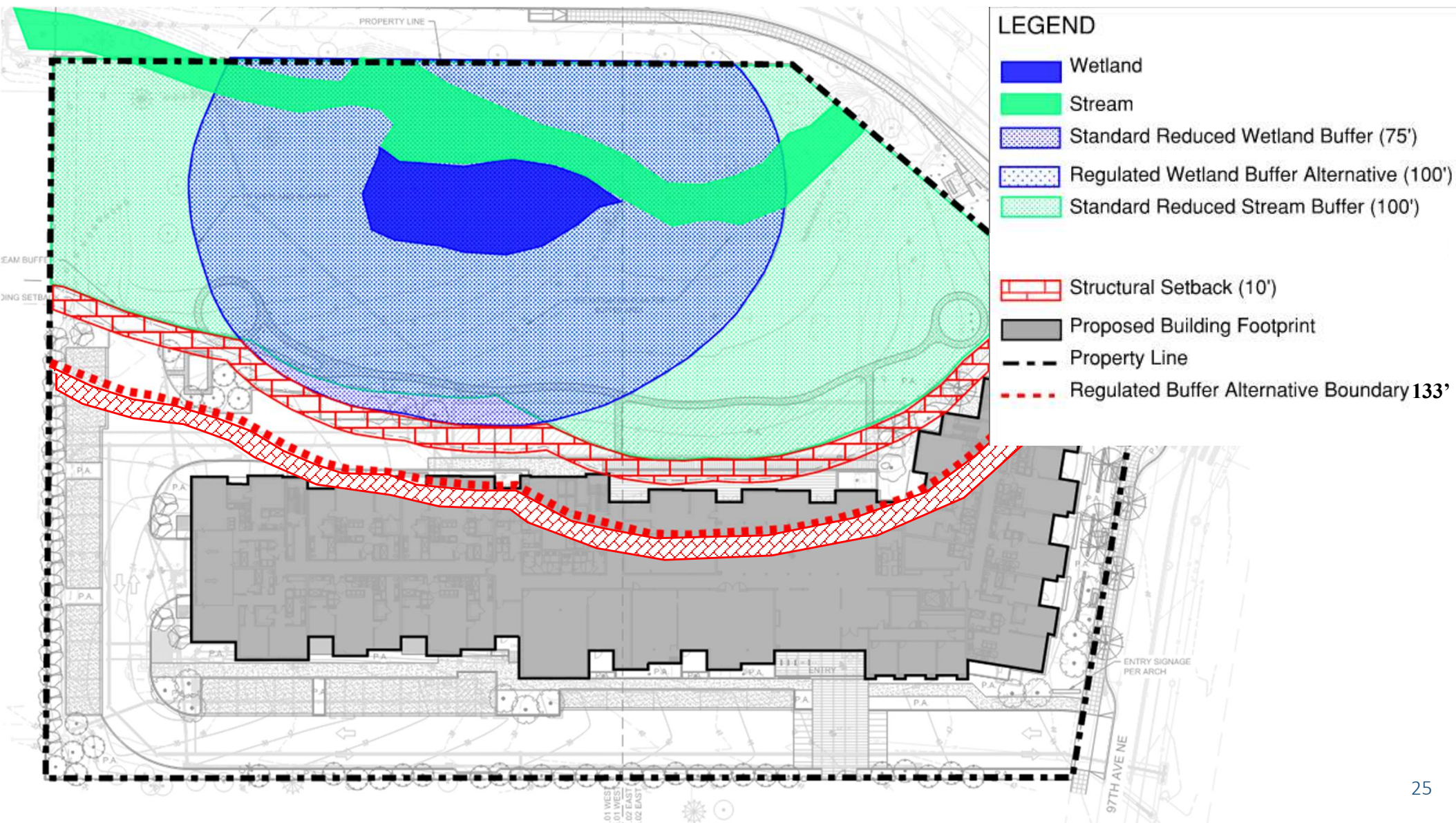
- ▷ High variability within WDFW/NRCS map
- ▷ Low accuracy given urban impacts to soil
- ▷ Low accuracy for riparian areas
- ▷ Uses forestry data for timber

SPTH Calculation for Kirkland

- ▷ Average of the tallest documented heights for riparian species in our region
- ▷ 150' height instead of over 200' per the map

[Site Potential Tree Height Calculator](#)





CHAPTER 90 – Neighboring Jurisdiction Buffers

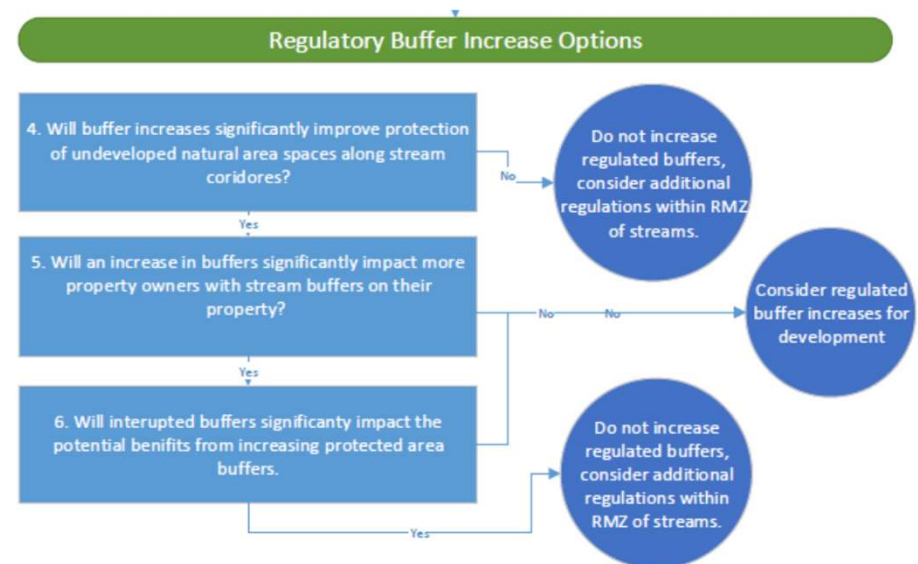


	City	F stream	N stream
Cities with proposed updates.	Redmond	150	100
	Sammamish	150	50-75
	KC (proposed)	180	100
	Kenmore (2024)	100-150	25
	Woodinville (Proposed)	200	100
	Kirkland (2016)	133	66
Cities that have yet to update, or propose updates	Woodinville (2020)	140	70
	Seattle (2014)	100	100
	Edmonds (2023)	75-100	40-50
	Shoreline (2015)	75-115	45-65
	Bellevue (2018)	100	50
	Bothell (2021)	100	75

CHAPTER 90 – Decision Matrix

Considerations associated with regulatory buffer increases

- ▷ Will buffer increases significantly increase the quantity of undeveloped natural areas?
- ▷ Will buffer increases significantly increase the number of property owners with stream buffers on their property?
- ▷ Will exemptions such as interrupted buffers decrease the applicability of buffer increases?



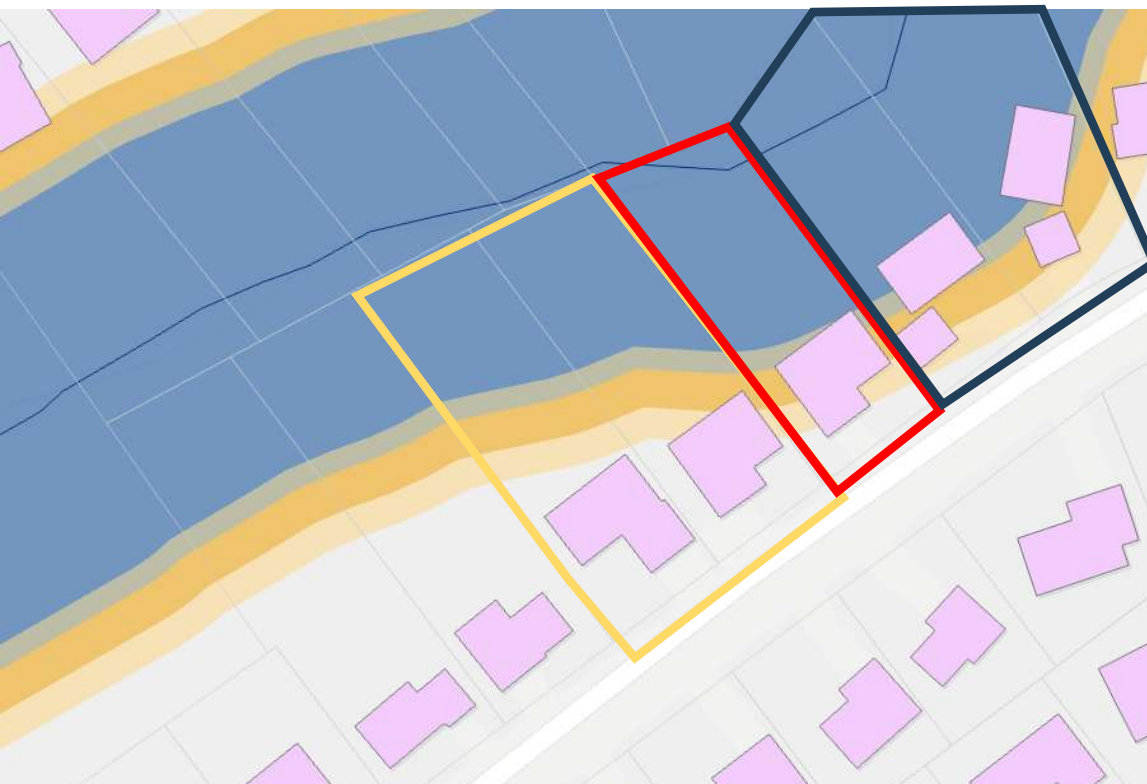


Undeveloped Natural Areas

- ▶ Tree canopy decreases further from stream
- ▶ Very few undeveloped parcels remain

Buffer width (both N and F streams)	Tree canopy % cover (across city)	# undeveloped parcels
50 ft	70%	22
100 ft	56%	18
150 ft	46%	6



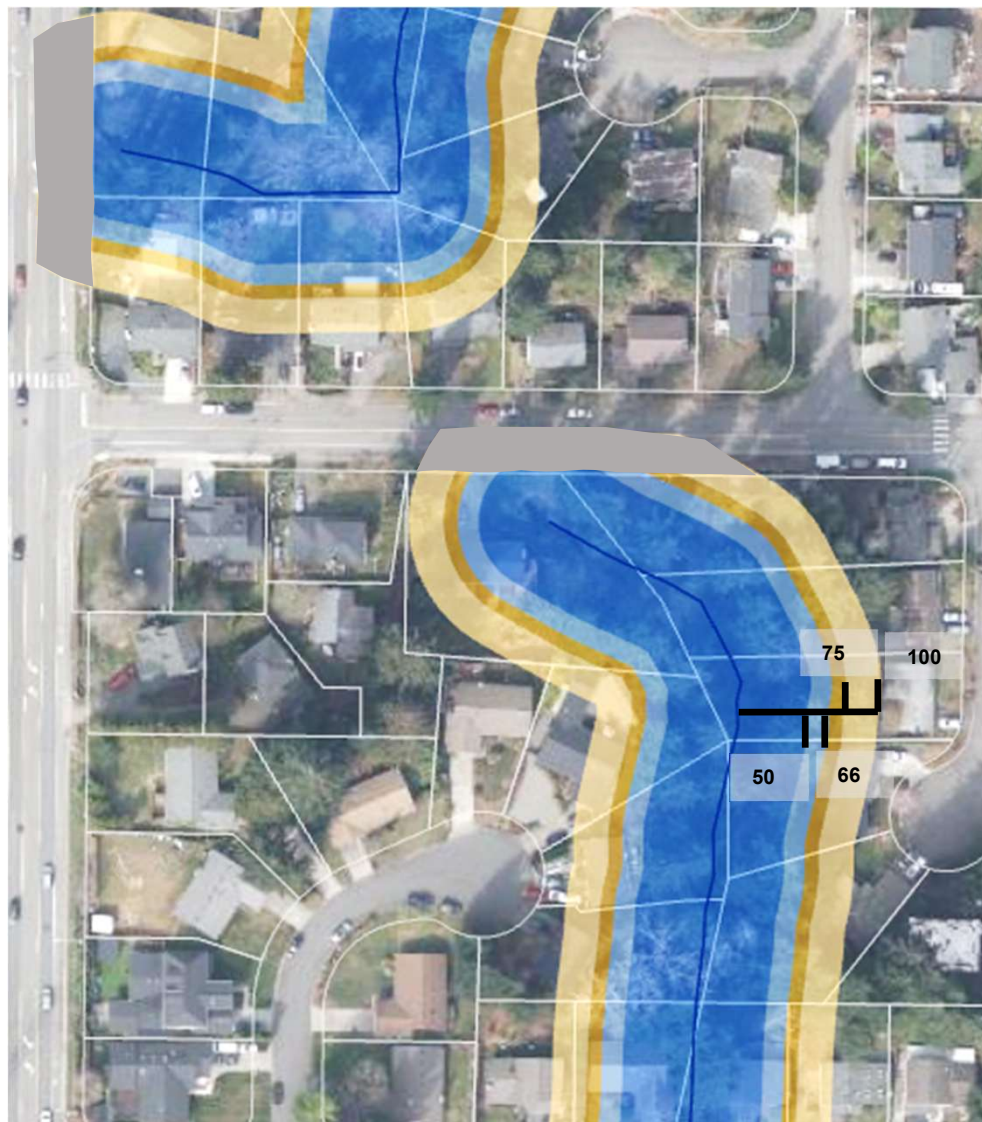


Stream Buffer Impacts to Parcels



- ▷ No impact/minor impact
- ▷ Future development will require mitigation
- ▷ Future development may require footprint changes (significantly impacted)
- ▷ Homes already significantly impacted remain significantly impacted

	# Parcels impacted	# Parcels "significantly impacted"
Private parcels impacted by current N- and F-regulated stream buffers (66, 133)	2,194	1,226
New parcels impacted if N buffer is increased (from 65 to 100 ft.)	306	282
New parcels impacted if F buffer increases from (133 to 150)	101	95



CHAPTER 90 – Options to Meet Habitat Protection

Things to consider and with proposed changes

- ▷ Water Quality
- ▷ Priority Wildlife Habitat
- ▷ Accommodate housing goals/objectives
- ▷ Individual vs Community impacts
- ▷ Streamline, Simplify, and Standardize code





CHAPTER 90 – Stream Buffer Options

	Meets Minimum State Requirements?	Meets Water Quality Goals?	Meets Habitat Goals?	Matches or Exceeds Neighboring Jurisdictions?	N Stream buffer Reduced / Regulated	F Stream Buffer Reduced / Regulated
<u>Option 1: NO CHANGE.</u> Maintain Current Buffers	X	X			50 / 66	100 / 133
<u>Option 1b:</u> Maintain Current Buffers and Add RMZ Requirements within 100 ft of any stream	X	X			50 / 66 + RMZ 100	100 / 133
<u>Option 1c:</u> Maintain current buffers and add RMZ requirements within 150 ft of any stream	X	X	X	X	50 / 66 + RMZ 150	100 / 133 + RMZ 150
<u>Option 2:</u> Increase all Buffer Widths to 100/133 ft	X	X	X	X	75 / 100	75 / 100
<u>Option 3:</u> Increase N Streams to 100 ft and F Streams to 150 ft	X	X	X	X	75 / 100	112 / 150

Options to include in RMZ development requirements

Table 90.155.1 Measures to minimize impacts to wetlands and associated buffers:

- ▷ Lights: Dark Skies Initiative
- ▷ Noise: Buffers
- ▷ Dust and Air pollution
- ▷ Toxic runoff: water quality
- ▷ Stormwater runoff: water quantity, turbidity, erosion control
- ▷ Pets and Human Disturbance:

Implement applicable LID requirements

Expand Critical Area Tree Regulations



CHAPTER 90 – Public Input



- ▷ Streamline
- ▷ Reduce costs



CHAPTER 90 – Discussion Questions

- ▶ Are there any concerns or missing data from this approach you would like to know before guidance is provided?
- ▶ What are members individual thoughts and preferred direction