

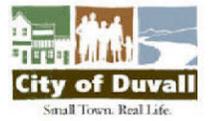
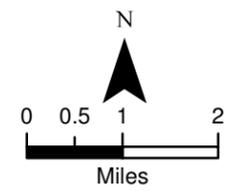
**Duvall SMP**

Reconnecting with the Riverfront.



**Legend**

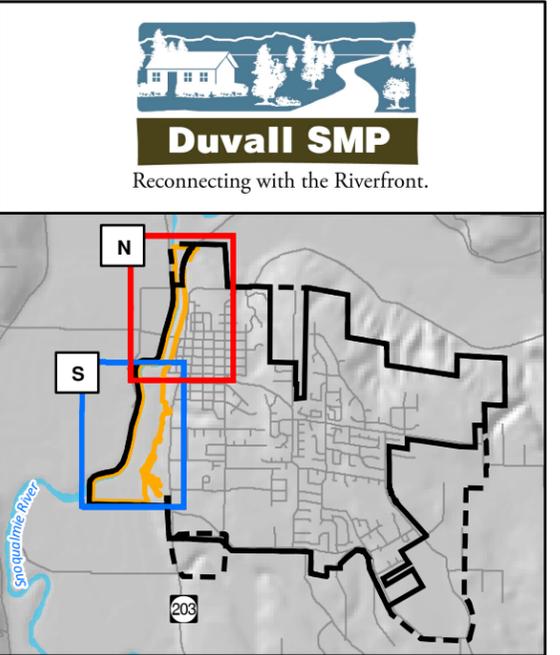
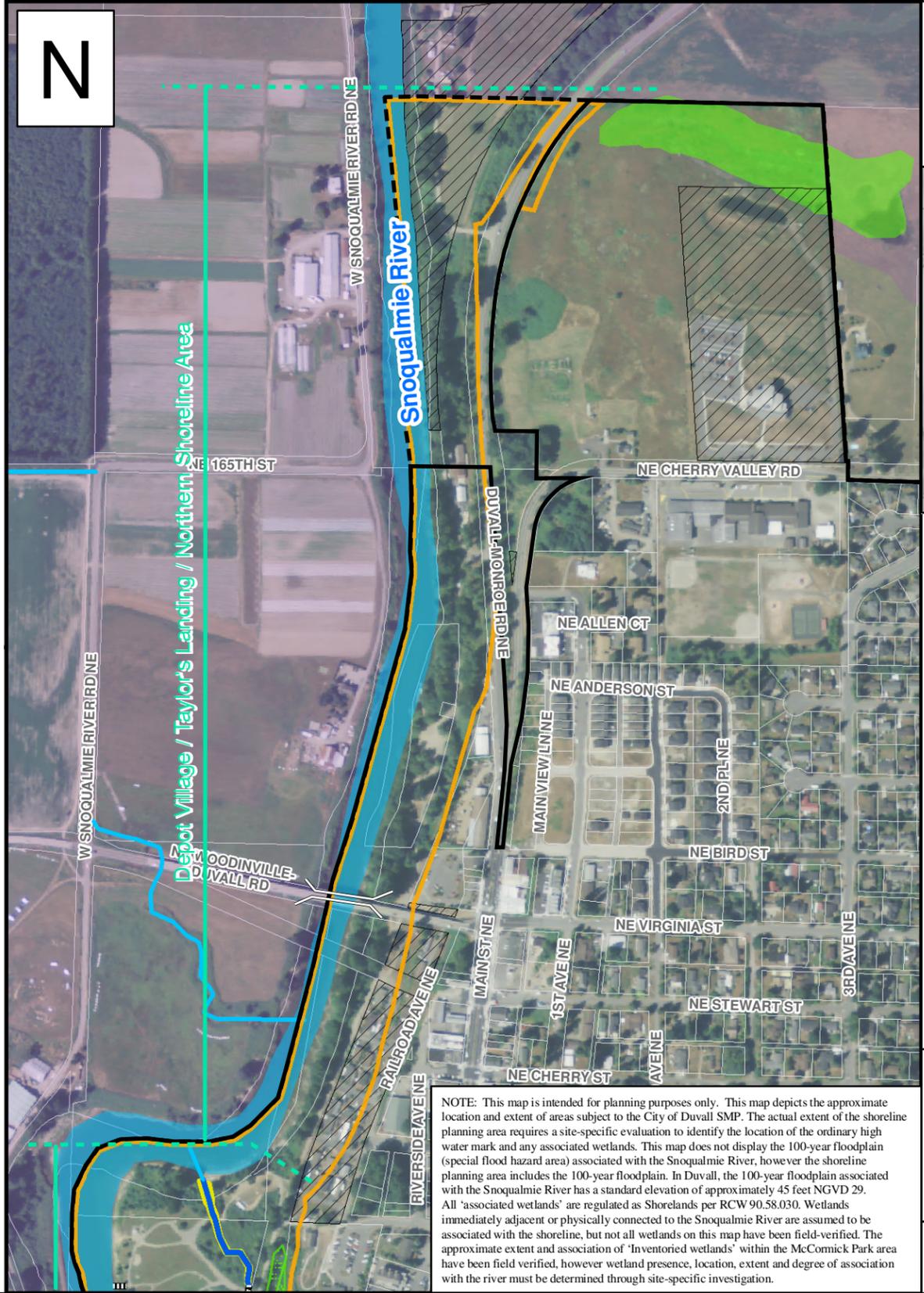
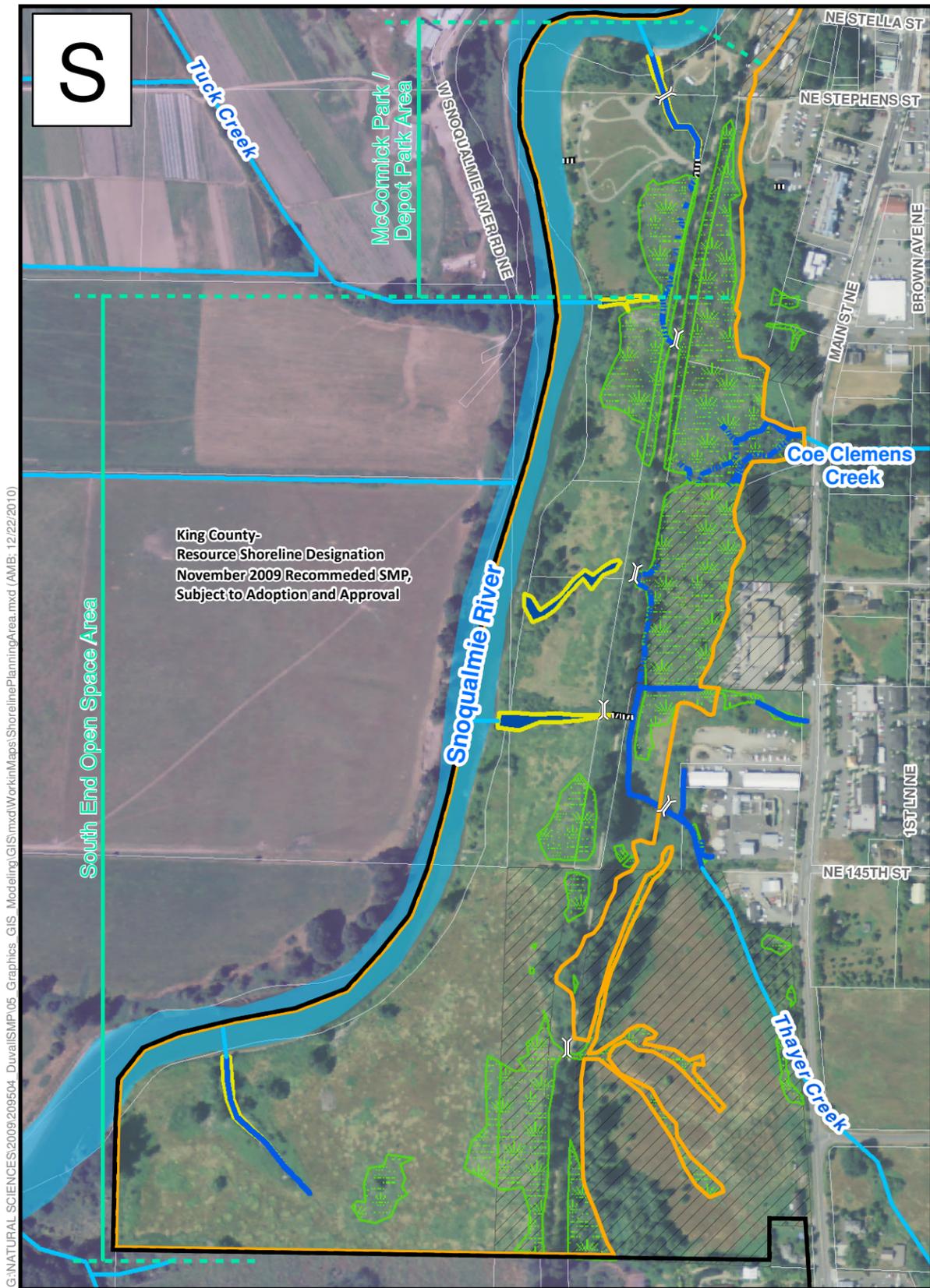
- Duvall City Limits
- Duvall UGA Boundary
- Waterbodies
- County Boundary
- 1% Chance Annual Flood
- Watershed**
- Snoqualmie River
- Sammamish River
- Skykomish River
- Snohomish River



SOURCE:  
Snohomish County, 2008;  
King County, 2009; ESRI, 2008.



Path: S:\GIS\Projects\209\209504 Duvall SMP\Projects\Working Maps Revised June 2011\01 Regional Context.mxd (mitch. 6/7/2011)



**Legend**

- Duvall City Limits
- Duvall UGA Boundary
- Preliminary Shoreline Planning Area
- Parcels
- Privately Owned Parcels within Shoreline
- Waterbody
- Resource Shoreline Designation (King County SMP)
- Wetlands (Field Verified)
- Wetlands (King County)
- Streams (King County)

**Inventoried Streams**

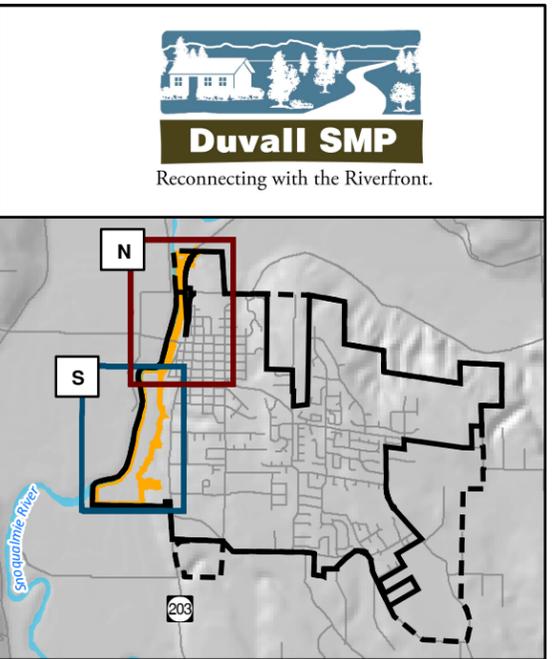
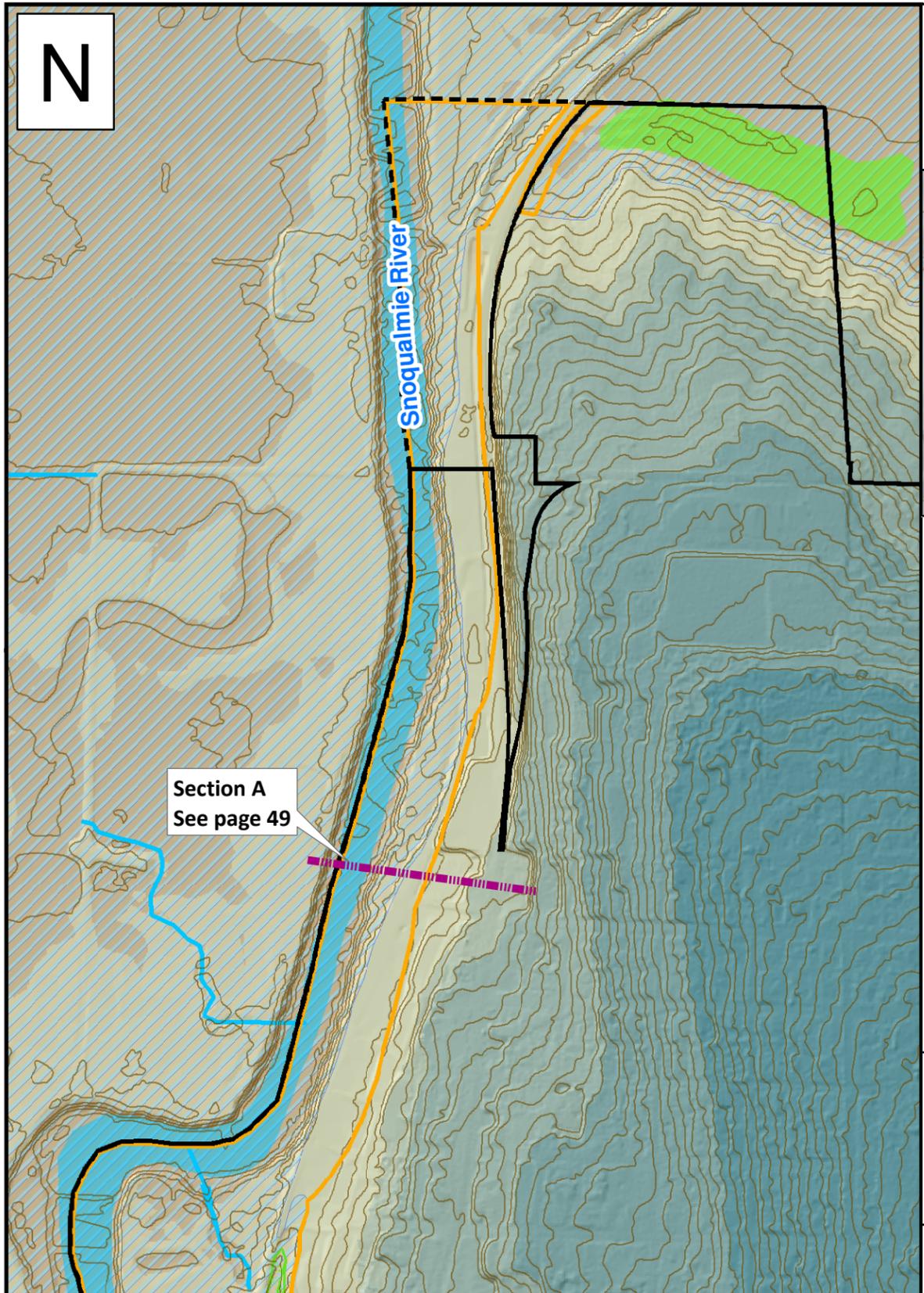
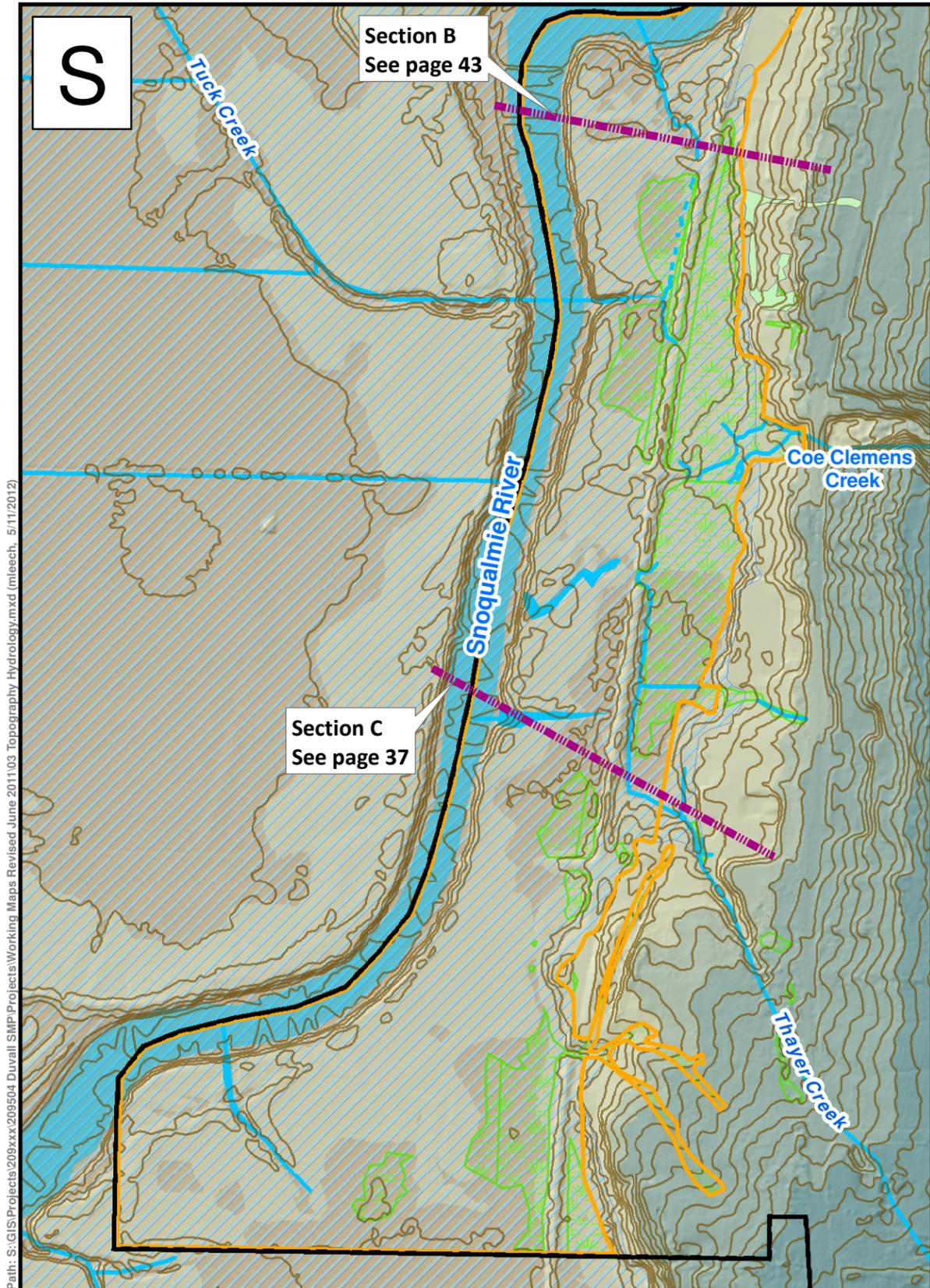
- Defined Channel
- Intermittent Channel
- Incised Channel
- Culvert
- Bridge

**City of Duvall**  
Small Town. Real Life.

0 300  
Feet

SOURCE: City of Duvall, 2008; ESA Adolfsen, 2009; King County, 2005, 2009; NAIP (USDA), 2009 (Aerial)

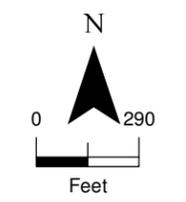
G:\NATURAL SCIENCES\2009\2009004 - DuvallSMP\05 - Graphics - GIS - Modeling\GIS\mxd\Work\Maps\ShorelinePlanningArea.mxd (AMB: 12/22/2010)



Legend

Duvall City Limits	Contours 2'
Duvall UGA Boundary	Elevation (ft)
Preliminary Shoreline Planning Area	0 - 5
Streams	5-10
Wetlands (City)	10-25
Wetlands (King County)	25-40
Wetlands (Field Verified)	40-50
1% Chance Annual Flood	50-70
	70-80
	80-125
	125-175
	>175

**NOTE: Sections A, B, and C to be prepared during completion of Draft Inventory and Characterization.**

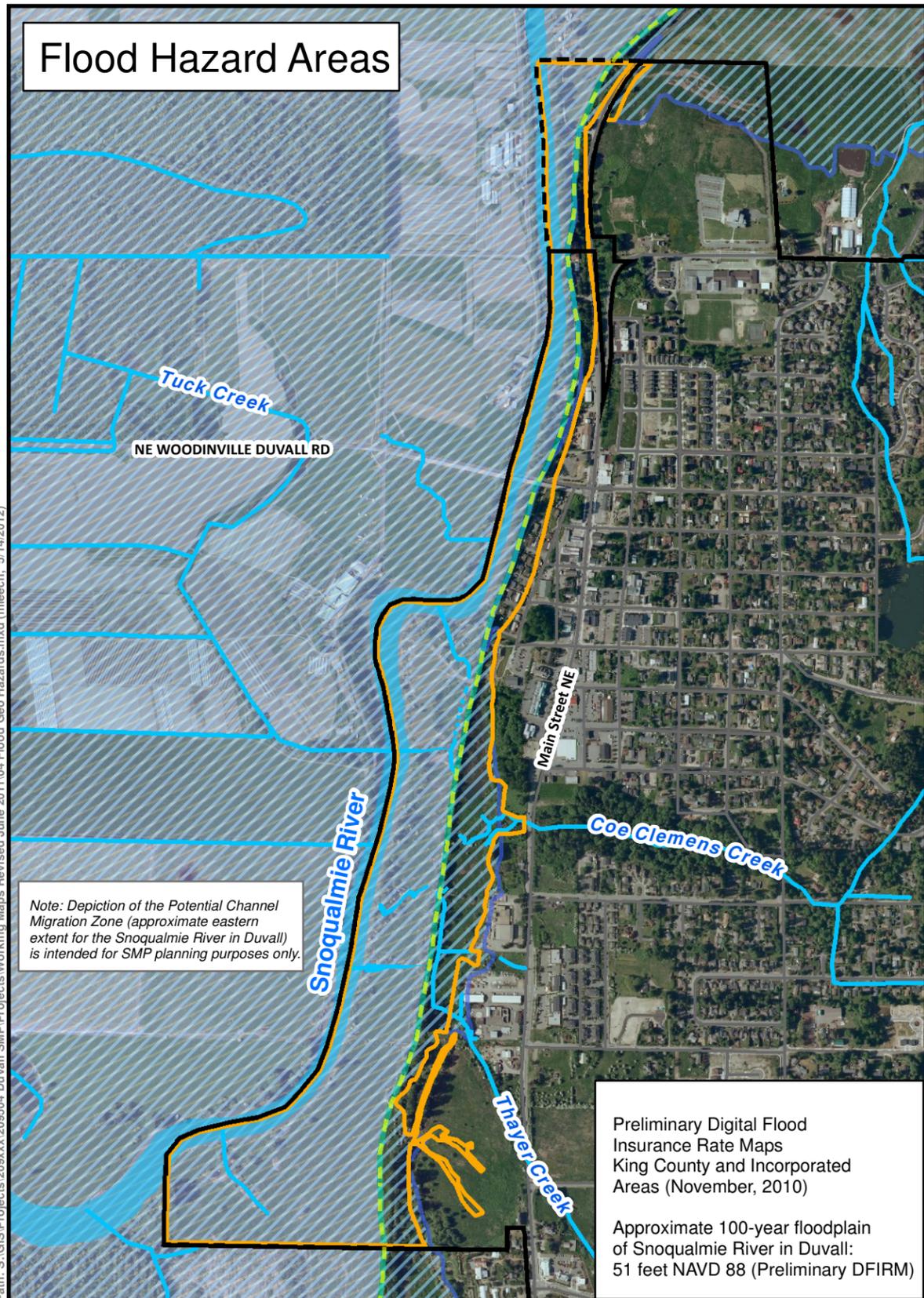


SOURCE:  
Snohomish County, 2008;  
King County, 2003 (LIDAR)

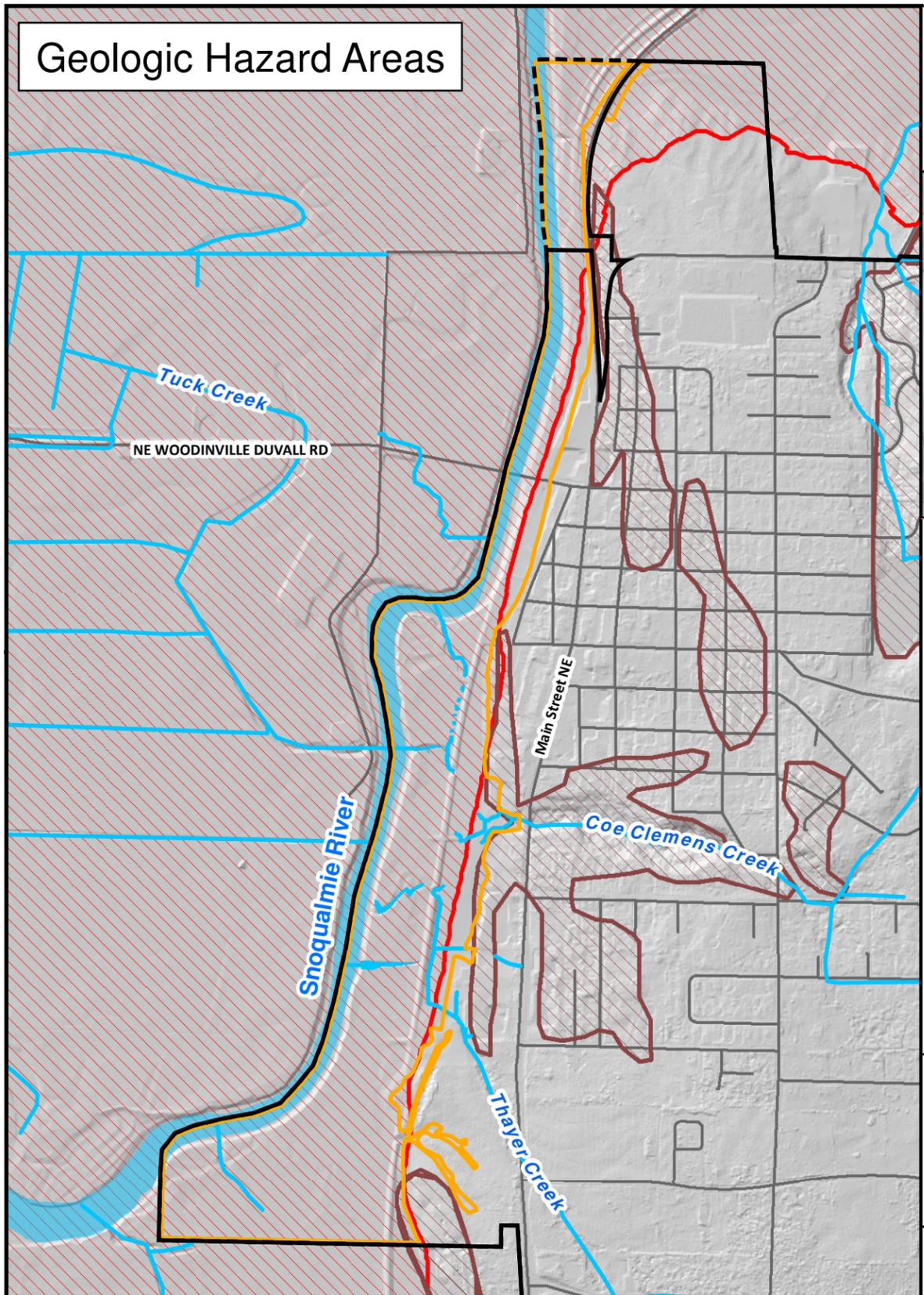


Path: S:\GIS\Projects\209\209504 Duvall SMP\Projects\Working Maps Revised June 2011\03 Topography Hydrology.mxd (mleech, 5/11/2012)

# Flood Hazard Areas

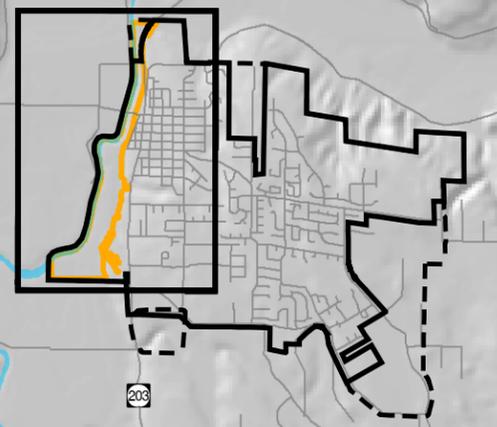


# Geologic Hazard Areas



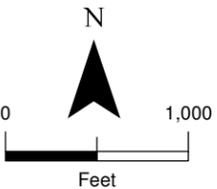
**Duvall SMP**

Reconnecting with the Riverfront.



## Legend

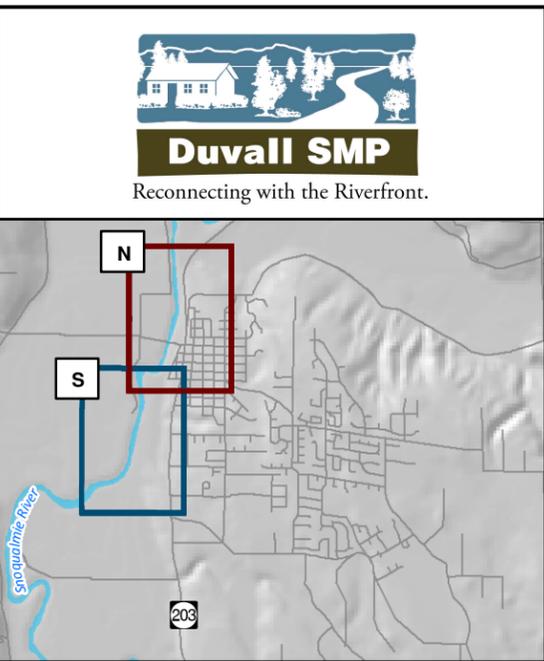
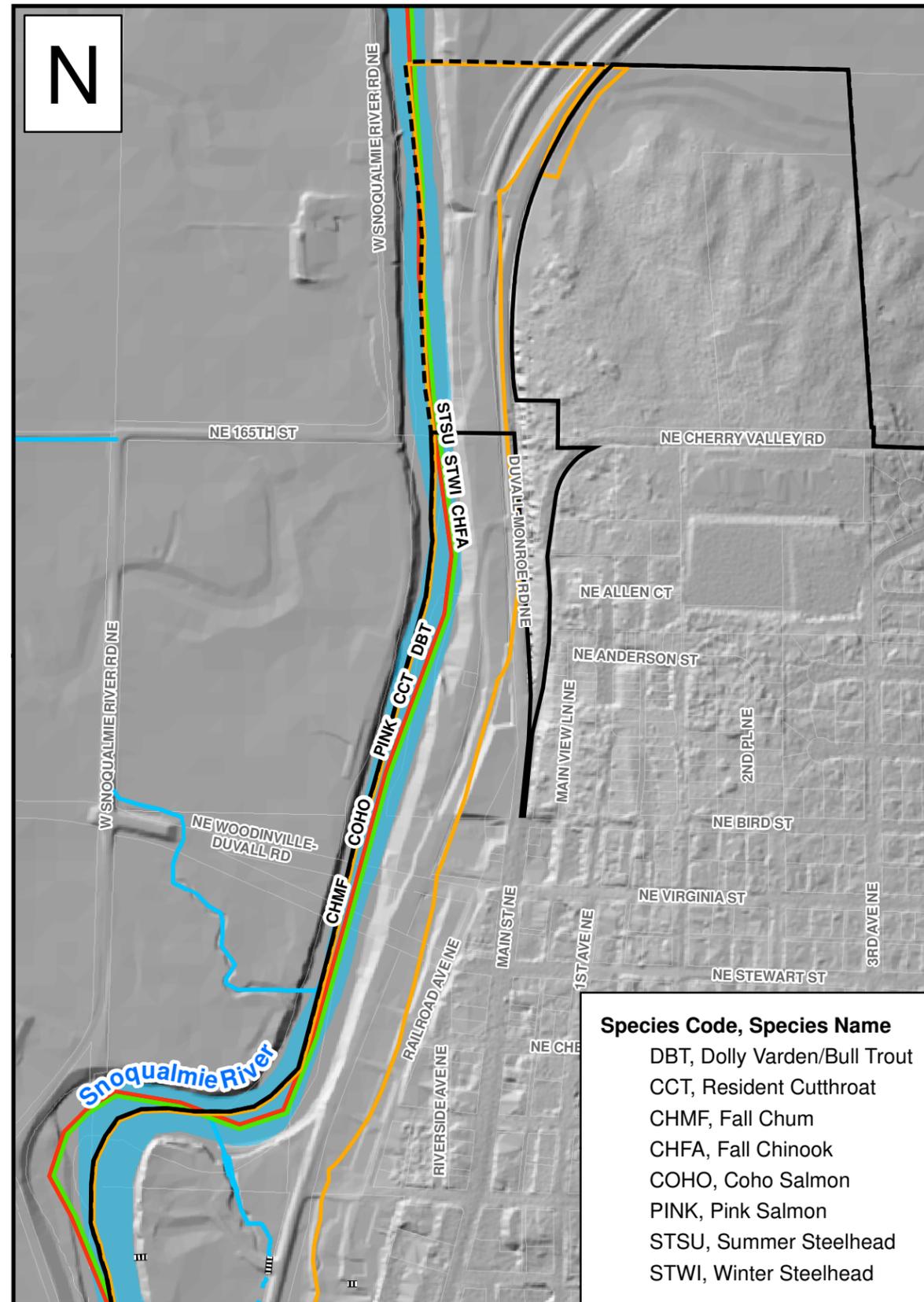
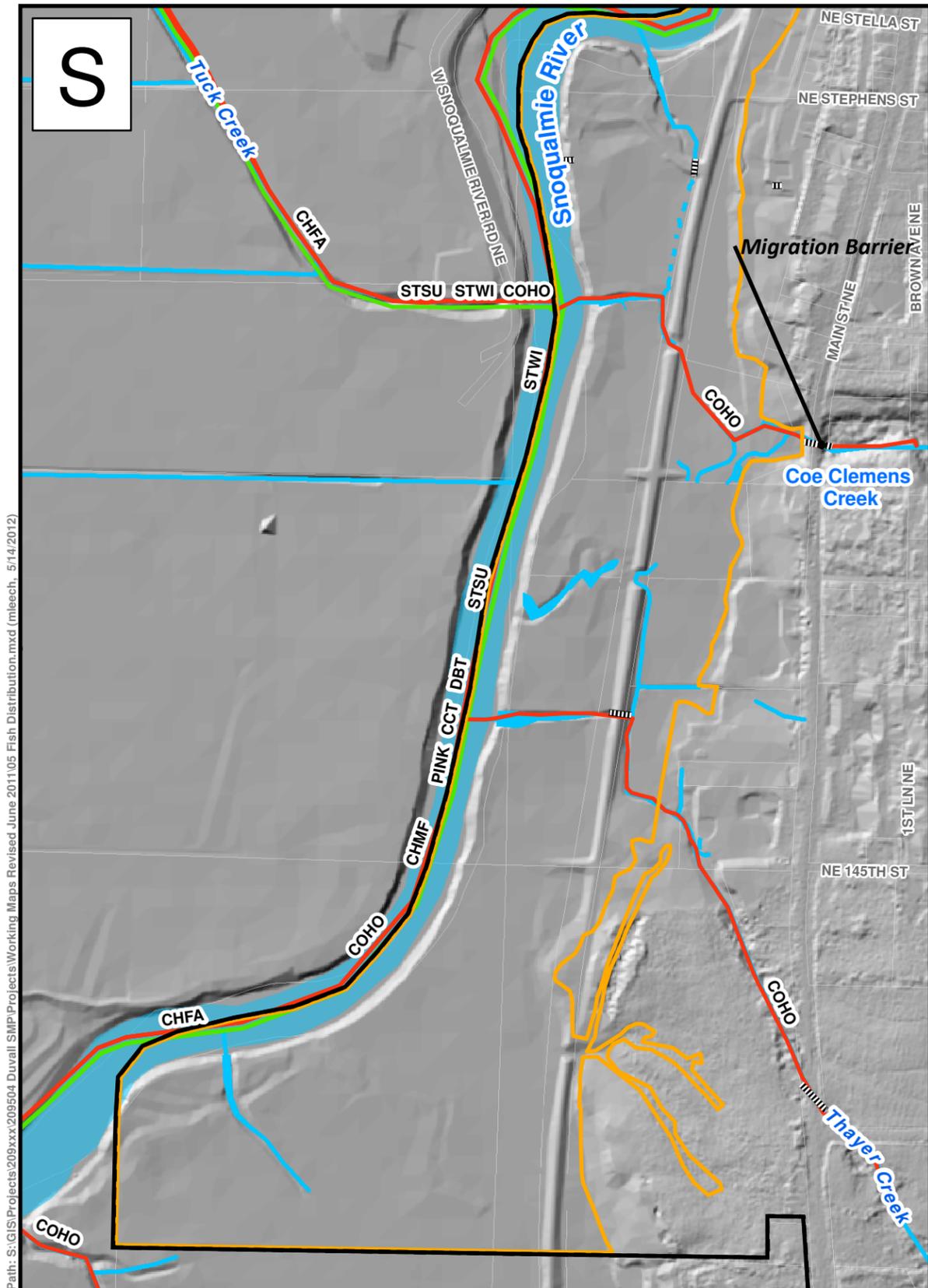
- Duvall City Limits
- Duvall UGA Boundary
- Preliminary Shoreline Planning Area
- Streams
- Erosion Hazard Areas
- Seismic Hazard Areas
- 1% Chance Annual Flood
- Floodway
- Approximate Extent of Potential Channel Migration
- Streets



SOURCE: City of Duvall, 2008; ESA, 2009; King County, 2005, 2009; Aerials Express, 2009



Path: S:\GIS\Projects\209xxx\209504 Duvall SMP\Projects\Working Maps Revised June 2011\04 Flood Geo Hazards.mxd (mleech, 5/14/2012)

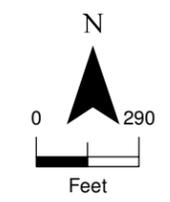


- Legend**
- Duvall City Limits
  - Duvall UGA Boundary
  - Preliminary Shoreline Planning Area
  - Streams
  - Culvert
  - Fish Distribution**
  - Known Juvenile Rearing
  - Presence/Migration

**Species Code, Species Name**

DBT,	Dolly Varden/Bull Trout
CCT,	Resident Cutthroat
CHMF,	Fall Chum
CHFA,	Fall Chinook
COHO,	Coho Salmon
PINK,	Pink Salmon
STSU,	Summer Steelhead
STWI,	Winter Steelhead

Note: No other documented wildlife in the project area.

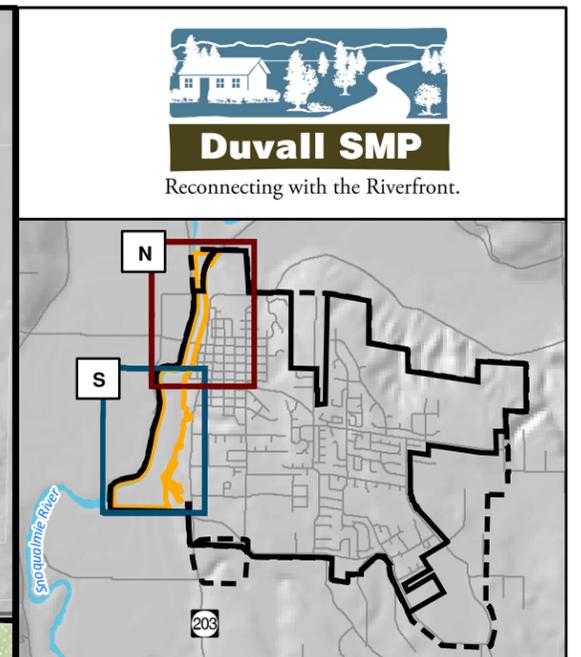
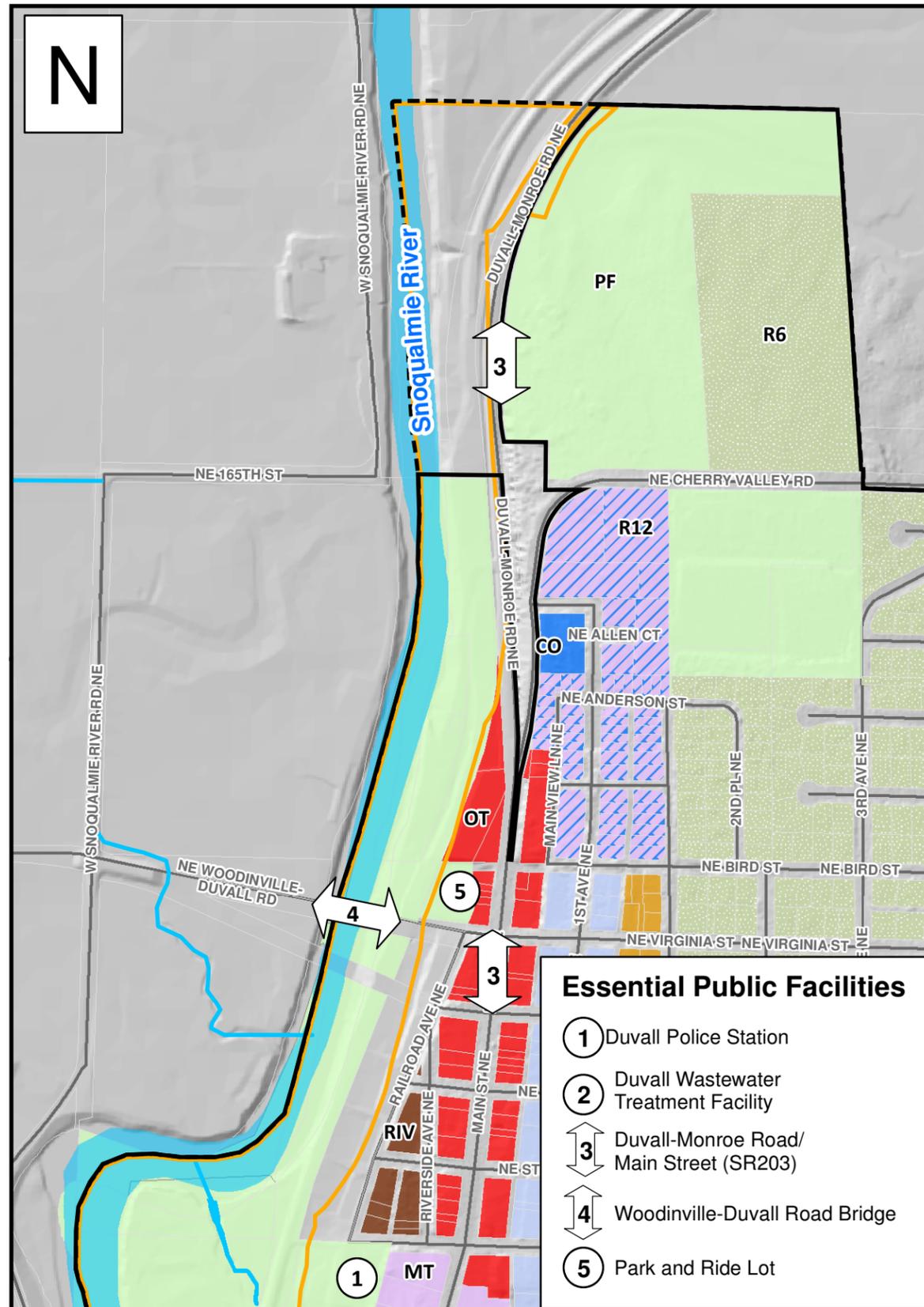
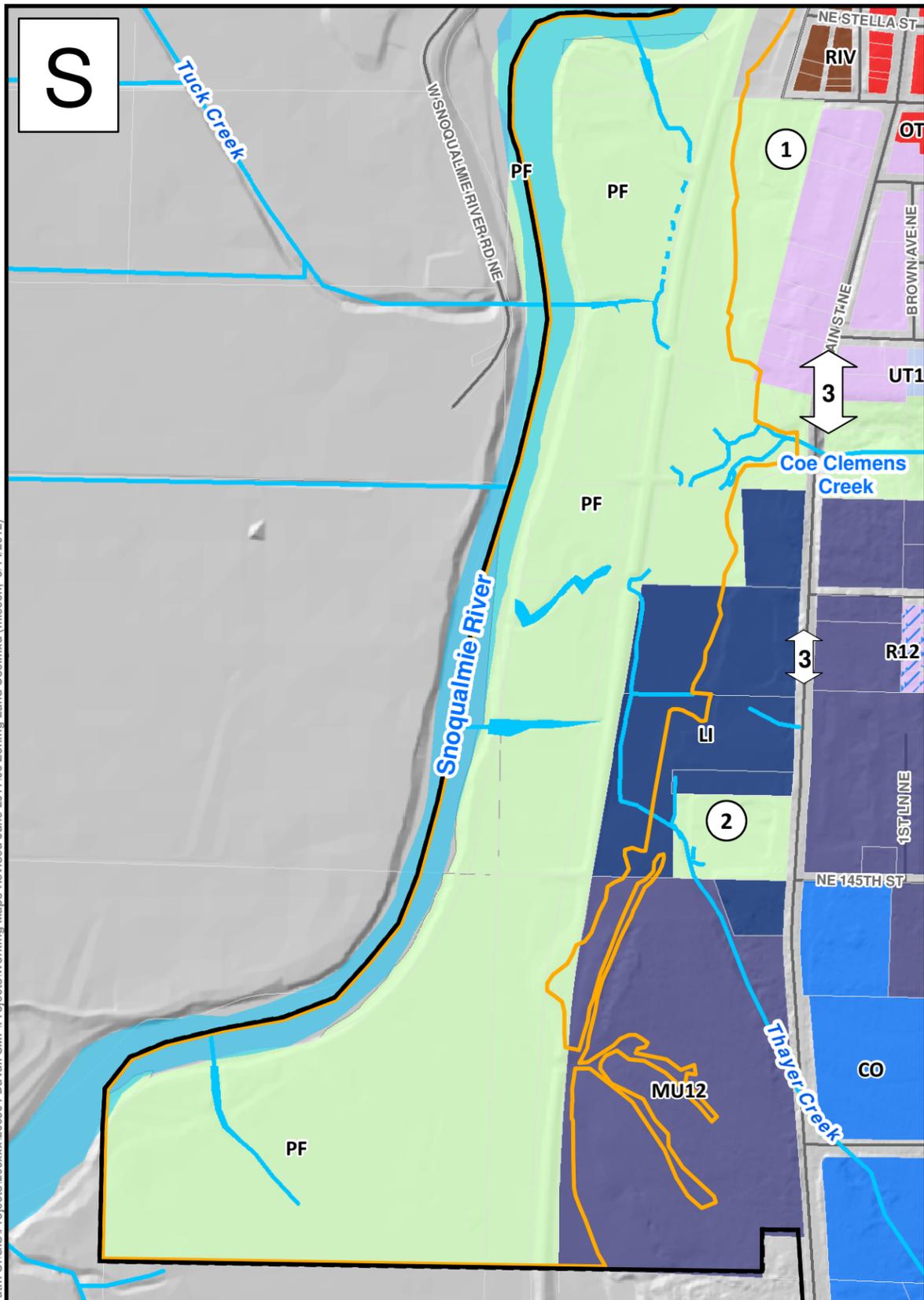


SOURCE:  
City of Duvall, 2009; Snohomish County, 2008;  
King County, 2003 (LiDAR)



Path: S:\GIS\Projects\209xxx\209504 Duvall SMP\Projects\Working Maps Revised June 2011\05 Fish Distribution.mxd (mbeech, 5/14/2012)

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**Legend**

- Preliminary Shoreline Planning Area
- Duvall City Limits
- Duvall UGA Boundary

**Zoning**

- PF - Public Facilities
- CO - Commercial
- LI - Light Industrial
- MT - Midtown
- MU12 - Mixed Use
- MUI - Mixed Use Industrial
- NUGA - Urban Growth Area
- OT - Old Town - Mixed Use
- R12 - Residential 12 Units Per Acre
- R4 - Residential 4 Units Per Acre
- R4.5 - Residential 4.5 Units Per Acre
- R6 - Residential 6 Units Per Acre
- R8 - Residential 8 Units Per Acre
- RIV - Riverside Village
- UT1 - Uptown - 1st Avenue

**Essential Public Facilities**

- 1 Duvall Police Station
- 2 Duvall Wastewater Treatment Facility
- 3 Duvall-Monroe Road/Main Street (SR203)
- 4 Woodinville-Duvall Road Bridge
- 5 Park and Ride Lot

North arrow and scale bar (0 to 290 Feet).

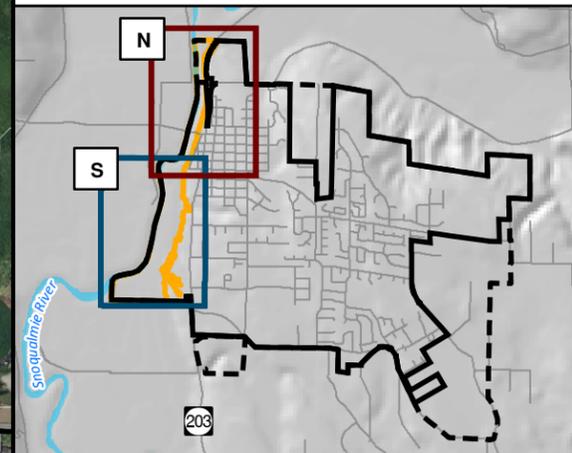
SOURCE: City of Duvall, 2010; ESA Adolfsen, 2009; King County, 2005, 2009; PSLC, 2005 (LiDAR)

**SHORELINE MASTER PROGRAM**  
City of Duvall

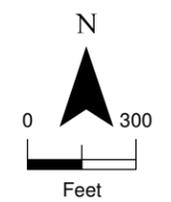
**Map 6**  
**ZONING AND LAND USE**



Path: S:\GIS\Projects\209xxx\209504 Duvall SMP\Projects\Working Maps Revised June 2011\07 Parks.mxd (mleech, 6/7/2011)



- Legend**
- Parks
  - Paths and Trails
  - Waterbody
  - Boat Ramp
  - Wading / Swim Beach
  - Bridge
  - Privately Owned Parcels
  - Duvall City Limits
  - Duvall UGA Boundary
  - Preliminary Shoreline Planning Area

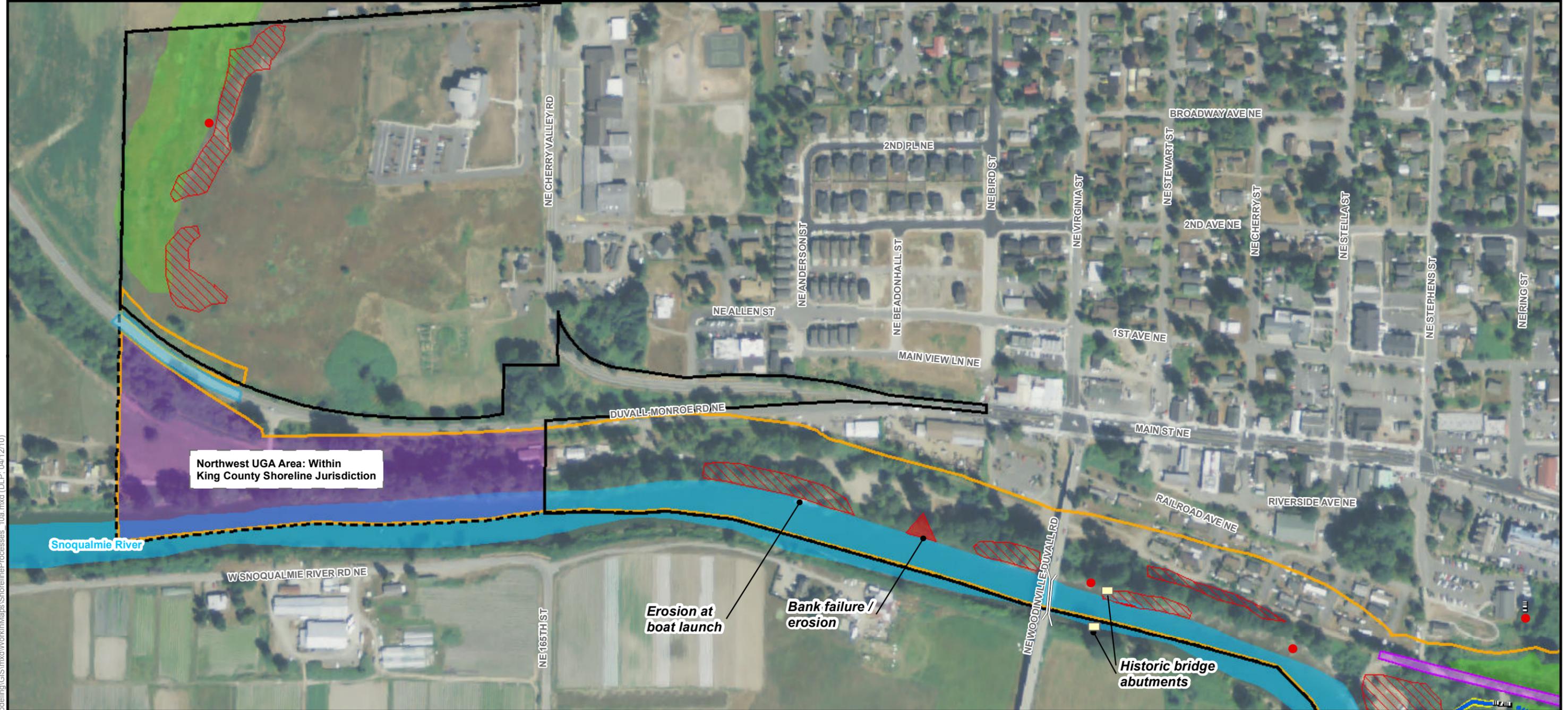


SOURCE: City of Duvall, 2008; ESA Adolfsen, 2009; King County, 2005, 2009; Aerials Express, 2009 (Aerial)

**SHORELINE MASTER PROGRAM**  
City of Duvall

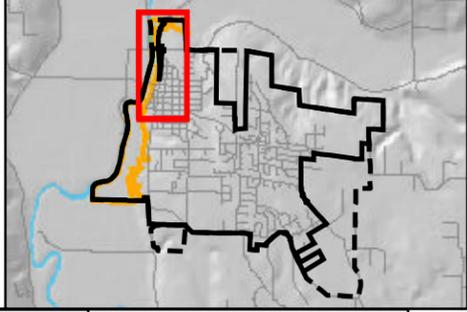
**Map 7**  
**PARKS, OPEN SPACE AND PUBLIC ACCESS AREAS**





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<b>Legend</b> <ul style="list-style-type: none"> <li><span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Duvall City Limits</li> <li><span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Duvall UGA Boundary</li> <li><span style="border: 2px dashed orange; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Shoreline Planning Area</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightblue; margin-right: 5px;"></span> Streams (King County)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; margin-right: 5px;"></span> Wetlands (King County and City of Duvall)</li> </ul>		<b>Field Verified Streams</b> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: blue; margin-right: 5px;"></span> Stream</li> <li><span style="display: inline-block; width: 15px; height: 10px; border-bottom: 2px dashed blue; margin-right: 5px;"></span> Intermittent Stream</li> </ul>		<b>Shoreline Processes &amp; Impairments</b> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Incised Tributary Channel</li> <li><span style="display: inline-block; width: 15px; height: 10px; border-bottom: 1px dashed black; margin-right: 5px;"></span> Culvert <span style="display: inline-block; width: 15px; height: 10px; border-bottom: 1px dashed black; margin-right: 5px;"></span> Bridge</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Tributary Streams &amp; Wetlands Impounded</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: pink; border: 1px solid black; margin-right: 5px;"></span> Bank Erosion / Failure</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: orange; border: 1px solid black; margin-right: 5px;"></span> Subsiding Soils</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Floodplain Impounded by Roadway</li> </ul>		<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px dashed red; margin-right: 5px;"></span> Invasive Species</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px dashed green; margin-right: 5px;"></span> Lack of Riparian Vegetation</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightblue; border: 1px solid black; margin-right: 5px;"></span> Wetland Sedimentation</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid red; border-radius: 50%; margin-right: 5px;"></span> Municipal Sewer Outfall</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid red; border-radius: 50%; margin-right: 5px;"></span> Stormwater Outfall</li> </ul>	
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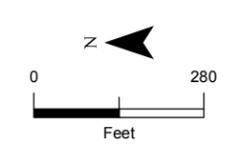
SOURCE: City of Duvall, 2008; ESA Adolfson, 2010; King County, 2005, 2009

**SHORELINE MASTER PROGRAM**  
City of Duvall

**Map 8a**

**DRAFT**

**SHORELINE PROCESSES AND IMPAIRMENTS - NORTH EXTENT**





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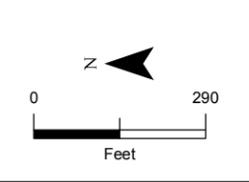
SOURCE: City of Duvall, 2008; ESA Adolfson, 2010; King County, 2005, 2009

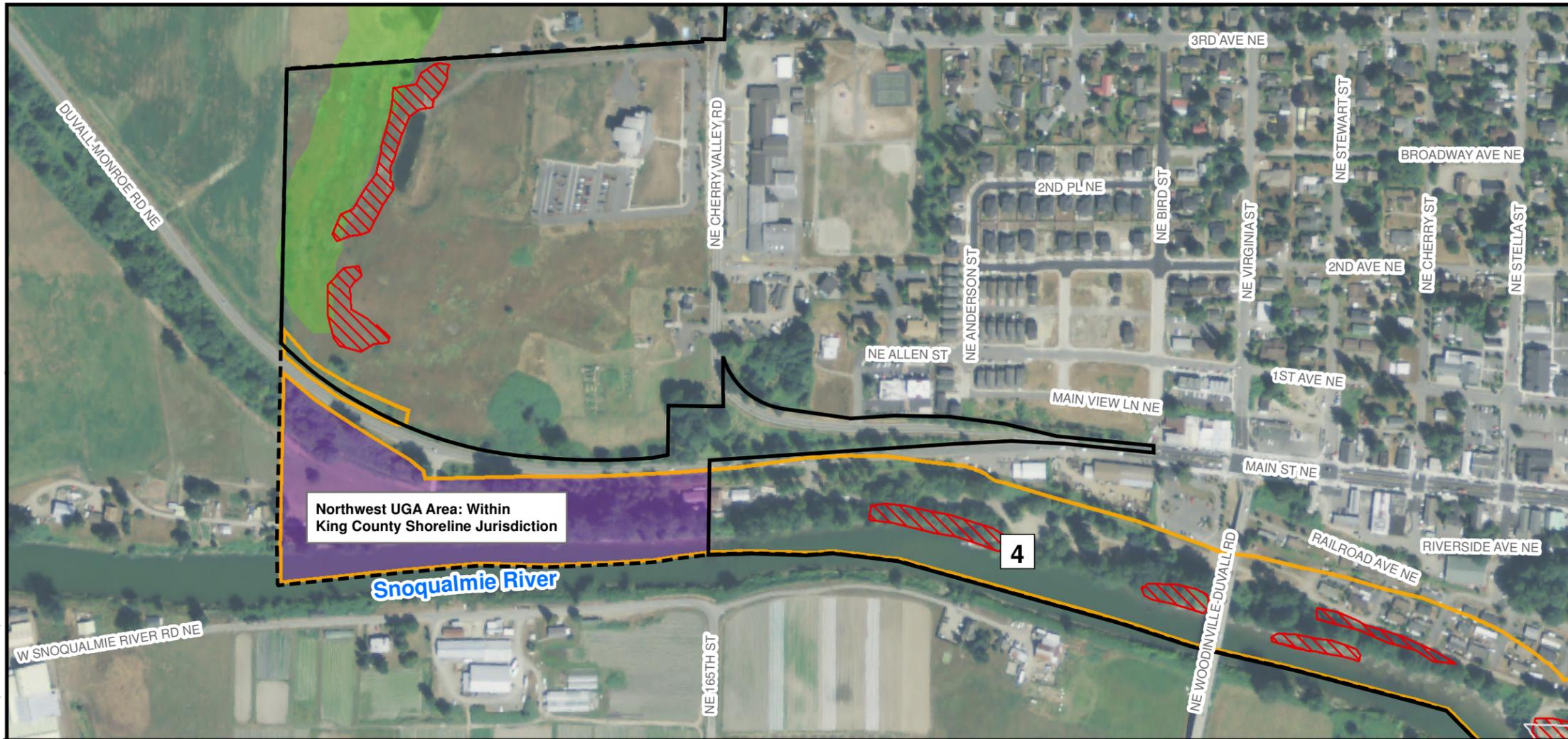
**SHORELINE MASTER PROGRAM**  
City of Duvall

**Map 8b**

**DRAFT**

**SHORELINE PROCESSES AND IMPAIRMENTS - SOUTH EXTENT**





**Legend**

- Duvall City Limits
- Duvall UGA Boundary
- Shoreline Planning Area
- Streams (King County)
- Wetlands (King County and City of Duvall)
- Field Verified Streams**
- Stream
- Intermittent Stream
- Culvert

\* wetland boundaries are approximate

**Potential Restoration Opportunities and Focus Areas**

1. Coe-Clemens and Thayer Creek Channels
  2. Coe-Clemens pond
  3. Southern (WLB) swale and depressional wetlands
  4. Snoqualmie River bank stabilization / riparian enhancement
  5. Off Channel habitat
- Non-native plant control

SOURCE: City of Duvall, 2008;  
 ESA Adolfson, 2010; King County, 2005, 2009;  
 USDA-NAIP, 2009

**RESTORATION GOALS AND OBJECTIVES**

**Goal 1 - Snoqualmie River riparian restoration**

- Objective 1-A. Restore shoreline bank conditions on the Snoqualmie River to enhance edge conditions.
  - Objective 1-B. Remove invasive plants and install native riparian trees, shrubs, and groundcover.
- See 'Non-native plant control' areas and '4' restoration focus areas for implementation of Goal 1*

**Goal 2 - Enhance existing and evaluate creation of new off-channel habitat along the main stem river**

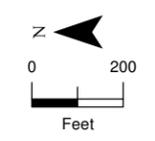
- Objective 2-A. Enhance fish habitat in Coe-Clemens Creek.
  - Objective 2-B. Enhance fish habitat in Thayer Creek downstream of State Route 202 in a phased approach, beginning with the lowest reach first.
  - Objective 2-C. Evaluate the central Thayer / Coe-Clemens channel and the unnamed channel south of Thayer Creek for fish habitat enhancement opportunities.
  - Objective 2-D. Evaluate creation of new off-channel habitat in the Snoqualmie River floodplain.
- See '1', '2', '3' and '5' restoration focus areas for implementation of Goal 2*

**Goal 3 - Improve and maintain water quality and hydrology functions in tributary streams**

- Objective 3-A. Protect existing riparian trees and shrubs and promote additional plantings along Thayer Creek, Coe-Clemens Creek, and Cherry Creeks A and B.
  - Objective 3-B. Reduce sediment loading, erosion, and stormwater impacts to Thayer Creek, Coe-Clemens Creek, and Cherry Creeks A and B.
  - Objective 3-C. Educate residents and businesses in the watershed about methods to reduce erosion and use of chemicals (e.g., fertilizers, pesticides).
- Goal 3 objectives require implementation on a basin-scale, extending throughout the City; see '1', '2' and '3' restoration focus areas for implementation opportunities within the shoreline area*

**Goal 4 - Address shoreline erosion issues where adjacent to active park and public infrastructure areas while restoring shoreline and riparian conditions.**

- Objective 4-A. Stabilize banks along the Snoqualmie River within the northern portion of McCormick Park and at the Taylor's Landing boat ramp.
- See '4' restoration focus areas for implementation of Goal 4*



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**Legend**

- Duvall City Limits
- Duvall UGA Boundary
- Shoreline Planning Area
- Streams (King County)
- Wetlands (King County and City of Duvall)
- Field Verified Streams**
- Stream
- Intermittent Stream
- Culvert

\* wetland boundaries are approximate

**Potential Restoration Opportunities and Focus Areas**

1. Coe-Clemens and Thayer Creek Channels
  2. Coe-Clemens pond
  3. Southern (WLB) swale and depressional wetlands
  4. Snoqualmie River bank stabilization / riparian enhancement
  5. Off Channel habitat
- Non-native plant control

SOURCE: City of Duvall, 2008;  
ESA Adolphson, 2010; King County, 2005, 2009;  
USDA-NAIP, 2009

**RESTORATION GOALS AND OBJECTIVES**

**Goal 1 - Snoqualmie River riparian restoration**

- Objective 1-A. Restore shoreline bank conditions on the Snoqualmie River to enhance edge conditions.
  - Objective 1-B. Remove invasive plants and install native riparian trees, shrubs, and groundcover.
- See 'Non-native plant control' areas and '4' restoration focus areas for implementation of Goal 1*

**Goal 2 - Enhance existing and evaluate creation of new off-channel habitat along the main stem river**

- Objective 2-A. Enhance fish habitat in Coe-Clemens Creek.
  - Objective 2-B. Enhance fish habitat in Thayer Creek downstream of State Route 202 in a phased approach, beginning with the lowest reach first.
  - Objective 2-C. Evaluate the central Thayer / Coe-Clemens channel and the unnamed channel south of Thayer Creek for fish habitat enhancement opportunities.
  - Objective 2-D. Evaluate creation of new off-channel habitat in the Snoqualmie River floodplain.
- See '1', '2', '3' and '5' restoration focus areas for implementation of Goal 2*

**Goal 3 - Improve and maintain water quality and hydrology functions in tributary streams**

- Objective 3-A. Protect existing riparian trees and shrubs and promote additional plantings along Thayer Creek, Coe-Clemens Creek, and Cherry Creeks A and B.
  - Objective 3-B. Reduce sediment loading, erosion, and stormwater impacts to Thayer Creek, Coe-Clemens Creek, and Cherry Creeks A and B.
  - Objective 3-C. Educate residents and businesses in the watershed about methods to reduce erosion and use of chemicals (e.g., fertilizers, pesticides).
- Goal 3 objectives require implementation on a basin-scale, extending throughout the City; see '1', '2' and '3' restoration focus areas for implementation opportunities within the shoreline area*

**Goal 4 - Address shoreline erosion issues where adjacent to active park and public infrastructure areas while restoring shoreline and riparian conditions.**

- Objective 4-A. Stabilize banks along the Snoqualmie River within the northern portion of McCormick Park and at the Taylor's Landing boat ramp.
- See '4' restoration focus areas for implementation of Goal 4*