Snohomish River Basin Freshwater Habitat Targets

History and Update Approach

Snohomish River Basin Technical Committee Presentation
May 5, 2020

Outline

- Purpose
- How Snohomish Basin 2005 habitat targets were developed
- Conservation Plan's 2005 habitat targets
- Snoqualmie 2025 habitat target update in 2018
- Approach for updating freshwater targets for 2030

Updating the Snohomish Salmon Plan

Late 2019 – Early 2020

- Collect and synthesize new information
- **Develop the framework for plan update**

Early 2020 – Early 2021

- Complete new analyses
- Further develop/vet new content

Early to Mid 2021

- Develop draft for review
- Identify future work

Mid 2021 – Late 2021

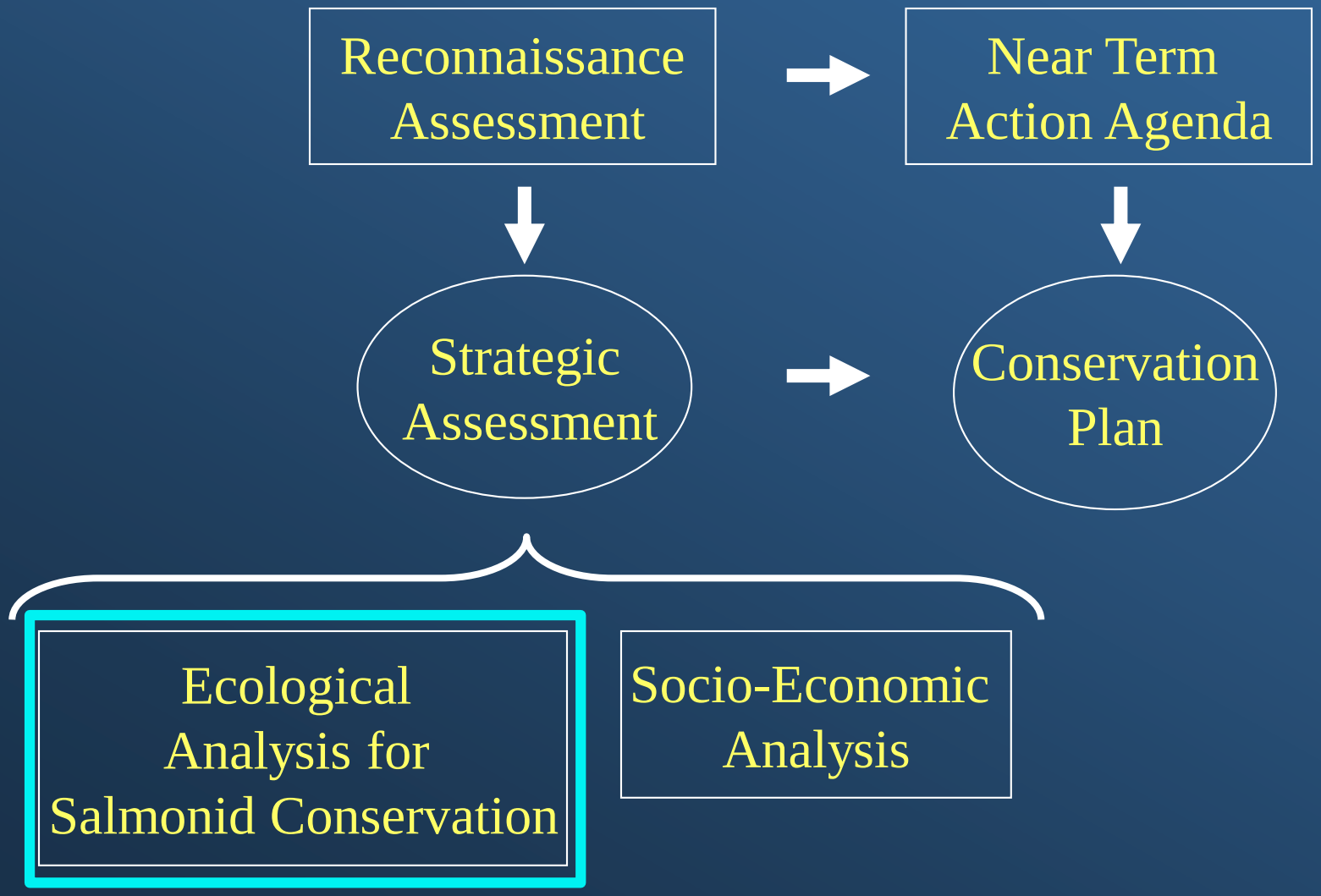
- Adoption

2005 Plan: Vision for Recovery

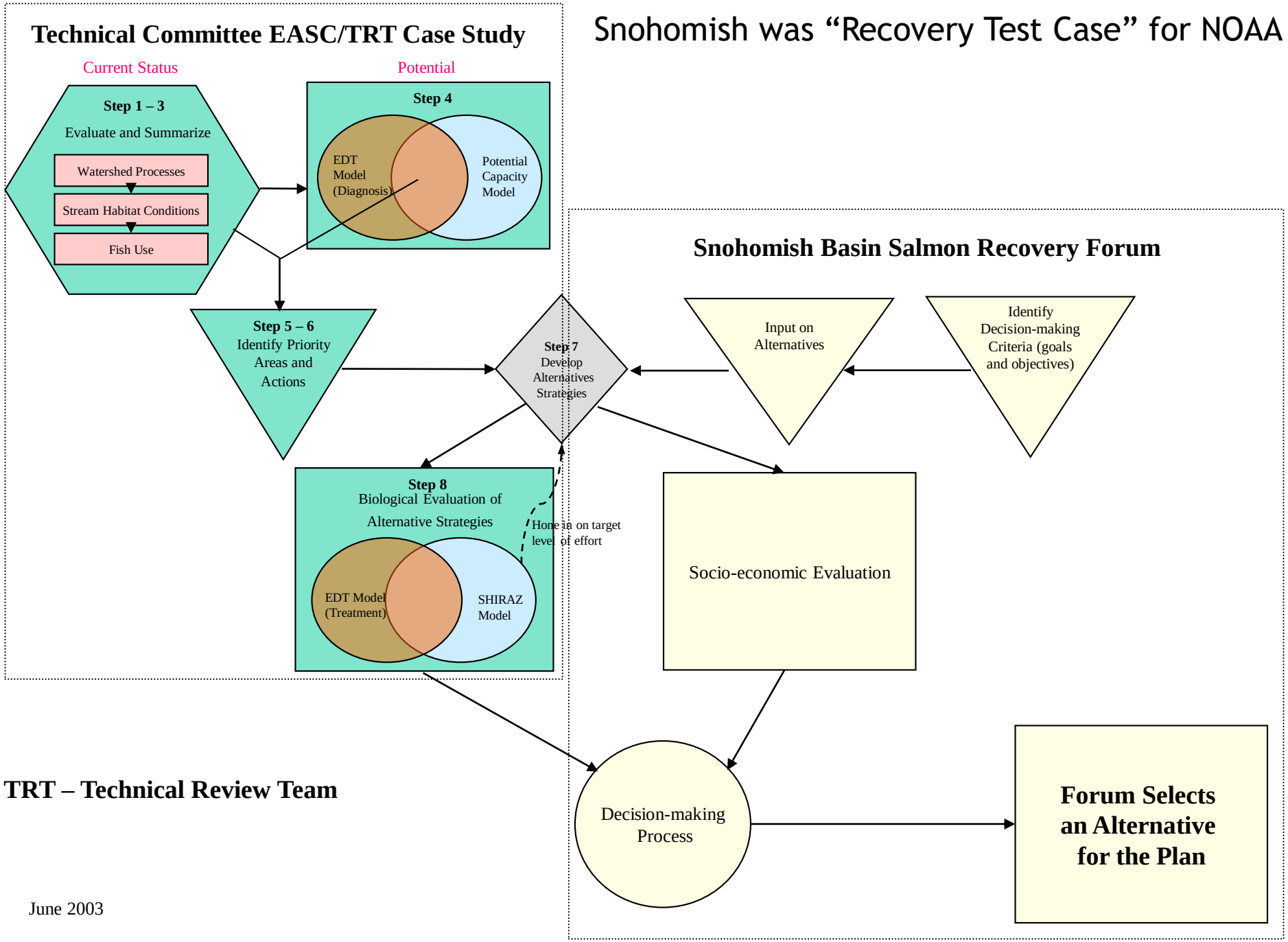
- Co-manager targets for long-term recovery (~50 years)
- 10-year milestones for habitat condition improvements
- Targeted 10-year capital approach in highest priority areas
  - Nearshore
  - Estuary
  - Mainstems
- Broad set of basin wide actions

2005 Salmon Plan Creation – 1998-2004

- Based on the Tri-County Framework

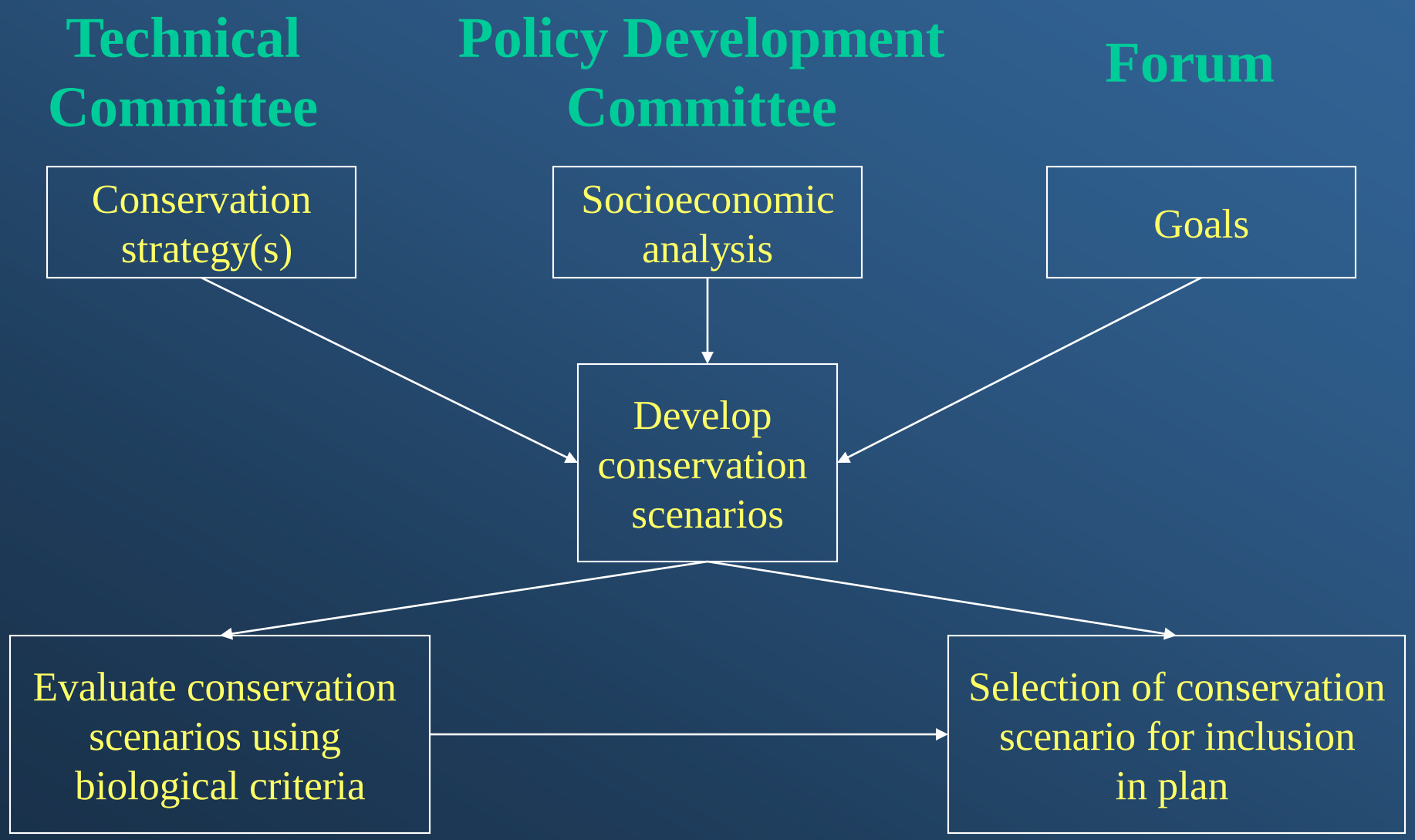


Snohomish was "Recovery Test Case" for NOAA and Region



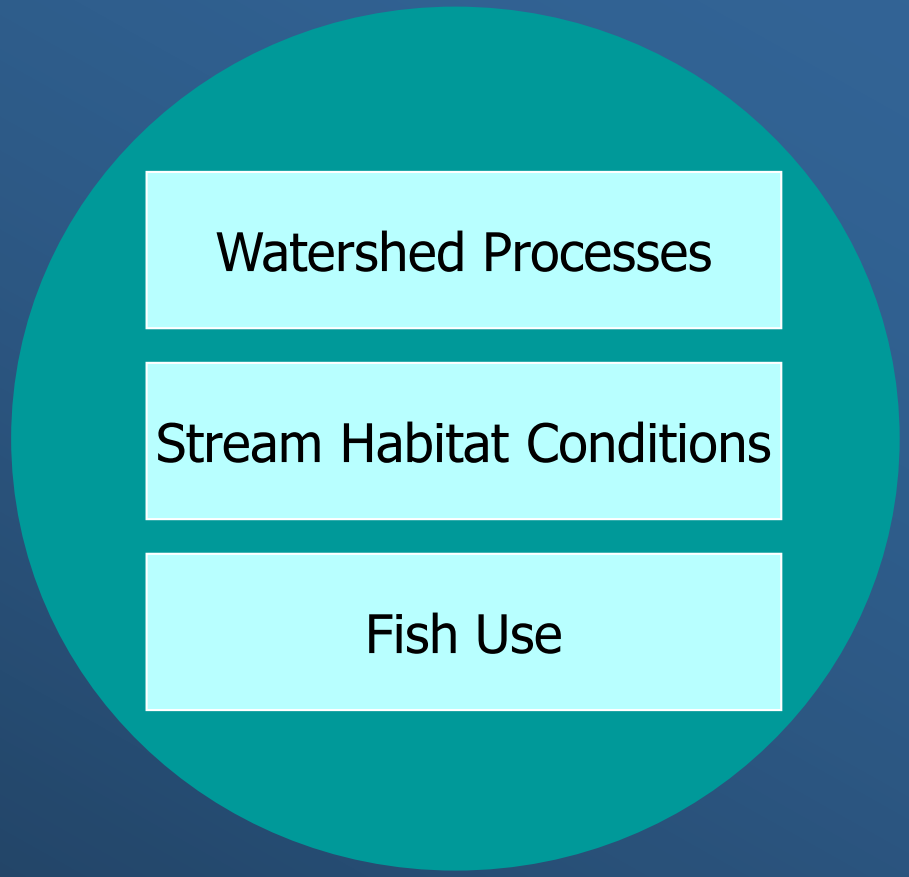
June 2003

Conservation strategies and scenarios



WRIA 7 Ecological Analysis for Salmonid Conservation (EASC) Purpose

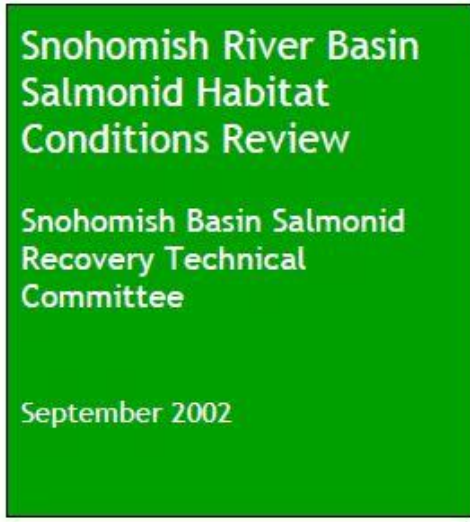
- Analyze and integrate previous technical work
- Provide guidance on actions and locations to improve population performance
- Assist with the development and evaluation of conservation scenarios



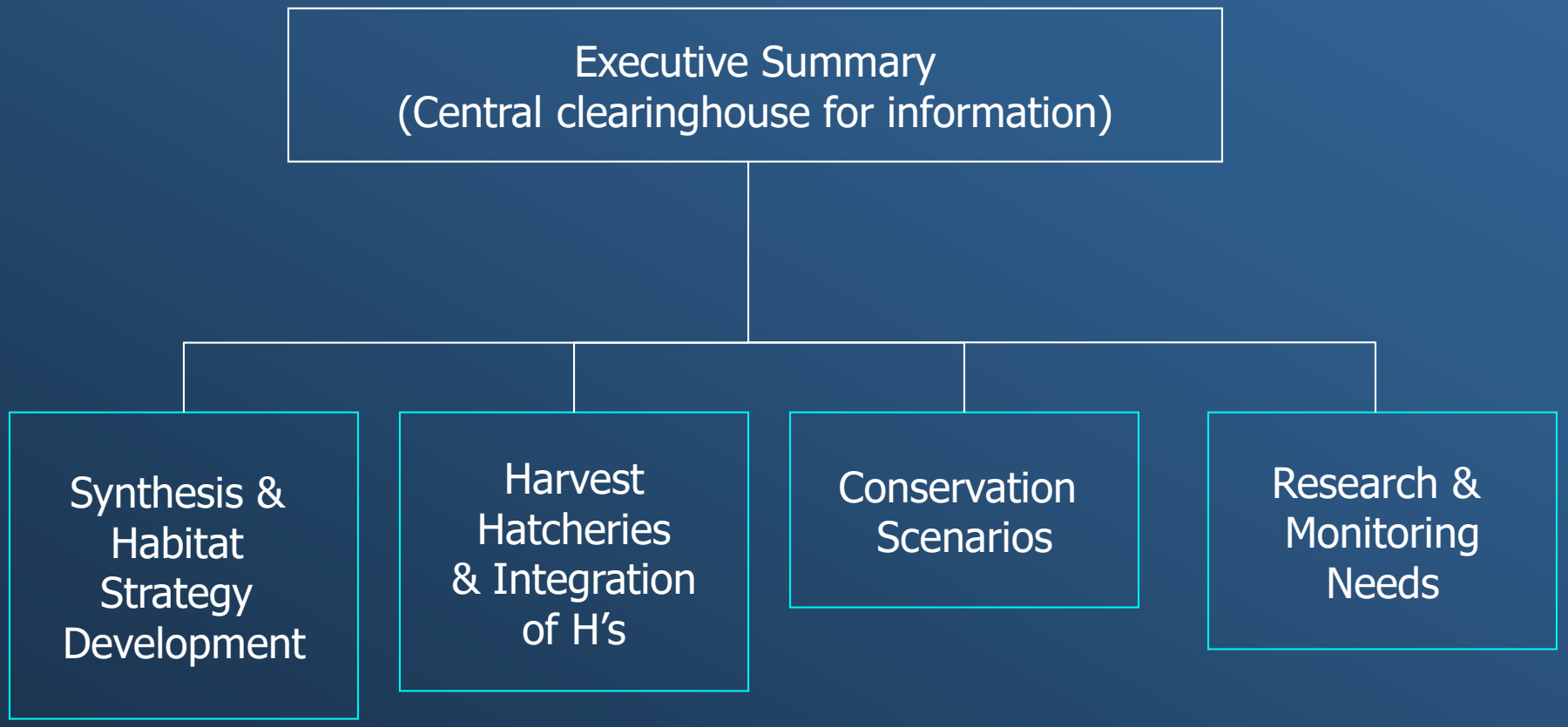
EASC Basis

- Snohomish Basin Salmonid Habitat Conditions Review
- Limiting Factors Analysis
- EDT Modeling

- Watershed Process Model
- Potential Habitat Capacity Model



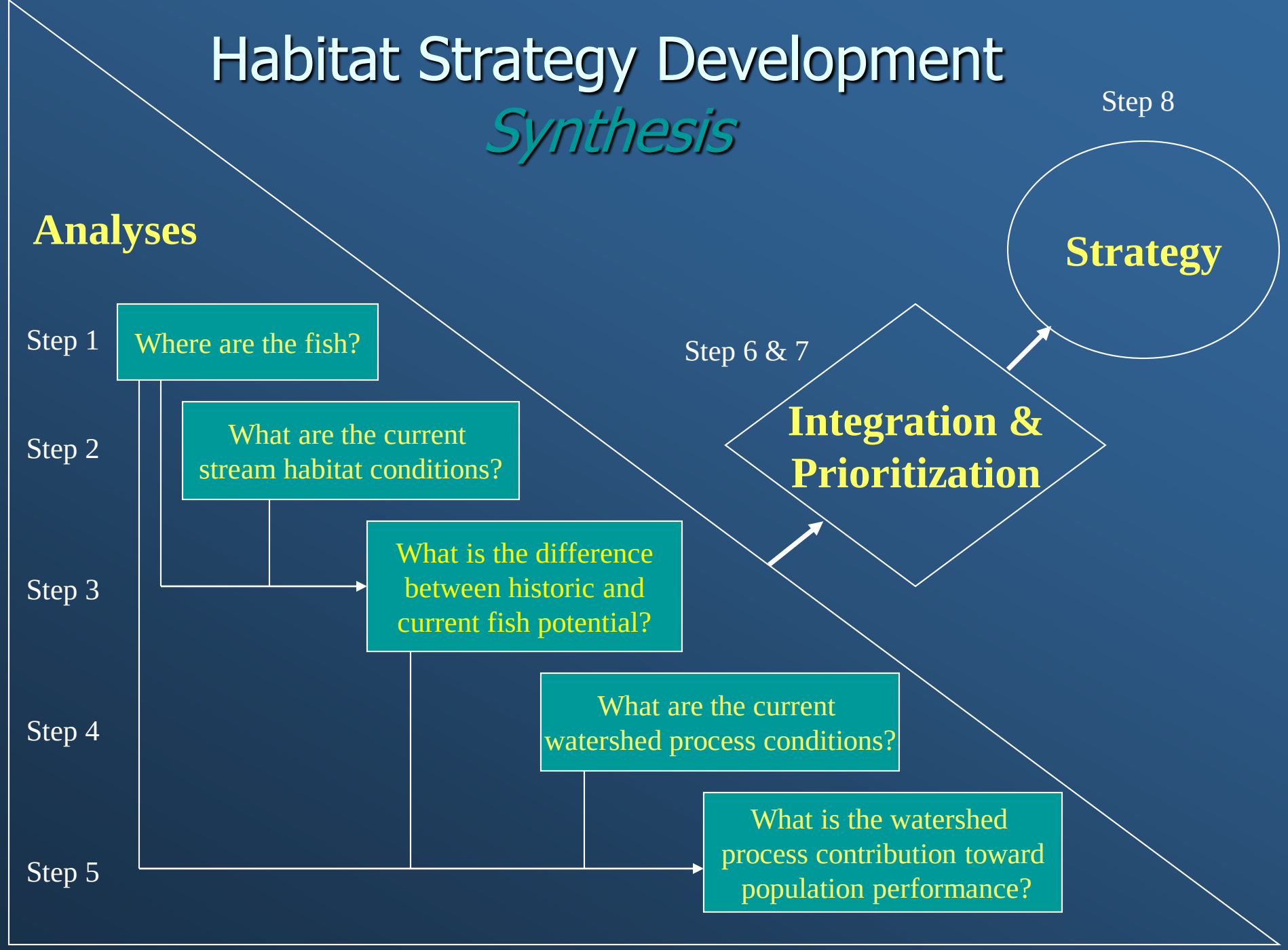
EASC Elements

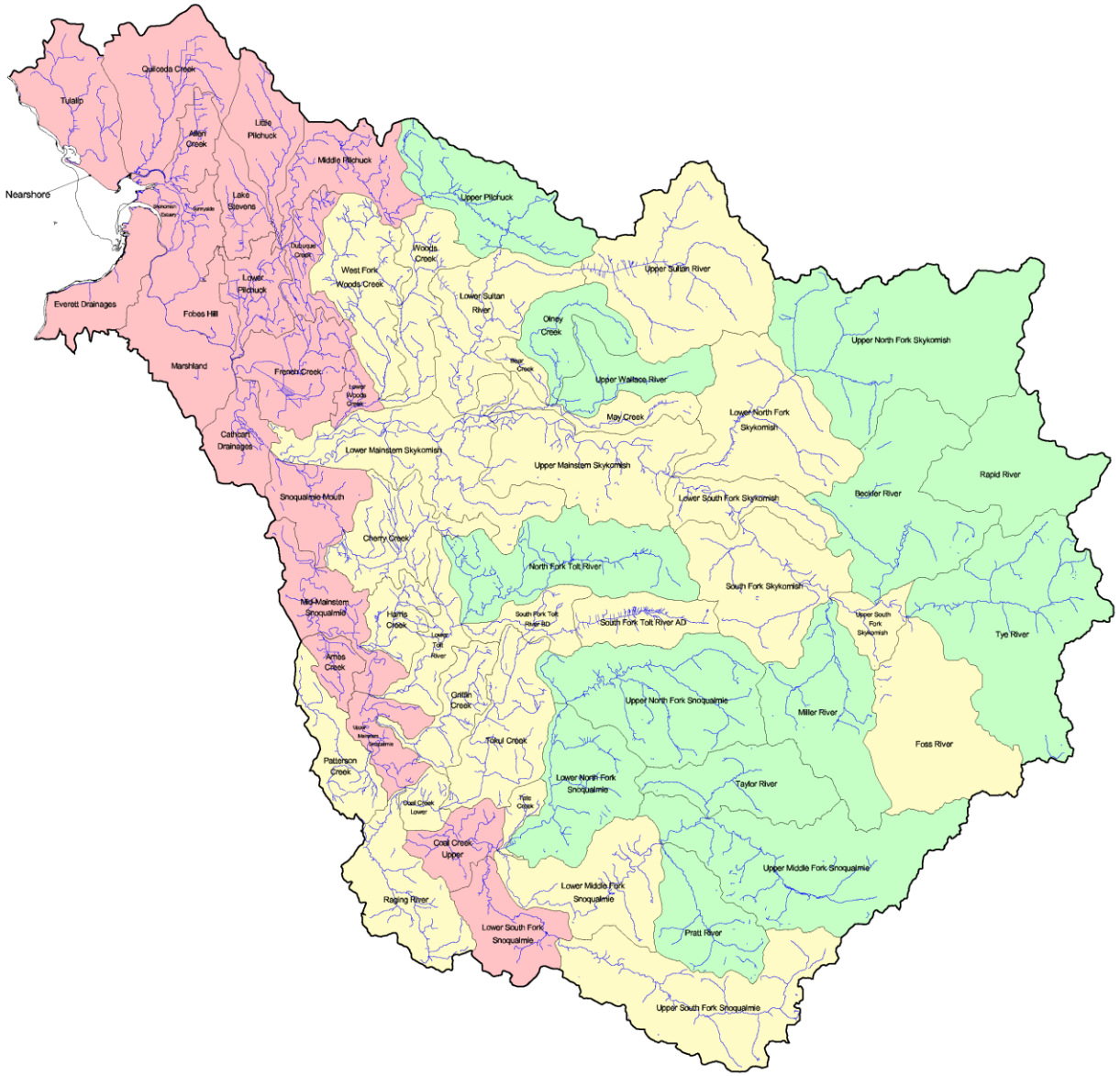


Technical Addendums

Habitat Strategy Development

Synthesis





SNOHOMISH COUNTY

SURFACE WATER MANAGEMENT

Step 3
Hydrologic Processes - Peak Flow

Hydrologic Processes

- Intact (>80% reaches intact)
- Moderately Degraded (between 80% and 50% reaches intact)
- Degraded (< 50% reaches intact)
- DNR type 1,2 & 3 streams

DRAFT

0 3 6 9 12 Miles

N W E S

Snohomish County

PUBLIC WORKS
SURFACE WATER MANAGEMENT
(425) 388-3464

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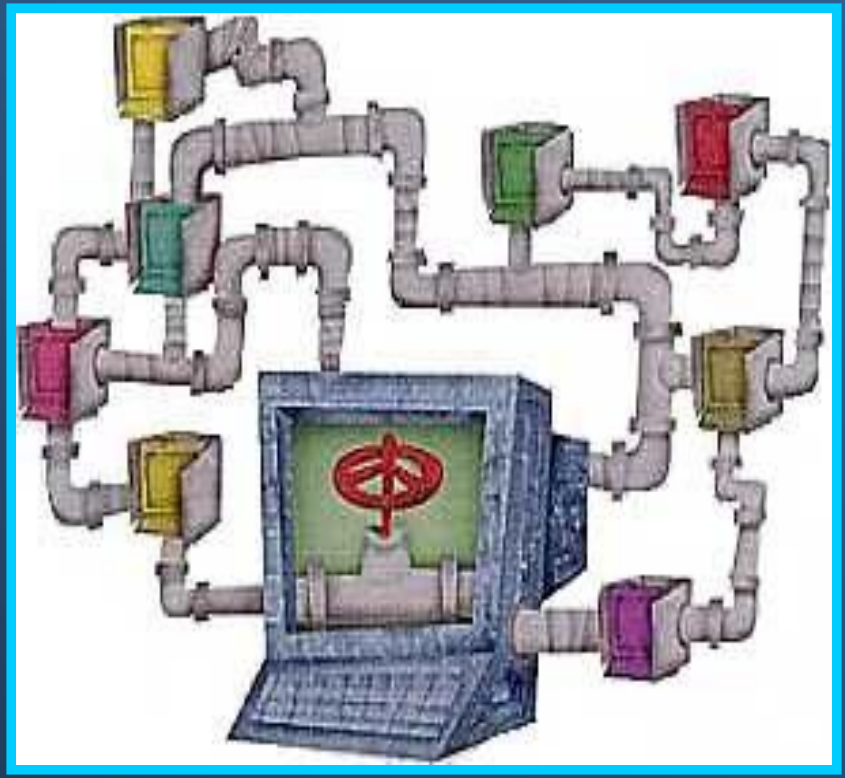
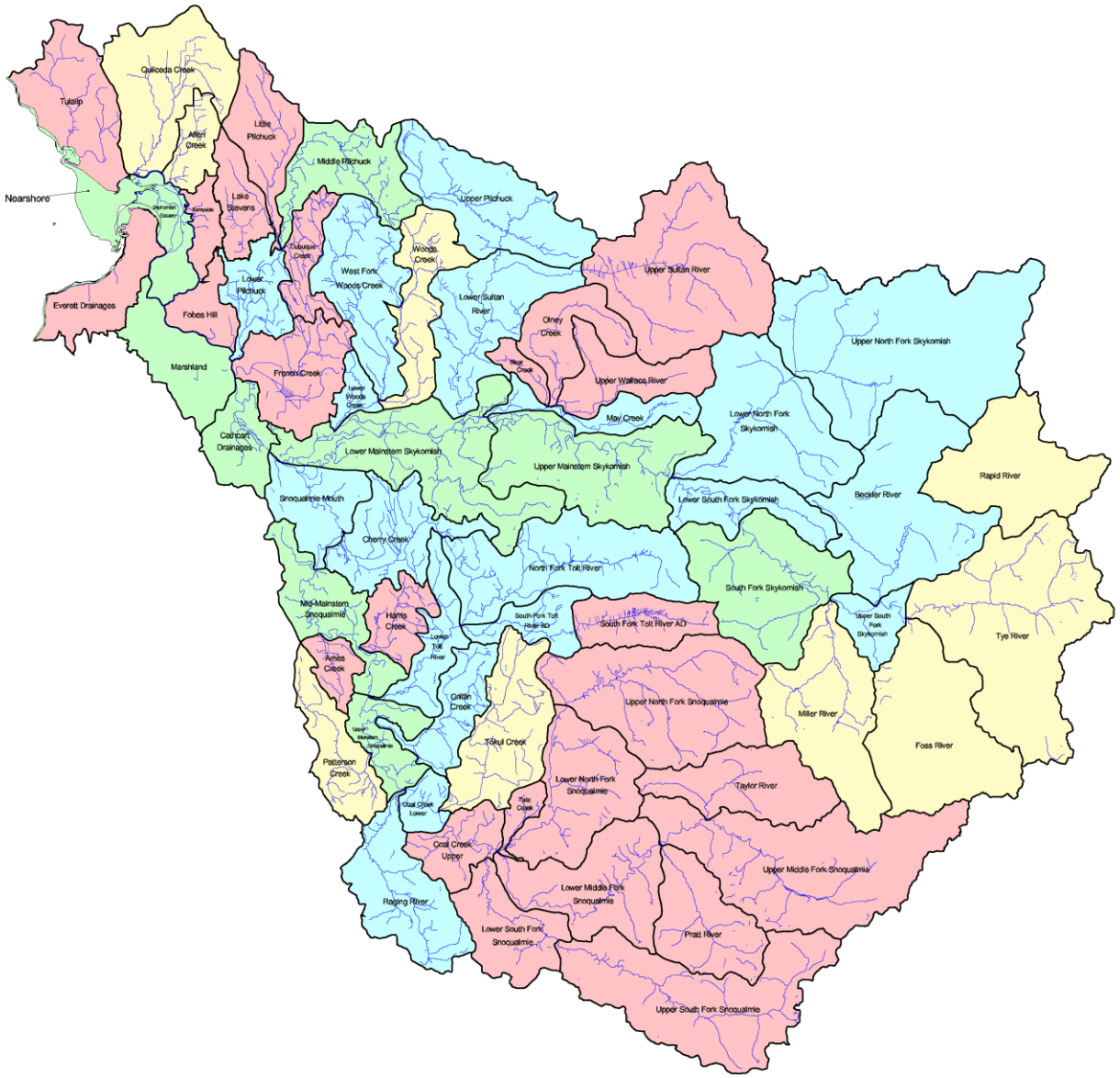
Project name: i:\pw\swm\spwsxb\andy_haas\unreasonable.apr Plot date: Jun 2, 2003; hydorproc smb

Step 4: What is the difference between current and historic habitat potential to produce Chinook?

- Diagnosis step of Ecosystem Diagnosis and Treatment (EDT)
- Potential Capacity Model
- Context for what is possible
- Where are the greatest opportunities and risks?





SNOHOMISH COUNTY

SURFACE WATER MANAGEMENT

Step 4 Potential Chinook Use with Restoration & Preservation (EDT Analysis only) by Subwatershed

Potential Chinook Use

- High
- Moderate
- Low
- None
- DNR type 1,2 & 3 streams

DRAFT

0 3 6 9 12 Miles

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Project name: i:\pw\swm\spwsxb\andy_haas\unreasonable.apr Plot date: May 14, 2003; potential chinook smb

Step 8: 2005 Habitat Targets

- Compared:
  - Intact habitat
  - Current path recovery progress
  - Total amount of habitat needed for recovery (properly functioning conditions)
- Habitat targets of ~80% of recovery total needed selected to attain co-manager VSP targets

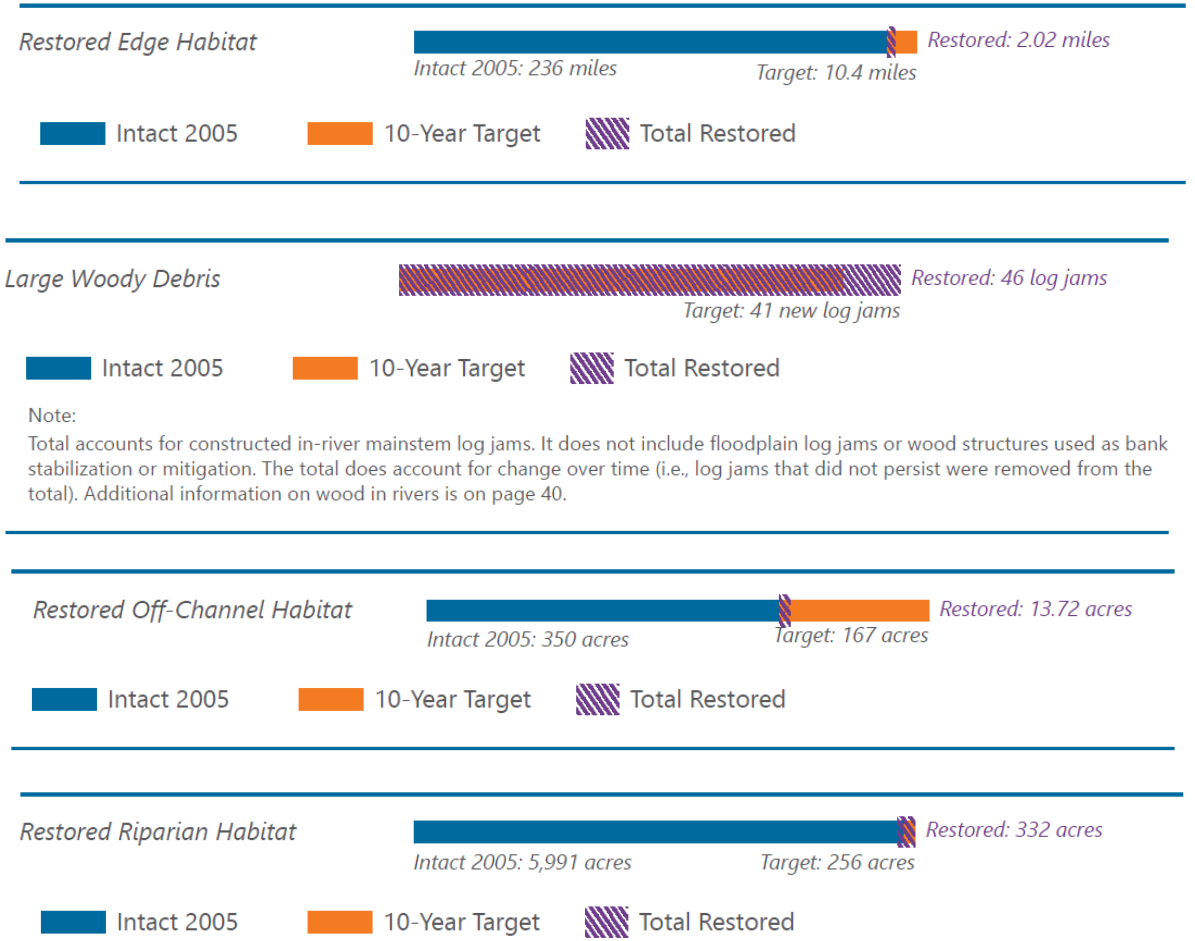
2005 Plan: 10-Year Habitat Condition Milestones in Key Areas

Sub-basin Strategy Group	Current (2005) Intact	Needed gain in next 10 years (including current path gains)	Total needed at Year 2015
Nearshore beaches and shoreline	8.4 miles	At least 1 mile	At least 9.4 miles
Estuary: Tidal Marsh	1,483 acres	1237 acres	2,720 acres
Mainstem Primary Restoration:			
Restored Edge Habitat	236 miles	11 miles	247 miles
Restored Riparian Habitat	5,991 acres	256 acres	6,247 acres
Restored Off-Channel Habitat	236 acres	137 acres	403 acres
Large Woody Debris	N/A	41 new log jams	

Condition of Watershed Processes:
Moderately degraded or degraded

Recovery Need:
Substantial improvement

Mainstem Restoration



Note:
Total accounts for constructed in-river mainstem log jams. It does not include floodplain log jams or wood structures used as bank stabilization or mitigation. The total does account for change over time (i.e., log jams that did not persist were removed from the total). Additional information on wood in rivers is on page 40.

Note:
Total shown includes Snohomish County Conservation Reserve Enhancement Program and progress through 2018. Note this progress total does not account for riparian habitat losses (refer to the discussion on page 37).

Interim Snoqualmie Habitat Targets for 2025

- Purpose: guide development of updated 10-year habitat project list for King County portion of basin
  - Snoqualmie
  - South Fork Skykomish
- Interim until adopted by Technical Committee

Flood fencing and LWD at Chinook Bend on the Snoqualmie, Feb 2011

SNOQUALMIE/SOUTH FORK SKYKOMISH 10 YEAR SALMON HABITAT PROJECTS (2015-2025)

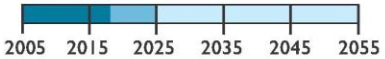
CHARTING THE COURSE OF SALMON RECOVERY THROUGH 2025

This map shows the capital project list for improving salmon habitat in the King County portion of the Snohomish Basin (WRIA 7) from 2015 to 2025. The map illustrates the projects necessary to meet the 2025 milestones of the Snohomish Basin Salmon Conservation Plan. The list includes conceptual project ideas as well as thoroughly vetted capital projects at various phases of design. Government agencies, tribes and non-governmental watershed partners are leading this critical effort including 64 projects totaling $190 million. These projects will chart the capital trajectory through 2025 on our way to fulfill the plan's ultimate vision of salmon recovery by 2055.

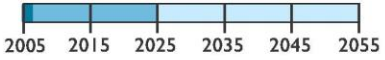
SALMON PLAN HABITAT MILESTONES FOR THE SNOQUALMIE/SOUTH FORK SKYKOMISH MAINSTEM RIVERS (2015-2025):

8.5 miles
of restored edge habitat

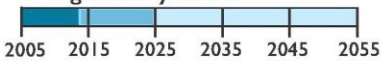
92 acres
of restored riparian conditions



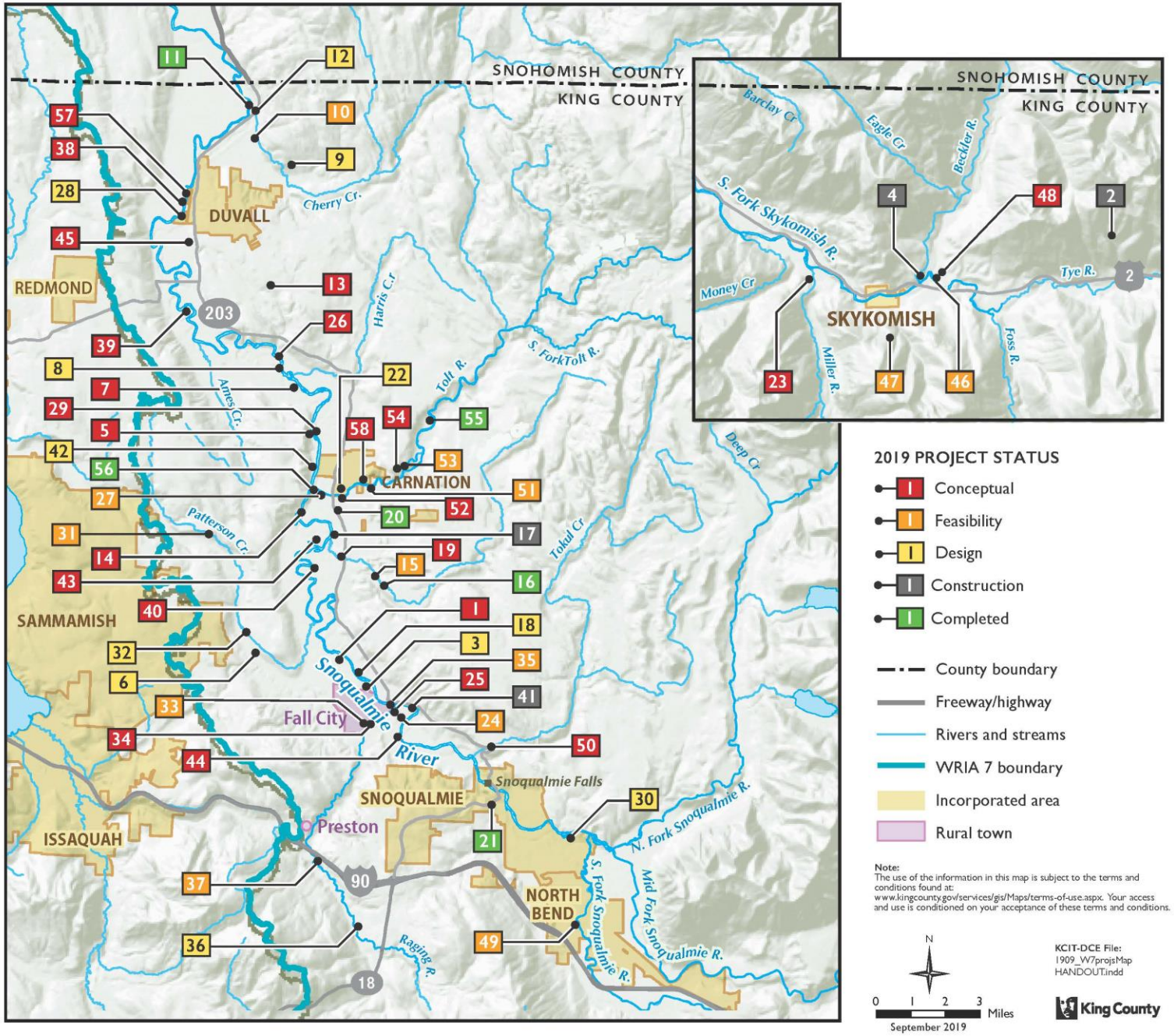
161 acres
of restored off-channel habitat



22 jams
of large woody debris



Completed projects | Proposed projects (2015-2025) | Future projects



2019 PROJECT STATUS

- Conceptual
- Feasibility
- Design
- Construction
- Completed

- County boundary
- Freeway/highway
- Rivers and streams
- WRIA 7 boundary
- Incorporated area
- Rural town

Note:
The use of the information in this map is subject to the terms and conditions found at:
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0 1 2 3 Miles

September 2019

KCIT-DCE File:
1909_W7projsMap
HANDOUT.indd

King County

Snoqualmie Habitat Targets for 2025

Sub-basin Strategy Group and Habitat	10 Year King County Habitat Targets 2005-2015	2005-2015 Habitat Gained - King County*	2015- % of 10 Year Targets Achieved	Proposed Interim King County 20-year Habitat Gain Targets (2005-2025)**	Notes
Mainstem: Restored Riparian Habitat	128 acres	164 acres	128%	616 acres	50-yr target is 80% (mainstem focus reaches), and maintain intact levels per Plan (p. 5-14). Accelerate pace (60% of WRIA-wide target) because of greater need due to water temperature issues. See EASC p. 39 for condition.
Mainstem Secondary: Riparian	3 acres	0 acres	0%	6 acres	Target is 65% intact along fish-bearing streams; 80% intact along fish-bearing waters in basins with highest coho use, 70% in basins with moderate coho use. (Plan, p. 5-14)
Rural Primary/Cherry Creek: Riparian	7 acres	13 acres	185%	49 acres	Accelerate pace (60% of WRIA-wide target) because of greater need due to water temperature issues. High coho use so plan calls for restoring to 80% intact along all fish-bearing waterways in basin.
Rural Secondary: Riparian	4.3	20.3	472%	9 acres	Includes Ames, Harris, Patterson basins. 50-yr target is 70% of intact per plan, p. 5-14, and use 40% for 20-yr target. Apply 50% to Snoqualmie.
Headwaters: Riparian	9.5	58.5	616%	19 acres	Most subbasins are at or above plan target for riparian, except Griffin Cr, which is at 79% (target 80%) - Griffin Cr - 68549 ft long, x300/43560=472.1 acres total.

*From 2015 Snoqualmie 10-year Status Report.

**These proposed interim targets are placeholders until the Snohomish Basin Salmon Recovery Technical Committee has discussed and agreed on them. They were derived by calculating 40% of the 50-year habitat targets, as documented in the Snohomish Basin Salmon Conservation Plan, and dividing that in half, unless otherwise noted.

Basin-wide Habitat Targets for 2030

2030 Target Update Process

- Existing habitat indicators – use ½ of 50-year target
- Update strategies
- Update 50-year habitat recovery goals where necessary?
- Evaluate targets:
  - Remove targets that aren't useful
  - Add new targets (consider regional targets)
  - Where is more or less effort needed for recovery?
- Determine appropriate targets for 2030

Targets - Questions

- Gretchen has a list of questions about targets we'll consider – from M&AM, status & trends, etc.

Questions?