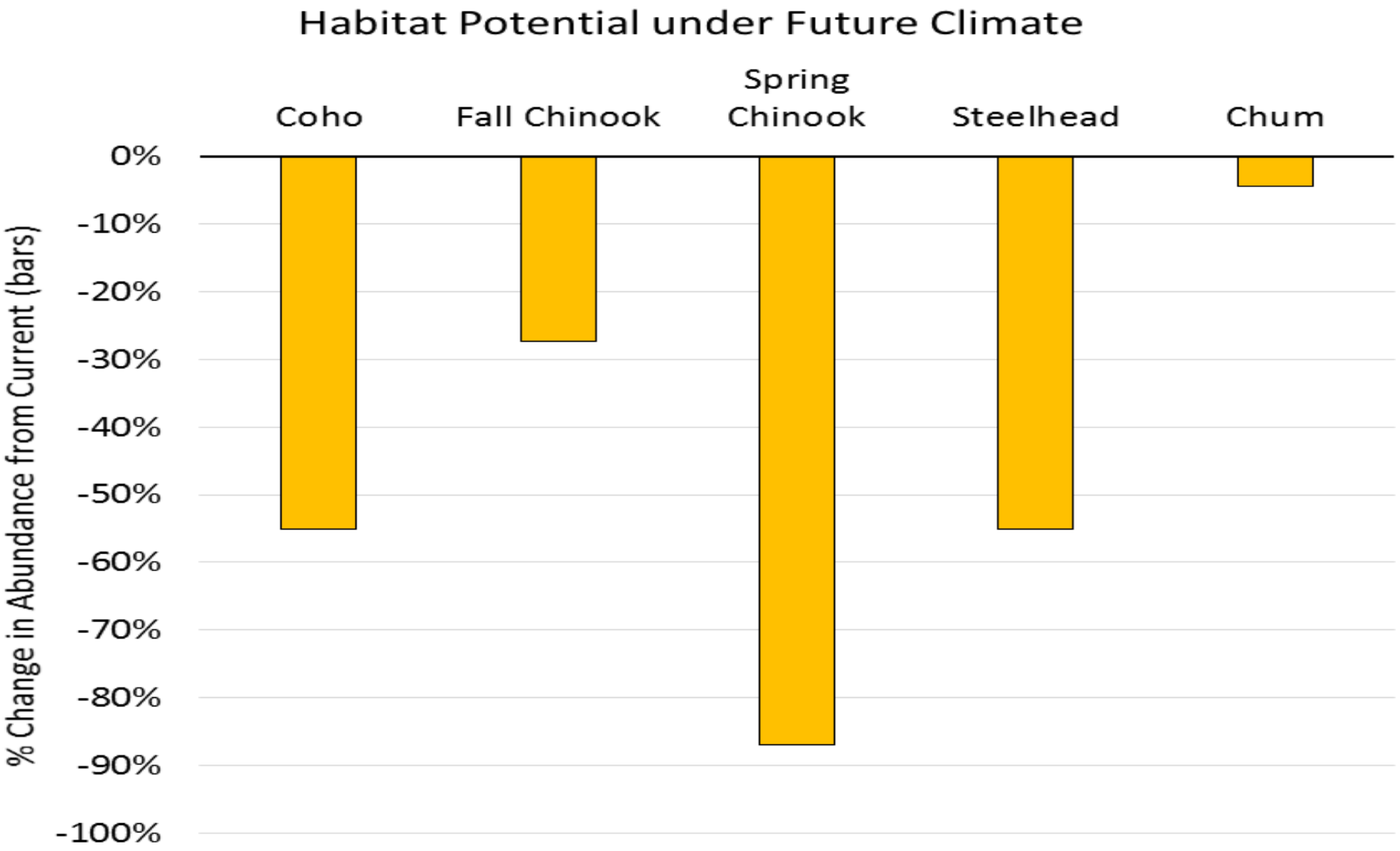
Chehalis Basin Aquatic Species Restoration Plan

August 3rd, 2017

History of Habitat Degradation

- Salmon harvest has been limited by poor runs of one species or another over the last 30 years
- Habitat productivity has been degraded by up to 87% from historic

Future Climate Change Impacts



Governor's Objectives for ASRP

- Significant improvements for salmon and other aquatic species in the face of climate change
- Strong support by the tribes and the state
- Engaged with the public
- Real and measureable results

Vision for ASRP

The vision of the ASRP is to provide for a future where the Chehalis Basin can support healthy and harvestable salmon populations, robust and diverse populations of native aquatic and semi-aquatic species, and productive, self-sustaining ecosystems that are resilient to climate change and anthropogenic stressors, while also honoring the social, economic, and cultural values of the region.

Aquatic Species Restoration Plan

Steering Committee

- Voting members:
  - WDFW
  - The Quinault Indian Nation
  - The Confederated Tribes of the Chehalis Reservation
- Ex-officio members:
  - DNR
  - Ecology
  - The Chehalis Basin Salmon Recovery Lead Entity

Science and Review Team

- Tim Quinn - WDFW
- Marc Hayes - WDFW
- Mara Zimmerman - WDFW
- Larry Lestelle – Biostream Environmental
- Cynthia Carlstad – Carlstad Consulting
- Tim Abbe – Natural Systems Design
- Tim Beechie – NOAA
- John Ferguson – Anchor QEA
- Chip McConnaha - ICF
- Chehalis tribal scientist

Science and Research

- Prior to the initiation of the Strategy, the Chehalis Basin was one of the least studied basins
  - Physical and biological models have dramatically increased our understanding of the basin
  - Critical salmonid and non-salmonid research
  - Continuing work on species and processes
- Need for continued research and analysis

Future Science and Research

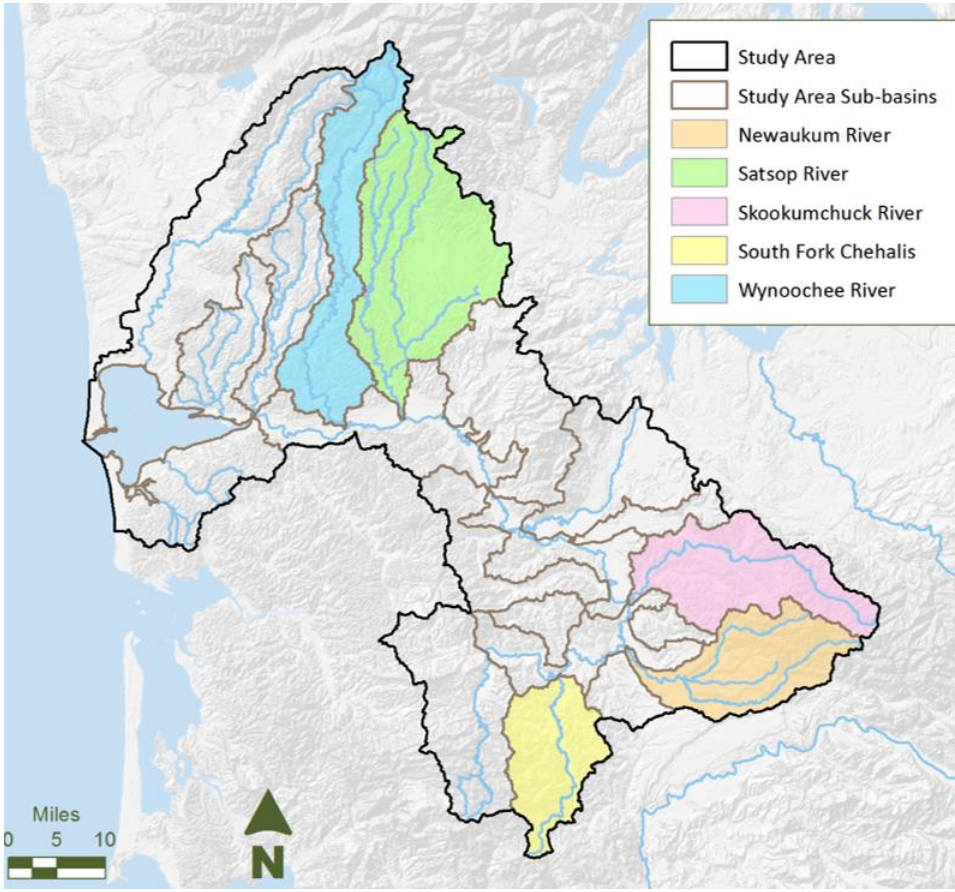
- Salmon model updates
  - Ecosystem Diagnosis and Treatment (EDT)
  - NOAA Watershed Characterization
- Non-salmonid research
- Fish passage
- Landscape processes
- Scientific foundation
- Ecological corridor

Priorities for the 17-19 biennium

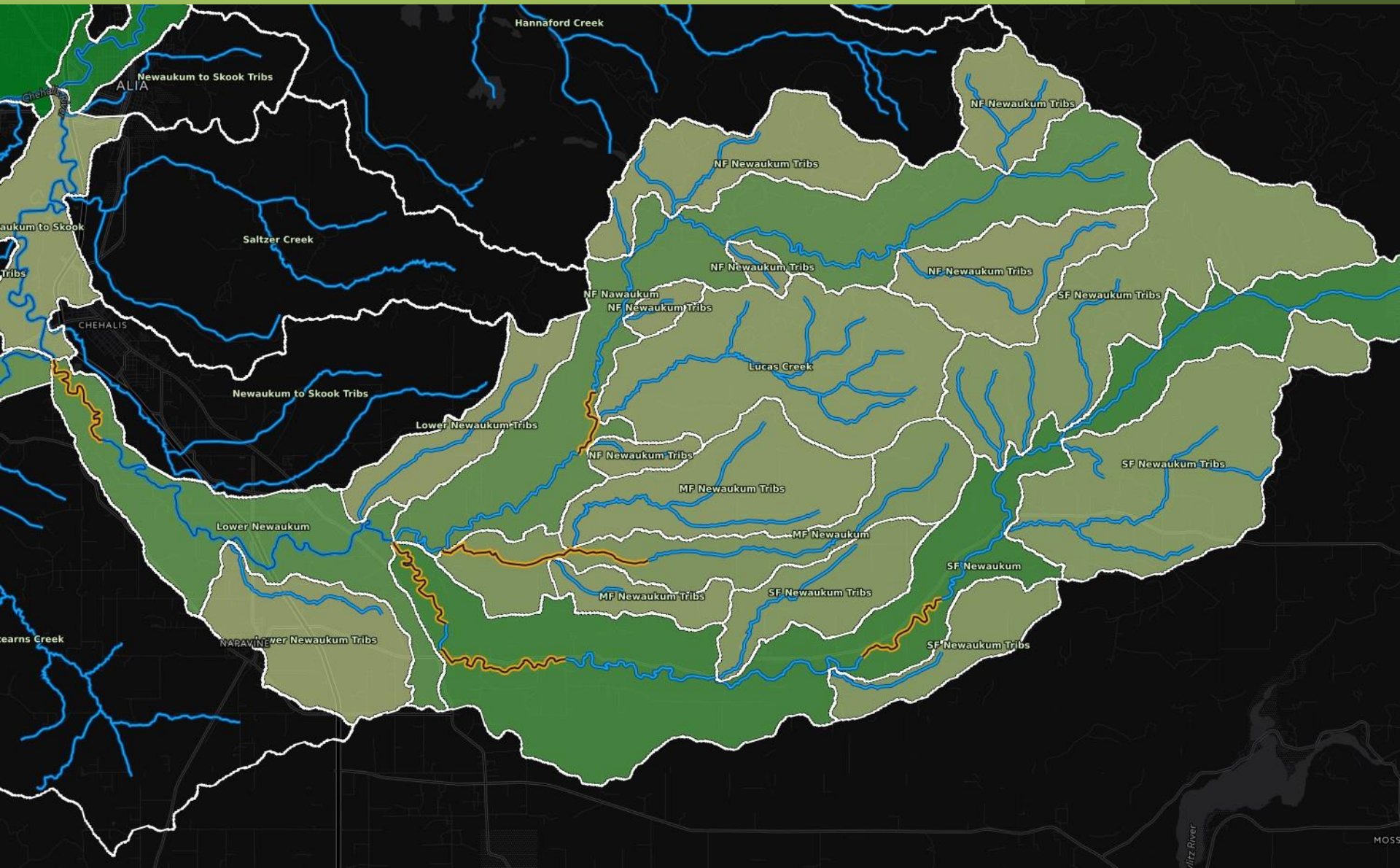
- Finalize the development of the ASRP
- Design/engineer as many projects as possible
- Reach scale restoration where feasible
- Acquisitions and easements
- Fish passage

Early Action Reaches

- The Steering Committee used the EDT model to identify five priority sub-watersheds for early action restoration:
  - Newaukum
  - South Fork Chehalis
  - Skookumchuck
  - Satsop
  - Wynoochee



Early Action Reaches



On-the-Ground Projects

- For the 15-17 biennium $6.9 million in funds were awarded for on-the-ground projects, resulting in:
  - 27 barriers corrected or removed
  - 135 miles of stream habitat opened
  - 13 barrier correction/removal designs
  - 30 miles of stream surveyed
  - 33 acres of wetlands restored

On-the-Ground Projects

- It is critical to advance as many on-the-ground projects as possible
- These projects invest in local jobs and communities
- Build momentum and interest among landowners and local residents

ASRP Development for 17-19

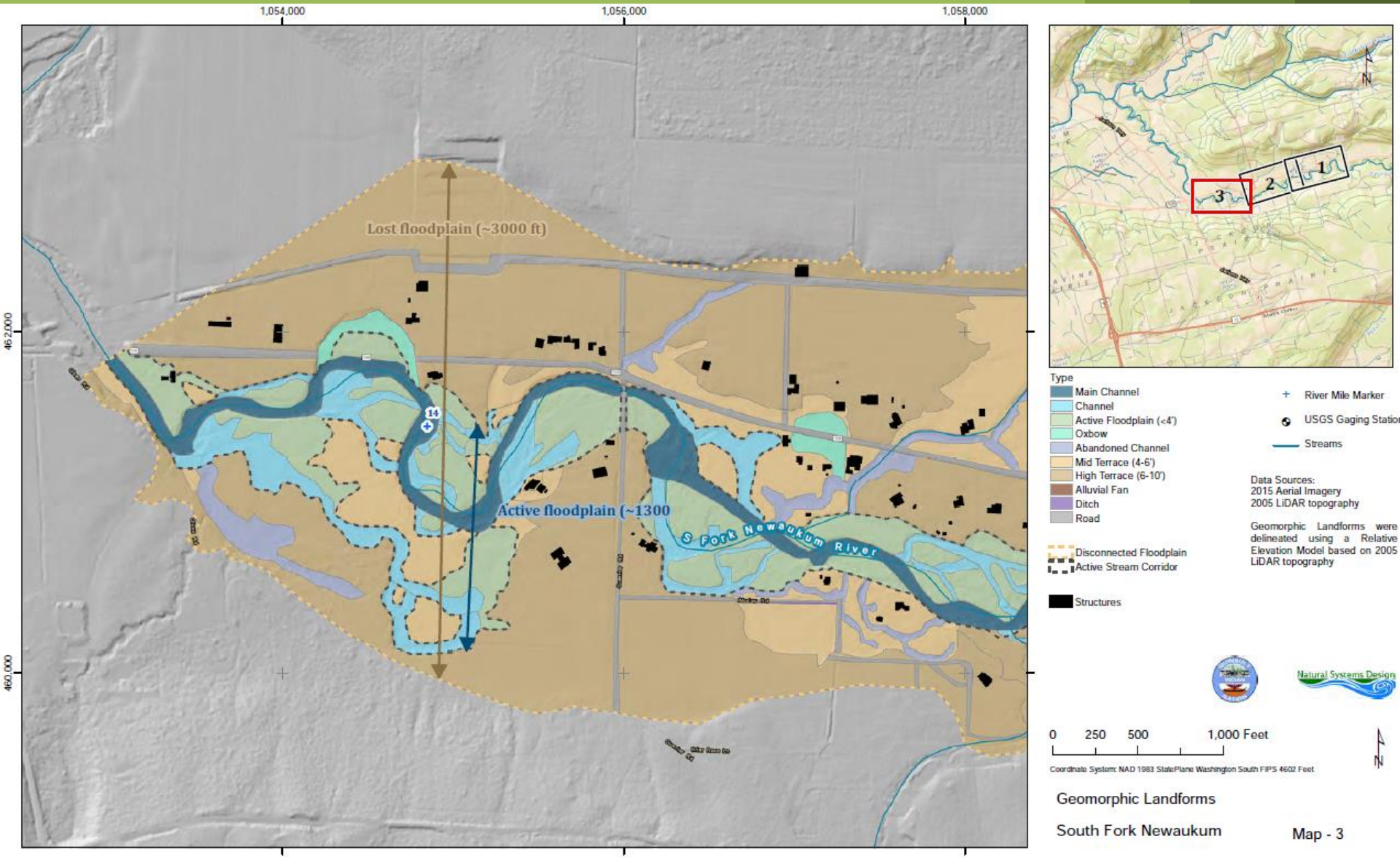
- Three phases of development:
  - Phase 1: Fall 2017
    - Initial goals, measurable objectives, initial strategies and actions, and costs
  - Phase 2: Spring/Summer 2018
    - Implementation strategies, monitoring and adaptive management plan, and refinements to phase 1
    - Draft plan for review by governing entities and key stakeholders
  - Phase 3: Winter 2018/2019
    - Draft plan released to public

ASRP Development for 17-19

- The Steering Committee has identified additional costs to provide the quality necessary for the ASRP
  - Establishment of a science and review team
    - Drafting the scientific foundation for the ASRP
    - Providing expert knowledge and review of sections of the ASRP as they are drafted
    - Developing a robust monitoring and adaptive management plan
  - Ecological corridor

Ecological Corridor

- For the Chehalis, the ecological corridor would define the area of the historic river domain necessary to restore and sustain long-term habitat productivity


1,054,000
1,056,000
1,058,000
462,000
460,000
Lost floodplain (~3000 ft)
Active floodplain (~1300
S Fork Newaukum River
14
1
2
3
N
Type
Main Channel
Channel
Active Floodplain (<4')
Oxbow
Abandoned Channel
Mid Terrace (4-6')
High Terrace (6-10')
Alluvial Fan
Ditch
Road
Disconnected Floodplain
Active Stream Corridor
Structures
River Mile Marker
USGS Gaging Station
Streams
Data Sources:
2015 Aerial Imagery
2005 LiDAR topography
Geomorphic Landforms were delineated using a Relative Elevation Model based on 2005 LiDAR topography
Natural Systems Design
0 250 500 1,000 Feet
Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet
Geomorphic Landforms
South Fork Newaukum
Map - 3

Ecological Corridor

- An area associated with the river that allows for natural riverine processes to develop and generate self-sustaining habitat for aquatic species

Ecological Corridor and the ASRP

- Provides more specific detail on the long-term needs for reach restoration, against which we can measure success
- Ensures that restoration projects are resilient and self-sustaining
- Provides more focused direction to restoration partners
- Direction for acquisitions and easements

ASRP and the Chehalis Basin Board

- Support the approach for ASRP development in the 17-19 biennium
  - Includes additional funding for science team and ecological corridor
- Periodic interaction between the Steering Committee and the Board

Conclusion