

North American Salmon Stronghold Partnership Status of Stronghold Identification

This document provides an update on the progress toward identifying and approving wild salmon strongholds in California, Idaho, Oregon and Washington. The stronghold identification and approval process for a given state or region includes the following steps:

- 1) Scoring of wild populations: Assess (“score”) wild populations within the study area based on three criteria: percent of natural origin spawners, life history diversity, and viability (productivity and/or abundance).
- 2) Identification of strong populations: Identify populations that meet or exceed the threshold for strong, diverse, and wild, using the Decision Support Model “NetWeaver”.
- 3) Identification of potential salmon strongholds: Based on the strong population data, identify and map salmon stronghold design alternatives using decision support tools, such as Marxan, as needed.
- 4) Selection of salmon strongholds: Convene an ad hoc team of regional conservation partners to review stronghold alternatives and agree upon a recommended set of salmon strongholds.
- 5) NASSP approval of strongholds: Members of the ad hoc team present the recommended strongholds to the North American Salmon Stronghold Partnership Board for review and approval.

The following table presents the current status of the stronghold identification and approval process for five states and/or associated ecoregions. All of the states and ecoregions have undergone at least one round of review, most in 2008. WSC is undertaking (or has undertaken) an additional round of population assessments to ensure that the best possible data is used to identify strongholds, and to promote a broad understanding of the stronghold effort among salmon conservation partners. This table and the comments which follow summarize the status of the second round of assessments.

Status	California	Oregon	Western WA/ Puget Sound	WA – Columbia	Idaho - Snake
Wild population scoring	Completed	Completed	Completed	No start date.	Spring – Summer 2012
Strong population ID	Completed	Completed	Completed		
Potential stronghold ID	Completed	Completed	Completed		
Stronghold selection	Completed	Underway	Underway		
NASSP approval	Completed June 2010	TBD	TBD		

California

Current Status: Stronghold identification and approval of California’s wild salmon strongholds was completed in June 2010 with the final approval of the “NASSP California (CA) Strongholds, June 2010 Assessment” by the Stronghold Partnership Board. The CA Team submitted a final report on the process and next steps to the California Department of Fish and Game.

Summary of Process: In 2009, the Stronghold Partnership convened a series of workshops throughout the state for salmon and steelhead experts from federal and state agencies, NGOs, and tribal governments to assess the status of the state’s 507 populations. Out of the 507 populations scored, 121 were considered to be “strong, diverse, and wild”. Over 30 different Marxan analyses were performed, with several watersheds consistently selected as having high conservation value. An ad-hoc team of conservation partners (listed below) reviewed the alternative designs, along with other relevant variables like scale, connectivity, suitability and protected status of

potential stronghold basins. Ultimately, the team selected six salmon strongholds, one in each of the six ecoregions.

The reports “Spatial Conservation Planning for Salmon Strongholds in California, June 2010 Assessment” and “California Salmon Stronghold Initiative” further detail the methodology used in the identification of CA’s strongholds. Collectively, the six CA strongholds represent less than five percent of the area of the state and ten percent of its salmon bearing streams, but capture roughly 70 percent of the state’s diversity of salmon and steelhead populations. These strongholds include a total of 69 populations of which 29 were rated as strong, diverse and wild.

California Scientific Review Team:

National Oceanic Atmospheric Administration
U.S. Fish and Wildlife Service-Region 8
U.S. Forest Service

California Dept. of Fish and Game
California Trout
Trout Unlimited

The Nature Conservancy-California Chapter
Wild Salmon Center
North American Salmon Stronghold Partnership

Next Steps: 1) Development of a model to characterize desired future conditions in strongholds, 2) outreach to groups operating within the strongholds to facilitate development of the “California Salmon Stronghold Investment Portfolio”, a summary of the critical measures necessary to reach desired future conditions, and 3) engagement with policy-makers to integrate the stronghold approach within new and existing state/federal resource management programs.

Oregon

Current Status: The ad-hoc team of Oregon partners convened in November 2011 to review a proposal generated by WSC using Oregon Dept. of Fish and Wildlife (ODFW) population scores and a review of 2008 data. The team approved a draft map, which is being vetted with ODFW biologists.

Summary of Process: In 2011, ODFW regional fish biologists reviewed and added to the 2008 scores, evaluating 210 wild populations across the state. Of the 210 populations scored, 88 were found to be strong, diverse, and wild. WSC’s conservation planner generated alternative salmon stronghold designs, using Marxan to examine the 88 identified strong populations and highlight areas that consistently offer the highest conservation value within determined ecoregions. An ad hoc team of Oregon partners (ODFW, Governor’s Office, OWEB, NOAA, USFWS, WSC, and TNC) used these designs to finalize a draft Oregon strongholds map. The review team gave additional consideration to the presence of rare species and life histories as well as land ownership/habitat protection. The team agreed to circulate the map among ODFW regional biologists to ensure accuracy. This is currently underway.

Oregon Scientific Review Team (Invited):

National Oceanic Atmospheric Administration
U.S. Fish and Wildlife Service-Region 1
U.S. Forest Service
Oregon Dept. of Fish and Wildlife

Oregon Governor’s Natural Resources Office
Columbia River Inter-Tribal Fish Commission
Oregon Watershed Enhancement Board
Trout Unlimited

The Nature Conservancy
Wild Salmon Center

Next Steps: Once the OR map is approved by state partners, it will be presented to the Board for consideration and approval. In the meantime, WSC will begin conducting outreach to partners in the strongholds, agency decision makers, and elected officials to ensure a broad understanding of the initiative. This outreach is designed to support the eventual development and implementation of an Oregon Stronghold Investment Portfolio (SIP), which will highlight: 1) the highest priority in-stronghold protection and restoration opportunities (derived from existing plans), and 2) initiatives or measures that can address ecosystem threats and capacity issues common in strongholds throughout the state. Outreach to elected officials and agency decision-makers will focus on institutionalizing the stronghold approach to increase the resources available for stronghold conservation (i.e., implementation of the SIP).

Washington

Current Status: Unlike the other states, the status of stronghold identification varies considerably in different regions of Washington (WA). Partners in western WA have undertaken a thorough analysis of the region's populations as part of a broader planning process underway through the Washington Coast Sustainable Salmon Partnership (WCSSP). Partners in Puget Sound, and the Lower, Middle, and Upper Columbia ecoregions have not indicated a need to revisit data collected in 2008, which resulted in recognition of the Skagit and Wenatchee River watersheds as strongholds.

Summary of Process (coastal WA ecoregion): In 2009, 117 populations in the coastal WA ecoregion were evaluated, and the mapped results were presented at two WCSSP workshops that were attended by over 50 regional stakeholders. Of the 117 populations, 49 were found to be strong, wild, and diverse. In 2010, Marxan was used to design stronghold alternatives, which were reviewed by an ad-hoc team of experts and WCSSP. Reviews focused heavily on habitat conditions, future security of the habitat, and aquatic connectivity across the four million acre ecoregion. The analysis resulted in 29 populations that aggregated into a stronghold in the northern portion of the coast. This stronghold represents 28 percent of the entire WA coast ecoregion, 31 percent of the salmon bearing streams, and 50 percent of the diversity (run timing/ESU).

Washington Coast Scientific Review Team:

National Oceanic Atmospheric Administration
U.S. Fish and Wildlife Service-Region 1
Olympic National Park Service
U.S. Forest Service
Washington Dept. of Fish and Wildlife
Washington Dept. of Natural Resources

Governor's Salmon Recovery Office
Quinalt Indian Nation
Lower Elwah Klallm Tribe
Quileute Tribe
Confederated Tribes of Chehalis
Hoh Tribe

Washington Coast Sustainable Salmon Partnership
Grays Harbor Lead Entity
Pacific County Lead Entity
North Pacific Coast Lead Entity
Wild Salmon Center

Next Steps:

- **WA Coast Ecoregion.** The final recommendations of the "Washington Coast Stronghold-May 2011 Assessment" will be presented to the Stronghold Partnership Board for their approval at the next meeting. The WCSSP is finalizing a regional salmon plan for the entire coast and incorporating the strongholds in its recovery planning process. WCSSP may develop a resolution to formally adopt this assessment.
- **Puget Sound Ecoregion.** If recommended by the State of Washington, the Stronghold Partnership Board will confirm recognition of the Skagit River as the Puget Sound ecoregion's stronghold without additional analyses. Although Marxan was not employed in the 2008 analysis, the Skagit was widely recognized as the eco-region's top wild salmon producer, with strong populations of pink, coho, and spring Chinook.
- **Columbia River Ecoregions.** The Lower and Middle Columbia strongholds may be revisited in the future if and when Washington partners choose to. Strongholds are pending in these ecoregions in Oregon. In the Upper Columbia, where the Wenatchee was recognized after the 2008 analysis, the Upper Columbia Salmon Recovery Board (UCSRB) is considering a review of the Wenatchee stronghold boundary. In 2010, a small team of partners produced a preliminary review of several of the ecoregion's wild populations. Additional analyses may be used to refine the Wenatchee stronghold when/if deemed necessary by the UCSRB and its partners .
- Note: the **Snake River Basin** in eastern Washington is part of a separate ecoregion contained mostly in Idaho. The Snake and its tributaries will reviewed in an Idaho-based process. WA and OR partners will be invited to participate in a review of populations in OR and WA Snake River tributaries.

Idaho

Current Status and Next Steps: Idaho's Office of Species Conservation (OSC) has begun to contact interested conservation partners to initiate a review and update of its 2008 data. OSC is reaching out to the Idaho Chapter of the American Fisheries Society (AFS) to convene a committee of agency and non-profit fisheries biologists. If AFS is unable to lead the scoring process, then OSC will convene the workshop(s) of technical reviewers. Like in OR and CA, WSC will lead the scoring process.

Preliminary Idaho Scientific Review Team:

National Oceanic Atmospheric Administration
U.S. Fish and Wildlife Service-Region 1
U.S. Forest Service

Idaho Dept. of Fish and Game
Idaho Office of Species Conservation
Idaho Chapter of American Fisheries Society

Trout Unlimited
The Nature Conservancy
Wild Salmon Center