Selection of Common Indicators to Assess Chinook Habitat

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Goals of Project

- Recover Chinook by restoring habitat
- Develop a Monitoring and Adaptive Management Plan for Chinook Recovery
  - Each watershed has a recovery plan, needs a monitoring plan
- Develop a common set of indicators across 16 watersheds
- Implement a system for sharing information at the regional scale about what's working to restore habitat

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Progress To Date

- 16 Watersheds identify most important habitats (KEAs) & long lists of indicators; ask for guidance
- 2 PSEMP Salmonid Work Groups for marine/nearshore and freshwater
- PSEMP Salmonid Work Groups defined
  - Assessment questions for habitat components
  - Indicators to answer questions
  - Protocols for how to measure
- PSEMP coordinated with NOAA Status and Trends Program to use same indicators where possible
- Presented to Salmon Recovery Council

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Freshwater Indicators

Assessment Question	Indicator
What is the extent of riparian cover?	1) % forest within 200 feet of anadromous streams
What is the extent and proportion of streams w/ healthy riparian community structure?	2) Seral stage within riparian (non-wadeable) 3) % of riparian with >30 year old trees (wadeable)
What is the 100-year flood extent and active width of connected floodplain?	4) Side channel length/mainstem length (ratio) 5) Connectivity
What is the current composition of habitat types in the floodplain?	6) Land use/land cover
What is the status of instream structure and complexity? (non-wadeable)	7) Sinuosity 8) Pool frequency per 100m 9) Residual pool depth 10) Wood abundance
What is the status of instream structure and complexity? (wadeable)	11) Pools per 100m 12) Pool volume 13) LWD 14) Sinuosity 15) Pool frequency 16) Residual pool depth
What is the extent fish passage barriers?	17) % historic miles available to adult Chinook
(RSMP) How many streams impaired by high flows? Low flows?	18) High pulse count 19) 30 day average summer low flow
(RSMP) What is the status of fresh water quality in the watershed? Trend? How many streams impaired?	20) Water Quality Index

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Marine/Nearshore Indicators

Assessment Question	Indicator
What is the historic, current, and desired amount of river delta area?	1) Functional river delta surface area 2) Extent of shoreline armoring
What is the extent, condition, and use of pocket estuaries?	3) Pocket estuarine habitat area 4) Pocket estuary count
What is the extent, condition, and use of pocket estuaries?	5) Presence/absence of Chinook
What is the extent, location, and tidal elevation of tidal wetlands?	6) Extent of connected tidal wetlands
What is the area, length, and width of tidal channels?	7) Extent of functional tidal channels
What is the historic, current, and desired extent of marine riparian vegetation?	8) Proportion of current shoreline that is vegetated
What is the extent, condition, and location of drift cells and sediment sources? (includes in-water structures and feeder bluffs)	9) Number of functional drift cells
What is the extent, condition, and location of drift cells and sediment sources? (includes in-water structures and feeder bluffs)	10) Length of connected feeder bluffs
What is the extent, condition, and location of drift cells and sediment sources? (includes in-water structures and feeder bluffs)	11) Amount of feeder bluffs relative to historic
What is the extent, condition, and location of drift cells and sediment sources? (includes in-water structures and feeder bluffs)	12) Bluff backed beach sediment supply
What is the extent, location, and tidal elevation of shoreline armoring?	Extent of shoreline armoring

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Value of Process

Common Indicators allow the region and watersheds to:

- Report status of habitat in a consistent way for all watershed chapters
- Guide planning and restoration at the watershed & regional scales
- Align watersheds' efforts
- Mobilize funding
- Share understanding of local progress towards recovery goals
- Communicate to partners on progress and where regional support is needed
- Integrate salmon recovery into the Puget Sound Action Agenda

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