

Barnaby Reach Project: Purpose, Goals, Objectives, and Strategies

Purpose: To revitalize salmon habitat and improve ecological function in the Barnaby Reach while addressing community values such as flood and erosion risk reduction.

Goal 1: Improve floodplain processes to benefit native fish and wildlife.

Objectives (the "What")

- a. Improve floodplain ecological processes and functions that will create and maintain dynamic habitat over time.
- b. Foster a diversity of mainstem, floodplain, tributary, wetland, and riparian habitat types that benefit fish and wildlife.

Strategies (the "How")

- a. Evaluate altered hydrology, sediment dynamics, and wood recruitment and address deficiencies.
- b. Maximize area of floodplain reconnection to Skagit River.
- c. Remove impediments from obsolete infrastructure to support floodplain connectivity
- d. Explore modifying existing infrastructure to increase connectivity.

Goal 2: Increase amount and connectivity of Chinook salmon, steelhead and other salmonid rearing and spawning habitat.

Objectives (the "What")

- a. Eliminate barriers to adult and juvenile fish migration.
- b. Maximize the amount of available rearing and spawning habitat for Chinook salmon, steelhead, and other salmonid species.
- c. Improve habitat quality, including flow conditions, groundwater inputs, temperature, woody debris, and other factors.

Strategies (the "How")

- a. Remove connectivity impediments from obsolete hatchery infrastructure.
- b. Improve current infrastructure to increase aquatic habitat connectivity.
- c. Incorporate design elements that maximize quality habitat.

Goal 3: Protect private property and infrastructure from potential project effects on hydrology and floodplain connectivity.

Objectives (the "What")

- a. Design the project so that it does not increase flood and/or erosion risk to private property and infrastructure.
- b. Include project elements that address uncertainties related to flood and erosion risks and provide protections for private property and infrastructure.

Strategies (the "How")

- a. Evaluate and document existing flood and erosion risks for properties and infrastructure in the potential project impact area as a baseline against which to compare potential project impacts.
- b. Establish and use conservative analytical input parameters and evaluation criteria in flood and erosion risk analysis.
- c. Design the project to conservatively avoid increasing the risk to other properties.
- d. Incorporate precautionary flood and erosion risk reduction measures into project design as safety measures.

Goal 4: Incorporate beneficial measures to reduce existing flood and erosion risks for adjacent communities.

Objectives (the "What")

- a. Identify causes and magnitude of flooding to Martin Road/Rockport-Cascade Road/SR 530 vicinity south of Rockport and other adjacent private properties.
- b. Consider structural and non-structural flood management tools that are consistent with the ecological goals of the project.
- c. Select community-supported measures to reduce flood and erosion risk.

Strategies (the "How")

- a. Use hydrologic and hydraulic analysis and modeling tools to evaluate causes and magnitudes of flood and erosion risks, and to develop flood management options.
- b. Use information and observations provided by community residents to validate results from analytical tools.
- c. Supplement FEMA mapping with flood analyses and community-based observations.
- d. Work with the community to identify preferences for risk reduction measures.

Goal 5: Provide recreational access opportunities that meet community, stakeholder, and primary landowner needs.

Objectives (the "What")

- a. Identify recreational access opportunities to include in the project.
- b. Provide unofficial recreation access point to reduce maintenance costs and limit environmental impacts from recreational activities.

Strategies (the "How")

- a. Establish recreational access advisory committee to recommend recreational access opportunities based on stakeholder and public input.