

Elk River Sediment Remediation and Habitat Rehabilitation Pilot Implementation Project

Project Description: The goal of the Proposed Project is to begin to remediate excess fine sediment, nuisance flooding, loss of water quality beneficial uses, and degraded juvenile salmonid rearing habitat uses by excavating approximately 18,000 cubic yards of sediment from the bed and banks of the North Fork Elk River within the Project area to re-create a more natural channel form and salmonid habitat.

Attendant to the Project goal, the objectives of the Elk River Sediment Remediation and Habitat Rehabilitation Pilot Implementation Project are to:

- Reduce the frequency and duration of nuisance flooding by increasing the hydraulic conveyance capacity of the channel in the North Fork Elk River;
- Reconstruct a natural channel morphology of riffle-pool sequences, with deep pools (>3-6 ft deep), fine gravel-bedded riffles, and abundant large wood habitat structures;
- Enhance winter and summer juvenile salmonid habitat by expanding rearing habitat area and increasing winter habitat refugia related to large wood structures and off-channel areas;
- Increase the sediment transport capacity during winter storms, in order to significantly reduce aggradation rates and maintain an approximate sediment supply/transport equilibrium;
- Monitor annual rates and volumes of sediment aggradation in re-constructed channels, and the persistence and utilization of rehabilitated habitat features;
- Improve low Dissolved Oxygen (DO) concentrations during the summer low-flow rearing season;
- Maintain existing riparian habitat and enhance riparian understory and canopy species diversity;
- Avoid short-term and long-term impacts to private property and public infrastructure; and
- Determine the regulatory compliance pathways for addressing construction-related impacts from Project implementation, including environmental constraints, CEQA compliance, regulatory permit conditions, sediment disposal options, construction logistics, and cost details.

The results of the Proposed Project will contribute to:

- Evaluating the feasibility of mechanical sediment remediation as a treatment approach along the impacted reaches of the Elk River, including methods, logistics, cost-effectiveness, and outcomes;
- Testing the predictive ability of a Hydrodynamic Sediment Transport (HST) Model developed as part of the Elk River Recovery Assessment (ERRA).
- Planning for a next-phase, large-scale program to address nuisance conditions and restore beneficial uses in the lower Elk River.
- Demonstrating to the local community the process for project design, regulatory compliance, and implementation that will be required to implement a larger-scale restoration program throughout the entire “impacted reach.”