

Preliminary Issues, Concerns, and Opportunities Resurrection Creek Stream and Riparian Restoration Proposed Action

The intent of the proposed action is to restore stream and riparian/floodplain habitat to pre-mining levels. However, some of the initial effects of the proposed action will be to create a short-term decrease in habitat during construction until new channels are opened and new vegetation becomes established. Internally and externally (through public input) we have surfaced a variety of issues, concerns, and opportunities (ICOs) relating to: channel construction, access, channel restoration, and tree, soil and sod removal. The list of the surfaced ICOs includes:

Channel Construction

- Visual quality would be impacted during, and for a period following construction. This could affect trail users as well as the downstream landowner.
- Passage through the project area by trail users could be delayed and/or rerouted during construction.
- Existing spawning and rearing habitat for salmon, trout and benthic invertebrates could be impacted during construction in the project reach.
- Water quality: Brief periods of increased sedimentation could occur on Resurrection Creek during construction. Construction activities present some hazards for petroleum and lubricant spills. Some potential also exists for finding beads of elemental mercury in the mine tailings. Mercury was used historically to separate fine gold from the “black sands” after the sands had been sorted from the stream gravels.
- Much of the existing live vegetation on the reconstructed and regraded floodplain will be harvested (and used in channel and floodplain restoration.)
- Wildlife habitat and individuals (calving, breeding, traveling, foraging) using the floodplain area would be adversely impacted during construction.
- Endangered or sensitive plants, if present within the project area, could be adversely impacted by construction activities
- Seeds of noxious weeds could be imported to the site by construction equipment, and disturbed floodplain areas could provide suitable habitat for the spread of such weeds.
- Equipment noise (and odors) could have adverse impacts to recreationists, nearby landowners, and resident wildlife during construction of the channel and floodplain.
- Construction activities have the potential for disturbing and/or damaging yet undiscovered mining artifacts and prehistoric cultural artifacts and sites within the project area.
- Some existing wetlands would likely be modified during construction. The project will result in a considerable net gain of wetlands.
- Tailings on site are in excess of what would be needed for channel and floodplain construction. Some coarse tailings will either need to be pushed to the sides of the valley bottom within the project area, or could hauled from the project area and either used or stockpiled for later use.

Access

- Equipment accessing the site would include large dozers, excavators, dump trucks, log trucks, log skidders, fuel trucks, and service and crew vehicles.
- Access to the project requires crossing $\frac{1}{4}$ mile of private land (a patented mining claim named “Paystreke”) immediately downstream of the project area. The Forest Service holds a 66-foot wide easement across this property (the Resurrection Pass Trail) along the west side of Resurrection Creek. This easement could be used for road access to the project area, but would require bridging Resurrection Creek downstream from the private lands.
- A road to the project area on the east side of Resurrection Creek exists, but again requires passing across the Paystreke Claim. The Forest Service does not hold an easement for this east side road through Paystreke. Use of this east side road for equipment access would require developing an agreement with the landowners.
- A temporary bridge or other type of crossing may be needed over Resurrection Creek to its west side. If built, the bridge would probably be used through the construction period, likely for two summer seasons. Potential crossing sites exist downstream from, inside, and upstream from the Paystreke Claim. Placement of a temporary bridge would require construction of temporary abutments at the crossing. A temporary crossing using multiple culvert pipes would be possible but would be more susceptible to flood damage.

Channel Restoration

- Soil augmentation to the new floodplain and placement of sod mats will require excavating the soil, and scalping the sod from alternate locations. Where finer grained materials exist within the project area valley bottom, they should be segregated for use on the new floodplain.
- Trees and root wads will need to be placed effectively within the newly created channels to prevent excessive erosion during high flow events.
- Several landings will need to be developed in the valley bottom project area for stockpiling harvested trees to be used in restoration. Stockpiling of larger boulders will also be desirable for use in channel restoration.
- Some sorting of existing tailings piles will be needed to segregate smaller sized spawning cobbles and gravels for use in the newly constructed channels.
- Revegetation of sod, shrubs, and trees along the banks of the new channels will need to be a top priority in order to get root structure developed along the bank.

- Revegetation of the entire floodplain should strive to emulate vegetative conditions and plant diversity found in unmined floodplain areas on Resurrection Creek.
- Snags may be placed within the floodplain area to provide wildlife habitat
- Planted trees and shrubs will need to be watered and monitored the first summer to ensure good survival rates.
- Recreational mining has potential to damage/erode the channel after reconstruction is complete. Limitations on activities with potential to impact the newly created and vegetated stream banks may need to be considered.

Tree Sites

- A large number of whole trees are needed to construct this project. Trees would be harvested from the project area, and if necessary at other sites nearby. Harvest patterns within the project area need to coincide with wildlife and ecology objectives for forest management of the area.
- Large, live cottonwoods and spruce will be desirable for the project, but also provide valuable wildlife habitat. Harvest must be designed to minimize adverse impacts to resource values.
- Other potential sources of trees include:
 - Forest Service vegetation management projects on the Palmer Creek Road and Hope Highway
 - Tree clearing on private lands in Hope
 - Hope highway reconstruction
 - Seward Highway 16-26 reconstruction
- Hope residents have expressed concern with the current fire risk. Tree harvest could be used in areas proposed for fuels/fire risk reduction.
- Tree harvest within the project area would be the most cost effective.
- Tree harvest on National Forest System land and private land, will require cultural resource surveys and compliance.
- Opportunities exist to enhance stands (tree growth, vegetative structure or composition) through treatments for wildlife habitat.
- Visual concerns regarding tree removal in proximity to Resurrection Pass Trail.
- Federal actions on private land still require environmental analysis.

Soil and Sod

- A potential source for soil and sod is located within the project area on the west side of Resurrection Creek. This site is shown in Figure 2 in the vicinity of the “constructed ponds” and is within an area harvested for spruce in the mid 1980’s.
- Turnagain Arm could provide a potential source of fine-grained silts (access is available at approximately Mile 13 of the Hope Highway.)
- Palmer Creek Road offers a source of soil and Calamagrostis sod during road reconstruction work. Avalanche areas adjacent to the road are particularly good for sod.

- Use of fish slurry from Kenai or Seward processing plants was suggested as a potential source of soil nutrient enhancement.
- Clearing at Hope Point Trailhead may serve as source for topsoil and trees.
- Sod and soil extraction will require cultural resource surveys and compliance.

Opportunities

- Interpretation of mining history and natural resources on the project site. Signs along the Resurrection Pass Trail have been suggested as a logical medium to use.
- Harvest could be used as an opportunity to create vegetative diversity and wildlife habitat with patch cuts and other types of treatments.
- Partnerships with Hope Historical Society and the Community of Hope for historic interpretation.
- The project could work in partnership with the Resurrection Trail reconstruction project as relates to bridges and construction equipment.
- Excess tailings could be used for construction products like crushed aggregate. Options include: 1) storing coarse tailings at a location on or near the project site, 2) crushing tailings on site and hauling aggregate away to alternate locations.