



RIVER & FISH

REPAIR AND RESTORE

A century of mining activity at the historic Stibnite Mining District left major impacts that remain today. For example, migrating bull trout, chinook, steelhead have been blocked from accessing spawning grounds in the head waters of the East Fork South Fork of the Salmon River for over 80 years, stream habitat is impaired by excess sedimentation and water quality is degraded.

Midas Gold designed the Stibnite Gold Project to address these legacy impacts that impede fish migration and degrade water quality. The Project was developed over 5 years and then submitted to the U.S. Forest Service in 2016. After years of analysis, regulators conclude that the project design as evaluated under Alternative 2 of the Draft Environmental Impact Statement (DEIS), will improve water quality and assist Idaho's bull trout, steelhead and chinook populations.

THE PLAN

- Midas Gold intentionally developed its Plan of Restoration and Operations to minimize potential impacts on aquatic wildlife, in particular anadromous and resident fish populations, while developing and implementing opportunities to maintain water temperature, improve water quality and enhance fish habitat in the headwaters of the East Fork of the South Fork of the Salmon River. (*Midas Gold Idaho, Plan of Restoration and Operations (PRO); Ch. 5*)
- Midas Gold wants to use the Stibnite Gold Project to restore volitional fish passage past the historical Yellow Pine pit, improve habitat and spawning grounds in the East Fork of the South Fork of the Salmon River and Meadow Creek.
- During operations, as an interim solution, fish will be able to reach the upper portions of the East Fork of the South Fork and Meadow Creek via a fish-friendly tunnel. This will provide immediate access for fish passage for the first time in 80 years.
- At year 7 of operations, the Yellow Pine Pit will begin to be backfilled so that the East Fork of the South Fork of the Salmon River can be reconstructed to have a natural flow for the first time in over 80 years. Restoring the natural gradient of the river will provide permanent passage for anadromous fish to swim to the headwaters via a restored East Fork of the South Fork of the Salmon River and access to 6 miles of existing, enhanced, and/or restored habitat.
- In order to improve fish passage, enhance fish habitat, and optimize potential for fish spawning within the Stibnite Gold Project footprint, Midas Gold plans to restore and enhance many of the waterways on site, most of which have been impacted by mining-related activities over the past 100 years. Typical enhancement activities include removal of local barriers to fish migration, restoration of riparian vegetation that will provide habitat and shade, and improve water temperature, installation of habitat improvement features (such as large woody debris), and reestablishment and reconnection of active floodplains. (*PRO; Table 5-1*)
- Under the Midas Gold Plan of Restoration and Operations, the company will enhance and/or restore approximately 12 miles of perennial streams, which, in conjunction with improved fish access, will result in roughly 6 miles of additional stream habitat being available as compared to existing conditions for migratory fish,



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including Chinook salmon, steelhead and bull trout. *(See: U.S Forest Service Draft Environmental Impact Statement (DEIS); Appendix D and J-3)*

- Concurrent mitigation and restoration reduces uncertainty in the duration of wetland and riparian resource losses. *(DEIS; Ch. 4; Section 4.11.3.1.1; pg. 4.11-53)*

THE CONCLUSION

After years of scientific analysis and review the U.S. Forest Service and multiple state and federal agencies conclude in the Draft Environmental Impact Statement (DEIS) that the mitigation and restoration plans proposed by Midas Gold will assist the population of bull trout, steelhead and chinook salmon and improve water quality.

- Specifically, the report concludes that **removing historical barriers to fish migration is beneficial to the population.**
 - Long-term access to historically blocked critical habitat would result in **increased productivity** *(DEIS; Ch 4.12 Fish Resources – pg. 4.12-39)*
 - Free movement and access to habitat can **improve genetic diversity** of isolated populations *(DEIS; Ch 4.12 Fish Resources – pg. 4.12-39)*
 - Increased access to feeding and refuge areas in critical habitat can **improve overall productivity** *(DEIS; Ch 4.12 Fish Resources – pg. 4.12-39)*
 - Restoration plans will also provide a **net gain of 21,941 stream functional units, a 23% increase** in the quality habitat these species need *(DEIS; Appendix D, Table 8-1)*
- Additionally, the report identifies that removing legacy waste from historic mining will improve water quality.
 - Removing legacy tailings and managing water quality provides **long-term reduction in metal loading in ground and surface water** *(DEIS; Ch. 4; Section 4.9)*
 - Removing legacy tailings and waste **lowers concentrations of antimony and arsenic in the East Fork South Fork of the Salmon River** *(DEIS; Ch 4; pg. 4.9-70)*
 - Removing legacy tailings and waste **improves water quality in Meadow Creek Valley** *(DEIS; Ch. 4; 4.12 pg. 103-104)*