


ATTACHMENT D: STATEMENT OF FINDINGS FOR FLOODPLAINS

**Shamrock Group Mining Plan of Operations
Environmental Assessment**

**National Park Service
Wrangle St. Elias National Park and Preserve**

Recommended:  7/8/13
Superintendent Date

Certification of Technical Adequacy and Servicewide Consistency:

 7/12/2013
Chief, NPS Water Resources Division Date

Approved:  7/22/2013
Alaska Regional Director Date

ATTACHMENT D

STATEMENT OF FINDINGS FOR FLOODPLAINS

EXECUTIVE ORDER 11988: FLOODPLAIN MANAGEMENT

STATEMENT OF FINDINGS

Description of Site:

Bonanza Creek is an integral part of the Chisana Historic Mining Landscape which was listed on the NRHP in 1998. The NPS has chosen to manage the Gold Hill area and Bonanza Creek for its historic value and therefore preservation and restoration of the historic landscape take precedent over natural resources and processes. Multiple historic features and structures have been identified within the drainage. Wooden remnants of boomer dams and linear hand-stacked tailings rows are situated within the active floodplains and channel. These adversely impact the floodplain function and associated natural resource character and associated values within the Shamrock Group. Bonanza Creek basin is situated in an un-forested alpine drainage. Water flow in the stream varies substantially with peak discharges observed during spring snow melt/runoff and summer rainstorm events. The barren streambed between side slopes and the sparsely-vegetated floodplain are periodically inundated. All of the 2650 linear feet of stream bed within the Shamrock Group has been mined. The entire 5-mile length of Bonanza Creek including all reaches upstream and downstream of the claims were mined or impacted by mining. Within the claim block the channel is dynamic and the adjacent streambed is barren and "braided".

Under this plan, approximately 2650 linear feet of creek bed and adjacent floodplain would be affected. The proposed mining operations area contains approximately 8 acres of floodplain and channel. All of which is situated within the 100-year regulatory floodplain. The floodplain width ranges from 80 to 200 feet on the claim block. The active channels range from 10 to 30 feet wide. During normal flow conditions, one or two channels are active and the stream has a braided character. During floods the barren streambed, inactive channels, portions of the adjacent sparsely-vegetated floodplain gravel bars and banks are covered by water.

Natural processes are slowly reclaiming the disturbed landscape. Floodwaters periodically alter the historic landscape and its component features. Loss of vegetation and soils and a dysfunctional floodplain have increased the ability for floodwaters to cause erosion. All historic cabins and the established mining support facilities are located outside the active floodplain. Some historic features and artifacts have been lost due to erosion and natural processes. Due to the small size of the drainage, discharge and location of permanent structures outside the floodplain, flood risks and threats to historic features are minor.

Proposed Action:

The scope of the proposed action is described in detail as the preferred Alternative 2 of an Environmental Assessment. This EA analyzes the environmental consequences in detail of two alternatives for floodplains and related resources including water resources, wildlife, vegetation, soils, and wetlands. Under the preferred alternative, the NPS would fundamentally authorize what the Lamals originally proposed, but monitor operations and attach stipulations to that proposed plan. These stipulations would modify the scope and ensure a higher level of protection to park resources and values and minimize and/or avoid potential adverse impacts. The proposed action would be confined to two unpatented mining claims..

Placer mining operations would be by necessity, conducted within the active floodplain of Bonanza Creek. Most of the proposed mining activities would be situated in the floodplain, although some mining would occur in the disturbed upland benches outside the floodplain. The support facilities are situated outside the active floodplain. This floodplain reach was extensively impacted by previous mining operations; it is in a condition of recovery by natural processes. Past mining and related disturbances have affected the floodplain and stream channel resulting in a comparatively barren floodplain over most reaches of the stream within the claim block. The majority of the mining operations would occur in a floodplain that has limited soil development and vegetative understory.

Operations as proposed would result in a negative, but temporary degradation to a disturbed and dysfunctional floodplain caused by re-mining the stream bottom and channel. Previous mining directly and indirectly impacted natural processes, channel morphology and all of the floodplain within the proposed mining area. No "pristine" floodplain reaches would be disturbed. Impacts to the floodplain would be controlled by NPS stipulations and monitoring. Stipulations would be attached to prevent loss of soil and erosion, restore and/or improve fluvial conditions and facilitate revegetation of the floodplain and disturbed areas. The NPS would monitor operations and require compliance with and NPS reclamation standards. This would minimize any direct or indirect impacts to the floodplain and prevent unnecessary degradation. There would be a temporary degradation in floodplain function while mining some areas. Floodplain function would be temporarily impacted during operations due to dams, excavations and stockpiling materials. By keeping the mine footprint small and reclaiming as operations proceed up drainage, impacts to the floodplain would be minimized.

Non-historic tailings and features that currently negatively impact the floodplain and natural processes would remain after mining. This would allow for continued minor long-term impacts to floodplain function. NPS stipulations would provide protection to the historic features. The Shamrock Support Camp is located on an elevated terrace such that a flood event would not wash out the facility. The camp has existed on this location for more than 70 years without flood damage. All fuels, waste, and the latrine would be located outside of the active floodplain.

Justification for Use of Floodplain:

Alternatives Considered:

Two alternatives were considered (Alternatives 1 and 2) in the Environmental Assessment). These include a no action and the, (preferred alternative) modified mining plan of operations and with stipulations to control impacts. The claimants do not want to sell the claims so acquisition is not feasible at this time. There would be no risk to property, natural or cultural resources or humans from flooding. The proposed mining action was chosen over the no action alternative because it is unlikely to cause any significant short or long-term impacts to the floodplain or natural resources and allows the miners to exercise their mineral rights. There would be no significant risk to property or humans posed by Alternative 2, the proposed action. NPS monitoring and stipulations minimize what threats do exist to property.

Floodplain Determination:

The proposed action would occur within a 100-year regulatory floodplain. The action proposed can not be successfully carried out unless it is located in or near water. It is a placer mining operation. Most of the direct disturbance would occur within a barren or sparsely-vegetated gravel and cobble zone of the active streambed and floodplain below ordinary high water. We do not anticipate any measurable long-term changes in natural floodplain values such as ecosystem quality, soils, vegetation, and wildlife habitat

or ground water recharge.

We do not anticipate that any adverse short and long-term impacts would likely result in any long-term threat to property and/or cultural/historic resources. The proposed action does not pose any potential for negative long-term impacts or to short-term impacts. This proposed action is consistent with NPS guidance for compliance with Executive Order 11988 (Floodplain Management).

The objective of the preferred action is to avoid, to the extent possible; any long and short-term adverse impact associated with temporary modification of the floodplain and to avoid direct or indirect development of floodplain whenever there is a practical alternative. Where a floodplain can not be avoided, NPS actions would focus on mitigation of adverse effects. This includes mitigation so as to minimize harm to life, property and natural values, and restore and preserve natural and beneficial floodplain values.

The proposed mining operations in the creekbed can not avoid temporary manipulation of the natural system. The proposed action would be monitored and controlled. The operator would be required to reclaim mine disturbances to a condition that approximates existing historic landscape concurrent with operations or as soon as feasible but within a one-year period from the original disturbance. The miner would also be required to keep his unreclaimed disturbed footprint to a minimum. Operations would be controlled to minimize and/or avoid impacts to historic features and artifacts that contribute to the historic landscape. Non-historic features and tailings piles would be removed. Restoration would allow for natural processes to facilitate reestablishment of the floodplain within the historic context.

NEPA Considerations:

The proposed action would directly and indirectly affect the Bonanza Creek floodplain. These effects have been evaluated in an EA. Other alternatives were considered and/or evaluated. This included a discussion of the no-action alternative. The proposed action was chosen because it offers a high level of protection to park resources including floodplain while enabling the claimants to exercise their rights under applicable law and regulation. The action reduces the potential for flood-related hazards to private property and the historic landscape. The EA states that we are in compliance with Executive Order 11988.

Summary:

There is no practical or feasible alternative to authorizing mining on the Shamrock Group on Bonanza Creek. The floodplain was impacted by mining in the past. Existing historic tailings piles and dam structure continue to impact floodplain function. The proposed action would not pose any significant threats to NPS property or human life. Although temporary, minor impacts to the floodplain system would occur, no significant impacts to floodplain values are anticipated.