Record of Decision

Greens Creek Mine
Tailings Disposal Facility Expansion

USDA Forest Service
Admiralty Island National Monument
Tongass National Forest Alaska

SUMMARY

The Forest Service prepared the Greens Creek Mine Tailings Disposal Facility Expansion Final Environmental Impact Statement (EIS) to analyze the potential impacts of increasing the capacity of the Greens Creek Mine to dispose of additional tailings and waste rock. The EIS complies with the National Environmental Policy Act (42 United States Code [U.S.C.] 4321 et seq.) (NEPA), the Alaska National Interest Lands Conservation Act (16 U.S.C. 431 note), the National Forest Management Act of 1976, and all other applicable Federal and State laws and regulations. This Record of Decision (ROD) describes the Forest Supervisor's decision to approve an expansion of the existing Greens Creek mine tailings disposal facility. The decision is based on the EIS and the entire project record.

The Forest Supervisor has selected Alternative D, with modifications described in this Decision. The primary modification is to delete construction of a second tailings facility in the Fowler Creek watershed. Alternative D Modified, also referenced in this Decision as the Selected Alternative, authorizes the Greens Creek Mine to expand the existing tailings disposal facility by about 18 acres, further south into the Admiralty Island National Monument. An additional 8 acres is authorized to be developed outside of the Monument for rock quarry and reclamation material storage sites and expanding an existing water management pond. The capacity of the facility will be expanded by about 2.1 million cubic yards. At the expected rate of fill, the ability of the facility to accept additional tailings will be extended by approximately 10 years, from 2019 to 2029. No tailings will be deposited in the sections of Tributary Creek that are classified as Class I or Class II fish habitat. The Selected Alternative does *not* authorize construction of a second tailings disposal facility in the Fowler Creek watershed as described in Alternatives C and D of the Final EIS. Adopting a modification of Alternative D as the Selected Alternative does not preclude the future consideration or selection of any of the action alternatives considered in this EIS, or other new feasible alternatives that may arise, through future NEPA processes.

PROJECT AREA

Figure 1 shows the project area and vicinity.

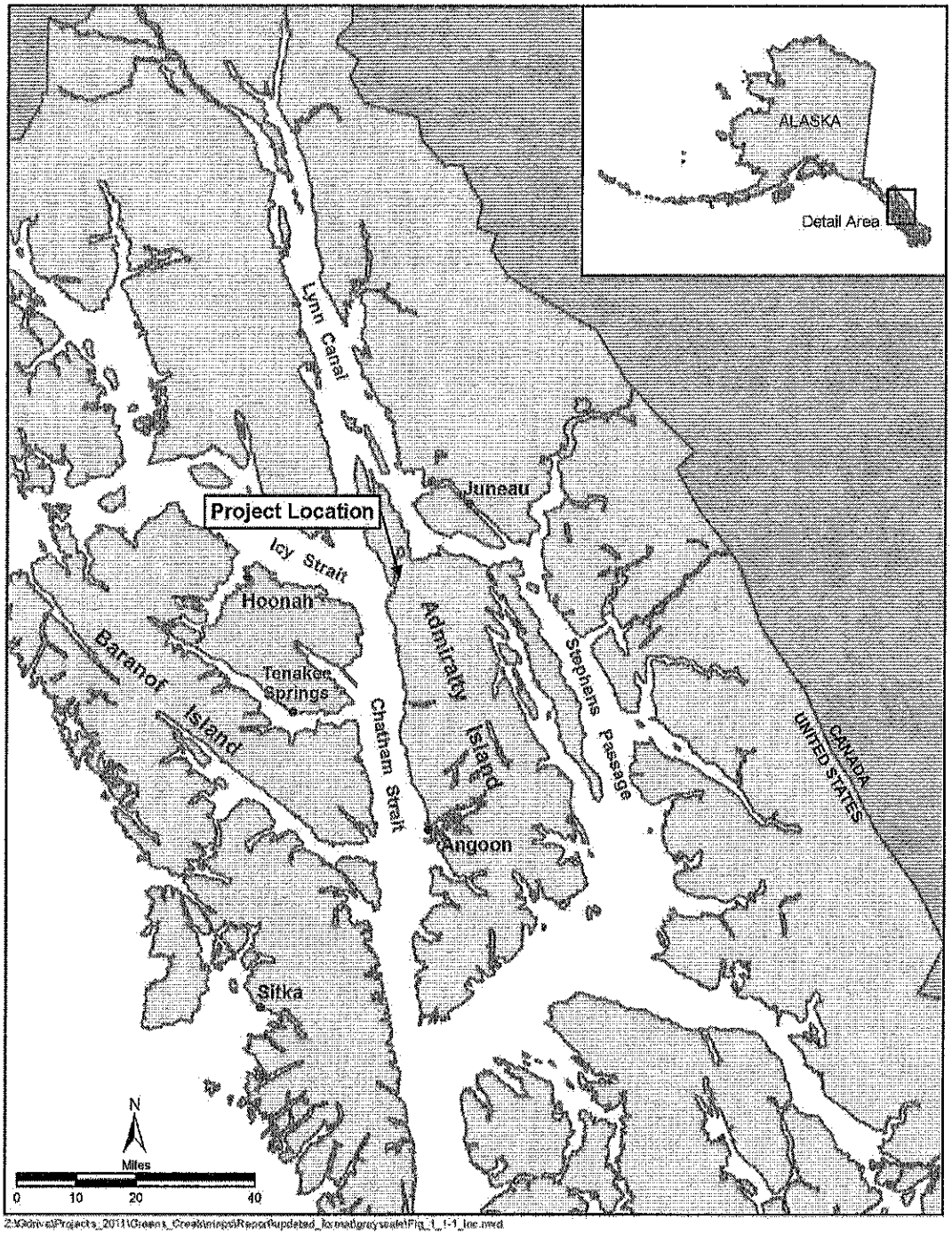

Figure 1. Project Area and Vicinity Map

DECISION

This ROD documents my decision to implement Alternative D from the Greens Creek Mine Tailings Disposal Facility Expansion Final EIS, with four modifications:

- Delete construction of a second tailings disposal facility in the Fowler Creek watershed. The second facility was not included in Alternatives B and B Modified, so this change is within the range of alternatives analyzed in the Final EIS.
- Delete the expansion of the existing tailings disposal facility by 7.2 acres to the northeast, into the Cannery Creek watershed. This expansion was not included in Alternative B, so this change is within the range of alternatives analyzed in the Final EIS.
- Avoid expanding the existing reclamation material storage site within Admiralty Island National Monument and add a 4.8-acre reclamation storage site near the junction of the A Road and the B Road, as displayed in Alternative B Mitigated. This change is within the range of alternatives analyzed in the Final EIS.
- Delete the West Road from the camp site to the new rock quarry within the perimeter of the existing tailings disposal facility, and adding a much shorter (160 - foot) road within the perimeter to provide access to the rock quarry. Because the new road is not within an inventoried roadless area, and the net effect of this change is to reduce the amount of new road construction, the effects are within the range of those disclosed in the Final EIS.

With these four changes, Alternative D Modified is referenced throughout this document as the Selected Alternative.

The Selected Alternative is nearly equal to Alternative D figures shown in Appendix E of the FEIS, showing years 1-10 of Alternative D, allowing the Hecla Greens Creek Mining Company to expand the existing tailings disposal facility further south into Admiralty Island National Monument by about 18 acres (ROD, Figure 2). An additional 8 acres is authorized to be developed outside of the Monument for rock quarry and reclamation material storage sites and expanding an existing water management pond. The Selected Alternative expands the facility's capacity by about 2.1 million cubic yards, which will delay the time at which the capacity is reached by approximately 10 years, from 2019 to 2029 at the expected rate of fill. No tailings will be deposited in those sections of Tributary Creek that are classified as Class I or Class II fish habitat, and a second tailings facility will not be constructed.

The total effects of the Selected Alternative are far less than those associated with any of the action alternatives analyzed in the Final EIS, because the Selected Alternative would disturb only one-fifth to one-third of the total acreage affected by any of the action alternatives. The effects to the Monument will be nearly identical to those described in Alternative D, and the total impacts to wetlands, wildlife, aquatics, and other resources are less than for any of the action alternatives.

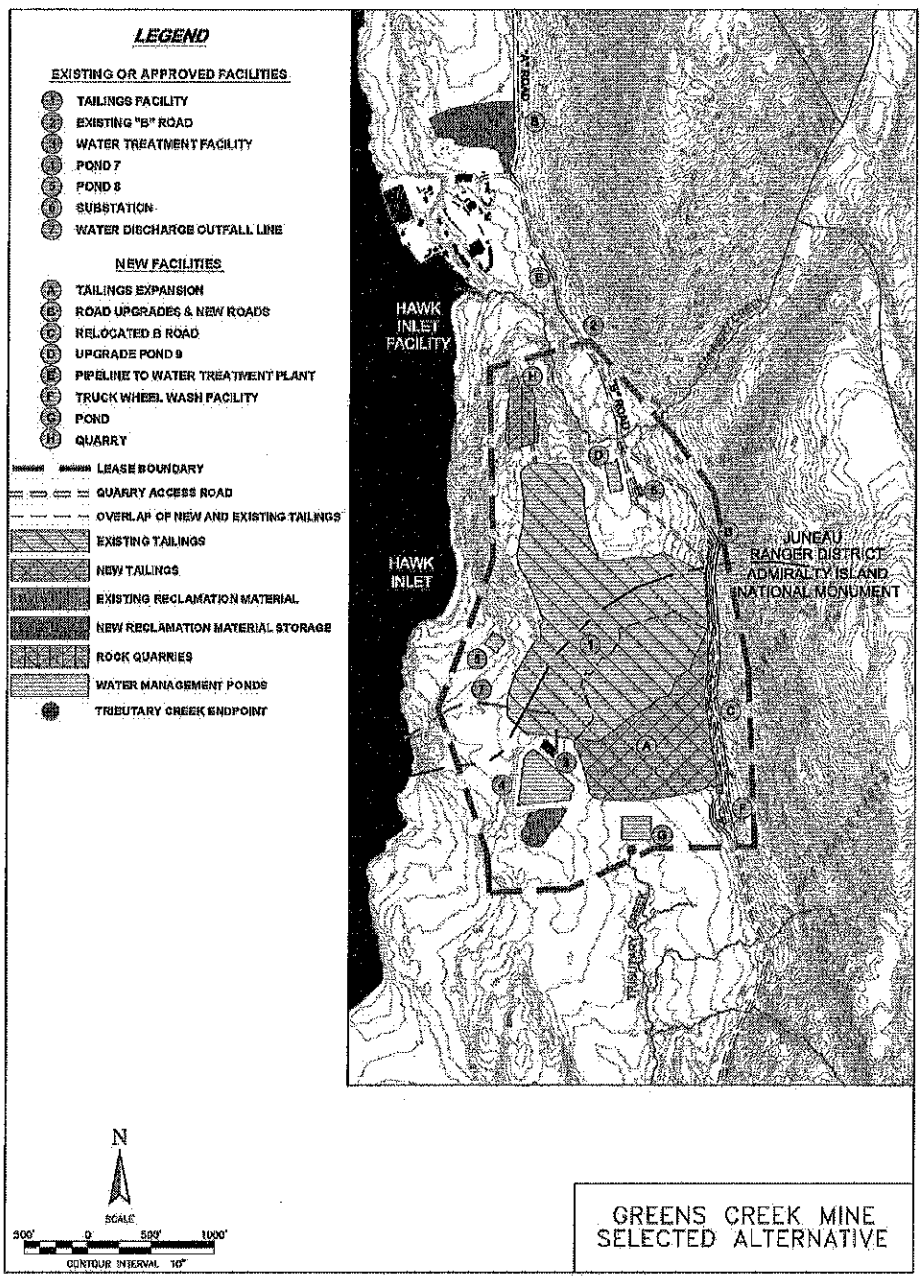

Figure 2. Selected Alternative

Components of the Selected Alternative include:

- Expansion of the existing tailings disposal facility (TDF) southward into the Monument;
- Development of a reclamation material storage area near the junction of the A and B roads, outside of the Monument;
- Development of a rock quarry north of the existing TDF, and access from within the existing facility, outside of the Monument;
- Development of a new water management pond south of the existing TDF and expansion of existing water management ponds; and
- Relocation of the B road and truck wheel wash facility to accommodate the TDF expansion.

ALTERNATIVES CONSIDERED

The development of alternatives is described in Section 2.2 of the Final EIS. Alternatives were developed to respond to the four significant issues identified by the public during the NEPA scoping process, including water quality, wetlands, fish habitat, and protection of Admiralty Island National Monument.

Alternatives Considered in Detail, Including the No-Action Alternative

Four alternatives were analyzed in detail in the Draft EIS, as well as several possible mitigation measures that could be applied to the Proposed Action, Alternative B. To provide additional clarity regarding the choices to be made, the Final EIS includes a fifth alternative, Alternative B Mitigated, which includes the mitigation measures described in the Draft EIS. All alternatives except Alternative A (the No-Action Alternative) respond to the purpose and need for the project. The five alternatives analyzed in detail are described below:

Alternative A, the No-Action Alternative. This alternative is the existing condition. Alternative A would not allow any expansion of capacity to store tailings at Greens Creek Mine. Based on revised information provided by Hecla Greens Creek Mine during preparation of the Final EIS, the existing tailings disposal facility would reach its capacity in 2019, at which time the Greens Creek Mine would have to cease operations. Under this alternative, when the mine is closed, Greens Creek Mine will cover the tailings facility with an engineered cover designed to support local vegetation and to limit the ingress of water and oxygen into the tailings below. The cover will substantially limit the development of acid rock drainage from the tailings. Greens Creek will be responsible for collection and treatment of water from the tailings disposal facility for at least a hundred years, perhaps in perpetuity.

Alternative B, the Proposed Action. This alternative was developed by Greens Creek Mine to facilitate long-term planning and avoid piecemeal permitting. Alternative B would expand the actual footprint of the currently authorized tailings pile by 54 acres, all

of which would be within Admiralty Island National Monument. Total new disturbance, including the tailings and ancillary facilities such as reclamation materials storage, quarries, water storage ponds, and other facilities, would be 116 acres, 100 acres of which would be within the Monument. When added to the 65-acre currently authorized facility, the tailings disposal facility would occupy 181 acres at full capacity under Alternative B. Alternative B would raise existing capacity by 14.2 million cubic yards, the equivalent of 30-50 years of additional operations at current production rates. This alternative would maximize efficiency by incorporating the tailings infrastructure in one location. Moreover, for any given capacity, a single tailings pile also has the smallest overall footprint due to basic geometry; because the sides of the pile are limited to a given slope angle to maintain stability; the larger the base of the pile, the higher it can be built. On the other hand, this alternative would expand the tailings disposal facility further into the Monument. In addition, at full capacity the facility described under Alternative B would cover approximately 4,000 feet of fish habitat in Tributary Creek, including 1,646 feet of habitat for anadromous fish such as salmon (referred to as Class I habitat), and 2,400 feet of habitat for non-migratory resident fish (referred to as Class II habitat). The closure scenario of the Alternative B is the same as for Alternative A: Greens Creek will construct an engineered cover as well as collect and treat water from the facility for at least 100 years after closure, perhaps in perpetuity.

Alternative B Mitigated. This alternative was developed by the Forest Service to display how impacts to Admiralty Island National Monument could be reduced. Alternative B Mitigated includes several features that were described in the Draft EIS as mitigation measures that could be applied to the Proposed Action. Alternative B Mitigated would expand the existing tailings disposal facility to provide 14.2 million cubic yards of additional tailings disposal capacity, equivalent to 30-50 years of additional operations, the same level of expansion as under Alternative B. Under Alternative B Mitigated, however, some of the expansion would be to the northeast into the Cannery Creek watershed outside the Monument, so that an equal increase in capacity could be achieved while reducing the expansion into the Monument by 31 acres as compared to Alternative B. The effects on Class I fish habitat in Tributary Creek would be the same under Alternative B Mitigated as under Alternative B; 1,646 feet of such habitat would be covered with tailings. The effects on Class II habitat would be about half under Alternative B Mitigated than under Alternative B: 1,169 feet of such habitat would be lost due to tailings placement. The size of the lease boundary for the full build-out encompasses 167 acres. Under this alternative, ancillary facilities such as reclamation material stockpiles and rock quarries and borrow sources are located north of the existing facility, out of the Monument. This alternative would disturb fewer acres of the Monument, but still contain all tailings and related infrastructure in a single facility. The closure and post-closure requirements of this alternative are the same as those of Alternatives A and B.

Alternative C. The Forest Service developed this alternative to display the effects of minimizing further development in the Monument beyond what is already authorized. Alternative C would require construction of a second tailings disposal facility located at 2.6 Mile on the "A" Road, which is outside the Monument and about 3 miles north of the current facility. Under this alternative, Greens Creek Mine would have approximately 5 years of additional capacity at the current facility, allowing the company time to complete

engineering and permitting work, then build the new facility and widen the "A" Road to accommodate heavy haul traffic. Alternative C would meet the purpose and need of granting the equivalent of 30-50 years of additional tailings disposal capacity, but about 25-45 years of that capacity, or 13.2 million cubic yards of tailings, would be located at the second facility. An additional 2.3 acres of Monument land would be disturbed, and the total area occupied by both facilities would be 224 acres. At closure, each tailings disposal facility would be capped using the same engineered cover design as described above under Alternatives A, B, and B Mitigated. Greens Creek Mine would also be required to collect and treat water from the tailings facilities for at least a hundred years after closure, perhaps in perpetuity. Under Alternative C, untreated contact water from the second location would be pumped back to the existing water treatment plant – a distance of about 3 miles -- and discharged through the currently permitted marine outfall.

Alternative D. The Forest Service developed Alternative D to consider ways to avoid filling any part of Tributary Creek with tailings. Like the other action alternatives, this alternative would provide about 30-50 years of additional tailings disposal capacity. Alternative D was designed to incorporate the efficiency of a single facility as much as possible by expanding the existing facility to the south, further into the Monument, by about 23 acres. Alternative D would also expand the existing facility to the northeast, into the Cannery Creek watershed, by 7.2 acres. Alternative D would expand the capacity of the existing facility by about 3 million cubic yards, the equivalent of 10-15 years of tailings disposal. Greens Creek Mine would construct a second facility, located at 2.6 Mile on the "A" Road, rather than fill any portion of Tributary Creek with tailings. The total area occupied by both facilities would be 245 acres. Greens Creek Mine would also be required to collect and treat water from the tailings facilities for at least a hundred years after closure, perhaps in perpetuity. Under Alternative D, untreated contact water from the second location would be pumped back to the existing water treatment plant – a distance of about 3 miles -- and discharged through the currently permitted marine outfall. The closure and post-closure requirements of this alternative are the same as identified for alternatives above.

Alternatives Considered but not Analyzed in Detail

Several additional alternatives were proposed internally or by the public during scoping and review of the Greens Creek Mine Tailings Disposal Facility Expansion Draft EIS. More discussion of these alternatives is located in Chapter 2 of the Final EIS, Alternatives Considered but Eliminated from Detailed Study, and in Appendix D of the Final EIS.

In looking at on-island locations, the 1983 EIS that analyzed development and construction of the Greens Creek Mine considered as many as 13 locations for a tailings impoundment. The 1983 analysis established criteria for locations including impacts to National Monument lands, reduction of fish habitat, deterioration of water quality, effects upon the marine environment, reduction of wildlife habitat, effects upon recreation, economic feasibility, and technical feasibility. Seven sites met the technical feasibility benchmark, including a site equivalent to the site being considered in Alternatives C and D in this analysis. After further consideration, the 1983 EIS analyzed three locations for a tailings impoundment: North Hawk Inlet (the current location of the second pile in Alternatives C and D of this analysis); the "Football Field" closer to the portal between

1,000-1,500 feet in elevation, within the Monument; and the "Cannery Creek" location which was ultimately selected. The 2003 EIS analysis did not look at alternative locations in detail, citing substantial increases in impacts to wetlands, wildlife, and the potential for impacts to water quality.

In this analysis, the Forest Service considered several alternative locations or configurations for tailings placement, including off-island and on-island sites. Off-island disposal would require the shipping of tailings by barge, which proved to be cost-prohibitive. Moreover, a new facility would create similar or a new set of effects in another setting. Screening criteria for alternative locations on the island included geotechnical stability, impacts to wetlands, impacts to fish bearing streams, and accessibility. No geotechnically stable location was identified that could avoid impacts to wetlands and fish-bearing streams. Alternative facility designs such as altering the shape of the pile in an attempt to avoid or minimize impacts to Tributary Creek were considered but ultimately not carried forward due to construction costs and engineering difficulties.

It is the presence of pyrite in the tailings that creates the potential for acid rock drainage, and therefore the greatest need to treat all water that has come into contact with the tailings to meet Alaska Water Quality Standards before such contact water is discharged to the environment. The 2003 EIS considered the removal of pyrite from the tailings but eliminated it from further study. Based upon the interest of the Cooperating Agencies and the interdisciplinary planning team, this possibility was looked at again for this analysis based on two criteria: technical and logistical feasibility, and predicted long-term water quality. This alternative was eliminated from further consideration due to the complexity of logistics and operational constraints of placing the required facilities at the current mill site, and a greater risk of significant adverse effects. The removal of pyrite from the tailings would require the use of sulfuric acid in the pyrite circuit. Thus, Greens Creek would need to store large amounts of sulfuric acid on site for pyrite removal, which would add to the inventory of hazardous materials at the mine and increase the risks of hazardous material spills during shipping, which could harm water quality, aquatic life, and the Monument. The pyrite concentrate itself would be highly reactive and create a potential for spontaneous combustion. An additional processing circuit to remove pyrite would need to be constructed adjacent to the existing mill. A pyrite concentration storage facility would also be required. The 2003 EIS estimated that up to 2.5 acres of land would be required to accommodate a pyrite facility and the associated storage facilities for concentrate and chemicals. The mill is located in a topographically steep and congested area, and it would be very difficult if not impossible to locate an additional facility of that size in this area. In summary, the additional risks associated with removing pyrite from the tailings, and the impracticality of this alternative, warranted excluding it from detailed analysis in the EIS.

Environmentally Preferable Alternative

Alternative A, the no-action alternative, is the environmentally preferable alternative because it would not expand the tailings facility, so it would avoid any additional adverse environmental impact from such an expansion.

RATIONALE FOR THE DECISION

Summary

This decision was an unusually difficult one for me to make. In 2003, I made a similar decision to expand the tailings disposal facility, a decision expected to last far longer than 10 years. Thus, the intent of this analysis was to provide a longer-term solution to provide greater certainty to all parties about the future of Greens Creek Mine and of the protection of Admiralty Island National Monument.

In arriving at this decision, I studied the entire project record, going all the way back to the 1983 EIS for initial approval of the mine, and every subsequent NEPA analysis since then. I also carefully examined the complex web of applicable legal requirements, many of which are specific to mining activities in the two national monuments on the Tongass, and revised information from Hecla Greens Creek Mine as to when the existing tailings disposal facility will reach capacity. Knowing how strongly people feel about the issues raised by this project, I concluded there will be time to gather and analyze additional information before authorizing further impacts on the Tributary Creek watershed or a second tailings disposal facility and the associated effects such a facility would have. Thus, while I was hoping to avoid another relatively short-term decision, I have determined that it is the wiser course of action. It allows time to gather and analyze additional information, to thoroughly consider all feasible ways to provide additional tailings disposal capacity, and to clearly and convincingly document such consideration through future NEPA processes. My reasons for not choosing the other alternatives described in the Final EIS are discussed in greater detail below.

Alternatives B and B Mitigated

These alternatives are very similar, in that they both expand the existing tailings disposal facility and do not include construction of a second facility in the Fowler Creek watershed. The only substantial difference between the two alternatives is that Alternative B confines the expansion to the Tributary Creek watershed; consequently, the entire expansion would be located in Admiralty Island National Monument. To reduce the portion of the expansion located in the Monument, Alternative B Mitigated would expand the existing tailings disposal facility to the northeast into the Cannery Creek watershed, and not as far south into the Tributary Creek watershed.

As described in the Final EIS, these alternatives have several advantages. For any given capacity, one larger facility inherently occupies a smaller area of land than do two smaller facilities. Consequently, fewer acres of wetlands are adversely affected under these alternatives than under Alternatives C and D. Confining tailings disposal to the fewest number of watersheds also reduces overall effects, such as the addition of fugitive dust to the Fowler Creek drainage and the increased release of greenhouse gases due to an increased haul distance to the second facility. Moreover, since water that has come into contact with tailings may require treatment in perpetuity, the alternatives with one tailings facility rather than two avoid the need to pump untreated contact water from the Fowler Creek location about 3 miles to the existing water treatment plant; the only pumping required by a single facility after mine closure is while personnel are on site periodically

to treat water stored adjacent to the treatment plant. Thus, a single facility as included in Alternatives B and B Mitigated avoids long-term risks of environmental harm from uncontrolled spills of untreated contact water should unattended pumps, generators, or pipes out of sight of the treatment plant fail sometime in the future. While failures are possible under a single facility as well, those risks are much smaller because far fewer pipes, generators, and pumps are involved and personnel are more likely to detect any failure before a substantial spill occurred.

On the other hand, these alternatives affect the Monument more than Alternatives C and D do. Section 503(f)(2)(A) of the Alaska National Interest Lands Conservation Act (ANILCA), requires the Secretary of Agriculture to promulgate reasonable regulations to assure that all mining operations related to what is now Greens Creek Mine, including (but not limited to) operations within the Monument, are compatible, to the maximum extent feasible, with the purposes for which the Monument was established. The regulations promulgated pursuant to this Section (36 Code of Federal Regulations [CFR] 228.80) further provide that operations meet the statutory requirement if they include all feasible measures which are necessary to prevent or minimize potential adverse impacts on the resources the Monument was established to protect. Moreover, 36 CFR 228.8(e) requires mine operators to take all practicable measures to maintain and protect fisheries habitat.

Some reviewers of the Draft EIS commented that these requirements prohibit adoption of any alternative that allows tailings to be disposed of in the portions of Tributary Creek classified as Class I or Class II fish habitat unless the Forest Service could demonstrate that Alternatives C and D, which do not affect the fish-bearing portions of Tributary Creek, are not feasible. Other reviewers asserted that the effects of Alternatives B or B Mitigated on the fish-bearing portions of Tributary Creek would violate Section 503(i)(1)(B) of ANILCA, which entitles Greens Creek Mine to a lease for mining and milling purposes only if it would not cause irreparable harm to the Monument.

During the preparation of the Final EIS, Hecla Greens Creek Mining Company provided information that the Company believes demonstrates that Alternatives C and D are not economically feasible. Although the information demonstrates that it would be far more expensive to build a second tailings disposal facility as described in Alternatives C and D, I am not confident that these alternatives are infeasible. The assertions that Alternatives B and B Mitigated would result in irreparable harm to the Monument because of their impacts on the fish-bearing portions of Tributary Creek are also important and challenging issues. For these reasons, after reviewing the project record, I believe additional information needs to be collected regarding feasibility of alternative sites before authorizing activities that would affect the fish-bearing portions of Tributary Creek.

Alternatives C and D (without modifications)

These alternatives are similar, in that they both would require construction of a second tailings disposal facility in the Fowler Creek watershed. Consequently, both alternatives would require untreated contact water to be pumped back to the existing water treatment plant, perhaps in perpetuity, and discharged via the existing marine outfall in Hawk Inlet. Both alternatives would require Greens Creek Mine to widen and upgrade 3 miles of the existing "A Road" to accommodate the additional traffic of heavy trucks that haul tailings, and to bury the pipes needed to transport contact water to prevent it from freezing. The

only substantial difference between the two alternatives is that Alternative C expands the existing tailings disposal facility much less than does Alternative D, providing less time before construction of the second facility in Fowler Creek would have to be completed.

As described in the Final EIS, these alternatives would substantially reduce the footprint of the combined tailings disposal facilities that would be located within the Monument, compared to Alternatives B and B Mitigated. Specifically, they avoid disposing of tailings in the fish-bearing portions of Tributary Creek. In this way, the issues related to whether the disposal of tailings causes irreparable harm to the Monument would be easier to resolve under Alternatives C and D than under Alternatives B and B Mitigated.

On the other hand, these two alternatives would introduce new impacts to the Fowler Creek watershed, which is not currently affected by tailings disposal. These alternatives would result in filling substantially more wetlands (128 acres for Alternative C, 138 acres for Alternative D) than would Alternative B (89 acres) or Alternative B Mitigated (70 acres). They also would affect an existing goshawk nest, unlike Alternatives B and B Mitigated, and result in greater greenhouse gas emissions due to the longer haul distance between the mill and the Fowler Creek tailings disposal site. I must also consider the long-term risks associated with the need under these two alternatives to pump untreated contact water a distance of about 3 miles for at least 100 years after closure, and perhaps in perpetuity. Based on my review of the record, I believe that long-term reliance under Alternatives C and D on a greater number of generators, pipes, and pumps, most of which would be out of sight of the treatment plant, poses a higher risk of substantial spills of untreated contact water than the simpler pumping system required under Alternatives B and B Mitigated.

For all these reasons, even though Alternatives C and D would cause less harm to the Monument, current information suggests that Alternatives C and D may have more total adverse environmental effects than would Alternatives B and B Modified.

As previously discussed, Section 503(i)(1) of ANILCA provides that Greens Creek Mine is entitled to a lease only if certain conditions are met. Section 503(i)(1) reads as follows:

> (i)(1) With respect to the mineral deposits at Quartz Hill and Greens Creek in the Tongass National Forest, the holders of valid mining claims under subsection (f)(2)(B) shall be entitled to a lease (and necessary associated permits) on lands under the Secretary's jurisdiction (including lands within any conservation system unit) at fair market value for use for mining or milling purposes in connection with the milling of minerals from such claims situated within the Monuments only if the Secretary determines—
>
> > (A) that milling activities necessary to develop such claims cannot be feasibly carried out on such claims or on other land owned by such holder;
> >
> > (B) that the use of the site to be leased will not cause irreparable harm to the Misty Fjords or the Admiralty Island National Monument; and
> >
> > (C) that the use of such leased area for such purposes will cause less environmental harm than the use of any other reasonably available location.

> With respect to any lease issued under this subsection, the Secretary shall limit the size of the area covered by such lease to an area he determines to be adequate to carry out the milling process for the mineral bearing material on such claims.

Based on my review of the project record, including previous NEPA documents, it appears that the primary focus of the public since enactment of ANILCA in 1980 has been on the language in clause (B) about avoiding irreparable harm to the Monument. It also appears that many people have assumed that Section 503(i)(1) applies only to activities within the Monument. After studying the language carefully, I have reached a different conclusion: that the provisions apply on any National Forest System land, including land within the Monument and land outside its boundary.

The information currently available does not suggest that either Alternative C or Alternative D (without the modifications described in the Selected Alternative) "will cause less environmental harm than the use of any other reasonably available location." However, since the Draft EIS was published, questions have arisen whether ways might exist to reduce the environmental effects of Alternatives C and D, such as developing a second water treatment plant and marine outfall in the northern part of Hawk Inlet or perhaps Young Bay; or routing untreated contact water to the beach on Hawk Inlet, treating it there, and then routing it to the existing marine outfall. I believe additional information is needed to ascertain whether any of these measures would reduce the environmental effects of Alternatives C and D before authorizing construction of a second tailings facility.

That brings me to the issue of the feasibility of Alternatives C and D. As previously mentioned, USDA promulgated regulations to implement Section 503(f)(2)(A) of ANILCA. Those regulations (36 CFR 228.80) read as follows:

> Operations within Misty Fjords and Admiralty Island National Monuments, Alaska
>
> (a) Mineral activities on valid mining claims in the Misty Fjords and Admiralty Island National Monuments must be conducted in accordance with regulations in subpart A of this part and with the provisions of this section.
>
> (b) Prior to approving a plan of operations, the authorized officer must consider:
>
> > (1) The resources of ecological, cultural, geological, historical, prehistorical, and scientific interest likely to be affected by the proposed operations, including access; and
> >
> > (2) The potential adverse impacts on the identified resource values resulting from the proposed operations.
>
> (c) A plan of operations will be approved if, in the judgment of the authorized officer, proposed operations are compatible, to the maximum extent feasible, with the protection of the resource values identified pursuant to paragraph (b)(1) of this section.
>
> > (1) The authorized officer will deem operations to be compatible if the plan of operations includes all feasible measures which are necessary to prevent or minimize potential adverse impacts on the resource values identified pursuant

to paragraph (b)(1) of this section and if the operations are conducted in accordance with the plan.

(2) In evaluating the feasibility of mitigating measures, the authorized officer shall, at a minimum, consider the following:

(i) The effectiveness and practicality of measures utilizing the best available technology for preventing or minimizing adverse impacts on the resource values identified pursuant to paragraph (b)(1) of this section; and

(ii) The long- and short-term costs to the operator of utilizing such measures and the effect of these costs on the long- and short-term economic viability of the operations.

(3) The authorized officer shall not require implementation of mitigating measures which would prevent the evaluation or development of any valid claim for which operations are proposed.

(d) In accordance with the procedures described in subpart A and paragraphs (c)(1) through (c)(3) of this section, the authorized officer may approve modifications of an existing plan of operations:

(1) If, in the judgment of the authorized officer, environmental impacts unforeseen at the time of approval of the existing plan may result in the incompatibility of the operations with the protection of the resource values identified pursuant to paragraph (b)(1) of this section; or

(2) Upon request by the operator to use alternative technology and equipment capable of achieving a level of environmental protection equivalent to that to be achieved under the existing plan of operations.

The language in paragraph (c)(2) of these regulations applies most directly to determining the feasibility of measures to prevent or minimize potential adverse impacts on resources the Monument was established to protect. Consistent with this language, the Tongass Forest Plan defines "feasible" to mean:

> Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, technical, and safety factors. In evaluating feasibility, the following are considerations: 1) the effectiveness and practicality of the measures being considered; and 2) the long- and short-term costs of the measures and the effect of those costs on long- and short-term economic viability of projects or programs.

As mentioned in the discussion of Alternatives B and B Mitigated above, during preparation of the Final EIS, Greens Creek Mine provided information that the company believes demonstrates that Alternatives C and D are not feasible. I am not confident that these alternatives are not feasible. However, because of the uncertainties regarding the feasibility of Alternatives C and D (without modifications described in the Selected Alternative), I believe additional information needs to be collected regarding feasibility of Alternatives C and D before authorizing construction of a second tailings facility.

Alternative A, the No-Action Alternative

The question arises whether the No-Action Alternative, Alternative A, is the best course of action until the additional information described above is gathered, reviewed, made available to the public, and incorporated in subsequent NEPA analysis. After all, the latest information from Greens Creek Mine suggests that capacity of the existing tailings disposal facility will not be reached until 2019, considerably later than previously estimated. I considered that approach, and rejected it for several reasons. First, while 6 years may seem like plenty of time to address the concerns outlined above, it will probably take at least 2 or 3 years of field work to gather the required information; about 3 years to prepare another EIS; and it could take at least 2 years to build whatever facility might be approved—more if that is an additional facility. It may well take at least 6 years before another decision can be made, even without a legal challenge that could extend that timeframe. In addition, there is a substantial amount of waste rock that will be stored in the tailings disposal facility prior to closure. The estimate that tailings storage capacity will be reached in 2019 did not take into account the need to store waste rock as well. Adjusting for that requirement substantially shortens the time period before additional tailings cannot be stored in the existing facility. Finally, paragraph (c)(3) of the regulations cited above clearly prohibit me from requiring "implementation of mitigating measures which would prevent the evaluation or development of any valid claim for which operations are proposed." I believe this language requires me to take action needed to ensure that Greens Creek Mine can continue operations, subject to the other requirements discussed previously.

Conclusion

For the reasons discussed above, some decision must be made to ensure that operations can continue until the necessary additional information can be gathered, analyzed, and reviewed by all stakeholders through the NEPA process. The Selected Alternative is the best way I know of to achieve that result, and as described above, it has far less environmental effects than the other alternatives considered in the Final EIS. That is why I am adopting it in this Decision.

Although the Selected Alternative is a modification of Alternative D, adopting it does not preclude consideration or selection in the future of any of the action alternatives considered in this EIS, or other new feasible alternatives that may arise, once the additional information described in this Decision is gathered, analyzed, and reviewed through future NEPA processes.

Because I am adopting an alternative that provides only a relatively short-term solution to the issues related to tailings disposal and protection of Admiralty Island National Monument, it is important to consider how best to prepare for the next decision that is likely to be needed several years from now. At that point, a short-term solution that avoids affecting the fish-bearing sections of Tributary Creek and also avoids a second tailings facility is unlikely to be available. Therefore, it is essential that the Responsible Official for the next decision not be in the position I am in today. To avoid that dilemma, the Tongass National Forest will work with other appropriate parties on two items. The first is to develop a supplement to the Forest Service Directives to clarify how to apply the

complex set of legal requirements that are specific to Admiralty Island National Monument and Misty Fiords National Monument. The second step is for Hecla to provide feasibility analyses regarding the construction and use of alternative tailings disposal facilities. The Tongass National Forest will work with other stakeholders to identify the information that must be incorporated into the feasibility analyses, using the definition of feasibility as stated above. As these analyses will be used to support any additional expansion of the Greens Creek Mine tailings disposal facility, they must be completed in a timeframe that enables the information to be included in any subsequent NEPA analysis.

EFFECTS OF THE SELECTED ALTERNATIVE ON SIGNIFICANT ISSUES

Issue 1 – Water Quality

Water quality and treatment is the same among all alternatives. Modeling, based upon water quality data collected from the tailings disposal facility during the last 20 years of operations, predicts that contact water will not meet water quality standards after closure, and that the water will require treatment in post-closure for hundreds of years, perhaps into perpetuity. The modeling does not show any differences in water quality among the alternatives. Thus, all of the alternatives will require collection and treatment of water for 100 years, perhaps into perpetuity. The Selected Alternative will require the mine to collect and treat water from the tailings disposal facility until the water can meet Alaska Water Quality Standards, likely in perpetuity, as with the other alternatives. Greens Creek Mine will be responsible for providing financial assurance to ensure that long-term water treatment will occur. The treated water will continue to discharge into Hawk Inlet, and is required to comply with the Clean Water Act under the Alaska Pollution Discharge Elimination System.

At closure, an engineered cover will be constructed on the pile to limit the ingress of water and oxygen into the tailings. This will minimize the development of acid rock drainage. Water will be collected as it drains from within or underneath the pile. The cover will be built to drain water falling onto the pile to natural watersheds and promote the return of natural forest vegetation, including Sitka spruce and western hemlock.

Issue 2 – Wetlands

The Selected Alternative will affect about 14 acres of wetlands. Approximately 8 acres of these wetlands will be covered with the tailings disposal facility and the area cannot be reclaimed as wetlands at closure of the mine. Water management pond development will fill about 2 acres of wetlands. These acres are considered a permanent loss of wetlands and mitigation will occur under the Clean Water Act according to a Corps of Engineers permit. These affected wetlands are near the headwaters of the Tributary Creek channel. Tributary Creek may experience changes to the hydrologic system, as diverting non-contact runoff could increase peak flow velocities in the natural stream channel during large storm events, potentially causing erosion of channel substrates and impact channel geomorphology. Mitigation will be put in place to minimize these effects as much as

practicable. The remaining 4 acres of wetlands lost will occur near the junction of the A and B Roads where reclamation material will be stored.

Issue 3 – Fish Habitat

The Selected Alternative does not allow Greens Creek Mine to fill or otherwise directly affect any Class I or Class II stream. The Selected Alternative does not require the widening or upgrading of the existing road. Only one new 160- foot road will be constructed as a result of this decision; no stream crossings will be required. Additionally, Greens Creek Mine is required to repair the existing fish passage facility on Greens Creek and provided for continued monitoring and maintenance of the facility.

Issue 4 – Admiralty Island National Monument

The Selected Alternative will cause an additional 18 acres of disturbance within Admiralty Island National Monument. No tailings will be disposed of in any fish-bearing portion of Tributary Creek. The area of impact from the decision represents less than 1/100th of a percent of the Monument, and is contained within a single watershed. Impacts to ecological resources are primarily concentrated to wetlands in the headwaters of Tributary Creek. Additionally, the Selected Alternative was chosen to comply with applicable legal requirements specific to managing the mine within Admiralty Island National Monument as described in the Rationale for Decision.

COMPARISON OF ALTERNATIVES

This section compares outputs and environmental effects of the alternatives for the significant issues and resources analyzed. The effects are summarized from Chapter 3 of the Final EIS, which should be consulted for a full understanding of these and other environmental consequences. For each resource, the environmental effects of the Selected Alternative are within the range of (or less than) the Alternative effects analyzed in the Draft EIS. The major difference among alternatives is the location and configuration of the TDF. The method of construction, disposal, water management and treatment, and reclamation and closure plans are the same for each of the alternatives. Alternatives C and D would require pumping of the effluent from additional collection points to a water treatment plant approximately 3 miles away, that would be required as long as active treatment is required, perhaps in perpetuity. This will entail the use of generators and pump stations along the route between the second facility and the existing facility, as well as 3 miles of pipeline carrying untreated water from the second tailings facility, and represents an increased risk of an uncontrolled discharge should pumps, pipes, or generators fail along the pipeline.

Alternatives B Mitigated and D (unmodified) expand the current facility to the northeast, in the Cannery Creek watershed, to minimize impacts to the Monument. The construction of the northeast corner will require a high volume of clean fill, imported from off-island sources because no geochemically stable rock source has yet been found near the mine. In addition, water collected from this portion of the facility would not be able to freely drain to the collection ponds and water treatment plant after closure of the mine. Water collected from this portion of the facility would require constant pumping to a collection

pond and water treatment plant on the other side of the facility. This represents a much smaller distance of pumping and associated infrastructure such as generators than would be required for a second tailings disposal facility, but still represents the increased risk of an uncontrolled discharge should pumps or generators fail.

Climate change has also been a consideration, including the effects of climate change on the project, the effects of the project on climate change, and how either type of effect varies by alternative. As described in Chapter 3 of the Final EIS and the table below, Alternatives C and D (unmodified) would increase the amount of greenhouse gas (carbon dioxide) emissions by 33 and 29 percent, respectively, compared to the other action alternatives. There would be no discernible differences among the alternatives in how climate change would affect the project.

Table 1 provides a comparison of alternatives relative to the issues and resources analyzed.

Table 1. Summary of Potential Impacts of Each Alternative by Resource

Resource	Impact	Alternative A	Alternative B	Alternative B Mitigated	Alternative C	Alternative D	Selected Alternative
	Duration of Mine Life	Through 2019	30–50 More Years	30–50 More Years	30–50 More Years	30–50 More Years	10 More Years
Air Quality	Uncontrolled: $PM_{10-2.5}$ tons per year (tpy)	142	171	164	233	242	155
	$PM_{2.5}$ tpy	17	22	21	30	32	20
	Controlled: $PM_{10-2.5}$ tpy	77	90	87	123	127	83
	$PM_{2.5}$ tpy	9	12	11	16	16	10
	Greenhouse gas emissions (tons CO_2 emissions per year)	707	707	707	946	910	707
Water Resources–Surface Water	Percent of watersheds affected by new disturbance	Tributary Creek: 0 Cannery Creek: 0 Fowler Creek: 0 North Hawk Inlet: 0 Middle Hawk Inlet: 0 South Hawk Inlet: 0	Tributary Creek: 20 Cannery Creek: 3 Fowler Creek: 0 North Hawk Inlet: 0 Middle Hawk Inlet: 0 South Hawk Inlet: 11	Tributary Creek: 15 Cannery Creek: 3 Fowler Creek: 0 North Hawk Inlet: 0 Middle Hawk Inlet: 3 South Hawk Inlet: 11	Tributary Creek: 3 Cannery Creek: 2 Fowler Creek: 2 North Hawk Inlet: 11 Middle Hawk Inlet: 1 South Hawk Inlet: 2	Tributary Creek: 5 Cannery Creek: 3 Fowler Creek: 2 North Hawk Inlet: 8 Middle Hawk Inlet: 1 South Hawk Inlet: 5	Tributary Creek: 4 Cannery Creek: 2 Fowler Creek: 0 North Hawk Inlet: 0 Middle Hawk Inlet: 1 South Hawk Inlet: 1
	Total acres of watersheds affected by new disturbance	Tributary Creek: 0 Cannery Creek: 0 Fowler Creek: 0 North Hawk Inlet: 0 Middle Hawk Inlet: 0 South Hawk Inlet: 0	Tributary Creek: 81 Cannery Creek: 19 Fowler Creek: 0 North Hawk Inlet: 0 Middle Hawk Inlet: 0 South Hawk Inlet: 28	Tributary Creek: 62 Cannery Creek: 23 Fowler Creek: 0 North Hawk Inlet: 0 Middle Hawk Inlet: 12 South Hawk Inlet: 29	Tributary Creek: 12 Cannery Creek: 15 Fowler Creek: 107 North Hawk Inlet 28 Middle Hawk Inlet: 6 South Hawk Inlet: 6	Tributary Creek: 22 Cannery Creek: 21 Fowler Creek: 104 North Hawk Inlet: 20 Middle Hawk Inlet: 6 South Hawk Inlet: 12	Tributary Creek: 15 Cannery Creek: 3 Fowler Creek: 0 North Hawk Inlet: 0 Middle Hawk Inlet: 5 South Hawk Inlet: 3
	Reduction in stream flow	Minor reduction of flow in two creeks (Tributary and Cannery)	Minor reduction in flow in two creeks (Tributary and Cannery) but more than Alternative A	Minor reduction in flow in two creeks (Tributary and Cannery) but more than Alternative A. Impacts to Tributary Creek slightly less than Alternative B.	Minor reduction in flow in three creeks (Tributary, Cannery, and Fowler)	Similar to Alternative C although effects in Fowler Creek would be delayed by approximately 12–15 years	Minor reduction in flow in two creeks (Tributary and Cannery) but more than Alternative A

Table 1. Summary of Potential Impacts of Each Alternative by Resource (continued)

Resource	Impact		Alternative A	Alternative B	Mitigated Alternative B	Alternative C	Alternative D	Selected Alternative
	Duration of Mine Life		Through 2019	30–50 More Years	30–50 More Years	30–50 More Years	30–50 More Years	10 More Years
Water Resources–Surface Water (continued)	Additional water management infrastructure such as diversions, groundwater slurry walls, and water management ponds		Yes as TDF expands to currently approved size	Yes; more water management infrastructure required than Alternative A	Yes; more water management infrastructure required than Alternative B; additional water management infrastructure required, including construction and maintenance of pipeline and pump stations.	Yes; more total infrastructure required than Alternative B and Alternative Mitigated B; additional water management infrastructure required for new TDF, including construction and maintenance of pipeline and pump stations	Similar to Alternative C although additional water management for new TDF would not be put in place until construction began in approximately 12–15 years	Yes; more water management infrastructure required than Alternative A, but less than the other action alternatives.
	Need for long-term water treatment		Yes	Yes	Yes	Yes	Yes	Yes
Water Resources–Groundwater	Change in flow or quality		Minimal effect on local hydrogeology; no impacts to groundwater quality	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A but new TDF located in additional groundwater area	Similar to Alternative C	Similar to Alternative A
Aquatic Resources	Habitat permanently lost (feet)	Class I	Tributary: 0 Fowler: 0	Tributary: 1,646 Fowler: 0	Tributary: 1,646 Fowler: 0	Tributary: 0 Fowler: 0	Tributary: 0 Fowler: 0	Tributary: 0 Fowler: 0
		Class II	Tributary: 0 Fowler: 0	Tributary: 2,400 Fowler: 0	Tributary: 1,169 Fowler: 0	Tributary: 0 Fowler: 1,044	Tributary: 0 Fowler: 1,044	Tributary: 0 Fowler: 0
	Risk of chemical or mining product spill		Low, due to BMPs and Spill Prevention, Control, and Countermeasure Plan requirements	Similar to Alternative A, although risk would continue over 30 to 50 years due to extended operations	Similar to Alternative B	Similar to Alternative B except the area of potential spills would expand to include Fowler Creek drainage	Similar to Alternative C	Similar to Alternative A, although risk would continue over approximately 10 years due to extended operations
Geochemistry	Likelihood of TDF ARD developing (uncontrolled)		Low due to very low permeability, low availability of oxygen and closure and reclamation of TDF	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A
Geotechnical Stability	Likelihood of TDF failure		Very low probability of TDF failure due to design measures	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A
Soils	New loss in soil productivity (measured in acres disturbed)		0	128[1/]	126[1/]	174[1/]	185[1/]	26

Table 1. Summary of Potential Impacts of Each Alternative by Resource (continued)

Resource	Impact	Alternative A	Alternative B	Mitigated Alternative B	Alternative C	Alternative D	Selected Alternative
	Duration of Mine Life	Through 2019	30–50 More Years	30–50 More Years	30–50 More Years	30–50 More Years	10 More Years
Vegetation	Acres of new disturbance	0	POG: 73 acres Unproductive forest: 55 acres	POG: 64 acres Unproductive forest:: 62 acres	POG: 114 acres Unproductive forest: 60 acres	POG: 115 acres Unproductive forest:: 70 acres	POG: 12 acres Unproductive forest: 14 acres
	Off-site effects	Elevated metals levels in lichens may continue through life of operations; duration of effects would depend on the effectiveness of control measures	Similar to Alternative A; however, off-site effects may continue longer due to longer mine life	Similar to Alternative B	Similar to Alternative B	Similar to Alternative B	Similar to Alternative B
Wetlands	Acres and types of new disturbance	0	Bog/Bog Woodland: 20 Forested: 36 Sedge Fen/Fen: 28 Marsh: 1 Total: 85	Bog/Bog Woodland: 12 Forested: 35 Sedge Fen/Fen: 27 Marsh: 3 Total: 77	Bog/Bog Woodland: 8 Forested: 78 Sedge Fen/Fen: 25 Marsh: 1 Total: 112	Bog/Bog Woodland: 9 Forested: 78 Sedge Fen/Fen: 32 Marsh: 2 Total: 121	Bog/Bog Woodland: 0 Forested: 4.6 Sedge Fen/Fen: 9 Marsh: 0.3 Total: 14
Wildlife	New decrease in brown bear buffers (acres)	None	30	29	6	14	0
	New removal of POG habitat (acres) within brown bear buffers	None	35	27	5	11	7
	Duration of activities that could disturb wildlife and marine mammals	Through 2019	Additional 30–50 years	Additional 30–50 years	Additional 30–50 years	Additional 30–50 years	Additional 10 years.
	New temporary reduction in deer winter range habitat (acres)	None	128	125	174	184	26
	Result in "take" of Endangered Species Act (ESA)-listed species[2/]	No	No	No	No	No	No
	Number of goshawk nests potentially affected	0	0	0	1	1	0

Table 1. Summary of Potential Impacts of Each Alternative by Resource (continued)

Resource	Impact	Alternative A	Alternative B	Mitigated Alternative B	Alternative C	Alternative D	Selected Alternative
	Duration of Mine Life	Through 2019	30–50 More Years	30–50 More Years	30–50 More Years	30–50 More Years	10 More Years
Threatened (FT) and endangered (FE) species / Forest Service Sensitive Species (FSS)/Forest Service Rare (FSR)	Humpback whale (FE)[2/]	Not likely to adversely effect					
	Steller sea lions (FE)[2/]	Not likely to adversely effect					
	Yellow-billed loon (candidate and FSS)	May adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing					
	Chinook salmon; coho salmon; sockeye salmon; steelhead (FT or FE, depending on the run)	No effect					
	Green Sturgeon (FT)	No effect					
	Pacific Herring (candidate and FSS	May adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing					
	Queen Charlotte goshawk (FSS)	May adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing					
	Black oystercatcher (FSS)	May adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing					
	Mountain lady's slipper (FSS)	May adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing					
	Large yellow lady's slipper (FSS)	May adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing					
	Alaska rein orchid (FSS)	May adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing					
	Bog adder's-mouth orchid (FSR)	May adversely impact individuals, but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing					
Land Use	Meet management prescriptions	Yes	Yes	Yes	Yes	Yes	Yes
Recreation	Duration of operations (when public may be excluded from areas)	Through 2019 plus reclamation period	Additional 30–50 years plus reclamation period	Additional 30–50 years plus reclamation period	Same duration as Alternative B; disturbance at new TDF initiated in approximately 3–5 years	Disturbance at new TDF not initiated until approximately year 12	Additional 10 years plus reclamation period

Table 1. Summary of Potential Impacts of Each Alternative by Resource (continued)

Resource	Impact	Alternative A	Alternative B	Mitigated Alternative B	Alternative C	Alternative D	Selected Alternative
	Duration of Mine Life	Through 2019	30–50 More Years	30–50 More Years	30–50 More Years	30–50 More Years	10 More Years
Scenic Resources	Compliance with applicable scenic integrity objective (SIO)	Yes	Yes	Yes	Yes	Yes	Yes
	Duration of visual effects	Around 2019 plus reclamation establishment period	Additional 30–50 years plus reclamation establishment period	Additional 30–50 years plus reclamation establishment period	Reclamation at existing TDF to begin in approximately 3–5 years; reclamation of new TDF at end of mining activity (30–50 years); reclamation establishment period applies to both facilities	Reclamation at existing TDF to begin in approximately 12 years; additional 30–50 years of mining activity at new TDF; reclamation establishment period applies to both facilities	Additional 10 years plus reclamation establishment period
	Location of TDF	Current location	Expanded at current location	Expanded at current location	Minimal expansion at current location and new site to the north	Moderate expansion at current location and new site to the north	Expanded at current location
Subsistence	Duration of mine life	Through 2019	30–50 more years	30–50 more years	30–50 more years	30–50 more years	Approximately 10 more years
	New temporary reduction in deer winter range habitat (acres) during operations and until forested canopy develops post reclamation	None	128	125	174	184	26
	Location of TDF	Current location	Expanded at current location	Expanded at current location	Minimal expansion at current location and new site to the north	Moderate expansion at current location and new site to the north	Expanded at current location
Cultural Resources	Effects on historic properties	Historic properties not adversely affected; Hawk Inlet identified as a sacred place by Angoon affected over the long term	Same as Alternative A	Same as Alternative A	Same as Alternative A	Same as Alternative A	Same as Alternative A

Table 1. Summary of Potential Impacts of Each Alternative by Resource (continued)

Resource	Impact	Alternative A	Alternative B	Mitigated Alternative B	Alternative C	Alternative D	Selected Alternative
	Duration of Mine Life	Through 2019	30–50 More Years	30–50 More Years	30–50 More Years	30–50 More Years	10 More Years
Socio-economics	Duration of annual economic and employment benefit from operations	Through 2019	30–50 more years	30–50 more years	30–50 more years	30–50 more years	Approximately 10 more years
Monument Resources	New disturbance within Monument (acres)	0	104	83	18	31	18
	Post-mining condition	Near-natural condition following reclamation	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A	Similar to Alternative A
Environmental Justice	Disproportionately affect minority or low income populations	No	No	No	No	No	No

1/ Soil productivity would begin to be re-established following closure and continue to return to pre-mining conditions as soil genesis processes become re-established.

2/ A "may affect" determination was made for Humpback whales and Stellar sea lions (Tetra Tech 2013) with concurrence from NMFS on April 19, 2013.

PUBLIC INVOLVEMENT

The Notice of Intent (NOI) to prepare the EIS for the Greens Creek Mine Tailings Disposal Facility Expansion was published in the Federal Register on October 5, 2010. The publication of the NOI initiated the scoping process and a public review and comment period required under NEPA at 40 CFR Part 1501.7. In addition to the NOI, the Forest Service placed a public notice in the *Ketchikan Daily News* and the *Juneau Empire* on October 8, 2010, which ran for 4 days, and also used email to advertise public meetings. A scoping document that provided a brief background on the Greens Creek Mine; a description of the proposed action, agency involvement, permits and authorizations, and the scoping process; an EIS preparation schedule; and information sources was distributed to a mailing list generated from previously completed similar projects and with input from the cooperating agencies. After a 15-day extension, the formal scoping period ended on November 19, 2010.

Public scoping meetings were held in Juneau on October 14, 2010, and in Angoon on October 15, 2010. Fifteen people signed the attendance sheets at the public meeting in Juneau, and 20 signed in at the Angoon meeting. The scoping process produced 16 individual comment submittals, which were individually reviewed by the interdisciplinary team identifying over 150 comments. A Scoping Summary Document is available in the project record.

The Forest Service published a Notice of Availability of the Draft EIS in the Federal Register (77 FR 23713 [2021-04-20]), which coincided with distribution of paper and electronic copies to the public. The document was posted concurrently on the Tongass National Forest website. The Notice of Availability was published in the *Juneau Empire* and *Ketchikan Daily News* on April 20, 2012. The Forest Service and the Unites States Army Corps of Engineers (USACE) held open house public meetings in Juneau (May 15, 2012) and Angoon (May 16, 2012) to solicit comment on the Draft EIS and the USACE Public Notice of Permit Application, which was included as Appendix A to the Draft EIS. Meeting announcements were posted in the *Ketchikan Daily News* on May 11, 2012. Nineteen people signed in for the public meeting in Juneau, and 10 people signed in for the meetings in Angoon.

The Forest Service received over 700 comments contained within over 100 comment "letters," which were submitted in the form of letters, emails, and hand-written comments. In addition, 10 comment letters were addressed to the USACE. Two comment documents were addressed to both agencies. All comments have been read and considered in this analysis. Where appropriate, the Final EIS has been revised to address comments received during the comment period. Copies of comment letters and responses to each of the comments are presented in Appendix A of the Final EIS.

PROJECT RECORD

The project record for this project includes the Draft EIS and Final EIS, the 2008 Forest Plan, all material incorporated by reference and other critical materials produced during

the environmental analysis of this project. The project record is available for review at the Admiralty Island National Monument in Juneau.

MITIGATION

Table 2.6-1 in the Final EIS summarizes the mitigation measures identified for each resource area and includes the agency or entity responsible for oversight of the mitigation completion. Other measures may be beyond regulatory authority but could be put in place by the Greens Creek Mine. Table 2.6-1 is included here as Table 2 of this Decision; for a more thorough discussion of mitigation measures, please see the corresponding section in the Final EIS.

Table 2. Required Mitigation Measures by Resource

Resource	Measure	Section in the EIS	Site	Responsibility
Air	Ongoing dust abatement and monitoring. Conduct operations in such a manner as to avoid or minimize the production and transport of fugitive dust from the site (MIN-3, Forest Service 2012).	3.2	TDF	HGCMC
	*Investigate the source(s) and extent of fugitive dust-related metals contaminants observed in the Forest Service's lichen monitoring program. As necessary, develop mitigation measures to reduce fugitive dust emissions.	3.2	TDF / Mill Site / Roads	HGCMC
Air and Water Quality	Inspect trailers hauling tailings/ waste rock; ensure covers are in place and secure and tailgate latched and secured against spillage.	3.2, 3.5	TDF, mill area, and roads	HGCMC
	Spray roads with water if notable dust observed.	3.2	Roads	HGCMC
	Vehicles must have the wheels cleaned prior to leaving the TDF using clean water from existing permitted water source.	3.5	TDF	HGCMC
	Implement additional fugitive dust control measures.	3.2.3	TDF	HGCMC
Geotechnical Stability	Tailings pile must be constructed with compacted outside side slopes that are no steeper than 3H:1V; slopes during operation may be steeper than 3:1 if future operation or slope work is planned or approval is obtained.	3.3, 3.5	TDF	HGCMC per ADEC Waste Management Permit
	Locate ore stockpiles and waste facilities on stable, level sites (Min-6, Forest Service 2012).	3.3	Site-wide	HGCMC
Geochemistry	Implement standard operating procedures to evaluate risk of acid rock drainage (ARD) and other geochemical concerns prior to developing quarries.	N/A	Quarries	HGCMC

Table 2. Required Mitigation Measures by Resource (continued)

Resource	Measure	Section in the EIS	Site	Responsibility
Geochemistry (continued)	Continue characterization of waste rock and tailings using accepted protocols to identify materials that have the potential to release acidity or other contaminants when exposed during mining (Min-6, Forest Service 2012).	3.3, 3.5	TDF	HGCMC
Water Resources / Water Quality	Maintain culverts and ditches; inspect facilities twice each year to maintain functionality. Clean culverts when more than 4" of sediment accumulates (6" in ditches).	3.5	Roads	HGCMC
	Install storm water detention structures, detention ponds or other structures at the confluence of surface water runoff diversions and natural channels in a manner that will maintain geomorphologic integrity of the natural channel.	3.5	TDF	HGCMC
	Water management detention basins and ponds would continue to be operated with low storage volumes to maintain adequate contact water capacity in the pond systems; the maintenance of adequate contact water capacity is required by ADEC.	3.5	TDF	HGCMC
	Collect and route direct runoff from tailings facility.	3.5	TDF	HGCMC
	Collect and route direct runoff from mill area tailings and storage and transfer facilities.	3.5	Mill area	HGCMC
	Prevent contact water runoff into surface water bodies.	3.5	TDF	HGCMC
	Vehicles exiting the TDF(s) must have the wheels cleaned.	3.5	TDF	HGCMC
	Vehicles exiting the mill building concentrate room must have the wheels cleaned; runoff water from the truck wash collects in the sump and is pumped to the bulk thickener; no runoff water from the concentrate loading area leaves the building.	3.5	Mill area	HGCMC
	Spill response and reporting procedure. Detailed Contingency Plan outlines spill response and reporting procedures in the event of a spill of a hazardous substance.	3.5	Site-wide	HGCMC

Table 2. Required Mitigation Measures by Resource (continued)

Resource	Measure	Section in the EIS	Site	Responsibility
Water Resources / Water Quality (continued)	Establish vegetative cover and moderate slopes to manage surface water flows. Most slopes will be constructed with a 3H:1V slope; use erosion control measures (e.g., silt fences, swales, and weed-free jute matting) to slow the water and reduce erosion while vegetation becomes established.	3.5	TDF	HGCMC
	Stabilize channels and channel banks. Hydroseeding used on channel banks to aid in stabilization; channels may be stabilized with degradable fiber mat to establish vegetation; riprap used to stabilize the constructed channels in areas that are subject to highly erosive stream flows.	3.5	Site-wide	HGCMC
	Hydroseede slopes for stability. Monitor road cuts for exposed soils and use hydroseeding as appropriate.	3.5	TDF	HGCMC
	During operations, drainage channels designed to handle flows from a 24 hour/25-year storm event. Applies to all drainage channels and diversion structures during reclamation.	3.5	Site-wide	HGCMC
	Ensure that clean water remains clean. Surface runoff is intercepted and diverted around the mill area.	3.5	Mill area	HGCMC
	Minimize tailings contact with groundwater by installing liners and under drains beneath the tailings; install slurry walls surrounding the facility (Min-6, Forest Service 2012).	3.6	TDF	HGCMC
	Maintain or increase water management infrastructure to contain and treat tailings contact water and manage industrial storm water.	3.5	Site-wide	HGCMC per the current APDES Permit
	Provide for water treatment in perpetuity to avoid or minimize the development and release of acidic or other contaminants (Min-6, Forest Service 2012).	3.5	TDF	HGCMC
	Install impermeable caps, liners, and surface water diversions (Min-6, Forest Service 2012).	3.5	TDF	HGCMC
Aquatic Resources	Repair and maintain, in perpetuity, the existing fish passage facility on Greens Creek.	3.7	TDF	HGCMC per previous NEPA documents and ADF&G mitigation requirements
	Observe timing windows for instream activities as stipulated by ADF&G for the protection of fish species.	3.7	Roads, fish passage	HGCMC

Table 2. Required Mitigation Measures by Resource (continued)

Resource	Measure	Section in the EIS	Site	Responsibility
Soils	Salvage topsoil in stockpile (Min-8, Forest Service 2012).	3.9.4	TDF	HGCMC per GPO
	Establish test plots to study the optimum depth of the plant growth layer.	3.9.4	Site 23 Test Cover	HGCMC
Vegetation	Establish test plots to verify that vegetative roots would not extend into the barrier layer, and develop an appropriate seed or planting mix.	3.10.3.1	Site 23 Test Cover	HGCMC
	Survey of HGCMC mine activity areas and roads for weeds to determine existing condition.	3.10.3.1	TDF	Forest Service
	Assure that all vehicles and heavy equipment transported to the project area are free of invasive plant propagules and contaminated soil.	3.10.3.1	Site-wide	HGCMC
	Use of erosion control materials that are weed seed free. Avoid use of hay or straw bales.	3.10.3.1	Site-wide	HGCMC
	Avoid or remove existing invasive plant populations in order to reduce the risk of spread.	3.10.3.1	Site-wide	HGCMC
	Eradicate or control any newly introduced high priority invasive plant populations in the project area for the life of the project.	3.10.3.1	Site-wide	HGCMC
	Perform triennial monitoring surveys of mine activity areas and roads for high priority invasive plant introductions for the life of the project, and for at least 3 years following mine site closures.	3.10.3.1	Site-wide	HGCMC
	Annually monitor high priority invasive plant treatment sites.	3.10.3.1	Site-wide	HGCMC
Wetlands	Mitigation for wetlands will be determined by the Section 404 permit.	3.8.4	TDF	HGCMC; USACE
Cultural Resources	Implement Cultural Resources Management Procedure for ongoing operations around known sites and for managing previously unidentified resources. Survey all areas in advance of ground disturbing activity.	3.17	Site-wide	HGCMC
	Document history of customary, traditional, and contemporary uses of the Cannery and adjacent areas of Hawk Inlet. The first step in the process will be for Greens Creek Mine to submit a study plan to the Forest Service for approval.	3.17	TDF	HGCMC
Wildlife and Subsistence	HGCMC employees prohibited from hunting.	3.11, 3.16	Site-wide	HGCMC

Table 2. Required Mitigation Measures by Resource (continued)

Resource	Measure	Section in the EIS	Site	Responsibility
Wildlife and Subsistence (continued)	To reduce the potential for impacts to nesting migratory birds, ground disturbing activities and tree clearing should be conducted outside the nesting season in the region (late May through early July).	3.11.4	TDF	HGCMC
Air, Water, Soil and Aquatics	Review current practices and update as necessary to be consistent with Forest Service National Core BMPs (Forest Service 2012) to avoid, minimize, or mitigate adverse effects to soil, water quality and riparian resources that may result from mining and milling activities. Update GPO accordingly.	3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9	Site-wide	HGCMC

*New requirement. Requirements not marked by asterisks are required by previous decisions or existing permits or plans and made part of this decision.

In addition to the requirements listed in Table 2 (Table 2.6-1 of the Final EIS), my decision also includes the following requirements:

- Greens Creek Mine will maintain its post-closure water quality model and update the model with observed water quality and hydrologic data. Results of the model, predications of post-closure water quality, and interpretation of the model results will be provided in a report to the Forest Service prior to the five-year environmental audit required by the ADEC Waste Management Permit such that the results can be incorporated into the audit.

With the implementation of these measures, I conclude that all practicable means to avoid or minimize environmental harm from the Selected Alternative have been adopted.

MONITORING

Monitoring is a tool which involves gathering data and information and observing the results of management activities as a basis for evaluation. Monitoring activities can be divided into project-specific monitoring and Forest Plan monitoring. The NFMA requires national forests to monitor and evaluate their Forest Plans (36 CFR 219.110). Chapter 6 of the Forest Plan includes the monitoring activities to be conducted as part of the Forest Plan implementation. Monitoring of the Selected Alternative will be done during implementation and also as part of the Forest Plan monitoring program. Specific monitoring items are outlined in Chapter 2 of the Final EIS. These monitoring items are part of this decision and will be implemented.

FINDINGS REQUIRED BY LAW

Alaska National Interest Lands Conservation Act

Subsistence Evaluation and Findings (Section 810)

A subsistence evaluation was conducted for the five EIS alternatives, in accordance with ANILCA Section 810. ANILCA 810 subsistence hearings were conducted in the communities of Hoonah and Angoon, Alaska, with open public phone lines as advertised in the *Juneau Empire* and the community of Tenakee Springs, in September and November of 2012, respectively, and are discussed in detail in Appendix G. The hearings and subsequent evaluation conclude that none of the action alternatives, including the Selected Alternative, will result in a significant possibility of a significant restriction on access to, or use of, any subsistence resources.

Protection of Admiralty Island National Monument (Section 503(i)(1))

Based on my review of the entire project record, and for the reasons described in the Rationale for the Decision section of this ROD, I have determined:

- that the additional disposal of tailings authorized under the Selected Alternative cannot be feasibly carried out on the valid mining claims within Admiralty Island National Monument or other land owned by Hecla Greeks Creek Mine;
- that the use of the site to be leased under the Selected Alternative for additional storage of tailings from Greens Creek Mine will not cause irreparable harm to the Admiralty Island National Monument; and
- that the use of such leased area for such purposes will cause less environmental harm than the use of any other reasonably available location.

Bald and Golden Eagle Protection Act

The Selected Alternative was designed to be in compliance with the National Bald Eagle Management Guidelines published by the U.S. Fish and Wildlife Service to maintain habitat to support long-term nesting, perching and winter roosting habitat for bald eagles. The Guidelines recommend activities inconsistent with bald eagle use follow timing, distance, or landscape buffer restraints which vary with the type of activity and the landscape characteristics. During implementation, the Forest Service will consult with USFWS to ensure project activities meet the Guidelines.

There are three bald eagle nest sites within one-half mile of the existing TDF, all of which were inactive in 2011. If nests in this area are found to be active prior to construction, including new nests established after 2011, the project would adhere to National Bald Eagle Management Guidelines.

Clean Air Act

Emissions from the implementation of the Selected Alternative are not expected to exceed State of Alaska ambient air quality standards (18 AAC 50). The Alaska Department of Environmental Conservation (ADEC) has issued air permits that serve as a framework for

the operation of the mine site. Permits are in place to regulate air emissions at the mine site. Operational guidelines and restrictions are identified in the permits to ensure air quality standards are maintained at the Greens Creek Mine property boundary during ongoing mining activities.

Clean Water Act

Project activities meet all applicable State of Alaska Water Quality Standards (WQS). Congress intended the Clean Water Act of 1972 (Public Law 92-500) as amended in 1977 (Public Law 95-217) and 1987 (Public Law 100-4) to protect and improve the quality of water resources and maintain their beneficial uses. Section 313 of the Clean Water Act (CWA) and Executive Order 12088 of January 23, 1987 address Federal agency compliance and consistency with water pollution control mandates. Agencies must be consistent with requirements that apply to "any governmental entity" or private person. Compliance is to be in line with "all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution." The Forest Service strategy for control of nonpoint source pollution is to apply appropriate BMPs, evaluate BMP performance, and initiate corrective actions where objectives are not met. The Forest Service recently issued national core BMPs (Forest Service 2012) which have been incorporated into the mitigation measures for this project.

On October 31, 2008, ADEC assumed initial authority over permitting, compliance, and enforcement of the Alaska Pollutant Discharge Elimination System (APDES) program, regulating point source discharges and stormwater runoff under Section 402 of the CWA. ADEC's authority over mining APDES permits began on October 31, 2010. APDES permit limits and other requirements are established to ensure compliance with State WQS for both marine water and freshwater. The Greens Creek Mine's National Pollutant Discharge Elimination System (NPDES) permit was assigned the designation of APDES when it transferred from the U.S. Environmental Protection Agency to ADEC under Phase III of the NPDES transfer of authority program. Until ADEC reissues the APDES, the conditions and limitations of the 2005 permit remain in effect. The permit establishes water quality-based effluent limits and monitoring requirements for treated process water being discharged to Hawk Inlet. It also establishes stormwater monitoring requirements at 10 locations throughout the Greens Creek Mine area.

Regulations in 36 CFR 228.8(h) state that "certification or other approval issued by state agencies or other federal agencies of compliance with laws and regulations relating to mining operations will be accepted as compliance… with these regulations." The Forest Service therefore accepts the APDES permit as compliance with CWA requirements.

Endangered Species Act

There are no federally listed species managed by the USFWS within the project area. A biological assessment was prepared and sent to the National Marine Fisheries Service (NMFS) on March 22, 2013 as part of the Section 7 consultation under the Endangered Species Act. In a letter dated April 19, 2013 NMFS concurred with the findings of "Not likely to adversely affect" the federally listed humpback whales and stellar sea lions and

"No effect" on federally listed Green Sturgeon, chinook salmon, sockeye salmon, coho salmon, and steelhead. The biological assessment is included in the project record.

Magnuson-Stevens Fishery Conservation and Management Act

The potential effects of the project on Essential Fish Habitat (EFH) were included in Chapter 3 of the Draft EIS. This discussion includes reference to the Magnuson-Stevens Fisheries Conservation Act that requires the Forest Service to consult with the National Marine Fisheries Service on projects that may affect EFH. It also includes a description of the EFH in the project area, a description of the proposed activities, and a description of the measures that will protect these essential habitats.

The Draft EIS was provided to the National Marine Fisheries Service to initiate the consultation process according to the agreement dated June 26, 2007 between the Forest Service and the National Marine Fisheries Service. NMFS concluded that impacts to EFH under Alternative B would be "substantial and permanent," noting direct effects to Tributary Creek and downstream resources. NMFS provided conservation recommendations in a letter dated July 19, 2012. I addressed each of their conservation recommendations in a response letter and will continue to consult with NMFS. The Selected Alternative will have less effect on EFH because it does not include the filling of anadromous or resident fish habitat of Tributary Creek. Information on the mitigation measures and applicable Standards and Guidelines to minimize effects to EFH are discussed in Chapter 3 of the Final EIS. A copy of the Final EIS and ROD will be sent to NMFS. This satisfies the EFH consultation requirement based on the 2007 agreement with NMFS.

Marine Mammal Protection Act

By extending the mine life, exposure of marine mammals in Hawk Inlet and Young Bay to disturbance and noise associated with the marine terminal, barge and crew shuttle traffic, and the potential for fuel or oil spills would be unchanged from current operations for an additional 10 years. Marine mammal viewing guidelines administered by NMFS and enforced by the Coast Guard are sufficient for their protection. Contractors, purchasers and employees will be required to follow provisions on Marine Wildlife Guidelines, including special prohibitions on approaching humpback whales in Alaska as defined in 50 CFR 224.103. NMFS administers the Marine Mammal Protection Act (MMPA), which prohibits the "take" of all marine mammal species in U.S. waters. "Take" is defined as "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." Harassment is defined in the MMPA as "any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild; or has the potential to disturb a marine mammal stock in the wild by causing disruption of behavior patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering."

2008 Forest Plan

I have determined that this decision and the Greens Creek Mine Tailings Disposal Facility Expansion Final EIS are consistent with the 2008 Forest Plan.

National Historic Preservation Act

Archaeological resource surveys of various intensities have been conducted in the analysis area in accordance with the Regional Inventory Strategy. A finding of "*no adverse effect*" was recommended for all alternatives for the EIS. The Alaska State Historic Preservation Officer was given the opportunity to comment on the Determination of Effect and has concurred with the Agency's Determination.

Executive Orders

Executive Order 11988 (Floodplains)

Executive Order 11988 directs federal agencies to take action to avoid, to the extent possible, the long- and short-term adverse effects associated with the occupancy and modification of floodplains. The Selected Alternative does not affect floodplains as defined by Executive Order 11988.

Executive Order 11990 (Wetlands)

Executive Order 11990 requires federal agencies to avoid, to the extent possible, the long and short-term adverse effects associated with the destruction or modification of wetlands.

It is not feasible to avoid all wetland areas due to the extent of wetlands in the project area and the technical constraints of constructing a geotechnically stable facility. I have determined that the Selected Alternative includes all reasonable measures to minimize harm to wetlands, which may result for such use. A separate permit, issued by the USACE, is required for all wetland fill.

The Selected Alternative will affect about 14 acres of wetlands. Approximately 8 acres of these wetlands will be covered with the tailings disposal facility and the area cannot be reclaimed as wetlands at closure of the mine. Water management pond development will fill about 2 acres of wetlands. These acres are considered a permanent loss of wetlands and mitigation will occur under the CWA according to a USACE permit. These affected wetlands are the headwaters of the Tributary Creek channel. The remaining 4 acres of wetlands lost will occur near the junction of the A and B Roads where reclamation material will be stored.

Executive Order 12898 (Environmental Justice)

Executive Order 12898 directs federal agencies to address whether a disproportionately high and adverse human health or environmental impact on minority populations, low-income populations, or Indian tribes is likely to result from the proposed action and any alternatives.

Minority communities in the vicinity of the project area include the communities of Angoon and Hoonah, each home to a federally recognized tribe. There are no communities within the project area. The Selected Alternative is not expected to have a

disproportionately high and adverse effect on the health or well-being of the minority or low-income populations that may use the project area.

The Executive Order directs agencies to consider patterns of subsistence hunting and fishing when an agency action may affect fish or wildlife. Although low-income and minority people are not the sole users of these resources in Alaska, the effects on these resources are addressed in Chapter 3 of the Final EIS. Any changes in consumption patterns and wild food resources, as well as other project effects, would be equally applicable to the general population.

Executive Order 12962 (Aquatic Systems, Recreational Fisheries)

Executive Order 12962 requires federal agencies to evaluate the effects of proposed activities on aquatic systems and recreational fisheries. The Selected Alternative minimizes the effects on aquatic systems through project design, application of standards and guidelines, BMPs, and site-specific mitigation measures. The Selected Alternative does not allow Greens Creek Mine to fill any Class I or Class II stream and eliminates the proposed western perimeter road, which would have crossed an anadromous stream. The Selected Alternative does not require the widening or upgrading of the existing road. Only one new 160 - foot road will be constructed as a result of this decision; no stream crossings will be required. Greens Creek Mine is required to repair a damaged fish passage facility in Greens Creek and maintain the structure in perpetuity. As a result, recreational fishing opportunities will remain essentially the same as the current condition because aquatic habitats are protected through implementation of BMPs and riparian buffers.

Executive Order 13007 (Indian Sacred Sites)

Executive Order 13007, Indian Sacred Sites, provides presidential direction to federal agencies to give consideration to the protection of American Indian sacred sites and allow access where feasible. In a government-to-government relationship, the tribal government is responsible for notifying the agency of the existence of a sacred site. A sacred site is defined as a site that has sacred significance due to established religious beliefs or ceremonial uses, and which has a specific, discrete, and delineated location that has been identified by the tribe. The Angoon Community Association has identified Hawk Inlet, the Hawk Inlet Cannery, and the Hawk Inlet overland route as sacred places. Access to the federally managed lands in the Hawk Inlet area, including the overland route, will remain unrestricted to the traditional uses identified by the Angoon Community Association. The Forest Service will continue to work with the Angoon Community Association and other tribal entities in identifying and protecting sacred places in the Hawk Inlet area.

Executive Order 13112 (Invasive Species)

Executive Order 13112 requires federal agencies (in part) to evaluate whether the proposed activities will affect the status of invasive species; and to not carry out activities that promote the introduction or spread of invasive species unless it has determined that the benefits of such action outweigh the potential harm caused by invasive species; and that all feasible and prudent measure to minimize risk of harm will be taken in conjunction

with the actions. The Selected Alternative implements specific measures to minimize the introduction and spread of invasive species.

Executive Order 13175 (Consultation with Indian Tribal Governments)

Executive Order 13175 directs federal agencies to respect tribal self-government, sovereignty, and tribal rights, and to engage in regular and meaningful government-to-government consultation with tribes on proposed actions with tribal implications.

Throughout the span of the Greens Creek EIS process, the District Ranger invited consultation with the Central Council of the Tlingit and Haida Indian Tribes of Alaska, the Angoon Community Association, Douglas Indian Association, Kootznoowoo, Inc., Hoonah Indian Association, Huna Totem Inc., Goldbelt Inc., and Sealaska Inc. Consultation took place with all tribal organizations except Hoonah Indian Association, Hoonah Totem Inc., Goldbelt Inc., and Sealaska Inc. Extensive consultation and updates were performed regularly between the District Ranger and Angoon Community Association and Kootznoowoo Inc. Tribal consultation does not imply that the tribes endorse the selected action or any of the alternatives.

Executive Order 13186 (Migratory Birds)

The Migratory Bird Treaty Act of 1918 (amended in 1936 and 1972) prohibits the taking of migratory birds, unless authorized by the Secretary of Interior. The law provides the primary mechanism to regulate waterfowl hunting seasons and bag limits, but its scope is not just limited to waterfowl. The migratory species that may stay in the area utilize most, if not all, of the habitats described in the analysis for breeding, nesting, and raising their young. The effects on these habitats were analyzed for this project.

The decision will not have a significant direct, indirect, or cumulative effect on any migratory bird species in the project area. Effects of the Selected Alternative will be minor due to the amount of overall clearing and low potential for population-level impacts to migratory birds; surrounding habitat would remain functional and could maintain the species.

Federal and State Permits

Federal and State permits necessary to implement the authorized activities are listed at the end of Chapter 1 in the Final EIS.

Implementation Process and Process for Considering Changes and New information

Implementation of this decision may occur no sooner than 50 days following publication of the legal notice of the decision in the *Ketchikan Daily News*, the newspaper of record, published in Ketchikan, Alaska. Implementation of activities authorized by this ROD will be monitored to ensure that they are carried out as planned and described in the Final EIS. Minor changes are expected during implementation to better meet on-site resource management and protection objectives.

Proposed changes to the authorized project actions or new information will be subject to the requirements of the National Environmental Policy Act (NEPA), the National Forest

Management Act of 1976, Section 810 of the ANILCA, and other laws concerning such changes.

Changes made during implementation will be reviewed, documented, and approved by the Responsible Official through the Tongass Change Analysis process (Tongass National Forest Supplement Forest Service Handbook (FSH) 1909.15-2009-1). In determining whether and what kind of NEPA action is required for changes during implementation, the Forest Supervisor will consider the criteria in the Code of Federal Regulations (40 CFR 1502.9(c)) and FSH 1909.15, sec. 18 to determine whether to supplement or revise an existing environmental impact statement. I will determine whether the proposed change is a substantial change to the Selected Alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated changes to particular areas or specific activities will be considered in making this determination. The cumulative impacts of these changes will also be considered.

Right to Appeal

This decision is subject to administrative review (appeal) pursuant to Title 36 CFR Part 215. Individuals or organizations who submitted comments during the comment period specified at 36 CFR 215.6 may appeal this decision. The notice of appeal must be in writing, meet the appeal content requirements at 36 CFR 215.14 and be filed with the Appeal Deciding Officer:

Beth Pendleton, Regional Forester
Alaska Region
US Department of Agriculture
709 W. 9th Street
P.O. Box 21628
Juneau, AK 99802-1628
Email address: appeals-alaska-regional-office@fs.fed.us
Fax (907) 586-7840

The Notice of Appeal, including attachments, must be filed (regular mail, fax, e-mail express delivery or messenger service) with the Appeal Deciding Officer at the correct location within 45 calendar days of the date that the legal notification of this decision is published in the *Ketchikan Daily News*, the official newspaper of record. The publication date in the newspaper of record is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

Hand-delivered appeals will be accepted at the Regional Office during normal business hours (8:00 a.m. through 4:30 p.m.), Monday through Friday, excluding holidays.

When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition. If no appeals are received, implementation of decisions subject to appeal pursuant to 36 CFR Part 215 may occur on, but not before, 5 business days from the close of the appeal filing period.

For additional information concerning this decision, contact Chad VanOrmer, District Ranger, Admiralty Island National Monument, 8510 Mendenhall Loop Road, Juneau, AK 99801, or call (907) 789-6202.

9-5-2013

FORREST COLE Date

Forest Supervisor