Alaska Department of Environmental Conservation
Response to Comments

for

Hecla Greens Creek Mine Company

Draft APDES Permit No. AK0043206

Public Noticed: April 1, 2011 - May 2, 2011

September 30, 2011

Alaska Department of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

1. Introduction

1.1 Summary

This document summarizes and addresses comments received on the Alaska Department of Environmental Conservation (Department), draft, Alaska Pollutant Discharge Elimination System (APDES) Permit No. AK0043206, which authorizes the discharge of treated wastewater into Hawk Inlet and discharge from ten storm water outfalls at Greens Creek Mine on Admiralty Island 18 miles southwest of Juneau, Alaska.

The Department solicited permit-specific comments during the public notice period. In addition to comments on the permit, comments on fact sheet were also received. The Department's responses to permit-specific, as well as fact sheet-specific comments, are contained in the following pages.

1.2 Opportunities for Public Participation

The Department proposed to issue an APDES wastewater discharge permit to Hecla Greens Creek Mine Company. To ensure public, agency, and tribal notification and opportunities for participation the Department:

- identified the permit on the annual Permit Issuance Plan posted online at: http://www.dec.state.ak.us/water/wwdp/index.htm
- notified potentially affected tribes that the Department would be working on this permit via letter, fax and/or email
- formally published public notice of the draft permit on April 1, 2011 in the Juneau Empire and posted the public notice on the Department's public notice web page
- sent email notifications via the APDES Program List Serve when the preliminary draft, draft, and proposed final permits were available for review

The Department received comments from seven interested parties on the draft permit and supporting documents: 1) Alaska Department of Fish and Game (ADF&G), 2) Center for Science in Public Participation (CSP2), 3) Friends of Admiralty Island (Friends), 4) Hecla Greens Creek Mine Company (HGCMC), 5) National Marine Fisheries Service (NMFS), 6) Southeast Alaska Conservation Council (SEACC), and 7) U.S. Fish and Wildlife Service (USFWS). Specifically, the Department requested comments from the Alaska Department of Natural Resources, ADF&G, NMFS, and USFWS, and the U.S. Environmental Protection Agency (EPA).

This document summarizes the comments submitted and the justification for any action taken or not taken by the Department in response to the comments.

1.3 Final Permit

The Department issued the final permit on September 30, 2011 with an effective date of November 1, 2011. There were changes from the public noticed permit to the final permit based on comments received. Minor errors in spelling and punctuation were made but are not

referenced in this document. Significant changes are identified in the response to comments and reflected in the final permit and fact sheet.

2. Comments on Monitoring and Effluent Limits

2.1 Comment – Monitoring near the Mixing Zone

SEACC commented that the Department uses three sites in Hawk Inlet to monitor discharges into the mixing zone, sites 106, 107, and 108. Site 108 is in the mixing zone above the diffuser. Site 106 is approximately 2,000 feet outside the boundary of the mixing zone, and 107 is much farther away. Sampling at a station 2,000 feet from the boundary of the mixing zone does not reasonably demonstrate that aquatic criteria are being met at the boundary of the mixing zone.

Response – Monitoring near the Mixing Zone

Permit part 1.2 requires continuous, weekly, and monthly monitoring of effluent quality to monitor discharges into the mixing zone, as well as submittal of monthly reports.

Permit part 1.5.1.1 requires water quality monitoring at sites 106, 107, and 108 to monitor impacts of discharges on Hawk Inlet water quality. Site 106 is a background monitoring station that is unlikely to be impacted from the outfall due to its location, site 107 is also distant from the outfall but is positioned to indicate impacts within the estuary, and site 108 monitors impacts near the boundary of the mixing zone. These sites were established in 1999, provide a valuable record of historical and relative water quality in Hawk Inlet, and each indicates that aquatic criteria have been met with a large margin of compliance. Rather than merely focus on the mixing zone, the Hawk Inlet sites provide valuable information for monitoring water quality in the mixing zone throughout the Hawk Inlet.

2.2 Comment – Setting effluent limits lower than technology-based limits

CSP2 commented that economic considerations associated with further water treatment if the outfall 002 limits were set lower than technology-based limits are not discussed.

Response - Setting effluent limits lower than technology-based limits

There is no regulatory basis for reducing limits below technology-based limits if the RPA indicates there is no reasonable potential for a parameter to exceed a water quality standard.

2.3 Comments – Hardness-based Effluent Limits

CSP2 commented that by using the 15th percentile of the hardness data to calculate hardness-based Water Quality Standards in Appendix B to the fact sheet, the Department is departing from EPA's accepted procedure of using the 5th percentile of hardness data for deriving hardness-based limits.

SEACC commented that EPA previously used the 5th percentile hardness of the receiving water for calculating the criteria for hardness dependent metals, like lead and zinc. The Department has chosen to use the 15th percentile, reducing the level of protection calculated as necessary for these metals. SEACC requested that the Department explain how the Department

can use a less conservative factor than EPA for calculating hardness of the receiving water for metals and not be backsliding.

Response – Hardness-based Effluent Limits

Appendix B of the fact sheet has been changed to the 5th percentile of the hardness data to be consistent with the previous permit. Regardless, permit limits remain unchanged whether the 15th or 5th percentile is used.

Hardness-based Water Quality Standards are promulgated by the State. It is the State's discretion to determine how hardness data will be used when looking at hardness-based permit limits. EPA arbitrarily selected the 5th percentile of hardness data, which has since become the de facto standard through past precedence. By contrast and as a reference, page 129 of the *Technical Support Document For Water Quality-based Toxics Control* uses the 15th percentile of hardness data in an example.

Responding to concerns about storm water and backsliding, permit part 1.3.2 was revised to ,, "…exceeds receiving water concentrations *or water quality criteria*…" The italicized phrase was added.

3. Comments on Mixing Zone

3.1 Comment – Mixing Zone Size and Increased Discharge

Friends commented that the proposed increase in the size of the mixing zone and the increased discharge will degrade Hawk Inlet and Greens Creek water quality.

Response – Mixing Zone Size and Increased Discharge

Increasing the size of the mixing zone is necessary to accommodate an overall improvement to the water management capability of Greens Creek Mine. A primary function of water management at the Greens Creek Mine is to control, treat, and discharge water that comes into contact with project facilities in an environmentally sound manner. Storms in 2007 almost overwhelmed the mine's wastewater capture, storage, and treatment facilities. In response to that threat, Greens Creek Mine expanded and upgraded wastewater management facilities. Some of the upgrades to the contact water management system included installation of new berms, ponds, pumps, diffusers, and even a new wastewater treatment plant. With these improvements, the mine can now better manage storm water. During extremely heavy rainfall events, the mine is capable of capturing more contact water, treating it by removing constituents of concern, and releasing a higher quality effluent into Hawk Inlet rather than allowing untreated poorer quality water to flow uncontrolled into Greens Creek and Hawk Inlet.

The discharge carries constituents that need to be controlled to prevent degradation of water quality. The mixing zone size defines an area where specific water quality standards may be exceeded. Its size reflects computer modeling results. The mixing zone in the permit was authorized according to 2003 regulations at 18 AAC 70.240 through 18 AAC 70.270.

Water in Greens Creek is now better protected because, as noted above, there is less contact storm water entering the stream due to water management upgrades. Additionally, the permit requires monitoring to track the effectiveness of storm water best management practices.

3.2 Comment – Mixing Zone and Designated and Existing Use

SEACC requested that the Department provide data showing that the mixing zone as described will protect designated and existing uses at a confidence level greater than a coin flip.

Response – Mixing Zone Size and Increased Discharge

The Department approved the use of the CORMIX mixing zone software. This software is also approved by EPA. CORMIX has been shown by practical laboratory and ambient demonstrations, monitoring results, and dye studies at other outfalls to provide reasonable estimates of mixing zone sizes. In addition to relying on a predictive model, the permit requires water quality monitoring, biological monitoring, and reporting to validate that the mixing zone is protective of the designated and existing uses. See permit parts 1.2, 1.5.1, and 1.5.3.

3.3 Comment – Mixing Zone Width versus Channel Width

SEACC commented that the mixing zone is 200 feet wide, exceeds ten percent of the channel width or 77.5 feet, and fails to satisfy regulations restricting the width of a mixing zone in a channel or inlet.

Response – Mixing Zone Width versus Channel Width

Under 18 AAC 70.255(e) of the applicable June 2003 mixing zone regulations, it states, "Unless the department finds that evidence is sufficient to reasonably demonstrate, in accordance with this section, that the size limitations of a mixing zone can be safely increased, a mixing zone must comply with the following size restrictions:" The 2005 permit authorized a 300 feet wide by 100 feet long mixing zone while the 2011 permit authorizes a 200 feet wide by 300 feet long mixing zone. Hawk Inlet water quality, mine discharge water quality, and Hawk Inlet biological monitoring confirm that the 2005 permit safely increased the mixing zone beyond ten percent of the channel width, from 77.5 feet to 300 feet, in accordance with 18 AAC 70.255(e). Based on the most recent computer models, the 2011 permit reduces the width of the mixing zone from 300 feet in the 2005 permit down to 200 feet. Since the 300 foot width was demonstrated that the width of the mixing zone was safely increased under the 2005 permit, a 200 foot width under the 2011 permit would also meet that same demonstration.

3.4 Comment – Reducing Mixing Zone Size

CSP2 commented that applying technology-based effluent limits to the discharge from outfall 002 maximizes the size of the mixing zone, and there is no discussion about setting effluent limits below the technology-based limits, which could further reduce the size of the mixing zone.

Response – Reducing Mixing Zone Size

Effluent limits for outfall 002 are specified in 40 CFR Part 440 Subpart J and adopted by reference in 18 AAC 83.010(g)(3). They are technology-based effluent limits that are based on best available technology economically achievable (BAT) and best practicable control technology (BPT).

If the receiving water has sufficient dilution available enabling water quality standards to be achieved with the limits specified in 40 CFR Part 440 Subpart J, then there is no requirement to impose more stringent limits. This is because, in order to authorize a mixing zone allowing

such dilution, the Department ensures aquatic life is fully protected and compliance with applicable mixing zone regulations is achieved. If the waterbody lacks sufficient dilution, or if a mixing zone size has to be restricted with an associated reduction in dilution, then water quality-based effluent limits are determined.

In this case, there is no requirement to reduce the mixing zone size. Hawk Inlet has sufficient dilution available for the BAT/BPT technology-based effluent limits, and no size reduction is necessary. It should be noted that the full dilution available in the mixing zone will be needed only during extreme rainfall events when a large quantity of storm water has to be treated and discharged.

3.5 Comments – Mixing Zone Size and Discharge Increase

CSP2 commented that the Department does not mention why increasing the outfall 002 discharge rate by a 1.28 multiplier resulted in increasing the mixing zone size by a 4.0 multiplier.

SEACC commented that the Department proposes to substantially increase the size of the mixing zone from the one authorized for the last EPA NPDES permit for this mining facility without showing that circumstances have materially and substantially changed since 2005 and that the Department is proposing to significantly increase the flow of volume of the pollutants discharged.

Response – Mixing Zone Size and Discharge Increase

Based on comments received, the Department re-evaluated the mixing zone model using the CORMIX model and corrected an errant input assumption. The result is a mixing zone 200 feet wide by 300 feet long, which reduced the length of the mixing zone in the draft permit from 600 feet to 300 feet. The permit and fact sheet have been changed to reflect this revision. Specific modeling details follow.

The original CORMIX modeling size was determined by selecting the "diffuser" option in the program. Outfall 002 consists of 15 diffusers evenly spaced along a 160 feet span. It was noted that the 15 diffuser plumes did not merge before the boundary of the mixing zone, as had been assumed in the original CORMIX model. Therefore, an alternative analysis as a single port discharge (with the associated actual port flow) was modeled, and a substantial difference in plume length was noted. This is because when CORMIX models a diffuser it assumes the discharge is from a continuous slot rather than discrete discharge points. This modeling is fine when plumes merge, but it does not provide an accurate representation of single port discharges. Accordingly, the model was re-run with a single port, and since there are 15 ports, the single port flow was $1/15^{th}$ that of the total flow. This resulted in a much reduced mixing zone length of 136 feet (to one side or the other of the diffuser depending on whether a flood or ebb tide is being considered). Duckbill "Tideflex" valves are also now used on the ports, so the modeling took this into account by using a port size that provided equivalent discharge velocities as the "Tideflex" valve at different flow rates.

The 2005 permit modeled the mixing zone using the PLUMES software. Now, the Department relies more on the CORMIX software, because EPA does not support the PLUMES software, Department staff have been trained on the CORMIX software, and CORMIX software better incorporates boundary effects into the modeling output.

Modeling software provides a reasonable approximation of a mixing zone size. It is commonly understood that the prediction is good to within +/- 50%. The Department does not

calculate a mixing zone size using precise numbers from the modeling output, but instead rounds the numbers to a more logical size. Accordingly, the mixing zone size is authorized as 200 feet wide by 300 feet long, rather than the size of 170 feet by 272 feet calculated by CORMIX.

In 2007, there was an exceptionally large storm, which resulted in the newly constructed Pond 7 nearly over filling with a combination of contact storm water, mill water discharge, and tailings seepage water drainage. If this pond had overflowed, it would have discharged to adjacent wetlands. Additionally, recent improvements to storm water management, comprised of pumping water from Pond C, which was collecting additional storm water drainage from around the mill area, and increasing pumping capacity at Pond D bring greater quantities of storm water to the treatment plant than previously. Overall improvements to the water management system include capture of runoff from the back slope at the mill and the mill road, improved capture and pumping at Ponds C and D, increased pumping capacity to the wastewater treatment plant, construction of a new wastewater treatment plant, and modification to the wastewater treatment plant diffuser. These improvements provide better environmental protection by helping to prevent contact storm water runoff into receiving water. Historically, overflows from Ponds C and D only occurred during high river flow periods, so adverse effects on aquatic life were unlikely. However, improved management of this water now provides greater assurance that there are no adverse effects of these storm waters on aquatic life in Greens Creek.

3.6 Comment – Mixing Zone Description Correction

CSP2 commented that the draft permit and fact sheet present the mixing zone as two dimensional when it is actually three dimensional.

Response – Mixing Zone Description Correction

Section 1.4.2 of the permit and section 4.3 of the fact sheet have been amended providing depth as the third dimension of the mixing zone.

4. Comments on Anti-Degradation

4.1 Comment – Interim Antidegradation Implementation Methods

SEACC commented that the permit relies on *Interim Antidegradation Implementation Methods* (*Interim Methods*) to apply the state's antidegradation policy, but *Interim Methods* were adopted in violation of rule-making requirements under Alaska law. Consequently, the permit's antidegradation analysis is illegal and as such, fails to satisfy the state's antidegradation policy.

Response – Interim Antidegradation Implementation Methods

First, case law supports the proposition that state agencies may use guidance to interpret and implement regulations without going through another rule-making procedure as long as guidance does not add any substantive requirement to the regulations. Second, *Interim Methods* were conceived, developed, and implemented through legal means. While there is now a legal challenge to the guidance, the Court has not stayed their effect while that case is pending. In the absence of a stay, unless and until *Interim Methods* are determined to be illegal, the Department will continue to use them. Finally, the antidegradation policy in regulation governs the implementing guidance. The guidance is simply a tool to help guarantee responsible and consistent application of the policy by Department staff.

4.2 Comment – Metals Data Availability for Protected Use Verification

CSP2 commented that it appears data required to verify that existing uses are fully protected may not be available. Specifically, there are no data to evaluate whether metals are increasing via biomagnification through higher trophic levels.

Response – Data Availability for Protected Use Verification

Species tested for metals concentration, mussels and marine worms, came from the lowest trophic levels because when metals do not concentrate in tissue at the lowest level, then excessive metals are not bioavailable for higher trophic levels. Design of the Hawk Inlet Monitoring Program is based on this principle of mass transfer, and data indicate that throughout several stations concentrations of metals (Cadmium, Copper, Mercury, Lead, and Zinc) in tissue are not increasing when compared to pre-mining baseline metal concentration data.

By design, the Hawk Inlet Monitoring Program chose mussels and marine worms not only because they are from the lowest trophic level, but also because their limited motility allows focus on the restricted area of Hawk Inlet that is potentially impacted by Greens Creek Mine. This maximizes impacts on the chosen species. By comparison to mussels and marine worms, predators of seafloor dwelling organisms are extremely mobile. Since the mussels and marine worms are confined to the mine-associated areas and show no increases in metals, it is even less likely that their relatively mobile predators would show a significant effect.

The results of the biomonitoring program indicate no concern over bioconcentrating metals in higher trophic levels, and it was effectively designed to provide those data. Since the sensitive species are unaffected, it is reasonable to conclude that less vulnerable animals are also unaffected.

4.3 Comment – General Data Availability for Water Quality Evaluation

Friends commented that there is not sufficient data to conclude that the current 2005 permit has not substantially degraded the water quality in Hawk Inlet or Greens Creek.

Response – General Data Availability for Water Quality Evaluation

Operating under the 2005 permit, the permittee collected five years of quarterly water quality data from 2005 through 2010 from three locations in Hawk Inlet for constituents of concern in the wastewater discharged by Greens Creek Mine. Those water quality data for cadmium, copper, lead, mercury, zinc, pH, and weak acid dissociable cyanide indicate that Hawk Inlet water quality has been consistently high year round during the sample period.

Storm water data collected from 2005 through 2010 during the 2005 permit term indicate that storm water quality around Greens Creek is comparable and was not degraded during the permit term. Additionally during the 2005 permit term, monthly water quality data was collected from upper, middle, and lower Greens Creek. Those data show that water quality in Greens Creek is consistently high quality above, near, and below the mine.

The 2005 permit required water quality monitoring at each storm water outfall and downstream of each storm water outfall. In addition to the 2005 monitoring requirements, this permit increases storm water monitoring by adding an additional monitoring location that is upstream of each storm water outfall.

4.4 Comments – Data Used in Protective Use Conclusion

(a) SEACC commented that the Department lacks reasonable basis for concluding that resulting water quality will fully protect existing uses.

(b) SEACC requested that the Department provide information to conclusively demonstrate the biological community has been protected and that established activities such as commercial, sport or subsistence uses for human consumption have been protected in Hawk Inlet.

(c) SEACC commented that the 2010 Hawk Inlet Monitoring Program report states, "[f]or the marine environment, there are no data available to numerically compare diversity or abundance of organisms between pre-mining and post-mining."

Responses – Data Used in Protective Use Conclusion

(a) Under the Hawk Inlet Monitoring Program, which has continued in its present form since 1999, eleven years of quarterly water quality data have been collected from three locations in Hawk Inlet for constituents of concern in the wastewater discharged by Greens Creek Mine. Those water quality data for cadmium, copper, lead, mercury, zinc, pH, and weak acid dissociable cyanide indicate that Hawk Inlet water quality has been consistently high year round for the past eleven years. Since 1984, five years before mine production started, metal concentration data from Hawk Inlet sediments and marine organisms (mussels and marine worms) have been collected semiannually. Those data corroborate that water quality has been protective of existing uses.

(b) Permit part 1.5.1 provides the requirements of the Hawk Inlet Monitoring Program. This program has continued in its present form since 1999 producing eleven years quarterly water quality data collected from three locations in Hawk Inlet. Monitoring focuses constituents of concern in the wastewater discharged by Greens Creek Mine. Those water quality data for cadmium, copper, lead, mercury, zinc, pH, and weak acid dissociable cyanide indicate that Hawk Inlet water has been consistently high quality year round for the past eleven years. Since 1984, five years before mine production started, metal concentration data from Hawk Inlet sediments and marine organisms (mussels and marine worms) have been collected semiannually. Those data corroborate that water quality has been protective of existing uses. Permit part 1.5.1 requires monitoring and reporting to insure that Hawk Inlet uses will be protected in the future.

(c) Pre-mining, marine biological data collection began during the summer of 1984, and mining production began during the summer of 1989. Those data include tissue assays of mussels and marine worms for metals content. Unfortunately, the pre-mining data from 1984 to 1989 does not contain sufficient data to allow comparisons of diversity or abundance of organisms.

4.5 Comment – Analysis of Cost Effective and Reasonable Pollutant Control

SEACC commented that the fact sheet's cursory analysis fails to demonstrate that Hecla Greens Creek Mining Company is using all cost effective and reasonable pollutant control technology or practices.

Response – Analysis of Cost Effective and Reasonable Pollutant Control

The permittee uses ferric co-precipitation, which produces effluent water quality that consistently achieves the highest statutory and regulatory requirements and was determined to be the most effective and reasonable treatment technology.

4.6 Comments – Evaluation of Lowering of Water Quality versus Socio-Economic Benefit

Friends commented that the economic and social development rationale for allowing lower water quality does not adequately account for the historical and current social, economic and cultural dependency of Angoon on the Hawk Inlet area.

SEACC commented that the rationale offered to support lowering water quality in Hawk Inlet is unreasonable because it lacks sufficient economic data and analysis to support a conclusion that the added cost and benefit measures of enhanced avoidance measures or treatment options for pollutant discharges from the Greens Creek Mine outweigh the benefits of maintaining or enhancing water quality in Hawk Inlet.

Response – Evaluation of Lowering of Water Quality versus Socio-Economic Benefit

The economic analysis was conducted according to *Interim Antidegradation Implementation Methods* (*Interim Methods*) effective July 14, 2010 and accepted by EPA on July 15, 2010. Attached to the *Interim Methods* is a list of resources that may be helpful when conducting an antidegradation analysis. Inclusion of an EPA guidance document on that list of resources is intended as a guide to the Department but does not commit Department staff to following that guidance in every instance.

The Department recognizes that a more exhaustive socio-economic and social analysis may be warranted when a permit is initially issued to a new facility. However, this permit proposes the third reissuance of a permit that was initially issued in 1987. Mixing zones have been incorporated into the permit since the outset of mining. As discussed elsewhere, the Department determined that an increase to the size of the mixing zone was necessary to accommodate the more expansive water collection and treatment regime instituted by the mine over the past five years. The mine is capturing and treating more water, and accommodating this expanded program through a larger mixing zone was necessary and beneficial to the environment. Lastly, the commenters have not identified any additional treatment process that they believe the permittee should be using, or that the Department should consider as part of the proposed cost-benefit analysis. In the context of this permit reissuance, the scope of the Department's socio-economic analysis is appropriate and tailored to the circumstances of a mine that has been operating for over twenty years.

5. Miscellaneous Comments

5.1 Comment – Permit Issuance and Expiration Relative to Supplemental Environmental Impact Statement (SEIS) Completion

NMFS requested delay of permit issuance until the SEIS for a tailings storage facility expansion is completed and further commented that the permit should expire when the SEIS is complete.

Response – Permit Issuance and Expiration Relative to Supplemental Environmental Impact Statement (SEIS) Completion

Currently, Greens Creek Mine's APDES permit is administratively extended beyond its expiration date, and future plans for a tailings storage facility expansion have yet to be established and proposed. There is no benefit to delaying permit issuance since the permit will be modified as necessary if activities change. The permit term will remain at five years. However, if there are significant changes to the facility or activities that affect this permit, the permit will either be modified or reissued as necessary.

5.2 Comment – Storm Water Outfall Locations

HGCMC requested updating the permit so that the storm water outfall locations, latitude and longitude, agree with the permit application.

Response – Storm Water Outfall Locations

The permit has been updated accordingly.

5.3 Comments - Alaska's Integrated Water Quality Monitoring and Assessment Report

(a) SEACC commented that the Department relies on *Alaska's Final 2008 Integrated Water Quality Monitoring and Assessment Report* to support the proposition that Hawk Inlet is expected to meet applicable water quality standards.

USFWS commented that the fact sheet refers to *Alaska's Final 2008 Integrated Water Quality Monitoring and Assessment Report* for information on whether Hawk Inlet, Zinc Creek and Greens Creek have impaired water quality. However, *Alaska's Final 2010 Integrated Water Quality Monitoring and Assessment Report* is more recent and should be referenced.

(b) USFWS commented that the ambient water quality data which has been collected as part of the permit process should have been incorporated in the Final 2010 Integrated Water Quality Monitoring and Assessment Report, and analysis of the data would result in Hawk Inlet being designated category 1, 2, 4, or 5 and not 3.

(c) USFWS requested that a water quality designation based on multiple years of water quality data be determined for Hawk Inlet before an APDES permit is issued.

Response - Alaska's Integrated Water Quality Monitoring and Assessment Report

(a) Regarding the permit's reliance on *Alaska's Final 2008 Integrated Water Quality Monitoring and Assessment Report*, 1) the 2010 version has been used instead of the 2008 version, and the fact sheet has been revised to reflect use of the 2010 version; 2) the permit only relied on *Alaska's Final 2010 Integrated Water Quality Monitoring and Assessment Report* to ensure that waters impacted by the permit, Hawk Inlet, Zinc Creek, and Greens Creek, are not impaired; and 3) according to law and regulation, all state waters are expected to meet applicable water quality standards.

(b) The Department concurs that future, biennial Integrated Water Quality Monitoring and Assessment Reports ought to consider Hawk Inlet ambient water quality data collected by Hecla Greens Creek Mining Company.

(c) A water quality designation of category 1, 2, 4, or 5 is not required prior to the issuance of an APDES permit.

5.4 Comment

ADF&G commented that Section 10.3 (Essential Fish Habitat) of the fact sheet incorrectly states that the Alaska Department of Fish and Game has "EFH oversight of fresh waters in the vicinity of Greens Creek Mine..." Rather, the Alaska Department of Fish and Game has statutory authority at AS 16.05.841 and AS 16.05.871 to protect resident and anadromous fishes from development proposals that will occur below the ordinary high water line in fish-bearing waters.

Response

Section 10.3 of the fact sheet was revised according to ADF&G's comment.