Supplemental Wetlands Mitigation Ordinance

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3 May 2021
MSB Planning Commission

OR 21-025, IM 21-051
Planning Commission Resolution 21-07

Presentation Overview

- Supplemental Wetland Mitigation Ordinance (SWMO)–Rationale & Intent
- History
- What the SWMO does
- What the SWMO does NOT do
- How the SWMO would work
- Recommendation

Background on Wetlands/SWMO

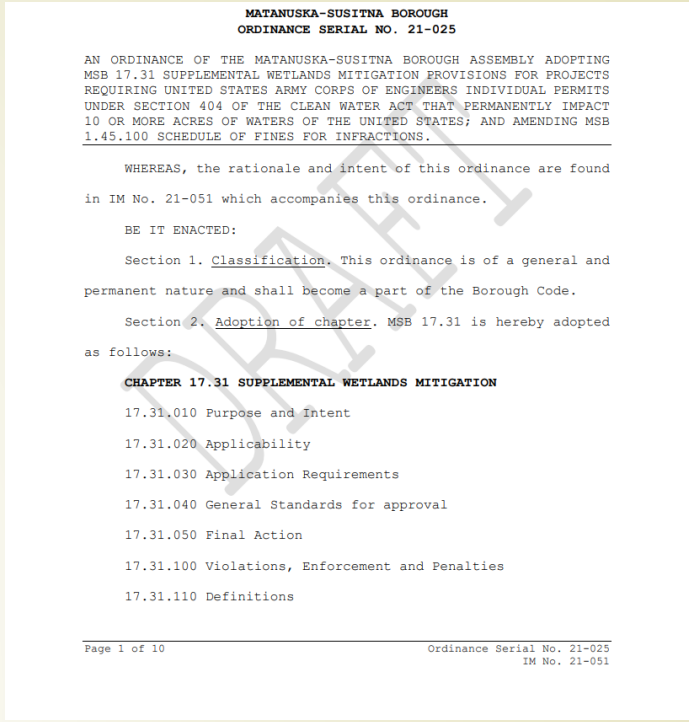
- **Intent of the Ordinance:**
  - *To* protect health, safety, property, and infrastructure by **offsetting lost wetland functions for MSB citizens from large developments.**

- **Rationale:**
  - Wetlands provide value via "free" ecological services to MSB citizens.
  - USACE regulates wetland development on certain wetlands.
  - "Mitigation" is a process - lost wetland services are "mitigated" or offset elsewhere.
  - Sometimes USACE does not require full mitigation.
  - The SWMO addresses this by fully offsetting lost functions from impacts to wetlands from larger projects.

History leading up to SWMO

- 2012 MSB Wetland Management Plan
- 3/19 MSB Assembly Wetland Mitigation Workshop
- MSB Fish and Wildlife Resolution 19-03
- MSB Assembly Resolution 19-074

MSB 17.31 Summarized



MATANUSKA-SUSITNA BOROUGH
ORDINANCE SERIAL NO. 21-025

AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY ADOPTING MSB 17.31 SUPPLEMENTAL WETLANDS MITIGATION PROVISIONS FOR PROJECTS REQUIRING UNITED STATES ARMY CORPS OF ENGINEERS INDIVIDUAL PERMITS UNDER SECTION 404 OF THE CLEAN WATER ACT THAT PERMANENTLY IMPACT 10 OR MORE ACRES OF WATERS OF THE UNITED STATES; AND AMENDING MSB 1.45.100 SCHEDULE OF FINES FOR INFRACTIONS.

WHEREAS, the rationale and intent of this ordinance are found in IM No. 21-051 which accompanies this ordinance.

BE IT ENACTED:

Section 1. Classification. This ordinance is of a general and permanent nature and shall become a part of the Borough Code.

Section 2. Adoption of chapter. MSB 17.31 is hereby adopted as follows:

CHAPTER 17.31 SUPPLEMENTAL WETLANDS MITIGATION

17.31.010 Purpose and Intent

17.31.020 Applicability

17.31.030 Application Requirements

17.31.040 General Standards for approval

17.31.050 Final Action

17.31.100 Violations, Enforcement and Penalties

17.31.110 Definitions

Page 1 of 10 Ordinance Serial No. 21-025 IM No. 21-051

DRAFT

1. APPLICABILITY

- Applies to projects that:
  - Require an USACE Individual Permit, and:
  - Impact 10+ acres of WOTUS wetlands.

2. APPLICATION REQUIREMENTS

- Uses the paperwork developer already submits to USACE and USACE permit decision documents.

3. GENERAL STANDARDS FOR APPROVAL.

- Developer chooses one of three USACE mitigation strategies; mitigation offset occurs in MSB; and.
- Applicant shows wetland impacts fully offset within the MSB.

What the SWMO doesn't do

- **Does not duplicate** USACE process, **instead sets a local standard for development.**
- **Does not involve itself in the USACE mitigation options**; requires that developer use a USACE-approved mitigation option within the MSB and to **fully offset the wetland impacts of project**.

SWMO Permitting Flow Chart

1. Developer applies for Individual Wetland Permit with USACE

- **MSB informs** developer about MSB 17.31

2. If **project impacts 10+ acres of wetlands** then MSB permit required

- Developer **submits MSB application**; provides all USACE documents.

3. Developer must show **full mitigation offset within MSB** of project impacts.

- **MSB checks** documentation; **issues permit** per MSB 17.31

Staff Recommendation

Advantages of implementing OR 21-025:

1. Preserves some lost wetland functions.
2. Protects health, safety, property, and infrastructure.
3. Supports MSB investments in fisheries.
4. Aligns with adopted MSB plans.
5. Provides predictable standards for developers.

Disadvantages of implementing OR 21-025:

1. Not comprehensive- ignores non-jurisdictional wetlands.
2. Ignores the more common smaller developments.

Support for OR 21-025:

- MSB Fish and Wildlife Commission Resolution 21-01.

Staff Recommendation: Adoption of RS PC 21-07/OR 21-025.

Thank you

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PC Reso 21-07
Supplemental Wetlands Mitigation Provisions
Email received 4/29/21 from Ray Nix

HANDOUT

Karol Riese

From: Ray Nix <raynixsr@gmail.com>
Sent: Thursday, April 29, 2021 1:04 PM
To: Theodore Eischeid; Mike Brown; donnamassay@gmail.com
Subject: Please note my attached public comments for Draft Ordinance 21-025
Attachments: cover.rgnrevised.final.odt

https://deltadiscovery.com/judge-finds-adec-certification-of-donlin-golds-water-quality-invalid-orders-certificate-rescinded/

https://www.kyuk.org/sites/kyuk/files/202104/2021-04-12_notice_of_proposed_decision.pdf

https://www.ktoo.org/2021/04/14/judge-recommends-state-not-uphold-water-certificate-for-donlin-gold-mine/

Overview of MSB DRAFT Ordinance 21-025

Draft MSB Ordinance *21-025* is the next and biggest step so far in preserving and protecting the wetlands within the Mat Su Borough boundary. Borough Assemblies have been moving for more than twenty years to meet the goal outlined in the 2012 MSB Wetland Management Plan, and provide Borough oversight of wetland issues that affect our Borough at the local government level. This Overview summarizes the Ordinance and sets out the changes to the Ordinance necessary to preserve those wetlands.

1. ***17.31.010 (page 2)*** describes the purpose of the Ordinance. Stated simply, the purpose is to protect health and safety, property, and infrastructure, and to promote economic stability while maintaining the functions of wetlands and aquatic resources; the intent is to seek full compensatory mitigation for loss of aquatic resources.
2. ***17.031.020A (page 3)*** specifies that this chapter applies to all public and private lands in the Borough.
3. ***17.31.020C* and *17.31.020C1b (page 3)*** describes the triggers that require a project that disturbs wetlands to mitigate. That is, the size of the impact must be at least 10 acres, and the MSB Compensatory Mitigation Certificate of Compliance (CMCC) must be obtained prior to filling the wetlands. **The Ordinance does not require projects of less than 10 acres to get a CMCC**.
4. ***17.31.030B (page 4)*** describes the USACE documentation required to process a CMCC application to determine whether full compensatory mitigation to offset the function and aquatic loss has been provided. If they fall within the scope of the Ordinance, projects have to get a CMCC, even if the **USACE** has imposed other requirements or no requirements.
5. ***17.31.060A1 (page 5)* and *17.31.060 (pages 5-6)*** states that the Ordinance does not apply to USACE Individual permit applications that have been issued a permit decision document prior to June 1, 2021. These sections should be stricken from the draft ordinance. The MSB CMCC is not subject to any Federal, State or other applications or Permits; nor does it fit the purpose and intent of the Draft Ordinance. These sections make the Ordinance applicable only to projects that are conceived in the future and put forward in the future or that have not been addressed by the US Army Corps of Engineers. These provisions intentionally target and exclude the Donlin Creek Mine project that is on everybody's minds (and that received its permits in August of 2018). Put another way, they are intended solely to relieve the Donlin Creek Mine project from having to obtain a CMCC, an outright gift to Donlin. The Donlin Creek project is the only project on the horizon for the foreseeable future. This project threatens to damage or destroy hundreds of acres of important and pristine wetland within the Borough's boundary.

There is no reason why this project, with this impact on the Borough's natural resources, should be shielded from this important Ordinance, an Ordinance the purpose of which has been under discussion since before 2012. To repeat, for these reasons, these sections of the draft Ordinance should be stricken and the Ordinance should be applied to the Donlin Creek Mine project.

6. Yet there is another perhaps even stronger reason to exclude sections ***17.31.060A1 (page 5)*** **and** ***17.31.060 (pages 5-6)***. On April 12, 2021, an administrative law judge issued a recommendation that the Alaska Department of Environmental Conservation rescind a state water quality certificate that was issued to the Donlin Gold mine in 2018. The judge said that the DEC had made some mistakes. That certificate was central to the US Army Corps of Engineers decision to issue the Clean Water permits for the Donlin Mine permit. If the DEC certificate is rescinded, the US Army Corps of Engineers permit for the mine would be of no effect. In other words, the Judge said that the DEC and the USACE did it *wrong*. Of course, if the agencies were wrong and Donlin loses its permit, the Ordinance as it is now drafted will apply to Donlin (they won't fall within the .060 exception). But that is not the point. The point is that as the Ordinance is now drafted, we in the Borough are dependent upon the USACE, the DEC and an administrative law judge to decide what is right for the Borough, and they can, and apparently have, gotten it *wrong*. Note that the same kind of thing happened with the Corps of Engineers permit in 2018. Donlin itself had projected that it would impact 600 acres in the Borough—in the final permit the Corps of Engineers itself lowered that figure to 5 acres. Who knows how many other things the Agencies got wrong. The point is that the Borough should have the right to make its own decisions related to its own land, and should be able to impose its own mitigation. *The Borough should have the right to get it right.* For that reason, too, sections ***17.31.060A1*** **and** ***17.31.060*** should be deleted and the Ordinance should apply to the Donlin Mine project.

BEFORE THE ALASKA OFFICE OF ADMINISTRATIVE HEARINGS ON REFERRAL FROM THE COMMISSIONER OF ENVIRONMENTAL CONSERVATION

ORUTSARARMIUT NATIVE COUNCIL,	)	
	)	
Requester,	)	
	)	
v.	)	
	)	
ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF WATER; and DONLIN GOLD LLC,	)	OAH No. 20-0536-DEC
	)	
Respondents.	)	
	)	

NOTICE REGARDING PROPOSED DECISION

We are sending you the administrative law judge's proposed decision in this matter. The final decision maker will be the Commissioner of Environmental Conservation. You may file a request, called a proposal for action, that the final decision maker take one or more of the following actions:

(1) adopt the proposed decision as the final agency decision;
(2) return the case to the administrative law judge to take additional evidence, make additional findings, or for other specific proceedings;
(3) revise the proposed enforcement action, determination of best interests, order, award, remedy, sanction, penalty, or other disposition of the case;
(4) reject, modify, or amend a factual finding; or
(5) reject, modify, or amend an interpretation or application of a statute or regulation.

You do not have to file a proposal for action, but if you do, you must do the following:

- Ensure that the Office of Administrative Hearings **receives** the proposal for action on or before **4:30 p.m. on Wednesday, May 5, 2021.** Late proposals will not be accepted.
- Submit your original, signed proposal to the Office of Administrative Hearings. To ensure timely receipt, please fax or email a copy of it to (907) 465-2280 or doa.oah@alaska.gov.
- Give the reasons for the action you propose. If you request action under option (4) regarding the proposed factual findings, you should identify evidence **in the record** (such as exhibits or testimony) that supports your request to change the factual finding.
- **Do not** attach **documents to the proposal for action.** If you wish to call attention to specific documents in the record, do so by referring to them in your proposal for action.
- **Do not submit additional evidence now.** Under option (2), you may request that the case be returned to take additional evidence that is not already in the record.

After the deadline for filing proposals for action has passed, we will send the proposed decision and any proposals for action that we receive to the final decision maker. The final decision maker will make a final decision and we will distribute a copy of that decision to you.

DATED: April 12, 2021.

I certify that on this date an exact copy of this Notice and the accompanying proposed decision were provided to the following:
Ton Waldo & Olivia Glasscok – by email
Eric Fjelstad, Attorney - by email
James Leik, Attorney – by email
Cameron Jimmo, Attorney – by email
Matthew Singer, Attorney – by email
Jennifer Currie, AAG – by email
Dep't of Law central email – by email
CC: Gary Mendivil – by email
Signature Patricia Sullivan Date: 4/12/2021

Patricia Sullivan
Office of Administrative Hearings
PO Box 110231
Juneau, AK 99811
(907) 465-1886; (907) 465-2280 fax

BEFORE THE ALASKA OFFICE OF ADMINISTRATIVE HEARINGS ON REFERRAL FROM THE COMMISSIONER OF ENVIRONMENTAL CONSERVATION

ORUTSARARMIUT NATIVE COUNCIL, Requester, v. ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF WATER; and DONLIN GOLD LLC, Respondents.	)	OAH No. 20-0536-DEC

DECISION

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SUMMARY

Donlin Gold LLC's (Donlin) proposes to construct and operate an open-pit, hard-rock gold mine in the Kuskokwim watershed. The issue in this case is whether, pursuant to Section 401 of the Clean Water Act (CWA), reasonable assurance exists that the project will comply with Alaska's water quality standards.

The Alaska Department of Environmental Conservation's Division of Water (Division) has issued a certificate of reasonable assurance concluding that "there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with the applicable provisions of Section 401 of the CWA and the Alaska Water Quality Standards, 18

AAC 70. . . ." Orutsararmiut Native Council (ONC) challenges the certificate, contending that reasonable assurance is not possible with respect to Alaska's water quality standards for mercury, temperature and protection of existing uses. In the present appeal, ONC seeks to establish by a preponderance of the evidence that the Department should not uphold the Division's certificate, thereby preventing the issuance of a CWA permit for the project in its current configuration and in the current regulatory framework.

Issuance of a certificate does not require absolute certainty that Donlin will never violate water quality standards. Instead, what the Department must conclude, and what the preponderance of the evidence must establish, is that there is *reasonable certainty* that state water quality standards will not be violated.

In addressing whether reasonable assurance exists in this case as to the three issues raised, the Division and Donlin have placed significant reliance on proposed and ongoing monitoring and adaptive management, together with the project's regulatory permits and plans. In certain situations, these strategies can serve as support for finding of reasonable assurance. The parties agree that the Washington Supreme Court case of *Port of Seattle v. Pollution Control Hearings Board,*[1] is extremely relevant and informative on this issue. It is analyzed in this decision in detail.

As that analysis reveals, the predicate simply does not exist in this case for reliance on monitoring and adaptive management and/or regulatory permits and plans. While the certificate could have contained conditions and provisions that might have made a *Port of Seattle* approach to this permit possible, it does not.

As to whether there is reasonable assurance that Alaska's water quality standards for mercury will not be violated, it is significant that this project is located within a watershed with already high background levels of mercury. A combination of high natural levels of mercury in the area, along with the residual effects of historic mining, create this circumstance.

In fact, the mercury levels are already so high in the vicinity of the mine that 14 percent of samples taken *already exceed* the chronic criterion. Some of the exceedances are by more than ten times the applicable standard. Because these levels are already so high, and because construction and operation of the mine will cause mercury levels to increase, there is no denying that the project will cause even more exceedances.

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[1] 90 P.3d 659 (Wash. 2004).

To get around this problem, the Division has taken the misguided approach of resorting to sleight of hand. In doing so, it has substituted the use of long-term average concentrations of mercury taken from numerous locations throughout the watershed. It has used these benchmarks instead of faithfully applying the mercury standard in the regulations, which explicitly require the use of four-day averages, from individual locations in areas impacted by the mine.

The Division's approach is the wrong tool. Instead, there are other means available when a project is proposed in an area where background levels of a contaminant are already high or even above the applicable standard. These include site-specific criteria, mixing zones, natural condition-based water quality standards, and variances. These tools would potentially allow the Division to address site-specific issues such as naturally high background levels and do so in a manner that comports to regulatory requirements.

Here, because the Division and Donlin did not seek invoke any of the regulatory options potentially available and which may have allowed this project to move forward despite the high levels of mercury already found in the vicinity, they have reached a regulatory dead-end. Because mercury levels at many of the sampled locations already greatly exceed the standard and because the project will undeniably increase those mercury levels, reasonable assurance does not exist that the project will not cause exceedances of state water quality standards for mercury.

As to the issue of the project's impact on stream temperatures, there can be no argument that temperatures in streams closest to the mine will increase because of the project's construction and operation. This is due to a combination of factors. One is that the mine will use large, deep, open pits. Safe and practical extraction of materials from the open pits, will require the use of a high number of dewatering wells. The dewatering wells are a major component of the project. The pit dewatering and wells will cause a reduction in the water table and a corresponding reduction in waterflow into adjacent streams. When water volumes decrease, temperatures increase.

A second cause of stream temperature increases will be from the reduction and elimination of vegetation, riparian buffers, and related impacts in the vicinity of the project. These impacts will further contribute to an increase in stream temperatures near the location of the project. The Final Environmental Impact Statement (April 2018) (FEIS) concludes that stream temperatures in waters near the mine will be close to or above Alaska's water quality standard.

The Division and Donlin have sought to evade the FEIS's conclusion concerning stream temperatures by, among other things, focusing on sections of the watershed not at issue, by suggesting that the baseline temperature data is an anomaly, or by performing a factual analysis unsupported by expert testimony and reaching an opposite conclusion to that contained in the FEIS. However, none of these approaches enable the present decision, based on the present record, to reject the FEIS's conclusion. Because stream temperatures near the project are likely to be close to or above Alaska's water quality standard for temperature, reasonable assurance does not exist.

Finally, turning to the issue of protection of existing uses, Alaska's antidegradation policy requires that degradation to the state's waters can only occur if "the resulting water quality will be adequate to fully protect existing uses of the water." The use at issue here concerns the watershed's function as salmon habitat.

Crooked Creek, the specific watershed where the project is located, is characterized as "essential fish habitat" and supports populations of all five species of Pacific salmon and 12 species of other resident fish. Because of the dewatering that will occur due to the project's two open pits and associated dewatering wells, together with reduction or elimination of vegetation and riparian buffers, there is a segment of the main stem of Crooked Creek that will experience considerable impacts from low water, particularly during the winter months.

The low water levels will leave some areas where salmon currently spawn high and dry in the winter months. Because salmon eggs incubate in gravel underwater over winter, these low flow conditions will significantly impact salmon spawning success and productivity in the impacted area. The impacted areas not an insignificant portion of Clear Creek. It is approximately nine stream miles in length, includes stream widths approximately 49 feet wide, and is in an area characterized as essential fish habitat where salmon spawning currently occurs unimpeded.

To counter this reality, the Division and Donlin have sought to analyze impacts to salmon in the entire Crooked Creek watershed. This has been termed as use of the "watershed approach." It is true that there are significant portions of the Crooked Creek watershed that will be wholly unimpacted by predicted wintertime low water events. It is also true that many of these areas include some of Crooked Creek's most productive salmon spawning areas.

However, use of the watershed approach on these facts is contrary to the intent and purpose of the CWA's reasonable assurance analysis. This is because it necessarily includes portions of the watershed unaffected by the project. Since the reasonable assurance analysis is intended to focus on potential *impacts* from the project as opposed to consideration of non-impacts, use of the watershed approach dilutes and obscures the analysis and is entirely inappropriate.

Instead, when the impacted segment of Crooked Creek is analyzed regarding the protection of existing uses, there is single and obvious conclusion. Salmon and salmon habitat in a large segment of Crooked Creek will be significantly and detrimentally impacted by the project. Therefore, reasonable assurance for the protection of existing uses is not met.

There are tools available to Donlin to address this impact. These tools include mitigation and/or project redesign to address the issue of low winter water flow. With those tools unused, however, it is not possible to certify that existing uses will be protected.

This decision concludes that the previously issued certificate of reasonable assurance for the Donlin project cannot be sustained. Reasonable assurance does not exist for the project meeting state water quality standards.

I. Introduction

This case concerns ONC's challenge to the certificate of reasonable assurance the Division issued to Donlin, after revisions and reconsideration, in May of 2020. The certificate would allow CWA permitting of Donlin's proposal to build and operate an open-pit, hard-rock gold mine in the Kuskokwim watershed near the community of Crooked Creek, Alaska.

The Donlin project consists of various components, including a mine site, transportation corridor, and pipeline. The operations will result in the discharge of significant amounts of fill material both temporarily and permanently impacting large areas of wetlands and streams. It is expected to have an operational life of 27 years, produce millions of ounces of gold, and have a significant economic benefit to the region.

The Division's certificate certifies that there is reasonable assurance the project, and any resulting discharge, will comply with the provisions of Section 401 of the Clean Water Act and Alaska Water Quality Standards. ONC alleges that the Division has failed to demonstrate the project will: 1) comply with Alaska's water quality standards for mercury; 2) comply with Alaska's water quality standards for temperature; and 3) fully protect existing uses.

ONC was originally joined in this challenge by eleven Alaska Native and non-governmental organizations. However, because those entities and organizations failed to comply with the requirements contained in 18 AAC 15.200(a), only ONC was entitled to an adjudicatory hearing. Per the parties' agreement, this matter proceeded as a hearing on the briefs and existing record pursuant to 18 AAC 15.220(e) and 2 AAC 64.260(a)(2).

Based on that record, the parties' briefing, and the documentation supplied, it is not possible to find reasonable assurance regarding the project's compliance with Alaska's water quality standards for mercury and temperature, or that the project will fully protect existing uses. For these reasons, the Division's certificate of reasonable assurance is invalidated.

II. Background

A. Factual Background

The location of the Donlin project is in the Kuskokwim River watershed, 277 miles west of Anchorage, 145 miles northeast of Bethel, and 10 miles north of the community of Crooked Creek.[2] Crooked Creek village was established around 1909 as a way station for the nearby Flat and Iditarod gold mining camps.[3] Placer gold was first discovered at the proposed project site in 1909.[4] Small scale mining occurred in the area from 1910 to 1940. The project and Crooked Creek are within the traditional territory of the Deg Hit'an, Kolchan, and Dena'ina Athabascan groups.[5]

Calista Corporation (Calista), one of thirteen Alaska Native regional corporations, first identified mineral potential in the region in 1975 and undertook limited prospecting and mining activities from 1984 to 1987.[6] The mine site itself is located on surface lands owned by The Kuskokwim Corporation (TKC), an Alaska Native village corporation. The subsurface is owned by Calista.[7] ONC is a federally recognized tribal government, responsible for the health, safety, and well-being of its members who live along the Kuskokwim River in and near Bethel, Alaska.

The applicant in this case, Donlin, was formed in 2007. It operates under agreements with landowners TKC and Calista.[8] The project is proposed as an open pit, hardrock gold mine

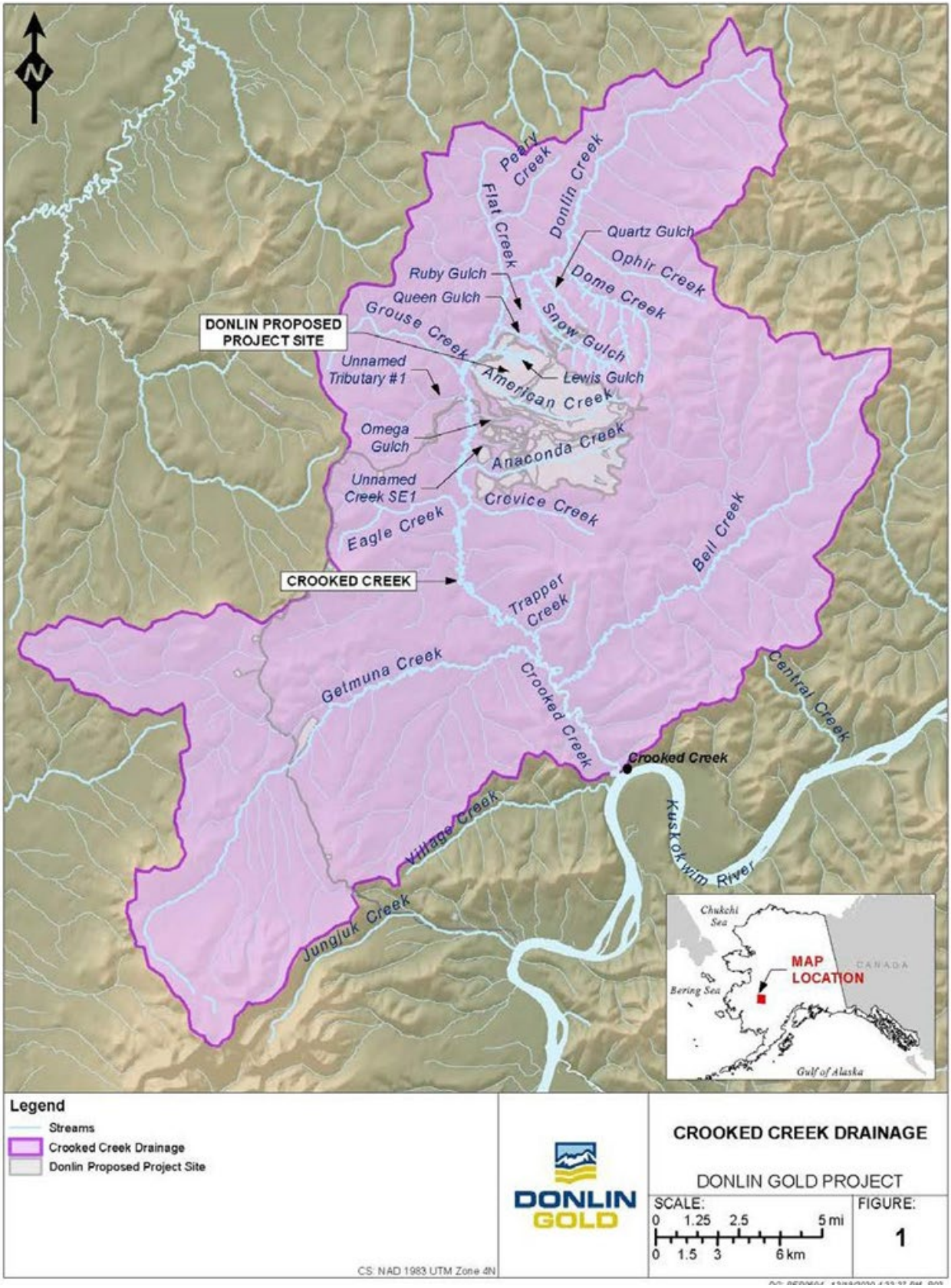
2 FEIS at 1-2, DEC 15341.
3 *Id.* at 3.20-12, DEC 17465.
4 *Id.* at 4, DEC 15279.
5 *Id.* at 3.20-10, DEC 17463.
6 *Id.*
7 FEIS at 3.15-1, DEC 17165.
8 *Id.* at 4, DEC 15279.

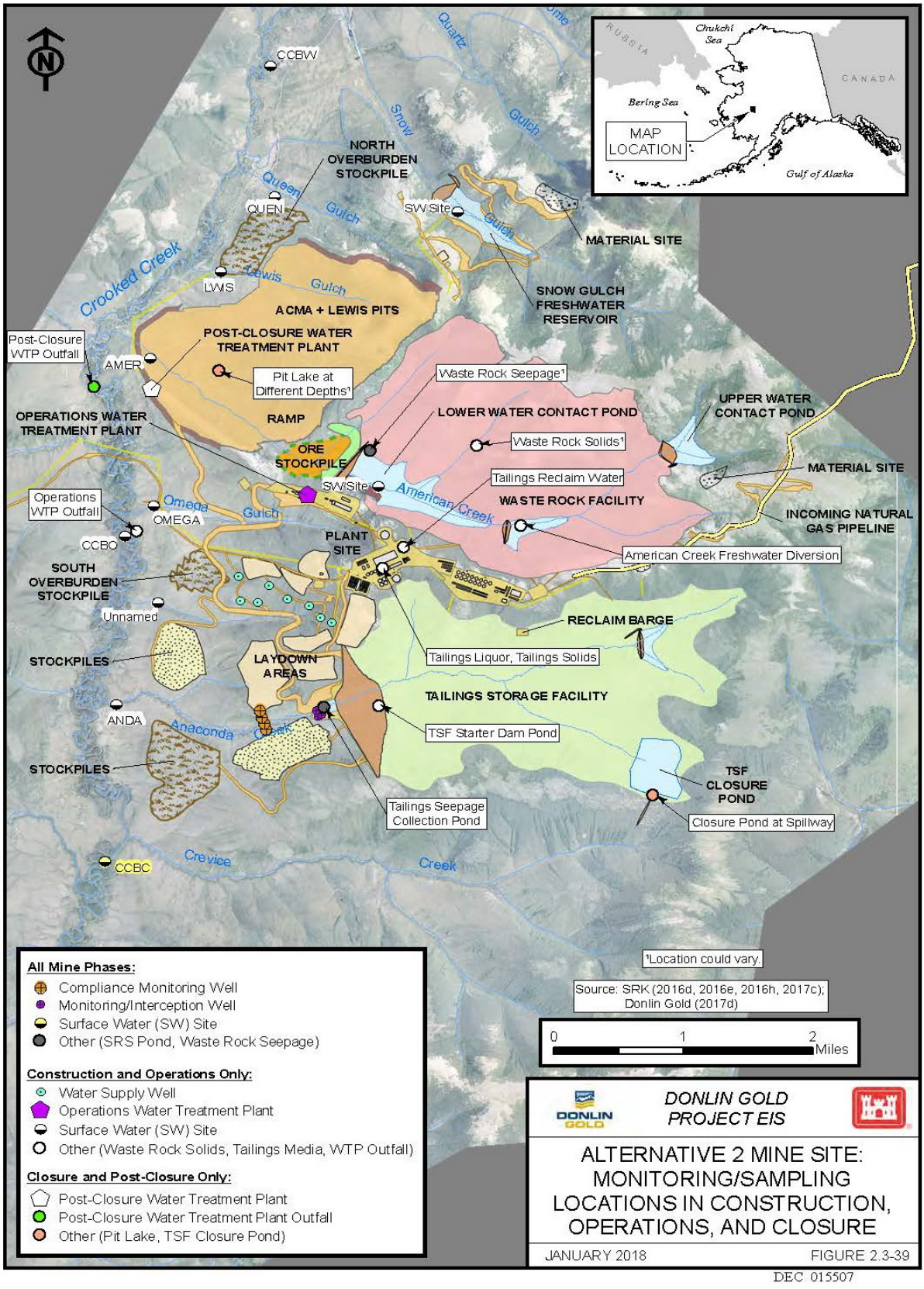
that will require 3-4 years to construct and have a projected mine life of 27 years.[9] It is to consist of various components, including a mine site, transportation corridor, and pipeline.[10] The operations would result in the discharge of 4,368,300 cubic yards of fill material, permanently impacting 2,877 acres of wetland, three acres of fill below the ordinary high-water mark of the Kuskokwim River, and 172,944 linear feet of stream. The project will temporarily impact 538 acres of wetland and 53,346 linear feet of stream.[11] The mine is anticipated to process an average of 59,000 tons of ore per day over its 27 years of expected operation. It will take six years to complete reclamation and closure activities after final operation. It is also expected that the mine pit will fill approximately 45 years after reclamation and there will be a need for treatment of the wastewater discharged from the pit in perpetuity. The mine is expected to produce approximately 30 million ounces of gold.[12]

The project is also expected to create significant benefits from employment, income, sales and tax revenues. During construction, direct employment is expected to create 3,200 jobs, of which 2,500 would go to Alaskans, and 1,600 – 1,900 to Yukon-Kuskokwim Region (Y-K) residents. During operations, direct employment is anticipated to be 1,000 jobs, of which 600 would go to Alaskans and 500 – 600 to Y-K residents. Each year the project is operational, an estimated $40 million in wages would be generated statewide through multiplier effects, while sales within the state would increase by $150 million per year. Calista and TKC would also receive substantial income through leases, surface use agreements, and royalty payments.[13]

Below are two images from Donlin's submissions in this case to place the project area and watershed into geographic context. The first image depicts the project site within the broader Crooked Creek drainage.[14] The second, depicts the mine site and its operations in greater detail.[15]

9 *Id.* at 1-2, DEC 15341.
10 *Id.*
11 DEC Response to Comments for Donlin Gold Mine (August 10, 2018) at 2, DEC 25.
12 *Id.*
13 FEIS at 3.18-2, 3.18-53-54, DEC 17352, 17403-04.
14 Donlin Gold LLC's Opposition to ONC Appeal to the Commissioner (December 29, 2020) at 12.
15 *Id.* at 14.


N
Peary Creek
Flat Creek
Donlin Creek
Quartz Gulch
Ophir Creek
Ruby Gulch
Dome Creek
Queen Gulch
Snow Gulch
Grouse Creek
DONLIN PROPOSED PROJECT SITE
Unnamed Tributary #1
American Creek
Lewis Gulch
Omega Gulch
Anaconda Creek
Unnamed Creek SE1
Crevice Creek
Eagle Creek
Bell Creek
CROOKED CREEK
Trapper Creek
Getmuna Creek
Crooked Creek
Central Creek
Crooked Creek
Village Creek
Kuskokwim River
Jungjuk Creek
Chukchi Sea
MAP LOCATION
CANADA
Bering Sea
Gulf of Alaska
Legend
Streams
Crooked Creek Drainage
Donlin Proposed Project Site
CS: NAD 1983 UTM Zone 4N
DONLIN GOLD
CROOKED CREEK DRAINAGE
DONLIN GOLD PROJECT
SCALE:
0 1.25 2.5 5 mi
0 1.5 3 6 km
FIGURE:
1


CCBW
Quartz
Snow
Gulch
NORTH OVERBURDEN STOCKPILE
Queen
QUEN
SW Site
MATERIAL SITE
Crooked Creek
LWS
Lewis
ACMA + LEWIS PITS
SNOW GULCH FRESHWATER RESERVOIR
Post-Closure WTP Outfall
AMER
POST-CLOSURE WATER TREATMENT PLANT
Pit Lake at Different Depths¹
Waste Rock Seepage¹
UPPER WATER CONTACT POND
OPERATIONS WATER TREATMENT PLANT
RAMP
LOWER WATER CONTACT POND
Waste Rock Solids¹
ORE STOCKPILE
Tailings Reclaim Water
MATERIAL SITE
Operations WTP Outfall
Omega
OMEGA
American Creek
WASTE ROCK FACILITY
INCOMING NATURAL GAS PIPELINE
CCBO
PLANT SITE
American Creek Freshwater Diversion
SOUTH OVERBURDEN STOCKPILE
Unnamed
RECLAIM BARGE
STOCKPILES
LAYDOWN AREAS
Tailings Liquor, Tailings Solids
TAILINGS STORAGE FACILITY
ANDA
Anaconda Creek
TSF Starter Dam Pond
STOCKPILES
TSF CLOSURE POND
Tailings Seepage Collection Pond
Closure Pond at Spillway
CCBC
Crevice Creek
RUSSIA
Chukchi Sea
CANADA
Bering Sea
MAP LOCATION
Gulf of Alaska
All Mine Phases:
Compliance Monitoring Well
Monitoring/Interception Well
Surface Water (SW) Site
Other (SRS Pond, Waste Rock Seepage)
Construction and Operations Only:
Water Supply Well
Operations Water Treatment Plant
Surface Water (SW) Site
Other (Waste Rock Solids, Tailings Media, WTP Outfall)
Closure and Post-Closure Only:
Post-Closure Water Treatment Plant
Post-Closure Water Treatment Plant Outfall
Other (Pit Lake, TSF Closure Pond)
¹Location could vary.
Source: SRK (2016d, 2016e, 2016h, 2017c); Donlin Gold (2017d)
0
1
2
Miles
DONLIN GOLD
DONLIN GOLD PROJECT EIS
ALTERNATIVE 2 MINE SITE: MONITORING/SAMPLING LOCATIONS IN CONSTRUCTION, OPERATIONS, AND CLOSURE
JANUARY 2018
FIGURE 2.3-39
DEC 015507

For purposes of this decision, there are three factual components to consider regarding the project's construction and operation. They are how its construction and operation will affect its ability to meet Alaska water quality standards: 1) for mercury; 2) for temperature; and 3) to protect existing uses. The broad factual background and context for each of these considerations is separately addressed below.

1. Factual background and context regarding mercury

Because mercury is potentially toxic and accumulates in plants and fish, the distribution of mercury in the water is an important consideration.[16] Impacts to water quality from the project can result from the geochemical alteration of mined rock and its interaction with air and water, and also, by deposition from stacks and fugitive dust.[17] It has been concluded that the proposed construction and operation activities at the mine will result in additional inputs of mercury to surface water from both atmospheric and aqueous sources.[18]

But predicting changes in mercury concentrations in aquatic systems is challenging because some of the mercury that is deposited into surface waters will be transported downstream. Therefore, estimates of mercury deposition within watersheds do not necessarily directly correspond to increases in the mercury content in surface waters.[19]

Adding to the challenge in predicting changes in mercury concentrations due to mine operations is the fact that atmospheric deposition of mercury is very different from runoff inputs of mercury. Studies have shown that runoff inputs of mercury into aquatic systems in forest-dominated environments can be significant. However, it has also been shown that, in many instances, most of the mercury in wetland runoff originally came from the atmosphere.[20]

The Environmental Protection Agency's (EPA) approved aquatic life chronic criterion for mercury is 12 ng/L. The FEIS concludes that, in combination with naturally occurring mercury levels in surrounding waters, the additional inputs of mercury from the proposed mining activities "would result in additional inputs of mercury to surface water from both atmospheric and aqueous sources, which would likely cause an increase in exceedances of the 12 ng/L chronic criterion.[21]

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16 FEIS at 3.7-27, DEC 16245.
17 *Id.* at 3.7-2, DEC 16220.
18 *Id.* at 3.7-151, DEC 16369.
19 *Id.*
20 *Id.*
21 FEIS at 3.7-151, DEC 16369.

2. Factual background and context regarding temperature

Stream temperatures are determined based on heat energy per unit volume of water.[22] All factors being the same, when unit volumes of water decrease, stream temperatures will generally rise. Stream temperatures are also affected by external factors such as vegetation and riparian buffers.[23] Here, this project is likely to increase stream temperatures due to a combination of both these factors.

A fundamental component of this project is that it is going to be an open pit mine. In fact, the site will be comprised of two separate open pits.[24] The rate of extraction achieved from these two pits will be 422,000 tons per day over the mine's expected useful life of 27 years.[25] The two open pits will be adjacent to each other, approximately 2.2 miles long and 1 mile wide. They will have depths ranging between 1,653 feet and 1,850 feet.[26] Mining the ore from these two pits will require using a fleet of shovels, wheel loaders, drills, large-capacity haul trucks, and a variety of auxiliary equipment within the pits themselves.[27]

Because the mine pits will be so closely associated to both surface and groundwater sources and because they will be so deep, another key component of the project is dewatering wells. The dewatering wells are necessary to remove groundwater from the pits during pre-construction, construction, and operations. They are also necessary to stabilize pit walls and allow for safe mining conditions.[28]

Pit dewatering will affect stream temperatures by drawing down the water table, thus reducing stream water volumes causing stream temperatures to increase. In addition to the effect pit dewatering will have on stream temperatures, the project will also indirectly disturb or eliminate wetlands, riparian buffers, and upland vegetation. This will result in the loss of water storage and infiltration affecting downstream reaches, including the increase of water temperatures.[29] The FEIS indicates that:

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22 *Id.* at 3.13-98, DEC 17026.
23 *Id.* at 3.13-79, DEC 17007.
24 *Id.* at 2-11-12, DEC 15364-65.
25 *Id.*
26 FEIS at Figure 2.3-3, DEC 15368.
27 *Id.* at 2-14, DEC 15367.
28 *Id.* at 2-29, DED 15382.
29 *Id.* at 3.13-79, DEC 17007.

> Maximum recorded stream temperatures for Crooked Creek at Crevice Creek in June, July, and August are 45.8°F, 51.6°F, and 50.1°F, respectively. Under summer low flow conditions during mining operations, reductions in groundwater inputs to Crooked Creek could cause stream temperatures in reaches near the mine to be close to or above the State of Alaska's water quality temperature standard of 55.4°F for egg/fry incubation and spawning and 59.0°F for migration and rearing.[30]

3. Factual background and context regarding protection of existing uses

Alaska's antidegradation policy requires that degradation to the state's waters can only occur if "the resulting water quality will be adequate to fully protect existing uses of the water."[31] One of the important existing uses within the Crooked Creek drainage is salmon habitat.[32] Crooked Creek, including its many smaller creeks and tributaries, is characterized both as essential fish habitat and home to populations of all five species of Pacific salmon and 12 species of other resident fish. Other fish species include Dolly Varden tuna, Arctic Grayling, pike and two species of whitefish.[33] Salmon, and the other resident fish species, are dependent on a variety of aquatic habitat types and stream conditions, including flow, water quality regimes, the availability and distribution of gravel substrates and the availability of and distribution of rock and vegetative cover.[34]

The Kuskokwim River watershed, of which Crooked Creek and its tributaries are a portion, is home to one of the largest subsistence fisheries in Alaska. The Kuskokwim drainage contains approximately 4,600 households in 38 communities with more than 1,500 households engaging in subsistence fishing.[35]

One of the predicted impacts from the mine project is a reduction in streamflow in the mainstem channel of Crooked Creek.[36] As the FEIS provides, "[t]he overall anticipated direct and indirect water quality impacts on fish and aquatic habitat in Crooked Creek may be measurable or noticeable."[37] This would primarily be caused by water withdrawals from the in-pit and perimeter dewatering wells and the cone of depression that would be created.[38]

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30 FEIS 3.13-101, DEC 17029 (internal citation removed).
31 18 AAC 70.015(2)(C).
32 FEIS at 3.13-6-27, DEC 16934-55.
33 *Id.* at 30, DEC 15305.
34 *Id.* at 3.13-7-8, DEC 16935-36.
35 *Id.* at 30, DEC 15305.
36 *Id.* at 3.13-85, DEC 17013.
37 FEIS at 3.13-78, DEC 17006.
38 *Id.* at 3.13-77-78, DEC 17005-06.

Streamflow reductions would reduce water elevation, thereby decreasing the wetted stream channel surface area. This would reduce aquatic habitat available for fish.[39] Habitat losses from flow reductions can result in adverse impacts to both the availability of suitable spawning areas and the viability of eggs incubating during winter.[40] Such flow reductions would vary seasonally with the particular phase of mining operations and with the distance downstream from the mine site.[41]

Finally, the FEIS references significant differences in analysis between the FEIS and findings, as set forth above, and as contained in an analysis of the project performed pursuant to Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA).[42] That analysis found that "salmon may be nearly or completely extirpated from Crooked Creek by hydrological changes from mine development, operation, and closure."[43] The Section 810 analysis further concludes that "remaining salmon resources in the Kuskokwim River drainage would be relied upon to address any lost subsistence opportunities caused by reductions in Crooked Creek's productivity. Therefore, these impacts would not result in a significant restriction to subsistence uses."[44] But, as the FEIS points out, the above-referenced conclusion from the Section 810 analysis "does not align with the conclusions of Section 3.13 below, which states that the potential effects to Crooked Creek would be in the middle reaches, and unmeasurable or unnoticeable in the lower river tributaries of Getmuna and Bell creeks, where the majority of salmon production occurs in this drainage."[45]

As the FEIS indicates, the ANILCA Section 810 conclusion wholly ignores and overlooks the fact that, irrespective of impacts to the middle watershed from the mine, the lower watershed will be almost entirely unaffected and it is the lower watershed where the vast majority of salmon spawning occurs. As a result, and because the referenced ANILCA Section 810 conclusion is at odds with the very detailed and thorough analysis and findings from the FEIS at Section 3.13 as referenced above, it will not be further considered.

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39 *Id.* at 3.13-85, DEC 17013.
40 *Id.* at 3.13-89, DEC 17017.
41 *Id.* at 3.13-85, DEC 17013.
42 FEIS at 3.21-140, DEC 17659. Section 810 of ANILCA requires Federal agencies having jurisdiction over lands in Alaska to evaluate the potential impacts of proposed actions on subsistence uses and needs.
43 *Id.* at 3.21-140, DEC 17659 (quoting DEC 20311, App. N).
44 *Id.*
45 *Id.*

B. Procedural Background

In July 2012, Donlin applied to the U.S. Army Corps Engineers (Corps) for a permit under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act (collectively, 404 permit application).[46] The National Environmental Policy Act requires an Environmental Impact Statement (EIS) for major federal actions, like the Donlin project, that would significantly affect the quality of the human environment.[47] One purpose of an EIS is to identify potential violations of state and local laws.[48]

The Corps determined that preparation of an EIS was necessary to inform the permit decision. The Corps led the preparation of the EIS.[49] Four federal agencies, the State of Alaska, and six Alaska Native tribal councils participated as cooperating agencies during the Corps' development of the EIS.[50] The Corps issued a draft EIS for public notice and comments on November 25, 2015.[51]

For several years following Donlin's 2012 application, the Corps, other federal agencies, the State of Alaska, and six tribes studied the project at length. This process resulted in an FEIS for the Donlin project in April 2018.[52] The FEIS is several thousand pages and is based on a substantial administrative record, including detailed studies of water quality by Donlin's contractors that were reviewed by the agencies and tribes preparing the FEIS.[53] The scope of the FEIS included the full spectrum of environmental impacts and analysis for the lifespan of the project. Portions of the impacts and analysis relate to water quality, and a subset of the water quality impacts address compliance with the water quality standards at issue in this adjudication.[54]

Under Section 401 of the CWA, a permit-issuing federal agency like the Corps must also obtain certification from the state that the permitted activity will not violate state water quality standards. On June 5, 2018, Donlin requested that the Division begin its process to consider

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46 U.S. Army Corps of Engineers & U.S. Bureau of Land Management, Donlin Gold Project Joint Record of Decision and Permit Evaluation (ROD), DEC 2671.
47 42 U.S.C. § 4332(2)(C).
48 40 C.F.R. § 1506.2(d).
49 ROD at 1-2, DEC 2672.
50 *Id.*
51 *Id.*
52 FEIS, DEC 15201- 27150.
53 *Id.*
54 *Id.* at 15978-016441 (Water Quality), 16702-16815 (Wetlands), 16929-17105 (Fish and Aquatic Resources).

issuing a certificate of reasonable assurance required for the proposed 404 permit under the CWA section 401.[55] On June 13, 2018, the Division issued a public notice requesting comments on a proposed state water quality certification for the Donlin project.[56] The public comment period was to run through July 13, 2018.[57] ONC and others submitted comments in response to the notice, and on August 10, 2018, the Division issued a certificate of reasonable assurance for the project, antidegradation analysis, and a response to comments on August 10, 2018.[58] The certificate included 11 conditions.[59]

On August 13, 2018, the Corps and the U.S. Bureau of Land Management issued a joint Federal Record of Decision (ROD),[60] along with a combined CWA section 404 and Rivers and Harbors Act section 10 permit.[61] The ROD outlines the decision to select Alternative 2 as identified in the FEIS, subject to special conditions and specific mitigation. The ROD includes the Corps' determinations that impacts to water quality and chemistry are not expected to exceed regulatory limits, that the proposed project would have minor adverse effects on water quality, and that the project is not contrary to the public interest.[62] Those statements were based on the Division's certificate of reasonable assurance, issued pursuant to the Corps' regulations treating certificates from states as conclusive with respect to water quality considerations.[63]

On August 30, 2018, Earthjustice, on behalf of ONC and six other Alaska Native tribes and organizations, submitted a request for informal review of the certificate.[64] The issues raised included the three issues addressed by this adjudication: violation of water quality standards for mercury and for temperature and failure to fully protect existing uses for fish habitat due to stream dewatering. ONC and others also argued that the Division should have issued an antidegradation analysis with the certificate.[65] The request was subsequently amended.[66] The Division's Director issued a decision on the amended request on October 19, 2018, remanding

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55 Email from Donlin to DEC, DEC 78.
56 Notice of Application, DEC 1996-97.
57 *Id.* at DEC 2008–09.
58 Comments by ONC and Others, DEC 2034-39; Certificate of Reasonable Assurance, DEC 3706–10; Response to Comments, DEC 3719–31.
59 Certificate of Reasonable Assurance, DEC 3709–10.
60 Record of Decision, DEC 2659-3053.
61 Department of the Army Permit POA-1995-120, DEC 3691–97.
62 ROD at B3-6, DEC 8343, 8698.
63 ROD at B3-6, DEC 8343; *see also* 33 C.F.R. § 320.4(d).
64 Letter from Earthjustice to DEC, DEC 3101–19.
65 Request for Informal Review, DEC 2847-55.
66 Letter from Earthjustice to DEC, DEC 2639–58.

the certificate to the Division for further review and consideration based on the issues identified.[67]

The Division ultimately revised its response to comments and reissued the certificate on April 5, 2019.[68] The certificate specifically provides that "there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with the applicable provisions of Section 401 of the CWA and the Alaska Water Quality Standards, 18 AAC 70 . . . ."[69] On April 24, 2019, a second request for informal review was submitted on behalf of 11 Alaska Native tribes and organizations, including ONC, raising issues substantially like those identified in the first request.[70] The Division's Director issued a decision on the second request on May 8, 2019, once more remanding the certificate to the Division to address the issues identified.[71] The Division revised its responses to comments and affirmed the previously issued certificate on May 7, 2020. The certificate did not change as a result of the remand.[72]

On June 5, 2020, Earthjustice timely submitted a request for an adjudicatory hearing on behalf of ONC, several other Alaska Native tribes, and other organizations.[73] The Commissioner of Environmental Conservation referred the adjudicatory hearing request to the Office of Administrative Hearings.[74] The Administrative Law Judge recommended the Commissioner grant the request for adjudication only for ONC and deny participation to the other tribes and organizations because they did not submit comments on the certificate.[75] The Commissioner granted the ONC request for hearing, as recommended by the Administrative Law Judge, on July 31, 2020.[76]

Donlin is an automatic party in this adjudication as the permit applicant.[77] Calista was granted permission to file a brief in this adjudication as *amicus curiae*.[78] This matter proceeded as a hearing on the briefs and existing record pursuant to 18 AAC 15.220(e) and 2 AAC

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67 Letter from DEC to Earthjustice, DEC 3099–100.
68 Certificate of Reasonable Assurance, DEC 16-23.
69 *Id.*
70 Letter from Earthjustice to DEC, DEC 3312–28.
71 Letter from DEC to Earthjustice, DEC 3585–86.
72 Letter from DEC to Earthjustice, DEC 3590–91.
73 Request for Adjudicatory Hearing, DEC 62–77.
74 Office of Administrative Hearing Case Referral Notice (June 15, 2020).
75 Recommended Ruling on Request for Adjudicatory Hearing (July 21, 2020) (Recommended Ruling); Commissioner's Decision (July 31, 2020) (Commissioner's Decision).
76 Recommended Ruling at 12; Commissioner's Decision at 12.
77 18 AAC 15.225(b).
78 Order Granting Leave to Calista Corporation to Appear as *Amici Curiae* (Jan. 12, 2021).

64.260(a)(2) based on the parties' agreement.[79] The parties have each submitted their respective briefs, together with proposed findings and conclusions and responses thereto.[80] The matter is now ripe.

III. Discussion

A. Preliminary Issues

There are several preliminary considerations that are helpful to initially address because they help frame the discussion of the remainder of this decision. They are the standard of review to be applied in this case; the applicable law; and the documentation appropriately considered as part of this hearing on the briefs and existing record.

1. Standard of review and proof

The standard of review for the Division's decision to issue the certificate of reasonable assurance is de novo.[81] Unlike court appeals, "a deferential standard of review akin to that applied by the courts to review of administrative agency decisions does not apply at this adjudicatory level."[82] This is because the Department of Environmental Conservation's (DEC) administrative appeal regulations (18 AAC 15.195 – 18 AAC 15.920) do not incorporate the judicially-applied standards of review (e.g., deferential standard on subject implicating agency expertise; substantial evidence on questions of fact; substitution of judgement standard on questions of law). They do not require the Commissioner, as the final decisionmaker, to defer to decisions or interpretations by subordinates such as those involving issuance of the certificate here.[83]

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[79] Donlin Gold LLC's Response to Request for Adjudicatory Hearing at 7-8 (July 2, 2020); The Division's Brief Regarding Compliance With 18 AAC 15.200 in Request for Adjudicatory Hearing at 10 (July 1, 2020); Recommended Ruling at 12; Commissioner's Decision at 13.

[80] ONC's Opening Brief; Division's Response Brief; Division's Response Brief; Donlin Gold LLC's Opposition to ONC Appeal to the Commissioner (December 29, 2020) (Donlin Response Brief"); Calista Brief of Amicus Curiae (December 29, 2020) (Calista Amicus Brief); ONC's Reply Brief; ONC's Proposed Findings of Fact and Conclusions of Law (February 17, 2021) (ONC's Proposed Findings); Respondents the Division and Donlin Gold's Joint Proposed Findings of Fact and Conclusions of Law (February 17, 2021) (Joint Proposed Findings); ONC Response to the Division and Donlin's Joint Proposed Findings of Fact and Conclusions of Law (February 24, 2021) (ONC Response to Joint Proposed Findings); Respondents' Joint Objections to ONC's Proposed Findings of Fact and Conclusions of Law (February 24, 2021) (Respondents' Objection to ONC's Proposed Findings).

[81] *Cascadia Wildlands Project et al. v. Dep't of Envtl. Conservation, Div. of Spill Prevention & Response, Joint Pipeline Office*, OAH No. 07-0496-DEC at 14-15 (Sept. 19, 2011) (available at: https://aws.state.ak.us/OAH/Decision/Display?rec=1968).

[82] *Id.* at 15.

[83] *Id.* at 14. *See also, e.g., Blasting v. New Jersey Dep't of Labor & Workforce Dev.,* 2005 WL 3071509, *4-5 (N.J. Super. App. Div. 2005) (under New Jersey's APA, similar to Alaska's, deference to staff's preliminary decisions is not required in administrative appeal process; administrative appeal is not like court review, where

DEC has the primary responsibility for adopting and enforcing Alaska's water quality standards and for issuance of certificates of reasonable assurance that projects will comply with Section 401 of the CWA and the state water quality standards.[84] As previous decisions of the Commissioner of Environmental Conservation have noted, inherent in the Commissioner's role is the power to supervise the work of subordinate employees and the Divisions they work within. Absent a statutory or regulatory directive to the contrary, the Commissioner is not required to defer to such decisions, though it would be within his discretion to accord some weight to the views of subordinates if the circumstances warranted.[85] Accordingly, in this instance, de novo review is the appropriate standard because the Commissioner of DEC owes no deference to the Division and is the statutory chief executive his agency.[86]

The burden of proof in an administrative hearing is on the party who requested the hearing, ONC in this instance, and the standard of proof is preponderance of the evidence.[87] To prove a fact by a preponderance of the evidence, ONC must show that the fact more likely than not is true.[88]

2. Applicable law

The CWA directs states to adopt water quality standards for approval by the EPA.[89] These water quality standards must include numeric and narrative criteria, designated uses, and antidegradation requirements.[90] Water quality standards are specifically adopted to protect and enhance water quality and must consider existing uses.[91] For states not in compliance with

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deference is indeed required); *Baffer v. Dep't of Human Serv.,* 553 A.2d 659, 662-3 (Maine 1989) ("the Commissioner [is] the final repository of discretion;" where final administrative decisionmaker thinks he "must defer" to prior exercises of discretion, "[t]his thwarts the purpose of the hearing procedure"); *In re Service Oil Delta Fuel Co.* (Commissioner of Administration, May 26, 1998), at 4 ("the Commissioner is not obligated to defer to the interpretation advanced by [the Division of General Services]"); *In re Providence Health & Serv*., OAH No. 11-0045-DHS (Comm'r of Health & Soc. Serv. 2011) (https://aws.state.ak.us/OAH/Decision/Display?rec=1964).

84 33 U.S.C. § 1313; 40 C.F.R. § 131.4(a); EPA, 69 Fed. Reg. 63,079-80 (Oct. 29, 2004); 18 AAC 70.

85 *Cascadia Wildlands Project* at 14.

86 *Id.* at 14.

87 2 AAC 64.290(e).

88 *Id.; accord, Port of Seattle*, 90 P.3d at 671, 691 (party challenging Ecology's certification has the burden of proving by a preponderance of the evidence that the certification does not provide reasonable assurance); *Airport Communities Coalition v. Washington Dep't of Ecology, Washington Pollution Control Hearings Board*, 2002 WL 1875280 at *46; F*riends of the Earth v. Washington Dep't of Ecology, Washington Pollution Control Hearing Board*, 1988 WL 161204 at *11.

89 33 U.S.C. § 1313(a); 40 C.F.R. § 131.4(a).

90 33 U.S.C. § 1313.

91 *Id.* at § 1313(c)(2)(A).

certain priority toxic pollutants, the EPA's numeric criteria for those toxic pollutants apply.[92]

The State of Alaska has adopted such standards in 18 AAC 70, and those standards have been approved by EPA,[93] with a notable exception: Alaska's numeric criteria for mercury have not been approved, and therefore the EPA criteria apply.[94]

Alaska's water quality standards apply to all navigable waters in the state unless DEC has undertaken a process to create site-specific standards for the water.[95] DEC has not established any site-specific criteria for Crooked Creek. All waters in Alaska are protected for all specified water uses unless designated otherwise.[96] DEC has not changed any use designations in Crooked Creek.[97]

Section 401 of the CWA requires that a federal agency issuing a permit must obtain certification from the state in which the activity will be sited "that any such discharge will comply with the applicable provisions of [the Clean Water Act]."[98] The certificate at issue here was issued under the regulations in effect on August 10, 2018.[99] The process for certification is set out at 18 AAC 15.130–18 AAC 15.170. Subsequently, on July 13,2020, the EPA adopted new regulations implementing Section 401, which took effect on September 11, 2020.[100] The regulations applicable here are those that were in effect at the time the certificate was issued.[101]

After reviewing an application for certification, the state has several options for how to proceed. It may waive its right to certify, issue the certification as requested, deny the certification, or issue the certification with conditions.[102] In order to certify, the state must have "reasonable assurance" that the entire "activity" associated with the certification will not violate water quality standards.[103]

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92 40 C.F.R. § 131.36.

93 69 Fed. Reg. 63,079-80 (Oct. 29, 2004).

94 40 C.F.R. § 131.36(b) (establishing toxic pollutant criteria for states not complying with EPA requirements); 69 Fed. Reg. at 63,079-80 (approving several Alaska criteria for toxic pollutants, not including mercury); *see also* FEIS at 3.7-29, DEC 16247.

95 18 AAC 70.020(b), 70.235.

96 18 AAC 70.050, 70.230.

97 18 AAC 70.236.

98 33 U.S.C. § 1341(a)(1); see 40 C.F.R. § 121.3.

99 Letter from DEC Re. Informal Review (May 7, 2020) DEC 15.

100 85 Fed. Reg. 42,210 (July 13, 2020).

101 *E.g.,* 85 Fed. Reg. 66,288 ("The [EPA's new] Certification Rule applies prospectively to certification requests submitted after the effective date of the rule").

102 33 U.S.C. § 1341(a)(1) - (2).

103 40 C.F.R. § 121.2(a)(3) (2019); *see also* DEC 8846-83 (*PUD No. 1 of Jefferson City. v. Wash. Dep't of Ecology*, 511 U.S. 700, 712 (1994)).

The federal regulations applicable to this certification require that the state's certification include a "statement that there is reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards,"[104] and a "statement of any conditions which the certifying agency deems necessary or desirable with respect to the discharge of the activity."[105]

In issuing its certification pursuant to section 401, the Division is not required to provide absolute certainty that permittees will never violate water quality standards.[106] Instead, the Division must conclude that it has "reasonable assurance"that the permitted activity will comply with water quality standards.[107] The certification must address future events and the likelihood that those events will result in violations of water quality standards.[108] This does not mean that the states are free to certify whenever water quality violations are not absolutely certain to occur. Instead, "reasonable assurance" is described as meaning "something is reasonably certain to occur."[109]

3. Documentation appropriately considered

In this adjudicatory hearing on the briefs and existing record, the Division's record is required to contain everything the Division considered in its decision to issue a certificate of reasonable assurance for the Donlin project.[110] Extra-record material may only be considered upon a showing of good cause.[111] Good cause includes: 1) the party could not reasonably have ascertained the issues or made the information available within the time required by this chapter; or 2) the party could not have reasonably anticipated the relevance or materiality of the matter sought to be raised or the information sought to be introduced.[112]

ONC has challenged what it construes as "extra-record documents" cited in footnotes 43, 45-46, 48-50, 52, 65-68, 93-94, 106-10, 112 and 114 of the Joint Proposed Findings.[113] It argues

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104 40 C.F.R. § 121.2(a)(3) (1971).

105 40 C.F.R. § 121.2(a)(4) (1971).

106 *Miners Advocacy Council v. State, Dep't of Envtl. Conservation*, 778 P.2d 1126, 1138 (Alaska 1989); *see also Port of Seattle v. Pollution Control Hearings Bd.*, 90 P.3d at 676.

107 *Miners Advocacy*, 778 P.2d at 1138.

108 *Port of Seattle*, 90 P.3d at 676.

109 *Id.* at 600.

110 2 AAC 64.370; 18 AAC 15.237(b).

111 2 AAC 64.310; 18 AAC 15.245.

112 18 AAC 15.245.

113 ONC's Response to Joint Proposed Findings at 1: ONC Reply Brief at 18-19. As ONC asserts, the documents of concern are: 1) BGC Engineering, Inc., Donlin Gold, Donlin Creek Gold Project, Hydrometric Stations: Data and Installation Summary (June 14, 2012) (BGC 2012a); 2) BGC Engineering Inc., Donlin Gold

that the documents are admissible only if Donlin shows good cause.[114] It also contends that the documents were never filed as a proposed supplement to the existing record as required by the scheduling order in this case.[115] Donlin asserts that the documents were provided to ONC in advance of the scheduling order deadline in this case and that ONC never objected to their consideration.[116]

Without addressing whether Donlin properly sought to supplement the record with the documents here, they do appear to be documents that were contained in the FEIS record and relied upon by the FEIS, but arguably "were not considered by the Division in the 401 certification and are therefore not part of the record in this adjudication."[117] However, as ONC acknowledges, the FEIS cites to the documents dozens of times.[118] Further, ONC contends that the FEIS's citation to and reliance on the documents is not in keeping with what Donlin and/or the Division, now argue they support. As ONC asserts, "[t]he documents they cite do not contain any conclusion that Crooked Creek will meet temperature standards during construction and operation of the mine. Indeed, the FEIS relied on these very analyses to reach the opposite conclusion."[119]

In this instance, the record in this case is voluminous, containing over 27,000 pages.[120] It is reasonable that until late in this adjudicatory process, both Donlin and the Division may have assumed that any documents or studies contained in the FEIS record and repeatedly cited to and relied upon by the FEIS, would have been part of the record in this case. ONC was also on notice that the documents were repeatedly cited in the FEIS and referenced in the FEIS record. Finally, ONC was provided copies of these documents before the deadline in this case for supplementation of the record.[121]

Based on the foregoing, ONC cannot claim it will suffer prejudice from consideration of the documents and further, Donlin took reasonable steps to provide ONC notice and copies of the

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Project, Numerical Hydrogeologic Model (July 18, 2014) (BGC 2014c); and 3) Memorandum from Owl Ridge Natural Resources Consultants, Inc., "Potential effects to fish habitat from modeled changes in alluvium inflow and outflow" (Feb. 13, 2017) (Owl Ridge 2017d).

114 2 AAC 64.310; 18 AAC 15.245; ONC Reply Brief at 19.

115 ONC's Reply Brief at 19.

116 Donlin's Response Brief at 35-36, n.104.

117 ONC's Response to Joint Proposed Findings at 1; ONC's Reply Brief at 18.

118 ONC's Reply Brief at 18, n.4.

119 *Id.* at 18.

120 *See* Certification of Agency Record (August 20, 2020); DEC 1-27150.

121 Donlin's Response Brief at 35-36, n.104.

documents. Accordingly, good cause is found for consideration of the documents in this case. In doing so, the documents will not necessarily be given the meaning that Donlin and/or the Division suggest, but the documents will be considered.

B. Does Reasonable Assurance Exist for Water Quality Standards Being Met During Construction and Operation of the Donlin Project?

In ONC's challenge to the issuance of the certificate of reasonable assurance by the Division, it asserts that the Division has failed to explain or justify its issuance of the certificate despite reaching conclusions that are opposite of those contained in the FEIS.[122] The Division and Donlin contend that the record fully supports the existence of reasonable assurance that Alaska's water quality standards will not be violated by the project's activities.[123]

But before reaching these main issues, there is an important factual and legal consideration that must first be resolved. This is because it has a significant impact on the remaining analysis. That issue involves the extent to which the Division and Donlin may rely on proposed monitoring, adaptive management, project permits and mitigation measures as support for concluding that reasonable assurance exists as to mercury, temperature and the protection of existing uses.

1. Application of the Port of Seattle analysis

This case has three primary issues, namely whether reasonable assurance exists that Alaska's water quality standards for mercury, temperature compliance and protection of existing uses will be satisfied. But there is a mixed factual and legal issue common to all three and that significantly influences the ultimate determination of whether reasonable assurance exists in this case. As such, it is of primary consideration. That common issue concerns the contents of the certificate of reasonable assurance itself, including its conditions. It also concerns whether, under the circumstances of this case, the Division and Donlin may rely on monitoring and adaptive management as well as the project's regulatory permits and plans, as support for the existence of reasonable assurance.

The parties have offered very different arguments on this point. The Division and Donlin have relied heavily on considerations of monitoring and adaptive management, project permits,

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122 ONC's Opening Brief at 1; ONC's Reply Brief at 1.

123 Division's Response Brief at 4; Donlin's Response Brief at 1.

and to a lesser extent mitigation plans in asserting that reasonable assurance exists.[124] On the other hand, ONC has asserted that none of those strategies provide reasonable assurance that state water quality standards will be met.[125] Both sides do appear, however, to agree that in certain circumstances, these various strategies can serve as support for finding of reasonable assurance. Their dispute centers on whether that is appropriate under the facts of this case.

Fortunately, there is a very informative decision on these issues. Both parties have relied on it extensively. That decision is *Port of Seattle v. Pollution Control Hearings Board.*[126] Because of its importance to the holding in this case, *Port of Seattle* will be analyzed in detail. In *Port of Seattle,* it was determined that reasonable assurance existed for water quality standards being met. This was based in significant part on considerations involving conditions contained within the certificate itself, monitoring and adaptive management, and project permits. But, as will be discussed below, the facts and circumstances of this case are far different from those in *Port of Seattle*.

Specifically, and among other things, *Port of Seattle* determined that monitoring and adaptive management are properly used as contingency measures, not primary strategies: They can "mitigate . . . inherent uncertainty" after a certifying agency has determined a project is reasonably likely to comply with water quality standards.[127] In such circumstances, they may help provide reasonable assurance, but they are inappropriate responses where the evidence shows a likelihood of violations.[128] Instead, monitoring and adaptive management do not provide reasonable assurance standing alone.[129] They must be coupled with very specific and detailed requirements identified in the certificate itself, including enforcement measures.[130]

Under the circumstances present here, the Division may not rely on monitoring or adaptive management because there are no "specific enforceable requirements . . . for implementation in the event that monitoring reveals that water quality standards are not being met."[131] Unlike in *Port of Seattle,* here, neither the certificate conditions, monitoring and adaptive management, project permits, nor mitigation measures serve to support the Division's

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124 DEC Response Brief at 9-13, 29-31, 35-38, 43-44; Donlin Response Brief at 44-46, 61-66.
125 ONC's Reply Brief at 10-13, 16-17, 26.
126 90 P.3d 659 (Wash. 2004).
127 *Port of Seattle*, 90 P.3d at 678-79.
128 *Id.* at 679.
129 *Id.*
130 *Id.* at 675-79.
131 *See Port of Seattle,* 90 P.3d at 678.

finding of reasonable assurance.

a. Port of Seattle and its holdings

Port of Seattle involved the 1996 third runway expansion at Seattle-Tacoma International Airport.[132] The expansion required placing fill into area wetlands. Before the Corps was entitled to issue a permit to fill the wetlands, the project proponent was required to obtain a certificate of reasonable assurance from the State confirming that reasonable assurance existed that the project would not violate state water quality standards. The certification was issued and then appealed to the Pollution Control Hearings Board (PCHB). After a lengthy hearing, the PCHB affirmed the certification, but added 16 new conditions to the certificate it deemed as necessary for reasonable assurance to exist.[133] All of the parties appealed the decision. The Supreme Court of Washington concluded that reasonable assurance existed that the project would not violate state water quality standards. In doing so, it upheld some of the PCHB's additional conditions, but reversed others.[134]

In analyzing what occurred in *Port of Seattle,* there are some important procedural distinctions between that proceeding and the case at bar. In *Port of Seattle,* the certificate of reasonable assurance was initially appealed to the PCHB.[135] The PCHB was created by the Washington legislature as a quasi-judicial body whose members must be "qualified by experience or training in pertinent matters pertaining to the environment."[136] As such, it served as a specialized adjudicatory board. It held a 10-day hearing, admitted written direct testimony, portions of deposition testimony, and numerous exhibits, all after considering a 58,000-page record. It then issued a 139-page decision affirming the Washington Department of Ecology's (Ecology) certification but adding 16 new conditions which it deemed necessary for reasonable assurance to exist.[137] In issuing the new conditions, the court held that PCHB could do so, but only after concluding that the certification was inadequate to protect water quality.[138]

So, unlike what has occurred here as a direct review of the certificate of reasonable assurance at a supervisory level within the state agency that issued it, in *Port of Seattle,* the

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132 *Id.* at 665.
133 *Id.*
134 *Id.*
135 *Id.*
136 *Port of Seattle,* 90 P.3d at 671.
137 *Id.* at 666.
138 *Id.* at 671-72.

PCHB served as an intermediate quasi-judicial body.[139] Its members were qualified by experience or training in matters pertaining to the environment and were legally authorized to add conditions to the certificate of reasonable assurance.[140] In fact, in that case they did so by adding 16 new conditions. In analyzing whether reasonable assurance existed, the appellate court was construing the certificate as it existed after the addition of detailed conditions included and deemed necessary by the PCHB.[141]

Therefore, in *Port of Seattle,* significant reliance was placed on the conditions added to the certificate by the PCHB addressing the issues of concern.[142] The PCHB had concluded that without the addition of the 16 new conditions to the certificate, reasonable assurance would not exist. The project's opponents argued that the PCHB should have remanded the certificate to Ecology for a new evaluation of reasonable assurance rather than "repairing" the certificate with new conditions.[143] However, the court concluded that given the PCHB's statutory role, it was appropriate for it to add the conditions to the certificate to bring it into "the realm of reasonable assurance."[144]

The court also addressed whether it was appropriate to rely on future submissions, including revised studies, plans, and reports, as a condition and support for certification.[145] The project opponents argued that reasonable assurance could not possibly exist before acceptance of the revised studies, plans and reports.[146] As was determined, however, reliance on future actions or submissions is appropriate so long as the submissions meet the same reasonable assurance test. Further, the requirements for future submissions must be set out in detail in the certification. Importantly, it was also noted that "Ecology retains some enforcement authority, which it can implement if the Port fails to submit the required materials or if submissions are inadequate."[147] Ecology had "issued the certification as an order, the violation of which results in penalties described in the order" and that "failure to submit the documents can result in revocation of the order/certification."[148]

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139 *Id.* at 671.
140 *Id.* at 668, 672.
141 *Port of Seattle,* 90 P.3d at 665.
142 *Id.* at 676.
143 *Id.*
144 *Id.* at 676.
145 *Id.* at 676-77.
146 *Port of Seattle,* at 676.
147 *Id.* at 90 P.3d at 676-77.
148 *Id.* at 677.

The certification in *Port of Seattle* also relied on compliance with other project permits, including National Pollutant Discharge Elimination System (NPDES) permits.[149] The PCHB had held that it was reasonable to rely on the Port's NPDES permit, and future revisions, in finding reasonable assurance. The project opponents argued that allowing future NPDES stormwater requirements to supersede the certification requirements could create a loophole through which compliance with water quality standards could be avoided.[150] The court held that because both permits shared a common purpose – compliance with state water quality standards – applying the two in a nonduplicative and complimentary manner was reasonable.[151]

Finally, in finding that reasonable assurance existed, the court addressed Ecology's reliance on monitoring and adaptive management.[152] It noted that "*the certification requires"* ongoing monitoring of various aspects of the project, including wetland mitigation, surface and groundwater contamination, fill criteria and low flow mitigation.[153] As was indicated: "[w]here the required monitoring reveals that water quality standards are being violated, contingency plans shall be implemented to bring the project back into compliance."[154] It was also noted that specific conditions (12-13) were added within the certification to eliminate future exceedances.[155]

As the court concluded, monitoring and adaptive management are fundamental elements of reasonable assurance.

> Because a finding of 'reasonable assurance' is predictive in nature, Ecology could not be absolutely certain when it issued the § 401 certification that the project as currently planned would comply with water quality standards. Monitoring and adaptive management provide a mechanism through which Ecology can mitigate that inherent uncertainty. Significantly, if Ecology perceives that adaptive management is being used to delay compliance with water quality standards, it can and must invoke *the enforcement mechanisms contained within the certification*.[156]

The court also cited favorably to the PCHB's findings and order concerning monitoring and

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149 *Port of Seattle.* at 677-78.
150 *Id.* at 677.
151 *Id.* at 677-78.
152 *Id.* 90 P.3d at 678-79.
153 *Id.* at 678 (emphasis added).
154 *Port of Seattle* at 678.
155 *Id.*
156 *Id.* at 679.

adaptive management.[157] Specifically, the PCHB concluded that the certification could rely upon adaptive management for reasonable assurance "so long as requirements are set forth with specificity, and the future corrective action and outcome are reasonably certain to occur. Specific enforceable requirements must be contained in the § 401 certification for implementation in the event that monitoring reveals that water quality standards are not being met."[158]

Here, regarding the Division's reliance on monitoring and adaptive management, project permits, and mitigation, the facts of this case are in no way analogous to *Port of Seattle*. While the two cases are similar in that in both, the state certifying agency has attempted to rely heavily on monitoring and adaptive management and project permits as a basis for finding reasonable assurance, that is where the similarities end.

b. Port of Seattle's application to these facts

One of the biggest distinctions between the facts present here and those found in *Port of Seattle* is regarding the certificates themselves. In *Port of Seattle,* there were numerous requirements within the certificate which are completely missing here. They include:

1. the specifics of future submissions, monitoring, and adaptive management set out in the certificate *in detail*;
2. specific conditions that will eliminate future exceedances;
3. requirements that where ongoing monitoring reveals that water quality standards are being violated, contingency plans will be implemented to bring the project back into compliance; and
4. the retention of enforcement authority by the governing state agency, including potential revocation of the certificate itself, which can be implemented if the project proponent fails to do what is required.[159]

Here, the certificate of reasonable assurance contains no such similar provisions.[160] While the certificate at issue contains conditions, these conditions do not remotely address the topics at hand. Instead, they address matters such as the accidental discharge of petroleum products, the use of spill response equipment, the potential need to obtain an Alaska Pollutant Discharge Elimination System (APDES) permit, restrictions on operating equipment below the ordinary

157 *Id.,* 90 P.3d at 679.
158 *Id.* at 678.
159 *Id.* at 676-79 (emphasis added).
160 Certificate of Reasonable Assurance, DEC 3706-10.

high-water mark, etc.[161]

This certificate does not provide specific details on future submissions, monitoring, and adaptive management. It also does not address the details and conditions required to avoid future exceedances, particularly of the issues being considered in this appeal. It fails to address the details of contingency plans to bring the project back into compliance when monitoring reveals violations of water quality standards. It also omits any discussion of enforcement or enforcement authority, including the potential revocation of the certificate itself if the project proponents fail to do what is required. Without these requirements and conditions being contained in the certificate itself, the Division cannot rely on monitoring and adaptive management as a basis for finding reasonable assurance.

Here, the proposed monitoring and adaptive management relied on by the Division and Donlin are designed to gather information and identify water quality problems.[162] However, they do not contain the actual remedial measures needed to establish reasonable assurance as required by *Port of Seattle*.[163] Notably, there has been a failure to identify a single remedial measure that might correct the violations foreseen by the FEIS.[164]

In addition to the stark contrast in the content of the certificates themselves, another distinction between this case and *Port of Seattle* is the attempted reliance on regulatory permits and plans. The Division and Donlin contend that the project will be subject to many such permits and plans. As they have referenced, these monitoring plans and permits and are intended to address the water quality standards at issue.[165] The Division and Donlin have also asserted that the plans and permits will allow the monitoring of changes and the ability to take corrective measures. As to mercury, these include:[166]

- A Waste Management Permit (WMP), incorporating by reference Donlin's Integrated Waste Management Monitoring Plan (IWMMP).[167] The monitoring plan includes operational surface water quality monitoring at two locations in the project area where mercury deposition is predicted to be the highest.[168] Based on

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161 *Id.*
162 *Infra* at 29-32.
163 *Port of Seattle*, 90 P.3d at 678-79.
164 *See generally* ONC's Reply Brief at 10-13.
165 DEC Response Brief at 9-13, 29-31, 35-38, 43-44; Donlin Response Brief at 32-33, 44-46, 61-66.
166 *See generally* DEC Response Brief at 9-13, 29-31; Donlin Response Brief at 61-66.
167 WMPermit at 12, DEC 6936; IWMMP, DEC 6523-611.
168 Monitoring Plan at 2-4, DEC 6534 (describing surface water sampling locations).

the plan, Donlin is required to immediately report to DEC any exceedances above Alaska water quality standards and implement, wherever necessary, "a plan for corrective actions to prevent adverse environmental impacts and avoid future exceedances."[169]

- Two Alaska Pollutant Discharge Elimination System (APDES) permits. One is a multi-sector general permit authorization that addresses stormwater runoff. A second, individual Wastewater Treatment Permit addresses discharges from the wastewater treatment plant. Under the permits, all discharges from the project must comply with Alaska water quality standards.[170]
- Donlin's Aquatic Resource Monitoring Plan (ARMP) includes water quantity and quality monitoring throughout the Crooked Creek watershed to assess among other things, whether pollutants including mercury, are causing adverse effects on aquatic life in the watershed.[171] Included within the ARMP is implementation of a fish metals analysis.[172] Specifically, fish will be sampled for the presence of mercury. Based on the results, Donlin and the regulatory agencies will implement an adaptive management[173] analysis to determine whether modifications are needed to project activities to ensure ongoing compliance with water quality standards.[174] The ARMP also requires that Donlin submit an annual monitoring report to the Alaska Department of Fish and Game.[175] By doing so, Donlin intends to use adaptive management by using the monitoring data to modify planned actions in response to observed changes in baseline conditions.[176]
- An Air Quality Control Construction Permit, issued by DEC's Division of Air Quality also addresses mercury.[177] To minimize potential point source emissions of mercury, the permit requires installation and proper operation of stack emission

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169 *See* FEIS at 3.7-167, DEC 16385 ("effects from all project-related discharges to Crooked Creek would be treated to meet the most stringent AWQC prior to discharge."). Response to Comments at 27-28, DEC 51-52.
170 APDES Permit at 9-11, DEC 1674-76.
171 ARMP at 2-1-3, DEC 6621-23.
172 DEC Response to Comments for Donlin Gold Mine at 20, DEC 43.
173 Monitoring and the implementation of contingency plans with regard to a project are referred to as "adaptive management." *Port of Seattle v. Pollution Control Hearings Bd.*, 90 P.3d 659, 678 (Wash. 2004).
174 ARMP at 4-1-2, DEC 5020-21.
175 ARMP at 3-2, DEC 6647.
176 *Id.* at 4-1, DEC 6648.
177 AQCC Permit, DEC 7823–921.

controls designed for the capture and removal of mercury from the exhaust stacks of gold ore and gold concentrate processing sources (autoclaves, carbon regeneration kilns, electrowinning cells, mercury retort, and gold induction furnace).[178] These mercury control systems are required under the Clean Air Act and are designed to reduce mercury emissions to less than 25 percent of the emissions standard in the Act. Additionally, the permit also requires implementation of Donlin's proposed Fugitive Dust Control Plan, which will limit potential releases of mercury from all fugitive emission sources at the Project site, including the Tailings Storage Facility.[179]

- Installation of controls specifically designed to capture and remove mercury from the exhaust stacks of gold ore and gold concentrate processing sources. Such sources would include autoclaves, carbon regeneration kilns, electrowinning cells, mercury retorts and gold induction furnaces.[180] The controls, including condensers, venturi scrubbers, dust collectors and carbon filters, would remove both particulate and gaseous forms of mercury from the exhaust of each process.[181]

As to the issue of stream temperatures, these include:[182]

- Donlin's IWMMP, incorporated into the WMP, requires it to monitor surface water and groundwater near the project site to assure compliance with water quality standards.[183] Water temperature is one of the measured parameters.[184] Where there is an exceedance or noncompliance with a permit requirement, Donlin is required to report to and implement corrective action under DEC oversight.[185]
- The ARMP requires Donlin to conduct physical stream and biological monitoring of Crooked Creek that includes monitoring of streamflow changes due to open pit dewatering; shallow groundwater monitoring (which includes an evaluation of the

178 FEIS at 2-23–26, DEC 15376–79.
179 AQCC Permit, Section 14, DEC 7911–19.
180 FEIS at 2-23-24, DEC 15376-79.
181 40 C.F.R. 63, Subpart EEEEEEE.
182 *See generally* DEC Response Brief at 9-13, 42-44; Donlin Response Brief at 44-46.
183 WMP at 12, DEC 6936; IWMMP at 2-4, DEC 6534.
184 IWMMP at 1-24, DEC 6576.
185 ARMP at 2-17, DEC 6637.

effects of pumping and open pit dewatering); winter habitat freeze-down monitoring, including temperature measurement and evaluation of the viability of fish spawning sites; and surface water quality monitoring, with temperature being one of the measured parameters.[186]

As to the protection of existing uses, these include:[187]

- The ARMP requires Donlin to conduct year around physical streamflow monitoring to determine potential effects on Crooked Creek; to conduct shallow groundwater monitoring to quantify potential Project-related changes in streamflow under both summer and winter flow conditions; to conduct winter habitat freeze-down monitoring to, in part, determine the viability of spawning sites within Crooked Creek; and to conduct watershed-level physical habitat mapping and surveys to track potential changes in aquatic habitat.[188] The ARMP also requires extensive salmon and salmon spawning and macroinvertebrate and periphyton surveys throughout the Cooked Creek watershed to allow assessment of how flow changes could be affecting salmon use at the watershed level.[189] Under the ARMP, adaptive management is required if changes from baseline conditions are observed.[190]

Therefore, as reflected above, Donlin will be subject to many permits designed and intended to protect the environment and mitigate impacts from the project's construction and operation. However, what is missing is a nexus between the permits, the certificate of reasonable assurance, and the ability to address and remedy those issues if and when exceedances occur. This strong nexus between detailed conditions contained and referenced in the certificate itself and the remedies that could be invoked if standards are exceeded, is exactly what existed in *Port of Seattle*. It is also precisely what is missing here regarding the proposed monitoring and adaptive management strategies suggested and relied upon by the Division and Donlin.[191]

As discussed above, the Division's certificate contains no such requirements whatsoever

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186 *Id.* at 2-17-23, 2-6-7, DEC 6637–43, 6626–27.
187 *See generally* DEC Response Brief at 9-13, 35-38; Donlin Response Brief at 32-33.
188 *Id.* at 2-17-25, DEC 6637–45.
189 *Id.* at 2-5, 2-14, DEC 6625, 6634.
190 *Id.* at 4-1-2, DEC 006648–49.
191 *Port of Seattle*, 90 P.3d at 677-79.

for monitoring, compliance, adaptive management, or contingency plans.[192] Without the inclusion of these items, DEC has no mechanism to enforce any monitoring requirements or to require any adaptive management, as relates to the certificate's issuance. This is true whether the permits and monitoring plans themselves may arguably contain enforcement mechanisms. Without this detailed information and specific requirements being included in the certificate of reasonable assurance itself, there is far too great a risk for the proposed monitoring and adaptive management to simply become hollow promises. The certificate must reference the specifics of the monitoring and contingency plans and how they intend to avoid exceedances. It must also provide specifics of what will occur if exceedances take place, including the potential for the ultimate enforcement remedy of certificate revocation. Without this, all the promises for monitoring and adaptive management become meaningless.

Further, in *Port of Seattle* it was held that because the NPDES permit and the certificate shared a similar purpose - compliance with state water quality standards - applying the two in a non-duplicative and complimentary manner was reasonable.[193] Here, however, not only are the certificates dissimilar regarding the inclusion of strong enforcement language,[194] but additionally, the permits themselves are also dissimilar.

Here, in many cases there is not a close causal link between the monitoring/permit being suggested as support for reasonable assurance and the issue it is argued to support. For instance, as to mercury, the FEIS concluded that an increase in the frequency and magnitude of violations of the mercury standard would occur, regardless of the controls in the CWA Section 402 permits, waste management permit, and Clean Air Act permit.[195] The FEIS assumed that DEC would issue a point-source discharge permit that required compliance with water quality standards.[196] Despite this fact, the FEIS found that mercury violations were likely, because exceedances would result not only from those point-source discharges covered by the APDES permit, but also from a combination of aqueous and atmospheric sources.[197]

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192 *See* Reissued certificate of Reasonable Assurance at 1-6, DEC 3711-18.

193 *Port of Seattle*, 90 P.3d at 677-78.

194 *Compare id.* at 676-79, *with* Certificate of Reasonable Assurance, DEC 3706-10.

195 FEIS at Table 3.7-42, DEC 16370; *id.* at 3.7-151, 3.7-191, 5-12, DEC 16369, 16409-10; 18268; *see also id.* at FEIS 5-7-8, DEC 18263-74 (listing all design features, including permit requirements, the FEIS considered in its analysis).

196 *Id.* at 3.7-144, 3.7-148, DEC 16362, 16366.

197 *Id.* at 3.7-151-52, DEC 16369-70; *see also* Response to Comments at 18, DEC 1718-19 (explaining mercury deposition from non-point source activities is outside the scope of an APDES permit).

Similarly, the FEIS assumed that Donlin would get all needed air permits and comply with applicable air quality standards.[198] While there are standards for mercury emissions to the atmosphere, the FEIS notes that "[t]here are no standards or guidelines for Hg deposition,"[199] which would protect water bodies from non-point discharges resulting from those airborne emissions. The FEIS assumed the application of design features, permit conditions, and best management practices— including state-of-the-art mercury abatement systems and dust control measures—would mitigate impacts.[200] Despite the requirements of air and water permits and application of significant mitigation measures, the FEIS found it was likely that the project would cause an increase in the frequency and magnitude of violations of the water quality standards for mercury.[201]

Another source of monitoring requirement identified by the Division and Donlin concerning mercury, temperature and protection of existing uses is the ARMP. But, the purpose of that plan is only "to collect information" to monitor and assess conditions.[202] It does not contain response measures or any actual requirement to meet water quality standards.[203] Moreover, the plan is implemented almost entirely by the Alaska Department of Fish and Game and Department of Natural Resources and grants no authority to DEC beyond what is required in in the APDES and WMP.[204] Accordingly, none of the proposed monitoring will avoid exceedances of State water quality standards. Further, no one will even begin to "design a solution" to any such exceedances until the project has been implemented and monitoring has demonstrated the violations.[205] This is very dissimilar to the shared purpose of "compliance with state water quality standards" finding in *Port of Seattle*.[206] Here, as indicated, none of the proposed monitoring or as required pursuant to the project's APDES or WMP will avoid more mercury being added to the watershed, temperatures being exceeded, or existing uses being impacted. Nor will the monitoring or permits implement an immediate solution to any such exceedance or lack of protection of existing uses.

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198 *Id.* at 3.8-3, 3.8-10, 3.8-75, DEC 16444, 16451, 16516.
199 FEIS at 3.13-17, DEC 16495,
200 *Id.* at 3.8-75, DEC 16516.
201 *Id.* at 3.7-151-52, 3.7-192, 5-12, DEC 16369-70, 16410, 18268.
202 ARMP at 1-1, DEC 6617.
203 *See* ARMP at 1-185, DEC 006612-865.
204 *See* Response to Comments at 9, DEC 003763 (explaining the plan is developed under permit provisions administered by those two agencies).
205 Division Response Brief at 12.
206 *Port of Seattle*, 90 P.3d at 677-78.

As to temperature specifically, the individual APDES permit only covers particular point source discharges, and the general APDES permit authorization only covers storm water discharges.[207] The temperature violations described in the FEIS do not result from any point source or storm water discharges covered by the APDES permits.[208] Rather, they are predicted to result from lower water levels from dewatering causing streams to reach higher temperatures.[209] Treated discharges from pit dewatering might very well remain under Alaska water quality standards.[210] Therefore, the APDES permits are beside the point with respect to addressing the FEIS's conclusion that dewatering and reduced groundwater inflow may cause violations of the temperature standard.[211] Indeed, the Division has acknowledged that the scope of ADPES permitting does not include protecting existing uses for fish habitat when the threat is a result of any non- point discharge.[212]

The project permits in place do at least require ongoing monitoring of temperature. However, as with mercury and protection of existing uses, the Division's certificate contains no requirement for compliance with monitoring or adaptive management regarding temperature.[213] The certificate fails to detail the specifics of future submissions, monitoring, and adaptive management. It also fails to address how future exceedance will be eliminated, it fails to reference the details of a contingency plan that will be implemented if standards are exceeded, and it fails to address a means of enforcement.

The primary focus above, and by the parties with regard to further support or lack thereof for reasonable assurance, has been on the topics of monitoring, adaptive management and project permits.[214] To a much lesser extent, the parties have also addressed the role mitigation has played regarding the reasonable assurance analysis. Their discussion of the mitigation issue, however, is somewhat confused.[215]

The Corps permit includes a Compensatory Mitigation Plan, which is a requirement of federal regulations intended to offset losses of wetlands by replacing or providing substitute

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207 *See* Revised Antidegradation Analysis at 5, DEC 5.
208 Response to Comments at 13, DEC 1718.
209 FEIS at 3.13-112, DEC 17040.
210 *Id.* at 3.7-145, DEC 16363.
211 *Id.* at 3.13-112, DEC 17040.
212 *Id.* at Response to Comments at 14, DEC 1719 (stating concerns relating to mercury deposition are outside the scope of APDES).
213 *See* Reissued certificate of Reasonable Assurance at 1-6, DEC 3711-18.
214 DEC Response Brief at 9-13, 29-31, 35-38, 43-44; Donlin Response Brief at 32-33, 44-46, 61-66.
215 *See* Division's Response Brief at 29, n.98; ONC Reply Brief at 10, n.2.

resources in other areas.[216] In issuing the certificate, the Division cited the Compensatory Mitigation Plan to support its findings of reasonable assurance of compliance with all three water quality standards at issue in this adjudication: mercury, temperature, and protection of existing uses.[217] However, in its brief in this adjudication, the Division disclaimed any reliance on the Compensatory Mitigation Plan to support the certificate.[218] Honoring this disclaimer, this ruling disregards the Division's prior reliance on the Compensatory Mitigation Plan. The issue of mitigation will not be further analyzed.

For these reasons and under the facts present here, the Division cannot rely on the certificate's conditions, monitoring and adaptive management, or project permits as support for reasonable assurance.

2. Reasonable assurance does not exist that construction and operation of the Donlin project will comply with Alaska's water quality standards for mercury.

The challenge concerning whether reasonable assurance exists for mercury is the manner the water quality standard was applied. The Division and Donlin have provided a variety of arguments supporting their contentions that Alaska's water quality standard for mercury will be met.[219] These include a discussion by the Division regarding background mercury levels, and the project's effects on mercury, and reliance on monitoring and adaptive management.[220] As will be addressed in detail, however, in this instance the Division has relied on measurements that collapse the four-day chronic standard for mercury into a long-term stream-wide average. Doing so contravenes the CWA and Alaska's water quality standards.

In analyzing the mercury issue as well as the assertions by the Division and Donlin that reasonable assurance exists, it is helpful to address several key considerations. These are: a) application of the mercury standard in the context of these facts; and b) the Division and Donlin's remaining arguments, including that development projects will be precluded anytime a project is considered in an area where baseline exceedances of a water quality standard exist no matter how small. When each of these considerations is weighed and analyzed, it is determined that there is a lack of reasonable assurance that the project will comply with Alaska's water

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216 *See* FEIS at 5-41, DEC 18297.
217 *Id.* at Response to Comments at 9-10, 16-17, 20, 34-35, DEC 3763-64, 3770-71, 3774, 3788-89.
218 Division Response Brief at 29 n.98.
219 Division Response Brief at 22-31; Donlin Response Brief at 46-72.
220 *Id.*

quality standards for mercury.

a. Application of the mercury standard in the context of these facts

The applicable chronic criterion for mercury in Alaska is 12 ng/L.[221] This is because the EPA has declined to act on Alaska's proposed higher standard and the 12 ng/L standard remains in effect.[222] When the standard is analyzed here, it becomes clear that it has not been properly applied.

As noted, proposed construction and operation activities at the mine will result in additional inputs of mercury to surface water from both atmospheric and aqueous sources.[223] Based on conservative estimates, the additional inputs of mercury from the proposed mining activities would likely cause an increase in exceedances of the 12ng/L chronic criterion.[224] Specifically, the FEIS provides that "[w]ith the project changes applied to current concentrations, the resulting surface water concentrations of total mercury would, in some instances, exceed the applicable chronic criterion of 12 ng/L."[225] Not only did the FEIS reach this conclusion, but as will be explained, it did so despite the fact that the mercury standard was not properly applied. In other words, the conclusion that the project will cause *an increase in exceedances* of the chronic criterion for mercury was reached by the erroneous use of a baseline measure derived from the long-term average of mercury readings over many sites.[226]

Because the primary factors that affect existing water quality in the vicinity of the mine site emanate from interactions of the water with mineralized areas, as well as from historic placer mining activities, the water quality sampling sites were divided into three categories. These categories were based on the location of each relative to the mineralized area, and for the potential of placer mining operations to affect water quality at each site.[227] Sampling locations in Category 1 include waters draining undisturbed areas and areas outside of the mineralized area of interest (background sites). Category 2 sampling locations are in waters draining areas of defined mineralized zones with no placer mining activities (background sites). Sampling locations in Category 3 include waters draining areas of both placer mining and the mineralized

221 40 C.F.R. § 131.36(b)(1) (establishing 12 ng/L chronic criterion in row "8 Mercury" and column B2).
222 *Id.*
223 *Supra* at 11.
224 FEIS at 3.7-151-52, DEC 16369-70.
225 *Id.* at 3.7-152, DEC 13670.
226 *Id.* at 3.7-151-52, DEC 16369-70.
227 FEIS at 3.7-9 - 10, DEC 16227-28.

zone of the proposed Donlin project (baseline sites).[228]

There appear to have been 33 monitoring sites used regarding the mercury monitoring across all three categories.[229] Mercury was sampled from the locations within these categories during a 10-year period from June 2005 to June 2015.[230] Across all three categories, mercury was detected in 545 of 564 water samples taken. In Category 3 sampling locations draining the proposed mine site and placer mining areas, concentrations ranged from 0.518 to 260 ng/L, with a mean of 7.81.[231] This is a significant variation with the highest concentration of mercury more than 500 times the lowest. Of the 545 samples in which mercury was detected across all sampling categories, it exceeded the chronic criterion in 80, or 14 percent, of those samples. Some exceeded the criterion by more than ten times. The highest concentrations were found in samples taken from tributaries around the mine site such as American, Crevice, and Eagle creeks, as well as the main stem of Crooked Creek [232] This suggests that naturally elevated concentrations of mercury are found sporadically in surface water in the vicinity of the mine site and that occasional spikes in these readings may be due to precipitation and localized rock weathering conditions.[233]

Below is a breakdown of the sampling results for mercury, by sampling category:[234]

	Category 1 Locations (background sites outside of mineralized area)	Category 2 Locations (background sites in mineralized area)	Category 3 Locations (baseline sites draining proposed mine and placer mining areas)
frequency of detection within samples taken	226/237 (95 percent)	102/105 (97 percent)	217/222 (98 percent)
range of detected concentrations	0.54 - 170 ng/L	0.561 - 46.7 ng/L	0.518 – 260 ng/L
arithmetic mean/average[235] concentration	8.11 ng/L	6.11 ng/L	8.31 ng/L

228 *Id.*
229 FEIS at 3.7-11-13, DEC 16229-31.
230 *Id.* at 3.7-9, DEC 16227.
231 *Id.* at 3.7-29, DEC 16247.
232 *Id.* at 3.7-29, 3.7-150-51, DEC 16247, 16368-69.
233 FEIS at 3.7-29, DEC 16247.
234 *Id.* at 3.7-11, 3.7-14, 3.7-17, 3.7-20, DEC 16229, 16232, 16235, 16238.
235 Inexplicably, the FEIS appears to use the arithmetic "mean" concentration for the table displaying Category 1 locations, and the arithmetic "average" concentration for Category 2 and 3 locations. *Id.*

The FEIS concludes that, based on conservative estimates, the additional inputs of mercury from the proposed mining activities would likely cause an increase in exceedances of the 12ng/L chronic criterion.[236] Specifically, it estimated there will be a 40 percent increase in mercury deposition rates and surface water mercury levels due to the mine's operation.[237] Not only will there be an average 40 percent increase in mercury levels, but further, the 95th percentile upper confidence limit will also rise by 40 percent. This equates to an increase in not only the number of exceedances, but also their magnitude.[238] Concentrations of mercury near the mine site will be highest and the effects will decrease to negligible once you extend 15 to 20 miles from the site.

The findings in the FEIS were made in reliance on numerous studies performed by Donlin's contractors.[239] The FEIS concluded that an increase in the frequency and magnitude of violations of the mercury standard would occur, regardless of the controls in the CWA Section 402 permits, WMP, and Clean Air Act permit.[240] In arguing that reasonable assurance exists that the mercury standard will not be exceeded, the Division acknowledges that that there is a potential to cause an increase in the *average* concentration of total mercury in the surface water to 11.4 ng/L. However, it notes that this level is *just below* the EPA-approved aquatic life chronic criterion.[241] Even at the mine site, it is referenced that total concentrations are expected to be close to or below the water quality criteria, *as estimated using long-term averages* for predicted concentration levels.[242] Donlin has also placed significant reliance on these points.[243] The problem is that the analysis relied on by the Division and Donlin is directly at odds with the standard criterion for chronic mercury.

As noted, the applicable chronic criterion for mercury is 12 ng/L.[244] However, long-term

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236 FEIS at 3.7-151-52, DEC 16369-70.

237 *Id.* at 3.7-151, DEC 16369; *id.* at 3.7-160, DEC 16378.

238 *Id.* at 3.7-152, DEC 16370 (Tbl. 3.7-42).

239 FEIS at 3.7-150-60, DEC 16368-78; *see also id.* at 9-17, 9-50, 9-55, 9-121, 9-124, DEC 18353, 18386, 18391, 18457, 18460 (providing full reference information for each study).

240 *Id.* at Table 3.7-42, DEC 16370; *id.* at 3.7-151, 3.7-191-92, 5-12, DEC 16369, 16409-10, 18268. *See also id.* at 5-7-18, DEC 18263-74 (listing all design features, including permit requirements, the FEIS considered in its analysis).

241 Response to Comments at 26, DEC 3780 n.34; *id.* at 27, DEC 3781 (emphasis added).

242 *Id.* at 3.7-160, DEC 16378 (emphasis added).

243 Donlin Response Brief at 47 ("[t]he Division evaluated and accepted the analysis presented in the EIS, predicting that during Project operations, *average* total mercury in surface waters close to the Project site will be below the 12 ng/L limit set by Alaska's water quality standards.") (emphasis added and citation omitted).

244 40 C.F.R. § 131.36(b)(1) (establishing 12 ng/L chronic criterion in row "8 Mercury" and column B2).

average concentrations are not relevant to a determination of whether there will be a violation of the chronic mercury standard. The chronic criterion is a measurement over four days and represents the level of mercury that aquatic life can be exposed to over that time period without experiencing long-term effects.[245]

The averaging of results over a longer period or by using many data points,[246] both of which occurred here, obscures a significant number of substantial violations. The court in *United States v. Allegheny Ludlum Corp.*,[247] held that averaging pollutant loads over time impermissibly downplays the harm from high concentration violations. The court stated, "it is analogous to arguing that consuming five gallons of alcohol in a single day is not harmful because on average the daily consumption over seven years is within acceptable limits."[248]

Some water quality standards are acute concentration maximums and others are chronic continuous maximums, consistent with EPA requirements.[249] Similarly, in NPDES permits, daily maximums and daily averages are included as discrete requirements.[250] Collapsing the four-day chronic standard for mercury into a long-term stream-wide average standard, as was done here, contravenes the CWA and Alaska's water quality standards.

Another flaw of the approach taken by the Division and Donlin is that it appears to use a baseline for predicting potential increases in mercury levels in waters around the mine, an average of samples from both within and outside of the area to be impacted by the project.[251] The baseline figure used by the Division for calculating potential increases to mercury levels from mine operations is 7.81 ng/L.[252] That figure appears to be an average of 564 samples, from all three categories.[253] However, it is only the monitoring sites within Category 3 which include

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245 40 C.F.R. § 131.36(b)(1), n.d.; see EPA, Water Quality Standards Handbook, Chapter 3: Water Quality Criteria at 15 (2017), https://www.epa.gov/sites/production/files/2014- 10/documents/handbook-chapter3.pdf (Handbook, Chapter 3).

246 There appear to have been roughly 33 monitoring sites used with regard to the monitoring applicable to mercury. FEIS at 3.7-11-13, DEC 16229-31.

247 187 F. Supp. 2d 426, 433 (W.D. Pa. 2002), *aff'd in part, vacated in part on other grounds*, 366 F.3d 164 (3d Cir. 2004),

248 *Id.*

249 *See, e.g.* DEC 008718 (Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances) (establishing acute and chronic criteria for mercury); *see also* Handbook, Chapter 3 at 15 (explaining differences in acute and chronic criteria).

250 *See Pub. Interest Research Grp. of New Jersey, Inc. v. Powell Duffryn Terminals Inc.*, 913 F.2d 64, 78 (3d Cir. 1990) (holding daily averages and maximums are separate requirements and violators can be penalized separately for violations of each).

251 FEIS at 3.7-11-13, DEC 16229-31.

252 *Id.* at 3.7-150-152, DEC 16368-70.

253 *Id.*; Response to Comments at 26, DEC 3780 n.34; *id.* at 27, DEC 3781 (emphasis added).

waters *potentially impacted* by the project.[254]

Further, even if the above-cited authority leaves unclear whether the Division's baseline of 7.81 ng/L is based on an average from all Category 1-3 locations or whether it is simply based on Category 3 locations alone, the conclusion that the analysis is flawed does not change. This is because as seen, even the Category 3 locations include areas that will see little if any impacts from the mine project.[255] Instead, the Category 3 waters include both waters draining the mineralized zone of the project, *and also,* simply areas of historic placer mining.[256] In other words, it includes areas outside the project and areas that are unlikely to be impacted by the project at all. Inclusion of these areas is inappropriate, because it has the potential of diluting the analysis of likely impacts from the project itself. Which, as will be discussed below, is contrary to the intent and purpose of the § 401 CWA analysis.

Importantly, even if the baseline beginning point used by the Division of 7.81 ng/L only includes measurements from sites likely to be impacted by the mine, it is still an inappropriate beginning point. This is because it is undeniably an average from many locations, whether those locations are from across all Category 1-3 monitoring locations, or simply from all locations within Category 3 itself.[257] As noted, the samples reflect a very high degree of variability in mercury levels in the vicinity of the mine site.[258] Because of this, the Division may not diminish the impact from high samples by averaging them with low samples. The applicable standard simply provides no support for doing so.[259]

While naturally occurring mercury levels are already high within the Crooked Creek drainage, such elevated background levels do not excuse the Division from the requirement of certifying that the standard will be met.[260] Enforcement of water quality standards in water bodies with naturally high levels of a contaminant does not necessarily preclude development activity. Site-specific criteria, mixing zones, natural condition-based water quality standards, and variances allow the Division to address site-specific issues such as naturally high background levels.[261] For example, if existing uses could be fully protected in Crooked Creek

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254 *Id.* at 3.7-9 - 10, DEC 16227-28. *See also,* FEIS at 3.7-11-13, DEC 16229-31.
255 FEIS at 3.7-11-13, DEC 16229-31.
256 *Id.* at 3.7-9 - 10, DEC 16227-28.
257 *Id.* at 3.7-150-152, DEC 16368-70.
258 *Id.* at 3.7-149-158, DEC 16368, 16377.
259 40 C.F.R. § 131.36(b)(1) (establishing 12 ng/L chronic criterion in row "8 Mercury" and column B2).
260 18 AAC 70.010(d).
261 *See* 18 AAC 70.010(d); 18 AAC 70.200; 18 AAC 70.235; 18 AAC 70.240.

with a relaxed standard for mercury, the Division may be able to adopt site-specific criteria for the waterbody.[262] Similarly, the water quality standards specifically include a provision for adopting natural condition-based water quality standards in circumstances, arguably relevant here, where "the department determines that the natural condition of a water of the state is of lower quality than the water quality criteria set out in 18 AAC 70.020(b)."[263]

Based on all the above, in analyzing the potential impacts from the undeniable increase in mercury in waters in and around the mine, the Division has diluted that potential increase by considering the average of water samples from many locations, including those outside of the area potentially impacted.

While ONC has the burden of proof in this case, it must simply prove, by a preponderance of the evidence, that the Division failed to provide reasonable assurance that construction and operation of the project will comply with Alaska's water quality standards for mercury. Here, in issuing the certificate, the Division was required to establish the project will not exceed the applicable chronic criterion for mercury in Alaska of 12 ng/L.[264] However, because the chronic criterion is a measurement over four days and because the Division has relied upon long-term averaged measurements, from many points, occurring over 10 years, it has not properly analyzed the issue. As a result, the Division applied the wrong standard, and there was simply no proper basis for its determination.

b. The Division and Donlin's remaining arguments

A potentially appealing argument by Donlin is its suggestion that acceptance of ONC's position in this case regarding mercury would, in many instances, squelch development. This would occur whenever there are baseline exceedances of a water quality standard anywhere within a waterbody, no matter how small. When that occurs, Donlin suggests there could be no new activity that might raise the level of contaminants.[265] But, such a claim is simply inaccurate.

Instead, as ONC has made clear, there are numerous ways this project could potentially be allowed to proceed despite the naturally high occurring mercury levels.[266] These include the use of site-specific criteria, mixing zones, natural condition-based water quality standards, and

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262 *See* 18 AAC 70.235(c)-(d).
263 18 AAC 70.010(d).
264 40 C.F.R. § 131.36(b)(1) (establishing 12 ng/L chronic criterion in row "8 Mercury" and column B2).
265 Donlin Response Brief at 68.
266 ONC Opening Brief at 8, 9 and 22 (and citing 18 AAC 70.010(d); ONC Reply at 9-10.

variances. All such tools are available to the Division to address site-specific issues such as naturally high background levels.[267] If protection of existing uses could still be assured, the Division could have adopted site-specific criteria for the waterbody per 18 AAC 70.235(c)-(d). Or alternatively, the water quality standards could include a provision for adopting natural condition-based standards in circumstances such as this, where the Division has determined that the natural condition of the water is of lower quality than the criteria set out in 18 AAC 70.020(b).[268] Here, however, the Division took none of these approaches.

The Division and Donlin have also argued that in finding reasonable assurance that state water quality standards for mercury are satisfied, they are not required to assume a worst-case scenario,[269] and that the FEIS has taken a conservative approach to analyzing mercury.[270] Donlin asserts that caselaw has made clear that a "worst case scenario" is not the proper standard.[271] It is true that the Division is not required to assume a "worst case scenario" in determining whether reasonable assurance exists.[272] However, consideration of a worst-case scenario is not what occurred here. Instead, this decision simply recognizes that the standard must properly be applied. The mercury chronic criterion does not allow the averaging over a 10-year period of water quality samples taken from numerous locations, including locations outside of the area to potentially be impacted.[273] While doing so may create what Donlin perceives as a harsh result or worst-case scenario because some of the baseline measures from specific sites are so high, the facts are what they are. Further, it is what the correct application of the standard requires. There are no assumptions being made.

Donlin and the Division further assert that consideration of monitoring and adaptive management, and other project permits, may be employed to mitigate mercury levels and support reasonable assurance.[274] But, as analyzed above, while monitoring and adaptive management may be employed in some situations to help justify a finding of reasonable assurance, that is not

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267 *Id.*
268 ONC Reply Brief at 9-10 (citing 18 AAC 70.010(d)).
269 Division Response Brief at 28; Donlin Response Brief at 68, n.175.
270 Division Response Brief at 25-28, 30; Donlin Response Brief at 50-61.
271 *Id.* at 68 (citing *Miners Advocacy Council, Inc. v. State Dep't of Environmental Conservation,* 778 P.2d 1136-37).
272 Donlin Response Brief at 68 (citing Miners Advocacy Council, Inc. v. State Dep't of Environmental Conservation, 778 P.2d 1136-37).
273 *Supra* at 36-42.
274 Division Response Brief at 9-13, 29-31; Donlin Response Brief at 61-66.

the case here.[275] There are two compelling realities. First, the background levels of mercury resulting from natural sources and historic mining in the area are already very high in the vicinity of the project. In many instances, those levels currently exceed the standard.[276] Second, it cannot be denied that mine operations will cause an increase in those levels.[277] The Division and Donlin have not identified any changes to operations that would avoid further additions of mercury to locations that already frequently exceed mercury standards. If 14 percent of the samples taken already exceed the standard,[278] and if it is undeniable that mine operations will result in an increase in mercury levels, there is only one conclusion to be drawn. That conclusion is that the project will cause an increase in exceedances of the existing standard. It follows that the Division has failed to provide reasonable assurance that construction and operation of the Donlin project will comply with Alaska's water quality standards for mercury.[279]

This conclusion would be reached even using the erroneous standard applied in this case, using long-term average concentrations of mercury over many sites, instead of a single site, four-day average, as the standard requires.[280] If and when the correct standard is applied, it is highly likely that reasonable assurance will be even further from being satisfied. This is because applying a long-term average over many locations negates the fact that many of the sites are already well above the chronic criterion.[281]

As to mercury, Donlin also asserts that there is no evidence that future exceedances at individual sampling locations will be harmful to aquatic life.[282] But, such an argument ignores that whether the exceedances caused by the project may or may not harm aquatic life is not the

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275 *Supra* at 23-36.

276 FEIS at 3.7-29, 3.7-150-51, DEC 16247, 16368-69.

277 *Id.* at 3.7-151, DEC 16369

278 *Id.* at 3.7-29, 3.7-150-51, DEC 16247, 16368-69.

279 As indicated above, the FEIS concluded that an increase in the frequency and magnitude of violations of the mercury standard would occur, regardless of the controls in the CWA Section 402 permits, waste management permit, and Clean Air Act permit. FEIS Table 3.7-42, DEC 16370; *id.* at 3.7-151, 3.7-191-92, 5-12, DEC 16369, 16409-10; 18268; *see also id.* at FEIS 5-7-8, DEC 18263-74 (listing all design features, including permit requirements, the FEIS considered in its analysis). The FEIS also found that mercury violations were likely because exceedances would result not only from those point-source discharges covered by permits, but also from a combination of aqueous and atmospheric sources. *Id.* at 3.7-151, DEC 16369; *see also* Response to Comments at 18, DEC 1718-19 (explaining mercury deposition from non-point source activities is outside the scope of an APDES permit).

280 *Supra* at 36-42.

281 *Id*.

282 Donlin Response Brief at 69-72.

issue. Instead, the issue is whether reasonable assurance exists that Alaska's water quality standard for mercury will be met. As indicated above, the evidence reflects it will not. Whether actual harm will occur from the predicted exceedances is not what the reasonable assurance determination requires.[283] That said, however, it is noted that the chronic criterion for mercury was created by analyzing and determining at what levels exposure to mercury is harmful. The chronic criterion represents the level of mercury that the EPA has determined aquatic life can be exposed to over that time-period without experiencing long-term effects.[284] As such, Donlin's assertion in addition to being irrelevant, is also inaccurate.

Finally, to the extent that Donlin believes it can establish that the predicted mercury levels here will not be harmful to aquatic life, such facts would be very useful for justifying the numerous ways that Donlin and the Division could employ for this project to proceed despite the naturally high levels of mercury. In other words, they could do so by relying on site-specific criteria, mixing zones, natural condition-based water quality standards, and variances.[285] Donlin and the Division could implement one or more of these tools and appropriately address the regulatory hurdles they might require. However, Donlin's claim that aquatic life will not be harmed simply provides no basis for ignoring application of the standard altogether, which is what would need to occur if reasonable assurance is claimed as satisfied on these facts.

In the absence of site-specific criteria, natural condition-based water quality standards, adequate control measures, or other means of ensuring that standards are met, the Division cannot certify reasonable assurance of compliance with the existing chronic water quality standard for mercury on the existing record.

3. Reasonable assurance does not exist that construction and operation of the Donlin project will comply with Alaska's water quality standards for temperature.

As the FEIS concludes, the Donlin project would cause groundwater that would normally flow into Crooked Creek to be diverted as part of the pit dewatering process.[286] Importantly, during the summer, the reduction in groundwater flowing into Crooked Creek "could cause

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283 *Supra* at 19-21.

284 40 C.F.R. § 131.36(b)(1), n.d; *see* EPA, Water Quality Standards Handbook, Chapter 3: Water Quality Criteria at 15 (2017), found at: https://www.epa.gov/sites/production/files/2014- 10/documents/handbook-chapter3.pdf (Handbook, Chapter 3) (emphasis added).

285 *Supra* at 41-43.

286 FEIS at 3.13-99, DEC 17027.

stream temperatures *in reaches near the mine to be close to or above Alaska's water quality temperature standard* of 55.4° F for egg/fry incubation and spawning and 59.0° F for migration and rearing."[287] The question is whether, in light of this conclusion, reasonable assurance exists that construction and operation of the Donlin project will comply with Alaska water quality standards for temperature.

In supporting a finding of reasonable assurance regarding temperature, the Division asserts that: the project will not have a significant effect on water temperatures;[288] APDES permits support a finding that reasonable assurance as to temperature exists;[289] and monitoring and adaptive management further support the finding.[290] Donlin contends that a finding of reasonable assurance as to temperature is justified because the temperature data cited by ONC and contained in the FEIS does not support the conclusion that stream temperatures will exceed applicable water quality standards.[291] It also asserts that loss of groundwater flows near the project will not cause stream temperature to exceed water quality standards.[292] Finally, it argues that reasonable assurance is further justified based on reliance on Donlin's IWMMP.[293]

However, as will be addressed below, the arguments of the Division and Donlin are unpersuasive. Nothing in what the Division and Donlin have asserted changes the conclusion from the FEIS that stream temperatures in reaches near the mine are likely to be close to or above Alaska's water quality temperature standard.

In analyzing this issue, it is important to focus on the portion of the watershed that will be impacted by low water flows and thus have resulting temperature increases. It is unhelpful, as the Division has done in some of its citations, to focus on other stream segments largely unimpacted by reduced inflow into Crooked Creek.[294]

Also, there is no support for suggesting, as Donlin has done, that the high baseline temperatures used for predicting likely increased temperatures in Crooked Creek near the mine are an anomaly or should somehow be disregarded.[295] Donlin's contention that the temperatures

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287 *Id.* at 3.13-112, DEC 17040 (emphasis added).
288 Division Response Brief at 38-41.
289 *Id.* at 42.
290 *Id.* at 43-44.
291 Donlin Response Brief at 33-39.
292 *Id.* at 39-44.
293 *Id.* at 44-46.
294 Division Response Brief at 40-41.
295 Donlin Response Brief at 33-39.

used as a baseline here were undeniably high as compared to other temperatures within the six-year period analyzed.[296] However, that is not a justification to disregard them. High temperatures have occurred in the past and will occur again, particularly given the fact that the mine is anticipated to take 3 to 4 years to construct and will have an estimated operational life of 27 years.[297]

Next, although Donlin has attempted to counter the conclusion from the FEIS with its own analysis, this effort is simply its own reconsideration of the very data and information relied on by the FEIS in reaching exactly the opposite conclusion. Short of offering detailed expert testimony, which has not occurred, there is no reason that the conclusion from the FEIS regarding temperature impacts should be disregarded so easily. It is important to note that the experts who prepared the FEIS, including those from the State of Alaska, were likely in accord about the impacts concerning temperature (and, for that matter, concerning mercury and protection of existing uses). This is because the FEIS was required to disclose "any responsible opposing view[s]."[298] Throughout the certification process, the Division has relied on the FEIS as support for its decision to issue the certificate, including as to the issue of temperature. It is inappropriate for the Division or Donlin to now reverse engineer conclusions contrary to those contained in the FEIS.

This decision finds that reasonable assurance does not exist that the project will meet Alaska's water quality standard for temperature. In reaching this conclusion, analyzed below are the cause of the increased temperatures in Crooked Creek near the mine; the applicable water quality standard for temperature; considerations regarding the area at issue; consideration of the reduction and elimination of wetlands and vegetation buffers in the middle section of the Crooked Creek watershed; and analysis of Donlin's remaining arguments.

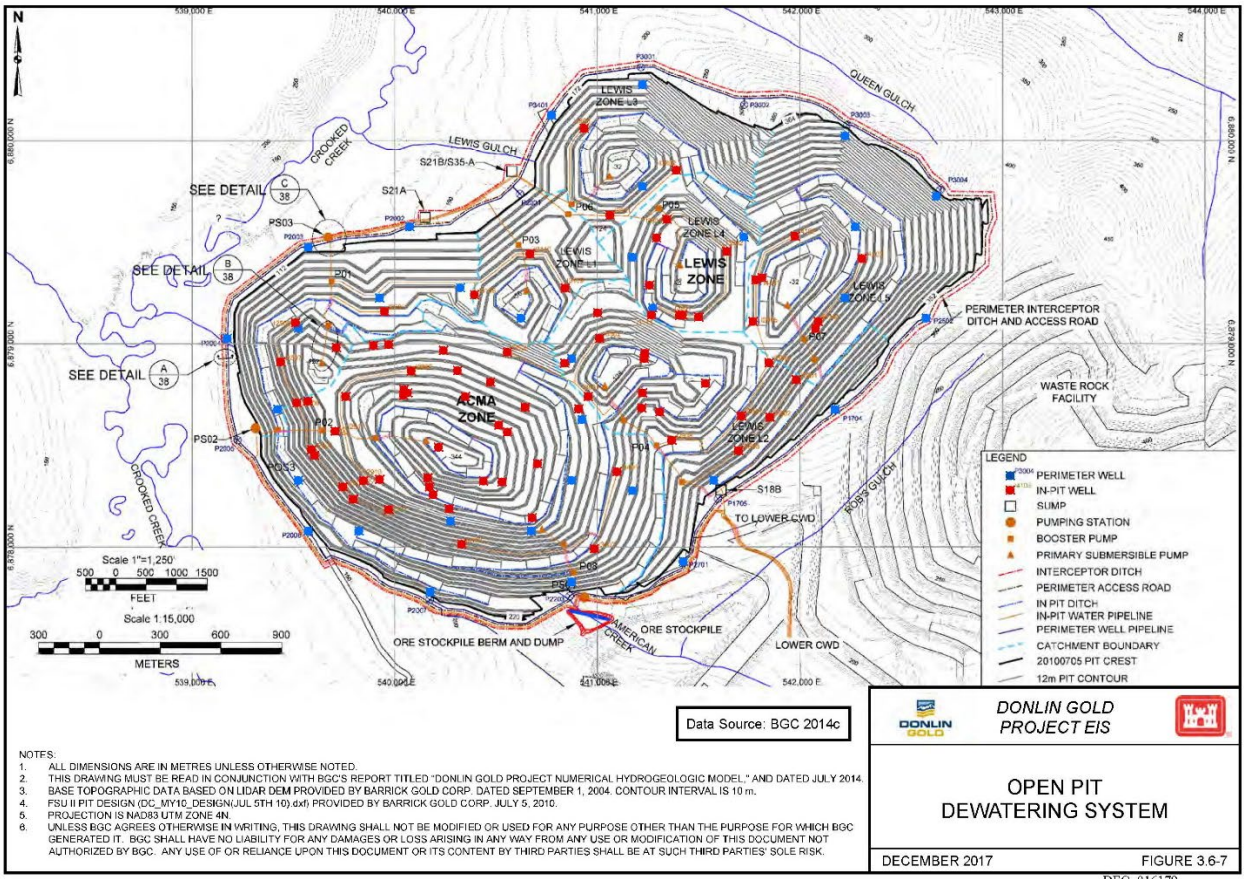
a. The cause of increased temperatures in Crooked Creek near the mine

As has been noted, stream temperatures are a function of the amount of heat energy as relates per unit volume of water.[299] Hydrologic processes help to insulate a stream and counter

296 *Id.* at 36-38.
297 Public Notice at 2, DEC 25.
298 40 C.F.R. § 1502.9(b) (2019). This citation is to the regulation in effect at the time of the FEIS. It has subsequently been revised in regulations with the same requirements at 40 C.F.R. § 1502.9(c). *See* 85 Fed. Reg. 43,304, 43,365 (July 16, 2020).
299 *Supra* at 12; FEIS at 3.13-98, DEC 17026.

against temperatures changes. Changes to a stream's internal and external factors can result in a change to the stream's temperature.[300] Here, a key component of the mine affecting water temperature is dewatering associated with the project's open pit. Operation of the mine will lower the water table in and around the pit. This is necessary to create stable pit walls and dry working conditions at the pit's bottom. The dewatering would occur by pumping groundwater from wells and drains in the pit area.[301]

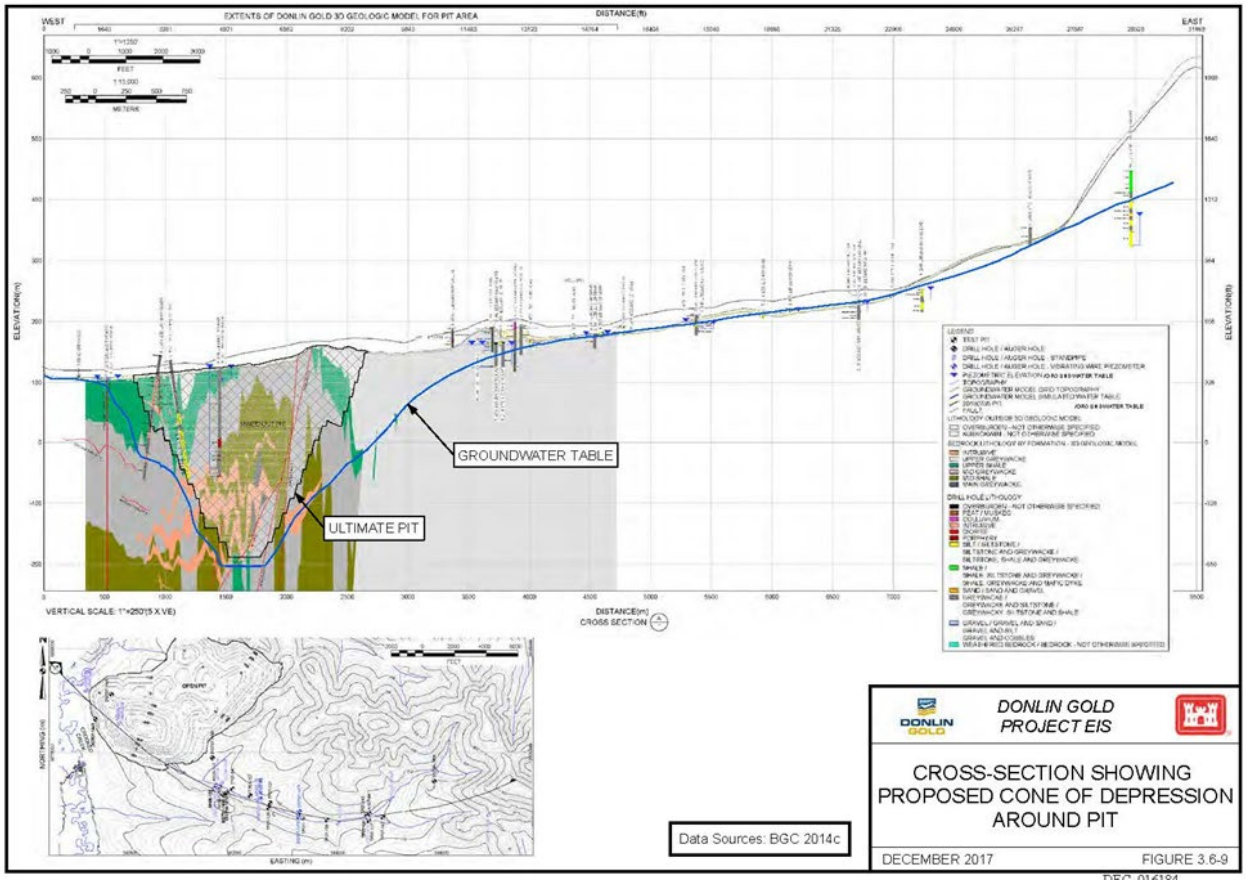
Pit dewatering will require the use of 35 vertical wells around the pit perimeter and approximately 80 wells in the pit's interior. Wells will be progressively replaced so that only a portion of the total wells will operate concurrently.[302] The diagram below displays the proposed open pit dewatering system.[303]



Pit dewatering would cause a drawing of groundwater toward the pit and away from the

300 *Id.*
301 FEIS at 3.6-17, 3.6-30, 3.13-101, DEC 16178, 16181, 17029.
302 *Id.* at 3.6-30, DEC 16181.
303 *Id.* at Fig. 3.6-7, DEC 16179.

outlying areas, including Crooked Creek. This would create a groundwater "cone of depression" around the pit.[304] The diagram below displays the resulting cone of depression.[305]



The pumped water would be used in the processing mill and after treatment, ultimately returned to Crooked Creek.[306]

Additionally, proposed clearing, excavations, grading, surface water diversions, and groundwater dewatering would directly or indirectly disturb or eliminate wetlands, riparian buffers, and upland vegetation in the American Creek, Omega Gulch, Anaconda Creek, Snow Gulch, and Crooked Creek drainages. Loss of water storage and infiltration functions can affect baseline conditions in downstream reaches of these drainages including by causing elevated stream temperatures when trees and other riparian plants are removed.[307] The elevation of water temperatures has been shown to affect the timing of egg development, maturation, and

304 *Id.* at 3.6-30-31, 3.13-78, 3.13-101, DEC 16182-82, 17006, 17029.
305 FEIS at Fig. 3.6-9, DEC 16184.
306 *Id.* at 3.6-2; DEC 16153.
307 *Id.* at 3.13-79, DEC 17007.

emergence of freshwater fishes. Salmon stocks may also be negatively affected if egg hatch and alevin migration do not coincide with favorable stream conditions.[308]

b. The applicable Alaska water quality standard for temperature

Alaska's general water quality temperature standard for freshwater, is 68° F (20° C). It is also 55.4° F (13° C) for fish egg and fry incubation, and spawning, and 59.0° F (15° C) for fish migration and rearing.[309] But, as the FEIS notes:

> Maximum recorded stream temperatures for Crooked Creek at Crevice Creek in June, July, and August are 45.8°F, 51.6°F, and 50.1°F, respectively. Under summer low flow conditions during mining operations, reductions in groundwater inputs to Crooked Creek could cause stream temperatures in reaches near the mine to be close to or above the State of Alaska's water quality temperature standard of 55.4°F for egg/fry incubation andspawning and 59.0°F for migration and rearing.[310]

Such temperatures may affect "the duration and timing of egg incubation and availability of prey species" and would occur in waters regulated as essential fish habitat "supporting key life stages of salmon that play a role in the Kuskokwim subsistence community."[311] Despite these findings,[312] the FEIS provides no further details concerning the extent or frequency with which stream temperatures in Crooked Creek, between American and Crevice Creek, will be close to or above the State of Alaska's water quality temperature standard for fish incubation, spawning, migration and rearing.

The baseline maximum recorded temperatures quoted above are from a single location: the Crooked Creek/Crevice Creek gauging station (CCAC).[313] This gauging station is located on Crooked Creek, approximately 490 feet upstream from its confluence with Crevice Creek, and immediately downstream from the southern end of the project development.[314] As noted, the referenced temperatures are not the average temperatures from this site. Instead, they are the highest water temperatures that were recorded at the site over a six-year period from 2005-2011.[315]

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308 *Id.* at 3.13-102, DEC 17030.
309 18 AAC 70.020(b)(10); FEIS 3.13-112, DEC 17040.
310 FEIS 3.13-101, DEC 17029 (internal citation removed).
311 *Id.*
312 *Id.* at 3.13-101, 3.13-112, DEC 17029, 17040.
313 *Id.* at 3.13-101, DEC 17029.
314 *Id.* at 3.5-20, DEC 15997.
315 FEIS 3.5-20, DEC 15997.

c. Consideration of the area at issue

One of the key points in appreciating the issues presented regarding stream temperature impacts from the project is to understand where temperatures within Crooked Creek will and will not be impacted by construction and operation of the mine. As has been noted, for ease of analysis, the Crooked Creek watershed has been divided into three discreet sections, the upper, middle, and lower watersheds.[316]

Because the FEIS provides a comprehensive analysis regarding many different aspects of the project and proposed alternatives, it contains findings and analysis for such issues across all three sections of the Crooked Creek watershed, even when some of those sections are largely unimpacted by the project or the issue considered.[317]

As to consideration of stream temperatures, it is important to note that ONC has not suggested that Alaska's water quality standard for temperature will likely be exceeded in Crooked Creek in all three portions of the watershed. Instead, it has only challenged the finding of reasonable assurance as to temperature for the main stem of Crooked Creek within the middle portion of the Crooked Creek watershed.[318] This middle section of the main stem of Crooked Creek extends from the confluence of Donlin and Flat Creeks downstream to the confluence of Crooked and Crevice Creeks.[319] The area of concern regarding potential stream temperature increases is the shorter segment within this middle section of Crooked Creek between American and Crevice Creeks. It is in an area characterized as essential fish habitat.[320] The proposed project itself is situated directly adjacent to Crooked Creek within this middle portion of the watershed.[321]

The reason that it is only this portion of Crooked Creek in the middle watershed that is the focus for purposes of potential violations of Alaska's water quality standards for temperature is because when it comes to impacts from the project relating to water temperature, those impacts lessen as the distance from the project increases. This is partially because the effects from pit dewatering lessen with distance from the pit itself.[322] It is also due to the positive effect that

316 *Id.* at 3.13-8-17, DEC 16936-45.
317 DEC 15201 – 27150.
318 ONC's Reply Brief at 14-16.
319 FEIS 3.13-11-16, DEC 16939-44.
320 *Id.* at 30, DEC 15305.
321 *Id.*; *See also, id.* at Figure 3.13-1, DEC 16937.
322 *Id.* 3.6-27, 3.6-30-31, DEC 16178, 16181-82.

added inflow from other non-impacted water sources and tributaries has on overall stream temperature.[323] In other words, further downstream, the positive influence of inflows from other tributaries such as the relatively large Bell and Getmuna Creeks, and from runoff, will overshadow flow reductions resulting from the project.[324] Consequently, the lower watershed is not a concern when it comes to potential violations of Alaska's water quality standards for temperature.

This is an important point, because, as ONC notes, much of the Division's response on the issue of temperature is directed at the potential for temperature changes downstream from Crevice Creek, in the lower watershed, rather than on the section of Crooked Creek that ONC addresses.[325] Therefore, much of its focus is on the main stem of Crooked Creek miles below the project site and the area primarily affected by discharges associated with treatment following dewatering.[326] Instead, the area of ONC's concern is the segment of the main stem of Crooked Creek, located in the middle watershed, between American and Crevice Creeks.[327]

This section of Crooked Creek, where violations are most likely, is a substantial portion of the creek. While it is only four miles in a straight line, it meanders extensively.[328] As such, it is estimated to be approximately nine stream miles in overall length.[329] Further, in this vicinity the creek is also of significant size. Specifically, the main stem of Crooked Creek just upstream from its confluence with Crevice Creek, is approximately 49 feet wide.[330] In terms of both breadth and length, this section is not an insubstantial portion of the creek.

It is within this area, near the project site, that violations of the temperature standard are predicted, not in areas further downstream. As ONC has correctly noted, "violations of water quality standards near the project site are still violations of water quality standards, regardless of whether areas exist some distance from the project site where compliance is still achieved."[331]

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323 *Id.* 3.13-2, DEC 16930.
324 *Id.*
325 Division Brief at 39-40.
326 *Id.* (twice quoting the FEIS as to predictions about water temperature downstream of the mine site); *id.* at 41-42 (discussing APDES
327 ONC's Reply Brief at 15; *see also, supra* at 9.
328 ONC's Opening Brief at 19 (citing FEIS Figure 3.13-1, DEC 16937).
329 ONC's Reply Brief at 15 (citing Donlin opening Brief at 11 (estimating a 15-mile straight-line distance of Crooked Creed to include 33 stream miles).
330 FEIS at 3.5-20, DEC 15997.
331 ONC Reply Brief at 15.

d. Consideration of the reduction and elimination of wetlands and vegetation buffers in the middle section of the Crooked Creek watershed

Another aspect of the project affecting stream temperature, and in which there appears to be some confusion between the parties, is with respect to the project's potential impact to the riparian corridor. It goes without saying that the reduction of treed and vegetative cover along a riparian corridor can significantly increase water temperatures.[332] The Division suggests the same in its briefing by asserting that the conservative nature of the FEIS doesn't even "take into account the fact that 'Crooked Creek's riparian corridor is completely intact providing shade to the stream channel which, to some extent, would help buffer potential mining-related changes to stream temperature.'"[333] Strongly implied by the Division's quote of this statement from the FEIS is that the riparian corridor will remain unimpacted by this project, thus helping to preserve and protect stream temperatures.

However, the Division's quotation and reliance on this language is inaccurate. Instead, the whole sentence from which the quote is taken provides that: *"[c]urrently*, Crooked Creek's riparian corridor is completely intact providing shade to the stream channel which, to some extent, would help buffer potential mining-related changes to stream temperature.[334] Further, this sentence immediately follows the conclusion from the FEIS that stream temperatures in reaches of Crooked Creek near the mine are likely to be "close to or above the State of Alaska's water quality temperature standard" for salmon.[335] As a result, what the FEIS actually suggests is that the project will significantly alter the riparian corridor, thus supporting the prediction from the previous sentence predicting temperature violations.[336]

Contrary to what the Division indicates (that the project will possess an intact riparian corridor which will help to avoid increased temperatures in Crooked Creek and thus water quality violations), in fact, the opposite is true. As the FEIS explains, the project will remove significant portions of wetlands and riparian buffers in the middle watershed.[337] Specifically, "[u]nder Alternative 2, clearing, excavations, grading, surface water diversions, and groundwater

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332 *Id.* at 3.13-98, DEC 17026.

333 Division Response Brief at 41 (citing *Id.* at 3.13-101, DEC 17029).

334 FEIS at 3.13-101, DEC 17029 (emphasis added).

335 *Id.*

336 *Id.* at 3.13-98, DEC 17026 (removal of riparian vegetation along stream corridors can significantly alter the temperature regimes of streams); *id.* at 3.13-79, DEC 17007 (the project will directly or indirectly disturb or eliminate wetlands and riparian buffers in the area in question).

337 FEIS 3.13-73, 3.13-78-79, DEC 17001, 17006-07.

dewatering would directly or indirectly disturb or eliminate wetlands, riparian buffers, and upland vegetation in the American Creek, Omega Gulch, Anaconda Creek, Snow Gulch and Crooked Creek drainages. . . . Elevated stream temperatures also could occur when trees and other riparian plants are removed."[338] Therefore it is precisely because of dewatering associated with the project's open pit and elimination of large portions of riparian buffers and wetlands in Crooked Creek's middle watershed, that the creek is expected to be close to or above Alaska's water quality temperature standard for salmon.

e. Analysis of Donlin's remaining arguments

Donlin asserts that the temperature data cited by ONC and contained in the FEIS does not support the conclusion that stream temperatures will exceed the standard.[339] In asserting the same, Donlin argues that the temperatures used for predicting that project will exceed temperature standards were from a single location; the temperatures were the highest temperatures recorded at this location; all maximum temperature recordings occurred in a single year; these maximum readings were significantly higher than the maximum readings in the other five observed years; and the monthly maximum stream temperature readings from this single year were below Alaska's water quality temperature standard.[340] None of these contentions is persuasive.

As ONC correctly asserts, it is improper to criticize the FEIS findings regarding stream temperature for its focus on low flow events, when temperatures will be highest.[341] Low flow events occur naturally and during periods of high temperatures. They have occurred in the past and they will occur in the future. As such, in attempting to predict high temperatures in this instance, they provide exactly the right comparison.

It is also insignificant that the maximum recorded stream temperatures used as the baseline in the FEIS for predicting future stream temperatures were themselves below the state water quality temperature standard. As ONC notes: "with an altered, dewatered creek in the future, low flow events may lead to temperature violations, not only of the 55.4°F standard for egg/fry incubation and spawning, but possibly even the 59.0°F standard for migration and

338 FEIS 3.13-79, DEC 17007.
339 Donlin Response Brief at 33-39.
340 *Id.*
341 ONC's Reply Brief at 16.

rearing."[342] Just as with Donlin's argument about suggested averaging of mercury readings,[343] a focus on average temperatures or average years also inappropriately skews the analysis by overlooking actual potential violations.

Donlin and Calista also assert that the loss of groundwater flow from near the project will not cause stream temperatures to exceed the levels set by the state's water quality standards.[344] In suggesting the same, Donlin goes through a lengthy analysis of the very studies and documentation relied on by the FEIS in reaching the exact opposite conclusion. Further, Donlin's opposite conclusion, based on this same information, is unsupported by any expert witnesses, affidavits, expert opinions, etc. Instead, Donlin reaches an opposite conclusion from the FEIS regarding the issue of potential increases in Crooked Creek stream temperature in the middle watershed, but only offers its own opinions in reaching it.[345]

It is certainly true that, as to Donlin's own reinterpretation of this same data relied on by the FEIS, the evidentiary standards applicable in administrative proceedings are far more relaxed than what would have occurred if this issue were before the trial courts. That said, without detailed expert testimony on this issue, there is simply no evidentiary basis to accept Donlin's arguments on this scientific data interpretation over the wholly different finding, on the same subject, as contained in the FEIS based on the consensus of the state and federal participants.[346]

Based on the above, reasonable assurance does not exist that the project will comply with Alaska's water quality standards for temperature.

4. Reasonable assurance does not exist that construction and operation of the Donlin project will fully protect existing uses.

The third manner in which ONC asserts the Division's certificate of reasonable assurance fails is regarding the protection of existing uses, specifically as concerns salmon habitat.[347] ONC contends that because salmon habitat in a portion of Crooked Creek will undeniably sustain

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342 *Id.*

343 *Supra* at 37-42.

344 Donlin Response Brief at 39-44; Calista Amicus Brief at 16-17.

345 *Compare id., with* FEIS 3.13-98-104, DEC 17026-17032.

346 The FEIS was written and prepared by the Corps as the lead agency with multiple state, federal and Alaska Native tribal councils, each with subject matter expertise on the issues at hand. These included the Corps, the Bureau of Land Management, the Pipeline and Hazardous Materials Administration, the EPA, the United States Fish and Wildlife Service, the State of Alaska, the Village of Crooked Creek, the Napaimute Traditional Council, the Chuathbaluk Traditional Council/Center for Science in Public Participation, the Aniak Traditional Council, the Knik Tribal Council and the Akiak Tribe/Kuskokwim Watershed Council. FEIS 1-7-13, DEC 15346-52.

347 ONC Opening Brief at 18-21; ONC Reply Brief at 20-26.

significant impacts from the construction and operation of the mine, that fact alone demonstrates that reasonable assurance is not met.[348] However, the Division and Donlin assert that the mine's impact on salmon habitat is not nearly as dire as ONC predicts.[349] This is because the area in question, the middle watershed, is marginal salmon habitat with poorer productivity when compared to the lower watershed. It is the lower watershed where most of the salmon productivity within Crooked Creek occurs. Accordingly, when the impacts to salmon and their habitat are analyzed by looking at the entire watershed, the impacts from the project are relatively minimal resulting in reasonable assurance being met.[350]

The issue essentially boils down to whether it is appropriate to address impacts to existing uses by analyzing the area to be impacted or by analyzing the larger watershed as a whole. Based on the applicable law, the facts present here, and the issues and arguments raised by the parties, this decision concludes that it is inappropriate to use a "watershed approach" in addressing impacts from the project and determining whether state water quality standards will be met. As such, reasonable assurance does not exist that construction and operation of the Donlin project will fully protect existing uses.

Analyzed below are a number of considerations in reaching this conclusion, including the: a) applicable standard and background facts; b) considerations and holding regarding applying the watershed approach; c) applying the area of impact approach as to the of protection of existing uses; and d) the Division and Donlin's remaining arguments.

a. The applicable standard and background facts

The starting point for this discussion is by reference § 401 of the CWA itself. It provides that the state is required to assure that the proposed project or activity will be constructed and operated in a manner that will not violate applicable state water quality standards.[351] As discussed previously, the Division must have evidence to conclude that the permitted activity will comply with water quality standards with reasonable assurance.[352] "[R]easonable assurance" is deemed to mean "something is reasonably certain to occur."[353] With this

348 *Id.*
349 Division Response Brief at 31-38; Donlin Response Brief at 15-33.
350 *Id.*
351 *See generally PUD No. 1 of Jefferson County v. Washington Department of Ecology et al.,* 511 U.S. 700 (1994); *see also Sierra Club v. State Water Control Board,* 898 F.3d 383, 388 (4th Cir. 2018).
352 *Miners Advocacy*, 778 P.2d at 1138.
353 *Id.* at 600.

background, it is then appropriate to analyze Alaska's antidegradation policy and the specific facts of this case.

Alaska's antidegradation policy is found at 18 AAC 70.015(2)(C). It requires that degradation to the state's waters can only occur if "the resulting water quality will be adequate to fully protect existing uses of the water."[354] The Division must have "reasonable assurance" that the entire "activity" associated with the certification will not violate water quality standards.[355] The relative impact and whether there are more productive areas of Crooked Creek than the affected area is not what matters—only whether the existing uses are fully protected.[356] This is because the water quality standards apply to "any waterbody or portion of a waterbody."[357] "The department's antidegradation policy under 18 AAC 70.015 applies to all waters of this state."[358]

An important existing use within the Crooked Creek drainage is salmon habitat.[359] The Crooked Creek watershed includes many smaller creeks and tributaries and is characterized both as essential fish habitat and home to populations of all five species of Pacific salmon and 12 species of other resident fish.[360] Salmon, and other resident fish, depend on a variety of aquatic habitat types and stream conditions. These include flow, water quality regimes, the availability and distribution of gravel substrates and the availability of and distribution of rock and vegetative cover.[361]

As has been noted, a predicted and undeniable impact from the mine project is a reduction in streamflow in the main stem of Crooked Creek[362] which would in turn result in measurable and noticeable impact on fish and aquatic habitat in Crooked Creek.[363] This is primarily due to water withdrawals from the in-pit and perimeter dewatering wells and the cone of depression that would result from the withdrawals.[364]

Streamflow reductions would reduce water elevation, thereby decreasing the wetted stream channel surface area. This would reduce aquatic habitat available for fish.[365] Habitat

354 18 AAC 70.015(2)(C).
355 40 C.F.R. § 121.2(a)(3) (2019).
356 18 AAC 70.015(a)(2)(C).
357 18 AAC 70.040.
358 18 AAC 70.016(a).
359 FEIS 3.13-6-27, DEC 16934-55.
360 *Id.* at 30, DEC 15305.
361 *Id.* at 3.13-7-8, DEC 16935-36.
362 *Id.* at 3.13-85, DEC 17013.
363 FEIS at 3.13-78, DEC 17006.
364 *Id.* at 3.13-77-78, DEC 17005-06.
365 *Id.* at 3.13-85, DEC 17013.

losses from flow reductions can result in adverse impacts to both the availability of suitable spawning areas and the viability of eggs incubating during winter.[366] Such flow reductions would vary seasonally with the particular phase of mining operations and with the distance downstream from the mine site.[367]

For purpose of analysis, the FEIS divided the entire Crooked Creek drainage, including Crooked Creek's tributaries, into three separate areas, namely the upper, middle, and lower watersheds.[368] The upper watershed consists of all streams upstream from the confluence of Donlin and Flat Creeks and is upstream from the proposed project area.[369] Although the upper watershed does contain salmon habitat and is used by salmon, particularly during their early life stages, it is relatively unimportant from a habitat or rearing perspective compared to the other portions of the watershed.[370]

The middle watershed consists of Crooked Creek and all its tributaries extending from the confluence of Donlin and Flat Creeks downstream to the confluence of Crooked and Crevice Creeks.[371] The proposed project area is largely situated directly adjacent to Crooked Creek within the middle watershed.[372]

The lower watershed consists of Crooked Creek and all its tributaries extending from the confluence of Crooked and Crevice Creeks downstream to the mouth of Crooked Creek at its confluence with the Kuskokwim River near the Village of Crooked Creek.[373] The lower watershed is noteworthy in that it contains the two largest tributaries and drainages in the Crooked Creek watershed, Getmuna and Bell Creeks. Both are important salmon spawning tributaries.[374]

Salmon populations within the Crooked Creek drainage have been extensively examined and studied.[375] A fish weir was installed in 2008 to help estimate adult salmon escapement within the watershed.[376] Crooked Creek has also had electrofishing performed from 2004-14 and

366 *Id.* at 3.13-89, DEC 17017.
367 FEIS at 3.13-85, DEC 17013.
368 *Id.* at 3.13-8-17, DEC 16936-45.
369 *Id.* at 3.13-8, DEC 16936.
370 *Id.* at 3.13-8-26, DEC 16936-54.
371 FEIS 3.13-11-16, DEC 16939-44.
372 *Id.*; *see also id.* at Figure 3.13-1, DEC 16937.
373 FEIS 3.13-16-17, DEC 16944-45.
374 *Id.*; *id.* at 3.13-89-94, DEC 17017-22.
375 *Id.* at 3.13-1-171, DEC 16929-17099.
376 *Id.* at 3.13-17, DEC 16945.

aerial counts of adult salmon were also conducted during the same period.[377] The average adult salmon aerial counts for the entire drainage identify a mean of 34 Chinook, 436 Coho, 609 Chum and 2 Sockeye Salmon per year during the period.[378] The Crooked Creek weir identified an average of 57 Chinook, 1,634 Coho, 1,524 Chum, 20 Pink and 16 Sockeye Salmon per year from 2008 to 2012.[379]

It is undisputed that the highest portion of salmon spawning activity within the Crooked Creek drainage occurs in the lower watershed and within Getmuna and Bell Creeks.[380] Specifically, a 2009 instream survey of salmon redds[381] identified a total of 532 salmon redds in the entire length of Crooked Creek.[382] More than 94 percent of the redds observed were downstream from Crevice Creek. Over 88 percent of the redds were in the segment of the lower watershed between Getmuna Creek and the Kuskokwim River.[383]

Further, surveys of adult salmon in area streams show that salmon are predominantly located in the lower section of the Crooked Creek watershed below Crevice Creek. Aerial surveys from 2004 to 2010 identified an annual average of 354 adult salmon in the main stem of Crooked Creek.[384] Of these 354 salmon, an average of 88 percent were in the lower watershed areas downstream from Crevice Creek. Eighty-three percent of the salmon in Crooked Creek were downstream of Getmuna Creek (*i.e.,* they were located between the mouth of Getmuna Creek and Crooked Creek's confluence with the Kuskokwim River). Only 12 percent of Crooked Creek salmon (an average of 40 out of 354 fish) were observed in the middle watershed of Crooked Creek, upstream from Crevice Creek.[385] Even more salmon were observed in Crooked Creek tributaries far downstream from the area of project activities. Average counts for Getmuna and Bell Creeks and their tributaries were 596 and 126 adult salmon, respectively.[386]

The FEIS concluded that there would not be an impact to salmon spawning habitat in the lower reaches of Crooked Creek despite predicted flow reductions in the middle reaches near the

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377 *Id.* at 3.13-20-22, DEC 16948-50.
378 FEIS 3.13-22-23, DEC 16950-51.
379 *Id.* at 3.13-26, DEC 16954.
380 *Id.* at 3.13-89-94, DEC 17017-22.
381 "Redds" are graveled and frequently depressed areas in a streambed created by salmon and other fish for the deposit of eggs and milt during spawning.
382 FEIS at 31, 3.13-89, DEC 15306, 17017.
383 *Id.* at 3.13-89, DEC 17017.
384 FEIS 3.13-89, DEC 17017.
385 *Id.*
386 *Id.* at 3.13-22–23, DEC 16950–51 (Tbl. 3.13-6) (setting out counts for reaches GM-R1 through GM-R5 and reaches BL-R1 through BL-R3).

mine. This is primarily due to the significant amount of inflows contributed to the mainstem channel of Crooked Creek in the lower drainage from Getmuna and Bell Creeks. Further, salmon redds occur far more abundantly in the lower reaches of Crooked Creek, particularly near its confluence with Getmuna Creek. This is in an area where proportionally higher baseflows occur as compared to reaches further upstream nearer the mine.[387] As a result, inflows/runoff from unaffected watersheds (*e.g.,* Bell and Getmuna creeks) would overshadow flow reductions resulting from construction and operations of the mine.[388] For instance, studies have shown that based on flow reduction models, in the lower main stem of the Crooked Creek watershed, from Crevice Creek to Getmuna Creek), only 3 out of 144 salmon redds observed in a 2009 survey would have been above the predicted winter low flow water line. None of the 348 salmon redds observed in Crooked Creek between Getmuna Creek and the Kuskokwim River would have been above the predicted winter low flow water line. [389] Additionally, because the Getmuna and Bell Creek tributaries hydrologically upgradient and off the main stem of Crooked Creek, and because they are in areas where little or no mine development is proposed, those tributaries will also be largely unaffected by the project.[390]

The greatest effects of flow reductions would be on the main stem of Crooked Creek in the middle watershed, upstream from Crevice Creek.[391] The FEIS notes that 65-78 percent of the salmon redds in Crooked Creek between American Creek and Crevice Creek "were located in gravels thatwould be outside the predicted wetted portions of the stream channel during winter low flow conditions during construction and operations."[392] This loss is due to groundwater dewatering and other processes that reduce the flow of water in Crooked Creek, dewatering salmon spawning redds in low flow conditions. The FEIS further explains that upwelling and downwelling in Crooked Creek would "reduce intergravel flow and egg survival in the segment of creek adjacent to the mine during operations."[393] The FEIS concludes: "[o]verall, impacts of streamflow changes and salmon spawning habitat as described above would involve noticeable changes in the character or quantity of aquatic habitat. The duration of these impacts may be

387 *Id.* at 3.13-89, DEC 17017.
388 *Id.* at 3.13-2, DEC 16930.
389 *Id.* at 3.13-90, DEC 17018.
390 FEIS 3.13-89-94, DEC 17017-22.
391 *Id.* at 3.13-90, DEC 17018.
392 *Id.*
393 *Id.*

expected to last during and beyond the life of the project."[394]

Accordingly, the FEIS has concluded that the middle watershed of Crooked Creek will be the area most affected by the project's construction and operations.[395] It would experience noticeable changes in the character and quantity of the salmon habitat, including that 65-78 percent of the salmon redds in the section would be outside of the wetted portions of the stream channel during winter low flow conditions during construction and operation.[396] To put it in simple terms, salmon may well spawn in these areas during the spring, fall and summer months because these areas would be covered by water during those periods. However, during winter low flow conditions, 65-78 percent of the spawned in redds, would be above-water, thus resulting in no survival of eggs laid in those areas. The Division has estimated that this section of the stream contains about 12 percent of the salmon observed in the entire main stem of Crooked Creek.[397]

Therefore, from all appearances and as set forth above, 88 percent of the salmon spawning habitat in Crooked Creek will be largely unaffected by the project's construction and operation. Of the remaining 12 percent of salmon spawning habitat, as much as 78 percent of the salmon spawning productivity in that section will be eliminated. In asserting whether focus should be on the 88 percent of salmon spawning habitat largely unaffected or on the 12 percent of salmon spawning habitat significantly affected, the essence of the parties' arguments essentially boils down to whether it is appropriate to analyze impacts by limiting focus on the area primarily affected, or alternatively, is it appropriate to consider the entire watershed?[398]

b. Considerations and holding regarding applying the watershed approach

As support for the watershed approach, the Division notes that it was required to make assumptions in performing its reasonable assurance determination. One assumption it chose was to analyze impacts to state water quality standards by looking at Crooked Creek at the watershed level.[399] It has indicated that, as is its standard practice, it evaluates a project's impacts on a

394 *Id.*
395 FEIS 3.13-8-17, 3.13-90, DEC 16936-45, 17018.
396 *Id.* at 3.13-90, DEC 17018.
397 The Division's Response Brief at 33 (December 19, 2020) (Division's Response Brief) (citing FEIS 3.13-89, DEC 17017).
398 ONC Opening Brief at 18-21; ONC Reply Brief at 20-26; Division Response Brief at 18-22, 31-38; Donlin Response Brief at 15-33.
399 Division Response Brief at 18-20.

"watershed basis" to determine whether water quality standards are met or violated.[400]

The Division further asserts that it is appropriate to do so here because, as relates to the protection of existing uses, the Corps conducted its analysis on a watershed basis; and there is no direction in § 401 of the CWA or regulations that says the state must consider the most extreme case when finding reasonable assurance.[401] Finally, in a footnote, the Division also cites Total Maximum Daily Load (TMDL) program as support for a watershed approach.[402] Donlin contends that, as to the watershed approach, Alaska's antidegradation regulations authorize evaluation of the entire waterbody to assess protection of existing uses; federal case law interpreting the CWA supports the conclusion that existing uses should be assessed for the entire waterbody; and EPA's regulatory guidance instructs the Division to consider the entire waterbody when evaluating compliance with antidegradation requirements.[403] However, none of the rationales cited by the Division or Donlin actually support use of the watershed approach based on the facts of this case.

The Division's argument that the Corps used the watershed approach in conducting its EIS analysis provides no support. The Corps may well have been justified in using a watershed approach for the purpose and intent of conducting the broader EIS. The Division assumes that the intent and purpose of the EIS is precisely the same as the intent and purpose of its reasonable assurance analysis. It is not.

Instead, as indicated above, the purpose and intent of the § 401 analysis is to determine whether, as proposed and constructed, a project is reasonably likely to cause a violation of the applicable standards.[404] However, the purpose and intent of preparing an EIS is far broader.[405] The EIS is intended to address: 1) the environmental impact of the proposed action; 2) any adverse environmental effects which cannot be avoided; 3) alternatives to the proposed action; 4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and 5) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.[406] Unlike the very limited application of § 401 of the CWA, the EIS purpose and intent is much broader and

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400 *Id.* at 21.
401 *Id.* at 21.
402 *Id.,* n.70.
403 Donlin Response Brief at 16-21
404 *See generally PUD No. 1 of Jefferson County v. Washington Department of Ecology et al*., 511 U.S. 700; *see also Sierra Club v. State Water Control Board*, 898 F.3d at 388.
405 42 U.S.C. § 4332.
406 *Id.*

far-reaching. The EIS is being considered in context of the project as a whole and involving dozens if not hundreds of issues and subjects cast across many different alternative proposals. Consequently, it is perfectly logical that the broader environmental subjects addressed by the EIS, such as fish and wildlife habitat, species, productivity, and distribution, would not be separately analyzed for each alternative under consideration. Instead, they would be analyzed, as was done here, in a much broader context and potentially, at a watershed level.[407] However, that is no justification for the Division doing so regarding the § 401 analysis.

The Division also contends that there is no direction in the § 401 statute or regulations that says the state must consider the most extreme case when finding reasonable assurance.[408] But what the Division ignores is that it is wholly inconsistent with the intent and purpose of the § 401 analysis for the Division to dilute down or minimize the very real and measurable impacts from this project by including them with unaffected areas. Instead, the entire intent and purpose of the § 401 analysis is to answer the question of whether state's water quality standards are likely to be violated by construction and operation of the project.[409] It is important that such findings not be arbitrary and capricious. Instead, they must be accurate and reasonably supported.[410] When considering a particular water quality standard, the inclusion of waters completely unaffected by the project does not adhere to the intent and purpose of § 401 of the CWA.

As an example of how arbitrary using the watershed approach can be, one can posit the same project located in watersheds of different sizes. For a project in a large watershed, the relative impacts to the entire watershed may be relatively small. However, in very small watersheds, the very same project could have large relative impacts to the entire watershed. Moreover, the scope of a watershed is often debatable—should one consider the Mississippi watershed, the Missouri watershed, or the Yellowstone watershed? The outcome of a reasonable assurance analysis should not depend on a project's fortune in being located in a large or small watershed or the arbitrary choice of how broadly to interpret the "watershed" for purposes of any given reasonable assurance analysis.

For instance, in this case, Crooked Creek itself is a tributary of the Kuskokwim River watershed. The Kuskokwim River is approximately 700 miles in length. It is the ninth largest

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407 FEIS 3.12-1 – 3.14-59, DEC 16816 - 17164.
408 Division Response Brief at 21.
409 *Supra* at 19-21.
410 *Port of Seattle,* 90 P.3d at 671.

river in the United States by average discharge volume and the 17th largest river basin by drainage area.[411] If the Division believes it is appropriate to analyze impacts by using a watershed approach, there is no reason it could not have justified analyzing impacts from the project by looking to the entire Kuskokwim watershed. Had it done so, the impacts to existing uses from the project would have been miniscule. However, that is not in keeping with the intent and purpose of § 401 of the CWA. Nor, is it appropriate, under the facts present here, to analyze impacts to existing uses by considering large portions of the Crooked Creek wholly unaffected by the project.

As to the Division's third argument in support of the watershed approach, it relied on its Total Maximum Daily Load (TDML) program.[412] However, the TMDL program does not support the use of a watershed approach for water quality certification as to mercury, temperature, or existing uses for fish habitat. TMDLs are an entirely separate regulatory tool under the CWA designed to address impaired waters—or waters that are already in violation of water quality standards.[413] TMDLs are not issued for projects, but rather apply broadly to impaired waters, so many states develop them on a waterbody or watershed level.[414] States may identify segments of waters that are impaired, indicating that protective measures can also be taken within a waterbody and a watershed.[415] As such, reliance on the TDML program has no application on these facts. Further, and as the Division has acknowledged, site-specific criteria may be made at levels lower than an entire watershed.[416] This supports the conclusion that water quality standards apply to every portion of a waterbody, not merely to the watershed as a whole as the Division and Donlin contend.

Donlin's contentions are equally unavailing. First, it offers its own version of the contention that Alaska's antidegradation regulations authorize evaluation of the entire watershed to assess protection of existing uses.[417] It cites to the fact that in the antidegradation regulations,

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411 *See Kammerer, J.C. (1990), Largest Rivers in the United States, United States Geological Survey, (*May 2, 2011).

412 Division Response Brief at 21, n.70.

413 33 U.S.C. § 1313(d); *Columbia Riverkeeper v. Wheeler*, 944 F.3d 1204, 1205-06 (9th Cir. 2019) (discussing TMDL requirements).

414 *See, e.g., Columbia Riverkeeper*, 944 F.3d at 1207 (discussing TMDLs to address impairment in segments of the Columbia and Snake Rivers).

415 *See id.*

416 18 AAC 70.235; Division Br. at 21, n.70.

417 Donlin Response Brief at 17-19.

the terms "water," "waterbody," and "waters" all have the same definition.[418] It contends that the terms "water," "waterbody," and "waters" are thus "broad terms that are inherently tied to the concept of an entire waterbody, such as the mainstem Crooked Creek and its tributaries."[419]

Donlin's conclusion is illogical at best. The definition of water cited above and as contained in AS 46.03.900(37), includes many types of waters, such as lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and the Arctic Ocean. This provision is reasonably read as defining the extent of the water covered by the state's water protection programs. The provision does not, as Donlin seems to suggest, allow the Division to disregard violations of water quality standards if they affect less than an entire waterbody.[420]

Nothing in how the terms "water," "waterbody," and "waters" are defined remotely suggests that, in construing Alaska's antidegradation policy at 18 AAC 70.015(2)(C), the Division is required to broaden or narrow the geographic scope of its inquiry. Simply because these terms are broadly construed under state law with an inclusive definition so as to encompass virtually any form of water, wherever and however located in the state, says nothing about how to properly construe the geographic scope of the antidegradation analysis in this case.

Donlin's second contention is that federal case law interpreting the CWA also supports the conclusion that existing uses should be assessed for the entire waterbody.[421] In suggesting the same, Donlin asserts that the existence of permitted and regulated mixing zones within a waterbody supports DEC looking to the entire waterbody in construing antidegradation policies. As Donlin indicates, a mixing zone is an area within a portion of a waterbody where wastewater discharges undergo initial dilution. Within the mixing zone, rules allow numeric limits for specific criteria to be exceeded. However, the water outside of the mixing zone must meet all criteria and existing uses must be maintained and protected for the waterbody as a whole.[422] It contends that based on the mixing zone approach, a permit may be issued even though existing uses are not protected within the mixing zone, as long as existing uses are preserved in the

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418 *Id.* at 17 (citing 18 AAC 70.990(65) as defining the terms "water," "waterbody," and "waters" by reference to the definition of the terms "water" in AS 46.03.900(37)).

419 Donlin Response Brief at 17.

420 *See id.*

421 Donlin Response Brief at 17-18.

422 *Id.* at 18.

balance of the entire waterbody.[423] In other words, the mixing zone regulations confirm that the antidegradation analysis is not whether "existing uses are preserved in *every* segment of the waterbody, but rather whether existing uses are preserved in the waterbody *as a whole.*"[424]

However, contrary to what Donlin has asserted as to mixing zones, "[t]he department may authorize in a discharge permit or certification, a mixing zone or multiple mixing zones in which the water quality criteria and any limit set under this chapter may be exceeded."[425] The regulations require mixing zones to be "as small as practicable,"[426] and require the department only approve a mixing zone if, among other things, "designated and existing uses of the waterbody as a whole will be maintained and protected" and "the overall biological integrity of the waterbody will not be impaired."[427] Thus, degradation of water quality and impairment of uses are only allowed within a mixing zone. "[T]he water outside the mixing zone must meet all water quality criteria . . . ."[428] Thus, the mixing zone analysis actually fails to support the use of a watershed approach as the Division and Donlin have argued.

Donlin also relies on the EPA's regulatory guidance interpreting the CWA and federal case law for support that protection of existing uses should be assessed for the entire waterbody.[429] Donlin cites *American Wildlands v. Browner*[430] for the proposition that, under Montana's antidegradation rule, where insignificant degradation to a waterbody occurs at the edge of a mixing zone, no antidegradation review of the mixing zone itself is required.[431] Donlin also cites to EPA's regulatory guidance allowing DEC to consider the entire waterbody when evaluating compliance with antidegradation requirements.[432] Specifically, Donlin cites to Chapter 4 of the EPA's Water Quality Handbook for the proposition that "[f]ull protection of the existing use requires protection of the entire water body with a few limited exceptions."[433] But again, the authority Donlin cites does not stand as support for the Division's use of a watershed approach under these facts.

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423 *Id.*
424 *Id.* (emphasis in original).
425 18 AAC 70.240(a).
426 18 AAC 70.240(k).
427 18 AAC 70.240(c)(2)-(3).
428 Donlin Brief at 18 (citing 18 AAC 70.240(c)(2)).
429 Donlin Response Brief at 19-21.
430 260 F.3d 1192 (10th Cir. 2001).
431 Donlin Response Brief at 21 (citing *American Wildlands,* 260 F.3d at 1195).
432 *Id.* at 20-21.
433 *Id.* (citing Chapter 4 of Water Quality Handbook).

Consistent with 18 AAC 70.240(c)(2)'s requirement that "[t]he water outside the mixing zone must meet all water quality criteria . . . ."[434] the EPA's Water Quality Handbook states: "Full protection of the existing use requires protection of the entire water body with a few limited exceptions such as certain physical modifications that may so alter a water body that species composition cannot be maintained . . . and mixing zones."[435] The physical modifications exception refers to activities including "wetland fill operations permitted under section 404 of the Clean Water Act."[436] The fill activity at the project site will not protect existing uses because it will destroy miles of stream and acres of wetlands, but that activity is ostensibly accounted for by measures such as compensatory mitigation.[437] ONC does not allege a violation of water quality standards in the water subject to the fill permit. Its allegations concern the waters downstream.[438]

The handbook further explains that "[m]ixing zones are another instance when the entire extent of the water body is not required to be given full existing use protection."[439] In the following chapter, the handbook summarizes what that means: "the narrative and/or numeric criteria for the waterbody are still the applicable criteria within the boundaries of the mixing zone. A mixing zone simply authorizes an applicable criterion to be exceeded within a defined area of the waterbody while still protecting the designated use of the waterbody as a whole."[440] Therefore, mixing zones and areas with qualifying physical modifications are the only portions of a waterbody where existing uses are not required to be fully protected.[441]

The court in *American Wildlands v. Browner* relied on these provisions from the EPA's Water Quality Handbook in support of its finding that loss of existing uses must be limited to mixing zones.[442] However, because mixing zones are not at issue in this case, Donlin's reliance on *American Wildlands* is misplaced. As noted, the Division could have, but has not, designated any mixing zones in the project area. The project is therefore required to comply with the antidegradation policy throughout the waters its activities will affect.[443] The Division has tools to

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434 Donlin Br. at 18 (citing 18 AAC 70.240(c)(2)).
435 EPA, Water Quality Handbook, Chapter 4: Antidegradation at 4.
436 *Id.* at 7.
437 FEIS 5-41, DEC 18297.
438 ONC Opening Brief at 18-21; ONC Reply Brief at 20-26
439 Water Quality Handbook, Chapter 4 at 8.
440 Water Quality Handbook, Chapter 5: General Polices at 1 (2014), https://www.epa.gov/sites/production/files/2014-09/documents/handbook-chapter5.pdf.
441 Water Quality Handbook, Chapter 4 at 4.
442 260 F.3d at 1198.
443 18 AAC 70.015(a)(2)(C).

address impacts that might otherwise prevent the Division from finding reasonable assurance of compliance with the standard, such as mixing zones, site-specific criteria, and variances.[444]

Finally, in addition to the arguments of the Division and Donlin in favor of the watershed approach as analyzed above, the Division, and to some extent Donlin, have placed reliance on monitoring, adaptive management and project permits as further support for claiming that reasonable assurance exists regarding the protection of salmon and salmon habitat.[445] But, as analyzed *supra,* none of those considerations support a finding of reasonable assurance under these facts.[446]

c. Applying the "area of impact approach" to the protection of existing uses

As analyzed above, under the facts applicable here, there is no support for applying a watershed approach in determining whether reasonable assurance has been meet concerning the protection of existing uses. This project is situated in roughly the center of the watershed geographically and hydrologically.[447] As such, there is a significant portion of the watershed that is wholly unaffected by this project when it comes to the issue of salmon propagation and habitat. Allowing consideration of those unaffected areas together the affected areas, inappropriately dilutes and distorts the analysis. Use of a watershed approach would virtually always work to the advantage of the project proponent, except perhaps in instances where a project is located at the very head of the watershed and nearly all of it is affected. But that is not the case here.

In an instance such as this, involving a lengthy watershed where significant portions of it are wholly unaffected by the project regarding the issue analyzed, a different approach must be used. This approach requires looking to the geographic area that will be physically impacted by the project regarding the issue being considered. When that is done, an accurate analysis can occur. Further, this is in keeping with the purposes and intent of § 401 of the CWA. It is also consistent with the various definitions and regulations that the Division and Donlin have claimed support the "watershed" approach.[448] Analyzing this "area of impact" approach in the context of the protection of existing uses will help demonstrate the appropriateness of doing so.

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444 18 AAC 70.010(d); 18 AAC 70.200; 18 AAC 70.235; 18 AAC 70.240.
445 Division Response Brief at 5-15, 35-38; Donlin Response Brief at 32-33.
446 *Supra* at 23-36.
447 *See supra* at 9.
448 *Supra* at 61-68.

Because the intent and purpose of the § 401 analysis is to determine whether a project is reasonably likely to cause a violation of the applicable standards,[449] it is therefore important to limit the geographic scope of that analysis to the area of measurable and quantifiable impacts from the project. By placing geographic parameters on the area of impact approach for analysis of the protection of existing uses, one could simply analyze the middle watershed, because, by all accounts, that is the area that virtually all of the impact to existing uses is predicted to occur.[450]

Doing so will best serve to accomplish the intent and purpose of the § 401 analysis and not do so in such a way as to obscure or dilute the impacts from the project. Further, this area of impact approach is something that the Division may wish to consider regarding all aspects of the § 401 analysis as it would appear equally applicable in many contexts, including regarding the issue of mercury. But, because reasonable assurance fails as to mercury irrespective of whether it is analyzed by using an area of impact approach, or as the Division chose to do so here, and because it is impossible on this factual record to apply an "area of impact" approach to mercury, no attempt has been made to do so.

d. Analysis of the Division and Donlin's remaining arguments

In addition to their heavy reliance on the watershed approach as addressed above, the Division and Donlin make several other arguments which will quickly be addressed. These include a suggested lack of impact to salmon from wintertime low water conditions, a claim that any significant degradation to existing uses will preclude development, and that the Corps already determined that the project will comply with water quality standards and thereby protect existing uses. None of these arguments have merit.

First, the Division and Donlin contend that, instead of being impacted by the FEIS's predicted wintertime low water conditions, salmon will simply spawn elsewhere in the more

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449 *See generally*, *PUD No. 1 of Jefferson County v. Washington Department of Ecology et al.*, 511 U.S. 700; *see also*, *Sierra Club v. State Water Control Board*, 898 F.3d at 388.

450 Because a very small number of redds will be impacted in the lower watershed, it may also be appropriate to determinate the location of the lowest downgradient redd which has been observed and predicted to be above the winter low flow water line. That redd, as indicated above, is in the lower watershed. But just because it is in the lower watershed does not mean that the Division would be justified by including all waters within the watershed below that point, including those completely unaffected by the predicted winter low flow conditions. Instead, it would be appropriate to analyze all salmon habitat and propagation activity between that lowest downstream redd impacted by predicted winter low flow, and the upper extent of the predicted impacts, which appear to be at the upper boundary of the middle watershed.

habitat-rich sections of the Crooked Creed watershed.[451] Specifically, they contend, without any citation or authority, that:

> While the Crooked Creek reach near the proposed mine site does sustain spawning, the use by salmon for such purpose is marginal, indicating natural conditions suitable for spawning are poor. Salmon in Crooked Creek spawn mainly in the lower reaches of the creek, in areas were [sic] mine effects on spawning would be "unmeasurable." Rather than result in "drying up" of redds, streamflow changes are likely to cause salmon to spawn in more suitable habitat in Crooked Creek.[452]

Such a statement grossly misconstrues salmon lifecycles and biology.

Here, low flow conditions are predominantly predicted to occur in the winter months when stream flows are at their lowest points, not during salmon spawning activity, which largely occurs in the summer and early fall.[453] It is during the winter that low flow conditions will leave salmon redds dry, thus killing the fertilized eggs incubating in the gravel in the location of the redds.[454] Because these same locations are likely to be covered with water during summer and early fall spawning activity, the salmon will not simply go elsewhere as the Division and Donlin boldly suggest.

Further, although the Division and Donlin now attempt to assert that this segment of stream is insignificant from a salmon spawning and habitat perspective, that simply is not the case. It is approximately nine miles in length,[455] 49 feet wide,[456] is characterized as "essential fish habitat,"[457] and contains roughly 12 percent of the salmon observed in the entire main stem of Crooked Creek.[458]

Second, the Division and Donlin also assert that ONC's position on the protection of existing uses is unworkable if universally applied. They cite as an example construction of a rip rap wall in a marine cove to support a new port.[459] They contend that if studies indicate aquatic life may not use the area adjacent the rip rap as much, the rule espoused by ONC would require denial of the Section 401 certification on the grounds that existing uses would not be fully

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451 Joint Proposed Findings at 19.
452 *Id.*
453 FEIS at 3.13-89, DEC 17017.
454 *Id.* at 3.13-90, DEC 17018.
455 FEIS at Figure 3.13-1, DEC 16937; ONC's Reply Brief at 15.
456 *Id.* at 3.13-112, DEC 17040.
457 FEIS at 30, DEC 15305.
458 The Division's Response Brief at 33 (December 19, 2020) (Division's Response Brief) (citing FEIS 3.13-89, DEC 17017).
459 Respondents' Objection to ONC's Proposed Findings at 5.

protected.[460]

But the Division and Donlin misapply the analogy and the facts of this case. Put simply it is incorrect to argue that a project cannot move forward because aquatic life will not "use the area . . . as much."[461] Here, we are not talking about salmon not using an area as much. Instead, 65-78 percent of the salmon habitat and productivity in this lengthy section of the Creek will cease to exist.

Further, while the Division and Donlin contend that under such circumstances, a project simply would not be allowed to move forward, this is inaccurate. Instead, there are multiple ways a project might conceivably move forward even in the face of such challenges. Specifically, the CWA's § 404 addresses compensatory mitigation measures when aquatic resources are replaced or substituted when impacts remain even after avoidance and minimization measures.[462] It is also conceivable that Donlin might look to augmenting streamflow in the predicted low water events during winter months, such as through the use of reservoirs. The point of this decision is not that no mining can occur on Crooked Creek, but rather than in order for it to occur, the Division and Donlin will have to use the tools legally available to address impacts. Neither Donlin nor the Division can simply ignore real and significant impacts to existing uses on a nine-mile portion of Crooked Creek.

Third, and perhaps most remarkably, the Division and Donlin also seek to support their claim that the project will not significantly impact existing uses by relying on determinations made by the Corps in its ROD. [463] In the ROD the Corps indicated that impacts to water quality and chemistry are not expected to exceed regulatory limits, the project will have minor adverse effects on water quality and is not contrary to the public interest.[464] This, however, is bootstrapping. The Corps was *required to defer to the Division's section 401 certification*.[465] As such, the Corps made no independent determination on these points.

The fact that the Corps was required to defer to the Division's certification simply

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460 *Id.*

461 *Id.*

462 40 C.F.R. § 230.

463 Joint Proposed Findings at 4-5. In addition to relying on this point regarding the protection of existing uses, the Division and Donlin also rely on it as to the existence of reasonable assurance for mercury and temperature. *Id.*; Respondents' Objection to ONC's Proposed Findings at 4-5. For the same reasons provided here, it is equally unavailing as to mercury and temperature as it is to the protection of existing uses.

464 Joint Proposed Findings at 4-5 (citing ROD B3-6, DEC 8343)

465 ONC's Response to Joint Proposed Findings at 5 (citing 33 C.F.R. § 320.4(d)); ONC's Reply Brief at 3.

underscores the importance of ensuring the certificate was fully supported. As now addressed in this decision in detail, it was not.

IV. Conclusion

In issuing the Donlin project's certificate of reasonable assurance, the Department must determine whether reasonable assurance exists that the construction and operation of the project will be conducted in a manner which will not violate applicable water quality standards. To the extent that conditions are required for reasonable assurance to exist, the Department must specify those conditions in the certificate itself.

In this instance, reasonable assurance has not been demonstrated. It cannot be said that construction and operation of the project will result in reasonable certainty that Alaska's water quality standards for mercury or temperature will be met. It also cannot be said that construction and operation of the project is reasonably certain to protect existing uses.

As to mercury, the Division has failed to apply the correct standard. When the correct standard is applied, state water quality standards for mercury will undeniably be exceeded by the project in numerous locations, in many instances by a significant degree.

As to temperature, as the FEIS properly concludes, water temperatures in the main stem of Crooked Creek are likely to be impacted by the removal of riparian buffers, wetlands and mine operations, including pit dewatering and the resulting cone of depression. All of these will combine to increase temperatures and, as a result, it cannot be said that construction and operation of the project is reasonably certain to avoid exceedance of state water quality standards for temperature.

Finally, as to the protection of existing uses, the Division has improperly relied on the watershed approach in analyzing this issue. However, per § 401 of the CWA, using the watershed approach to analyze protection of existing uses on these facts is inappropriate. Instead, when the area of impact from the project is scrutinized, it is obvious that the overwhelming majority of the salmon productivity from that segment of the main stem of Crooked Creek will be eliminated. In the absence of mitigation or other compensatory measures, it cannot be said under these circumstances that the protection of existing uses is reasonably certain to occur.

For all these reasons, the previously issued certificate of reasonable assurance for the Donlin project is unsupported. The Department does not have reasonable assurance that the

project will meet state water quality standards. As a result, the Division's certificate is hereby rescinded, and the Division shall notify the Corps that project is no longer certified by the State of Alaska under § 401 of the CWA.

DATED this 12th day of April 2021.

By: _____
Z. Kent Sullivan
Administrative Law Judge

Adoption

The undersigned adopts this Decision, under the authority of AS 44.64.060(e)(1), as the final administrative determination in this matter.

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

DATED this _____ day of _____, 2021.

By: _____
Jason Brune, Commissioner
Department of Environmental Conservation

Non-Adoption Options

A. The undersigned in accordance with AS 44.64.060(e)(2), declines to adopt this Decision, and instead orders under AS 44.64.060(e)(2) that the case be returned to the administrative law judge to

take additional evidence about _____;

make additional findings about _____;

conduct the following specific proceedings: _____.

DATED this _____ day of _____, 2021.

By: _____
Jason Brune, Commissioner
Department of Environmental Conservation

B. The undersigned, in accordance with AS 44.64.060(e)(3), revises the enforcement action, determination of best interest, order, award, remedy, sanction, penalty, or other disposition of the case as set forth below, and adopts the proposed decision as revised:

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

DATED this _____ day of _____, 2021.

By: _____
Jason Brune, Commissioner
Department of Environmental Conservation

C. The undersigned, in accordance with AS 44.64.060(e)(4), rejects, modifies or amends one or more factual findings as follows, based on the specific evidence in the record described below:

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

DATED this _____ day of _____, 2021.

By: _____
Jason Brune, Commissioner
Department of Environmental Conservation

D. The undersigned, in accordance with AS 44.64.060(e)(5), rejects, modifies or amends the interpretation or application of a statute or regulation in the decision as follows and for these reasons:

Judicial review of this decision may be obtained by filing an appeal in the Alaska Superior Court in accordance with Alaska R. App. P. 602(a)(2) within 30 days after the date of this decision.

DATED this _____ day of _____, 2021.

By: _____
Jason Brune, Commissioner
Department of Environmental Conservation

Judge finds ADEC certification of Donlin Gold's water quality invalid & orders certificate rescinded

by ONC Staff

Department of Environmental Conservation told to rescind certification of Federal wetlands permit for Donlin Gold Mine because the project will violate Alaska's environmental standards & will not adequately protect salmon habitat.

(Bethel, AK) April 13th, 2021: In a 78-page decision, handed down late Monday afternoon, Alaska Administrative Law Judge Z. Kent Sullivan issued notice of his findings in favor of Orutsararmiut Native Council that Alaska Department of Environmental Conservation was wrong to issue a Clean Water Act Section 401 Certificate to Donlin Gold because the project would not meet the State of Alaska's water quality standards. Judge Sullivan's findings are a recommended ruling. DEC Commissioner Jason Brune will have 45 days to decide whether to adopt the ruling.

According to the Clean Water Act, the Army Corps of Engineers is required to obtain a 401 certificate from the state as part of the permitting process for the Donlin project. The Final Environmental Impact Statement (FEIS) for the Donlin Gold Project concluded, based on extensive study, that operation of the Donlin Mine would lead to violations of numerous state water quality standards for mercury and water temperature.

Judge Sullivan's findings concur with the FEIS, his conclusions include;

1) "In this instance, reasonable assurance has not been demonstrated. It cannot be said that construction and operation of the project will result in reasonable certainty that Alaska's water quality standards for mercury or temperature will be met. It also cannot be said that construction and operation of the project is reasonably certain to protect existing uses".

2) "As to mercury, the Division has failed to apply the correct standard. When the correct standard is applied, state water quality standards for mercury will undeniably be exceeded by the project in numerous locations, in many instances by a significant degree".

3) "As to temperature, as the FEIS properly concludes, water temperatures in the main stem of Crooked Creek are likely to be impacted by the removal of riparian buffers, wetlands and mine operations, including pit dewatering and the resulting cone of depression. All of these will combine to increase temperatures and, as a result, it cannot be said that construction and operation of the project is reasonably certain to avoid exceedance of state water quality standards for temperature".

4) "When the area of impact from the project is scrutinized, it is obvious that the overwhelming majority of the salmon productivity from that segment of the main stem of Crooked Creek will be eliminated. In the absence of mitigation or other compensatory measures, it cannot be said under these circumstances that the protection of existing uses is reasonably certain to occur".

Orutsararmiut Native Council Executive Director Mark Springer noted, "This decision by Judge Sullivan demonstrates that the concerns of the People of the Kuskokwim River surrounding development of the Donlin Prospect were, and are legitimate. We knew from the beginning that DEC erred in their hasty issuance of

the 401Certificate, and we encourage Commissioner Brune and the Administration to take to heart the conclusions contained in this Proposed Decision, and ensure protection of salmon streams otherwise slated for destruction as well as the additional, noted, long term environmental impacts on the Kuskokwim River drainage and the communities within it."

"Sovereign Tribal governments have a responsibility for the health and welfare of their citizens, lands, and self-governance. There is nothing more important to Kuskokwim communities and their people than maintaining the subsistence way of life that has sustained them through millennia. This way of life depends integrally upon the salmon and smelt of the Kuskokwim River and its tributaries. The Donlin prospect which is located upstream from these communities, if developed, would be a direct threat to water quality, to the many fish that traverse these waters, and to the Kuskokwim way of life." Springer added.

"With the decision that DEC cannot assure water quality standards will be met, the Commissioner should adopt the recommended ruling, vacate the certificate, and notify the Army Corps that the project is no longer certified by the state of Alaska and the 404 permit should be revoked." said Olivia Glasscock, Earthjustice attorney representing Orutsararmiut Native Council.

Within a year of former President Donald Trump's inauguration, the Army Corps of Engineers issued a joint Record of Decision with the Bureau of Land Management authorizing the key Clean Water Act permit required for the Donlin Gold project. That approval was granted despite the fact that the Environmental Impact Statement revealed major environmental impacts including the destruction of salmon spawning habitats and releases of mercury into the air and water far in excess of Alaska's standards.

For example, according to the Final Environmental Impact Statement issued by the Army Corps, it is anticipated that if the mine is developed there will be a 40% increase in mercury deposition to surface waters near the mine. Additionally, the Fish Habitat permits issued by the Alaska Department of Fish and Game without public notice or process authorize Donlin to permanently eliminate stream reaches that support Chinook, Coho, Sockeye and Chum salmon or as the permits themselves state: result in "altered or eliminated" habitat, "fish passage… would be eliminated," and would reduce or eliminate flow of water from headwaters to the mouth of these streams.

13 Tribal Governments, the Yukon Kuskokwim Health Corporation, and the Association of Village Council Presidents were joined by the National Congress of American Indians in passing resolutions of opposition to the Donlin project.

Related

Donlin Gold project does not meet State of Alaska water quality standards
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Judge recommends state not uphold water certificate for Donlin Gold mine

April 14, 2021 by Anna Rose MacArthur, KYUK - Bethel (https://www.ktoo.org/author/kyuk-bethel/)

Site of the proposed Donlin Gold mine. (KYUK)

On April 12, a state judge issued a recommendation (https://www.kyuk.org/sites/kyuk/files/202104/2021-04-12_notice_of_proposed_decision.pdf) that the Alaska Department of Environmental Conservation not uphold a water certificate issued to the Donlin Gold mine.

Alaska's environmental conservation commissioner will make the final decision.

The state initially issued what's called a "certificate of reasonable assurance" to Donlin in August 2018. It said that the state had reasonable assurance that Donlin's operations would comply with state water standards. It's attached to one of the most important state permits Donlin needs before it can begin constructing and operating its gold mine. Donlin Gold needs more than 100 permits for its operations.

The Orutsararmiut Native Council challenged that certificate, contending that the state cannot have "reasonable assurance" that the mine won't violate the water standards. Specifically, the tribe said that the state cannot guarantee that the mining operations will maintain Alaska's environmental standards for mercury levels, water temperature and fish habitat.

Administrative Law Judge Kent Sullivan agreed.

"Salmon and salmon habitat in a large segment of Crooked Creek will be significantly and detrimentally impacted by the project," Sullivan wrote in his proposed decision.

The three parties involved in the case, Orutsararmiut Native Council, Alaska Department of Environmental Conservation and Donlin Gold, have until May 5 to respond to the judge's recommendation.

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(https://www.ktoo.org/2021/04/29/dunleavy-proposes-opening-part-of-kachemak-bay-to-subsurface-gas-leasing/)

Dunleavy proposes opening part of Kachemak Bay to subsurface gas leasing (https://www.ktoo.org/2021/04/29/dunleavy-proposes-opening-part-of-kachemak-bay-to-subsurface-gas-leasing/)

April 29, 2021

Legislation proposed by Gov. Mike Dunleavy would allow the state to sell subsurface gas-only leases in part of Kachemak Bay so companies could drill into undersea reservoirs from miles away.

(https://www.ktoo.org/2021/04/27/state-owned-corporation-considers-shuttering-skagway-ore-terminal-building-a-new-one-in-haines/)

State-owned corporation considers shuttering Skagway ore terminal, building a new one in Haines (https://www.ktoo.org/2021/04/27/state-owned-corporation-considers-shuttering-skagway-ore-terminal-building-a-new-one-in-haines/)

April 27, 2021

Local officials in Haines see it as an opportunity to upgrade old shipping infrastructure.

(https://www.ktoo.org/2021/04/24/in-river-hydro-project-in-alaska-chosen-for-federal-assistance-aimed-to-get-communities-off-diesel/)

In-river hydro project in Alaska chosen for federal assistance aimed to get communities off diesel (https://www.ktoo.org/2021/04/24/in-river-hydro-project-in-alaska-chosen-for-federal-assistance-aimed-to-get-communities-off-diesel/)

April 24, 2021

The U.S. Department of Energy chose 11 communities nationwide to receive federal assistance for renewable energy projects. Five of them are in Alaska

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Supplemental Wetlands Mitigation Ordinance

Public Comments Received on SWMO Project Webpage from 7/2020 through 5/1/2021

HANDOUT

Public Comments Received on SWMO Project Webpage from 7/2020 through 5/1/2021

COMMENT 1

Name: Michelle Breinholt

Community of Residence: Willow

Contact Email: Shelly.breinholt@gmail.com

Contact Phone: 907-671-0788

3. Are there any specific portions of the draft SWMO that seem confusing?

It is always confusing to me why anyone would allow development on wetlands. Wetlands are one of the fastest disappearing ecosystems and should be protected at all costs.

4. After reviewing the draft SWMO and the supporting material, what additional questions do you have about the SWMO?

I would like to know exactly who is going to monitor the development and make 100% sure that full mitigation will occur. I know of instances in the lower 48 where the process was not followed and mitigation became a joke.

5. After reviewing the draft SWMO and the supporting materials, what would you like to share that can help us improve the SWMO?

While I applaud the borough's seemingly good intentions to require full "compensation" for wetlands that are affected, I simply have no faith that true mitigation will occur and if it does that it will be enough to keep our wetlands healthy. A natural wetland is an ecosystem of great intricacy. It has evolved to meet the needs of its living components and by way of flood control and water filtration, ours as well. While I have seen a wetland area restored to a degree by humans, I was never really sure if it was as complete and functioning as nature had intended. I don't think anyone can know that for sure. Why not just reign in the greed and leave the wetlands alone. Take the development elsewhere.

COMMENT 2

Name: Fred Wagner

Community of Residence: Meadow_Lakes

Contact Email: akfred@mtaonline.net

Contact Phone: 907-354-8501

Public Comments Received on SWMO Project Webpage from 7/2020 through 5/1/2021

3. Are there any specific portions of the draft SWMO that seem confusing?

No.

4. After reviewing the draft SWMO and the supporting material, what additional questions do you have about the SWMO?

It seems to me that this project is subverting the USACE process by adding additional restrictions beyond those deemed necessary by the body that governs wetlands - USACE. I believe you're making an incorrect assumption when you say that a project impacts X number of acres and the USACE is only making them mitigate X%. It is my understanding the USACE considers the percentage of the total wetlands that are being affected and makes the applicant offset this by mitigating an equal amount. This looks to actually be an attempt to further discourage responsible, permitted, projects from advancing by forcing projects to give additional considerations outside of those deemed necessary by the agency in charge of making such determinations.

5. After reviewing the draft SWMO and the supporting materials, what would you like to share that can help us improve the SWMO?

COMMENT 3

First Name: Gwen Bachman

Community of Residence: Farm Loop

Contact Email: gcbachman@gmail.com

Contact Phone: 402-405-3909

3. Are there any specific portions of the draft SWMO that seem confusing?

No, I felt it was all very clear.

4. After reviewing the draft SWMO and the supporting material, what additional questions do you have about the SWMO?

I dug around a bit and didn't find any specific criteria for when a USACE permit was needed so I don't have a clear understanding of when the WMO would apply. I understand 'large', but the definition wasn't easy to find, and I am still not clear on the conditions that specify when a wetland is affected. Is runoff from a paved lot nearby enough for USACE and the WMO to apply or does the project physically have to be in contact with the wetland? My runoff concern is that the project can be distant, but the increased pollution etc. can still be traced to the project. This effect isn't immediately going to destroy the wetland but it will alter ecosystem services and could ultimately have just as

significant an effect as immediately destroying an area. It would help the public if the criteria (other than just saying when a USACE is used) is spelled out in the WMO.

5. After reviewing the draft SWMO and the supporting materials, what would you like to share that can help us improve the SWMO?

Preserving our wetlands is important. MatSu may not have the biggest fisheries in the state but they are used by locals who may not have the time and resources to venture to other parts. Also, until we can better understand why salmon returns are so variable and low lately, it seems wise to preserve wetland areas that could serve as future alternative habitats for young fish. Tourism is another potential beneficiary of wetlands. If MatSu could nurture a Potters Marsh equivalent it would bring in more bird and wildlife watchers. We can't do that if we don't have the wetlands. Projects like Settlers Bay trails, boardwalks on the hay flats and the very popular Reflections lake trail are a great start.

COMMENT 4

First Name: April Warwick

Community of Residence: Big_Lake

Contact Email: awarwick@ak.net

Contact Phone: 907-338-7777

3. Are there any specific portions of the draft SWMO that seem confusing?

4. After reviewing the draft SWMO and the supporting material, what additional questions do you have about the SWMO?

5. After reviewing the draft SWMO and the supporting materials, what would you like to share that can help us improve the SWMO?

I grew up in Big Lake and I visit often. I'm totally opposed to opening up a road for 100 miles of wilderness. I've hiked that area over the years and I prefer to keep the wilderness wild and alive. In my view the wilderness needs more protections from hunters and people who pollute and leave their trash. Our planet is dying, lack of knowledge or belief does not change that fact. Humans and their never ending greed is killing every acre of land on earth and this road just furthers that behavior. I suggest you leave the wilderness alone and say no to more destruction.

END OF COMMENTS

PC Reso 21-09 Packet

TALKEETNA RESTAURANT

HANDOUT

From: Mark Whisenhunt
To: Bill Rodwell
Cc: Karol Riese
Subject: FW: Comment for Talkeetna Restaurant CUP modification
Date: Monday, May 3, 2021 7:35:10 AM
Attachments: Talkeetna Restaraut.docx

Received. We will provide them as a hand out. Thank you.

Respectfully,

Mark Whisenhunt
Planner II
Matanuska-Susitna Borough
Office: (907) 861-8527
mark.whisenhunt@matsugov.us

From: Bill Rodwell <billrodwell3@gmail.com>
Sent: Monday, May 3, 2021 7:19 AM
To: Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>
Subject: Comment for Talkeetna Restaurant CUP modification

Hello Mark,
Could you please forward the comments on the attached document to the planning commission packet for tonight's hearing. I hope to call in but do wish to include these comments.
Thank you,
Bill Rodwell

Dear Mat Su Borough Planning Commission, May 3, 2021

I am a neighboring downtown business owner (Talkeetna Cabins), and longtime Talkeetna Resident, **opposed** to modifying the conditional use permits 17.70 and 17.25, expansion of Talkeetna Restaurant. The modifications are too large, would set a precedent of changes that would not be beneficial to the town.

Current CUP:
2013 conditional use granted at 4206 square feet, required to comply with SPUD requirements, and operate consistent with goals and policies of comprehensive plan and not detract from value, character, or integrity of surrounding area.

Concerns:

- In recent years, without showing commercial use that required a CUP, the roof was raised, eaves were raised, building square footage increased. Now the business asks for a modification to utilize this space. This expansion plan by the owners appears to have the process of **"Build it and then ask for forgiveness,** which is not consistent to goals of the comprehensive plan.

- Current Application shows increase in building square footage from 4206SF to 7138SF (not including decks), a **70% increase**. Including decks and 2nd floor current application shows increase in dispensary area from 5332SF to 9968SF, an **87% increase**.

- Although the application states the expansion is for banquets and group gatherings, the owner also has publically stated (TCCI meeting) that the space will be used for individual dining parties as needed. Talkeetna Restaurant is already operating at a maximum capacity when it comes to the use of the lot space, town character, and infrastructure needs.
  Does this increase in business size have an effect on the value, character, or integrity of surrounding area? **Yes it does have an effect!** In the eyes of this resident, and neighboring business owner who sees the character of downtown Talkeetna as losing its value. We must pay close attention to the comprehensive plan. We must balance our growth to maintain and sustain our historic and small town tourism attractiveness.

If the Talkeetna Restaurant expands, it will have outgrown Talkeetna and have an impact that deters from the goals of the comprehensive plan and only adds to major town infrastructure limitations.

Respectfully,

Bill Rodwell

Resident and owner/operator of Talkeetna Cabins, downtown Talkeetna