



## ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

Permit Fact Sheet – **Preliminary Draft**

Permit Number: AKG002000

### GENERAL PERMIT FOR EXCAVATION DEWATERING

**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Wastewater Discharge Authorization Program**  
**555 Cordova Street**  
**Anchorage, AK 99501**

Public Comment Period Start Date: [\(Insert Date\)](#)

Public Comment Period Expiration Date: [\(Insert Date\)](#)

Alaska Online Public Notice System: <https://aws.state.ak.us/OnlinePublicNotices/>

DEC Online Public Notice System: <https://dec.alaska.gov/commish/public-notices/>

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Proposed issuance of an Alaska Pollutant Discharge Elimination System (APDES) general permit for:

### EXCAVATION DEWATERING

The Alaska Department of Environmental Conservation (the Department or DEC) proposes to issue an APDES general permit (permit) for excavation dewatering discharges. The permit authorizes and sets conditions on the discharge of pollutants from authorized excavation dewatering discharges to waters of the United States (U.S.) or waters of the State or to land. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged from the authorized excavation dewatering discharges and outlines Best Management Practices (BMPs) to which they must adhere.

This fact sheet explains the nature of potential discharges from excavation dewatering and the development of the permit including:

- information on public comment, public hearing, and appeal procedures,
- a description of the industry
- a listing of effluent limitations, monitoring, and other conditions
- technical material supporting the conditions in the permit, and
- monitoring requirements in the permit.

## **Public Comment**

Persons wishing to comment on, or request a public hearing for the draft permit, may do so in writing by the expiration date of the public comment period.

Commenters are requested to submit a concise statement on the permit condition(s) and the relevant facts upon which the comments are based. Commenters are encouraged to cite specific permit requirements or conditions in their submittals.

A request for a public hearing must state the nature of the issues to be raised, as well as the requester's name, address, phone number, and email address. The Department will hold a public hearing whenever the Department finds on the basis of requests, a significant degree of public interest in a draft permit. The Department may also hold a public hearing if a hearing might clarify one or more issues involved in a permit decision or for other good reason, in the Department's discretion. A public hearing will be held at the closest practical location to the site of the operation. If the Department holds a public hearing, the Director will appoint a designee to preside at the hearing. The public may also submit written testimony in lieu of or in addition to providing oral testimony at the hearing. A hearing will be tape recorded. If there is sufficient public interest in a hearing, the comment period will be extended to allow time to public notice the hearing. Details about the time and location of the hearing will be provided in a separate notice.

All comments and requests for public hearings must be in writing and should be submitted to the Department at the technical contact address, fax, or email identified above (see also the public comments section of the attached public notice). Mailed comments and requests must be postmarked on or before the expiration date of the public comment period.

After the close of the public comment period and after a public hearing, if applicable, the Department will review the comments received on the draft permit. The Department will respond to the comments received in a Response to Comments document that will be made available to the public. If no substantive comments are received, the tentative conditions in the draft permit will become the proposed final permit.

The proposed final permit will be made publicly available for a five-day applicant review. The applicant may waive this review period. After the close of the proposed final permit review period, the Department will make a final decision regarding permit issuance.

A final permit will become effective 30 days after the Department's decision, in accordance with the state's appeals process at 18 Alaska Administrative Code (AAC) 15.185.

The Department will transmit the final permit, fact sheet (amended as appropriate), and the Response to Comments to anyone who provided comments during the public comment period or who requested to be notified of the Department's final decision.

## **Informal Reviews and Adjudicatory Hearings**

A person authorized under a provision of 18 AAC 15 may request an informal review of a contested decision by the Division Director in accordance with 18 AAC 15.185 and/or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. See DEC's "Appeal a DEC Decision" web page <https://dec.alaska.gov/commish/review-guidance/> for access to the required forms and guidance on the appeal process. Please provide a courtesy copy of the adjudicatory hearing request in an electronic format to the parties required to be served under 18 AAC 15.200. Requests must be submitted no later than the deadline specified in 18 AAC 15.

## **Documents are Available**

The permit, fact sheet, and related documents can be obtained by visiting or contacting DEC between 8:00 a.m. and 4:30 p.m. Monday through Friday at the addresses below. The permit, fact sheet, and other

information are located on the Department's Wastewater Discharge Authorization Program website:  
<https://dec.alaska.gov/water/wastewater/>.

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## 1.0 INTRODUCTION

The Alaska Department of Environmental Conservation (DEC or Department), Division of Water, Wastewater Discharge Authorization Program (WDAP) is reissuing AKG002000 – Excavation Dewatering General Permit, which represents the third reissuance of the permit by DEC.

### 1.1 Basis for Permit

Per Alaska Statutes (AS), Chapter 46, Title 3, Section 100(a) (AS 46.03.100(a)), a person may not construct, modify, or operate a treatment works or dispose of liquid waste into the waters or onto the land of the State without prior authorization from the Department. Per AS 46.03.100(d), the Commissioner may provide, as a term of a general permit, that a person intending to dispose (or discharge) wastewater under the general permit shall first obtain specific authorization from the Department. The following section discusses the regulatory basis for developing the Permit and covers both the discharge of wastewater to Waters of the U.S. and state waters and disposal of wastewater into or onto land.

#### 1.1.1 Wastewater Discharges to Waters of the United States (WOTUS) in Alaska.

Section 301(a) of the Clean Water Act (CWA) and Title 18 of the Alaska Administrative Code (AAC), Chapter 83, Section 15 (18 AAC 83.015) provide that the discharge of pollutants to WOTUS located in Alaska is unlawful except in accordance with an Alaska Pollutant Discharge Elimination System (APDES) permit. Often the discharge of pollutants is regulated through an APDES individual permit. However, 18 AAC 83.205 authorizes the issuance of a general APDES permit to categories of discharges when a number of point sources are:

- Located within the same geographic area and warrant similar pollution control measures;
- Involve the same or substantially similar types of operations;
- Discharge the same types of wastes;
- Require the same effluent limitations or operating conditions;
- Require the same or similar monitoring requirements; and
- In the opinion of the Department, are more appropriately controlled under a general permit than under individual permits.

Per 18 AAC 83.210(a), a general permit is to be administered according to the individual permit regulations in 18 AAC 83.115 and 18 AAC 83.120. Like an individual permit, a violation of a condition contained in a general permit constitutes a violation of the CWA and the permittee is accordingly subject to the penalties specified in Section 309 of the CWA. In accordance with 18 AAC 83.155, the Permit has a term of five years and those authorizations under the general permit can remain in force and effect via administrative extension should the Department be unable to reissue the permit prior to its expiration date.

#### 1.1.2 Wastewater Discharges into State Waters

WDAP authorizes discharges of domestic or non-domestic wastewater into state waters under the regulatory authority of 18 AAC 72 – Wastewater Disposal. Determining which waters are state waters is not straightforward because the new definition of WOTUS is still without clear guidance of how the WOTUS determination will be made in certain circumstances. Previously, nearly all waters and wetlands were perceived as WOTUS. However, in the recent Superior Court decision in the case of *Sackett v. EPA*, the court held that the CWA's use of "waters" in 33 USC 1362(7) refers only to "geographic[al] features that are described in ordinary parlance as 'streams, oceans, rivers, and lakes' and to adjacent wetlands that are 'indistinguishable' from those bodies of water due to a continuous surface connection."

This recent decision means many waters and wetlands that were previously categorized as WOTUS are, at this time, now state waters. While the determination procedures remain in flux, the level of environmental protection remains the same regardless of whether waters are categorized as WOTUS or state waters. In other words, 18 AAC 70 – Water Quality Standards (WQS) applies to both designations and the resulting permit limits and conditions remain the same for either. The primary implication lies in the reporting of monitoring results. Reporting to the EPA is required for discharges to WOTUS while discharges to waters of the state are reported only to the State. Hence, the designation of receiving water only affects the method or reporting in this general permit.

### 1.1.3 Wastewater Disposal into or onto Lands in Alaska

WDAP also authorizes disposal of domestic or non-domestic wastewater into or onto lands of the State under the regulatory authority of 18 AAC 72 – Wastewater Disposal. For land disposal to upland areas, it is incumbent upon the applicant to demonstrate that the disposal area is neither WOTUS nor state waters. More importantly, DEC intends to restrict land disposal to those locations where infiltration into groundwater is the primary objective. Hence, land disposals to the subsurface requires the ability for the disposed water to infiltrate before flowing overland and becoming a potential discharge to surface waters, including waters of the state and WOTUS. The burden of submitting the necessary information for DEC to make this determination will reside with the applicant.

Per 18 AAC 15.100, the Department can issue a State general permit for a term of five years. The authorization for disposal under a State general permit can be administratively extended per 18 AAC 15.110. The permit term and administrative extension process is essentially the same for either APDES or state general permits.

## 1.2 Permit Issuance History

This is the third issuance of an excavation dewatering APDES permit. Prior to the first APDES permit, excavation dewatering discharge activities were permitted under a state wastewater discharge permit developed in accordance to AS 46.03.100 to permit both discharges to land and water. Excavation dewatering discharges in Alaska have been regulated by the Department since 1998 with the issuance of the first state general permit (Permit # 9940-DB002). The permit initially issued in 1998 was reissued in 2004 and then again in 2009 prior to the Department's assuming authority to administer the National Pollutant Discharge Elimination System (NPDES) program for these types of nondomestic discharges on October 31, 2009. The most current permit authorizing these discharges is the Excavation Dewatering General Permit (Permit # AKG002000) that is due to expire on September 30, 2024. During the course of the current permit term 164 authorizations have been issued with an average of 32 authorizations issued per year, of which 47 facilities/projects have been inspected, and 67 active authorizations are currently in effect.

Excavation dewatering discharges are primarily related to trench dewatering for the installation of utilities and dewatering for the construction of building footers. Due to the presence of permafrost, shallow bedrock, and poorly drained soils, a large portion of the state has a relatively high-water table that requires dewatering to facilitate construction activity. The dewatering general permit authorized discharges of accumulated water within an excavation or work area to facilitate construction.

All discharges to surface waters authorized under the current and past dewatering state permits were required to meet water quality-based effluent limits (WQBEL) equal to applicable Alaska water quality criteria, which are codified in 18 AAC 70, at the point of discharge. Effluent limits and monitoring permit requirements consisted of monitoring for pH, settleable solids, turbidity, Total Aqueous Hydrocarbons (TAQH), Total Aromatic Hydrocarbons (TAH), and total iron. In addition to the

hydrocarbon analysis, all surface water discharges were prohibited from discharging any water with a visible sheen.

Land discharges have historically been authorized to areas which were suitable for infiltration with no off-site discharges. Permit monitoring requirements for land discharges consisted of visual monitoring for sheen, turbidity, and erosional effects. Operators were required to implement basic erosion and sediment control best management practices (BMPs) to prevent erosion and sediment deposition. All prior discharges were authorized by site-specific discharge authorizations that often included specific BMPs.

### **1.3 Summary of Significant Changes to the Excavation Dewatering General Permit**

- Minor changes were made to reflect the required use of DEC's online permit application portal – Environmental Data Management System (EDMS) to be the primary method for submission of Notice of Intent (NOI), Notice of Termination (NOT), and reporting, unless DEC approves of an alternative submission method.

## **2.0 DESCRIPTION OF INDUSTRY AND RECEIVING WATERS**

### **2.1 Industry and Process Summary**

Excavation dewatering is critical in Alaska to support the construction industry. New buried utilities across Alaska are often installed several feet deep below the frost line, which can place them beneath the surface of the water table. A large portion of the state contains permafrost that forms an impermeable layer for water infiltration and will cause elevated water tables. Those areas that do not contain permafrost are often poorly drained due to the predominance of silt, which can result in elevated water tables or saturated soils. In order to facilitate construction, the subsurface water is removed from the excavation areas either through pumps placed within the excavation or through employing nearby dewatering wells.

The dewatering process normally consists of placing a suction hose into a sump or low area of an excavation that is connected to a large pump to remove any accumulated water. This process is normally used for excavations in relatively impermeable soils that are just below the surface of the water table with an aquifer recharge rate that is less than the pumping discharge rate. The pumped water is typically discharged to the land utilizing appropriate temporary BMPs or to surface water through sediment filters. The BMPs commonly used are dewatering bags to filter the water, temporary settling basins, weir tanks, rock check dams, and other similar devices, which can reduce the discharge velocity and provide an area for sediment deposition and ultimately removal. Another form of dewatering for excavations to depths several feet below the water table with rapid aquifer recharge is the installation of perimeter dewatering wells. Dewatering wells are temporarily drilled wells placed within close proximity and in the same aquifer of the planned excavations where either a single well pump or a series of wells can be used to induce a localized lowering of the surface of the water table.

### **2.2 Potential Industry Impacts on Water Quality**

The main pollutant of concern for any excavation dewatering discharge is sediment, which can normally be filtered directly through a sediment filter or weir tank for those direct discharges to surface water. Sediment filters or Weir tanks can remove a large percentage of the total suspended solids (i.e., sediment) if discharge rates are within the limits of the treatment unit. Discharges to land are typically managed with temporary BMPs, which reduce discharge velocity to mitigate erosion and provide large settling areas.

Dewatering discharges that are in close proximity to “DEC identified contaminated sites” have the potential to be impacted by the contaminants of concern identified by the DEC Contaminated Sites

Program. The contaminants of concern are generally petroleum hydrocarbons. Excavation dewatering conducted within close proximity to identified contaminated sites have historically been authorized via site-specific discharge authorizations that often include additional monitoring requirements. Discharges with residual petroleum products are normally treated with oil absorbent pads or surface skimmers, and in more severe cases, a temporary granular activated carbon filter treatment system. Water Quality-Based Effluent Limits (WQBELs) for Total Aromatic Hydrocarbons (TAH) and Total Aqueous Hydrocarbons (TaqH) are set equal to their applicable criteria established in the permit to ensure maintenance and protection of water body uses.

## 2.3 Receiving Waters

### 2.3.1 Water Quality Standards

Regulations in 18 AAC 70 require that the conditions in permits ensure compliance with the Alaska WQS. The state's WQS are composed of use classifications, numeric and/or narrative water quality criteria, and an Antidegradation Policy. The use classification system describes the designated and existing uses that each water body is expected to achieve. The numeric and/or narrative water quality criteria are the criteria deemed necessary by the State to support the beneficial use classification of each water body. The Antidegradation Policy ensures that the beneficial uses and existing water quality are maintained.

The protection of surface water occurs primarily through the development, adoption, and implementation of Alaska Water Quality Standards (WQS) and the use of WQS in APDES and state permits. The WQS designate specific uses that water quality must be maintained and protected. Alaska WQS designate seven uses for fresh waters (drinking water; agriculture; aquaculture; industrial; contact recreation; non-contact recreation; and growth and propagation of fish, shellfish, other aquatic life, and wildlife) and seven uses for marine waters (aquaculture; seafood processing; industrial; contact recreation; non-contact recreation; growth and propagation of fish, shellfish, other aquatic life, and wildlife; and harvesting raw mollusks or other raw aquatic life for human consumption).

Existing uses are “those uses actually attained in a water body on or after November 28, 1975, whether or not they are included in the WQS [40 CFR § 131.3(e)].” Designated uses are “those uses specified in water quality standards for each waterbody or segment whether or not they are being attained [40 CFR § 131.3(f)].” Waterbodies in Alaska are designated for all uses unless the water has been reclassified under 18 AAC 70.230 as listed under 18 AAC 70.230(e). Some waterbodies in Alaska can also have site-specific water quality criterion per 18 AAC 70.235, such as those listed under 18 AAC 70.236(b).

### 2.3.2 Impaired Surface Waters

The CWA mandates that states monitor and report on the quality of their waters. Section 305(b) requires that the quality of all water bodies be characterized, and Section 303(d) requires that states list any water bodies that do not meet WQS. DEC develops and publishes an integrated water quality assessment report every two years as required by the CWA.

There are five categories to which a waterbody can be assigned:

Categories 1 and 2	Waters for which there is enough information to determine that water quality standards are attained for all or some of their designated uses.
Category 3	Waters for which there is not enough information to determine their status.
Category 4	Waters that are impaired but have one of several different types of waterbody recovery plans.
Category 5	Waters that are impaired and do not yet have waterbody recovery plans. Also known as 303(d) list impaired waters.



Waters that persistently do not meet Alaska’s Water Quality Standards (18 AAC 70) are placed in Alaska’s 303(d) Category 5 Impaired Waters List through the Integrated Reporting process. When a water is Category 5 listed, it triggers certain requirements for that water to move out of Category 5.

A Total Maximum Daily Load (TMDL) establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality. A TMDL identifies pollution sources in a waterbody and calculates the amount or 'load' of that specific pollutant that the water can receive and still maintain WQS. TMDLs are a necessary first step toward waterbody recovery and are the primary tool per the CWA for a waterbody to be moved from the Alaska 303(d) Category 5 Impaired Waters List. TMDLs are approved by EPA and once approved, the waterbody moves to Category 4a, impaired with a recovery plan in place. TMDL implementation includes taking actions to improve water quality.

A permittee can access DEC’s Integrated Water Quality Monitoring and Assessment Report and the Alaska’s Section 303(d) List of Impaired Waterbodies at <https://dec.alaska.gov/water/water-quality/integrated-report/>.

## **3.0 PERMIT CONDITIONS**

### **3.1 Coverage under the Permit**

#### **3.1.1 Authorized Discharges**

Permit Part 1.3 outlines operations that are authorized under the permit. The authorized operations consist of excavation dewatering discharges to waters of the U.S., waters of the State or land associated with construction activity where pumps, sumps, etc. are used within or near excavation areas to remove accumulated groundwater, surface water or storm water. Dewatering discharges eligible for coverage under this permit would also consist of groundwater dewatering using temporary dewatering wells, vacuum well points, eductors, etc. to temporarily lower the surface of a water table to support a construction activity.

The permit provides additional permitting requirements for excavation dewatering activities that occur within 1,500 feet of a “DEC identified contaminated site” or “contaminated groundwater plume”. Excavation dewatering activities that are covered under the APDES Construction General Permit (CGP, AKR100000) that occur within 1,500 feet of an “Active DEC identified contaminated site” or “contaminated groundwater plume” require additional permit authorization under the permit due to the potential for additional pollutants of concern in the discharge. The additional permitting authorization under the permit will assure that dewatering activities conducted at a construction project covered under the CGP do not impact any known contaminant plumes. This permit authorization is required since the CGP only authorizes discharges of uncontaminated groundwater from dewatering activities managed through BMPs. This is the only situation where permit coverage under two permits that authorize excavation dewatering discharges will be required on the same project. A Notice of Intent (NOI) application submittal requirement flow chart is provided in Appendix A of this fact sheet to provide clarification as to how dewatering discharges would be properly permitted either under the Excavation Dewatering permit or the CGP.

#### **3.1.2 Exclusions**

Permit Part 1.4 outlines discharges that are not authorized under the permit. Discharges that are not authorized must seek coverage under another applicable APDES permit or apply for and obtain an APDES individual permit. The permit is to be used for eligible excavation dewatering discharges associated with construction activities. The permit only authorizes intermittent or temporary discharges

that contain low pollutant concentrations that present a minimal threat to the environment or public health. Permit Part 1.5 describes conditions that would justify the requirement to issue an individual permit.

Construction dewatering associated with oil and gas facilities located on the North Slope Borough are eligible for coverage under permit AKG332000. The statewide oil and gas pipeline general permit AKG320000 covers hydrostatic testing, dewatering, and other operational and maintenance activity discharges associated with the operation of hydrocarbon transport pipelines.

### 3.1.3 Individual Permit

APDES regulations outline three situations where facilities that are eligible for coverage under a general permit or obtained coverage under a general permit will be required to seek coverage under an individual permit (18 AAC 83.215). First, the Department may require any person authorized by a general permit to apply for and obtain an individual permit, or any interested person may petition the Department to take this action. Second, an applicant may request to be excluded from the coverage of the general permit by applying for an individual permit. Third, a permittee who is already authorized by an individual permit may request general permit coverage.

Permit Part 1.5 also outlines situations when the Department may require an individual permit, based upon the agency's request, and describes potential additional individual permit stipulations. Due to the temporary nature of excavation dewatering, and the limited risk posed to the environment from the innocuous discharges, the most logical permitting approach is coverage under a general permit. Discharges that are long-term or continuous and not associated with eligible excavation dewatering that support a construction activity may require coverage under an individual permit.

## 3.2 Authorization under the Excavation Dewatering General Permit

### 3.2.1 How to Obtain Authorization

An NOI to be covered under the general permit is required for entities that are conducting excavation dewatering activities that result in discharges authorized under Permit Part 1.3. Authorization is granted for discharges to either waters of the U.S. or to waters of the State or land that are located within 1,500 feet of an "DEC-identified contaminated site"; discharges within 1,500 feet of a "DEC-identified contaminated groundwater plume"; or discharges to waters of the U.S. greater than 1,500 feet from an "DEC identified contaminated site or groundwater plume" and are not eligible for coverage under the CGP. The NOI notification requirements are outlined in Permit Part 2.2 as required per 18 AAC 83.210(b).

Mixing Zone Request. For limited instances where it may not be possible to achieve water quality criteria for turbidity and residues prior to discharge, applicants may seek a mixing zone for turbidity and residues prior to discharge. The Department will, based on the mixing zone request submitted with the NOI, make a determination as to whether a 500-foot mixing zone is appropriate at the proposed discharge location. See Section 3.6 for further discussion of mixing zone requirements.

Automatic Authorization. Discharges to land from dewatering activities located greater than 1,500 feet from a "DEC-identified contaminated site or groundwater plume" will have less potential to affect the contaminate plume. These discharges to land will be authorized through the implementation of BMPs (Part 4.0) and additional requirements listed in Permit Parts 5.1 and 6.0 and will not require formal NOI submittal.

### 3.2.2 How to Submit an NOI

Permit Part 2.2 requires permittees to use DEC's online NOI system – Environmental Data Management System (EDMS) accessible at: <https://dec.alaska.gov/water/edms>.

### 3.2.3 Submission Timeframes

Timeframes for submitting discharge authorizations are contained in Table 2 of the permit, which identifies the category of discharger, NOI submission deadline, and NOI submittal requirements.

### 3.2.4 Date of Authorization to Begin Discharge

A permittee is authorized to discharge excavation dewatering under the terms and conditions of the permit upon the date specified in the issuance of the authorization letter. A copy of the authorization letter is accessible via the EDMS website (<https://dec.alaska.gov/water/edms>).

During the NOI review period, DEC may notify the permittee that additional action must be taken before discharge authorization is obtained, based on concerns regarding eligibility as described in Part 1.2.

### 3.2.5 Continuation of Expired General Permit

If the permit is not reissued prior to the expiration date, it will be administratively continued in accordance with 18 AAC 83.155(c) and remain in force and effect. A permittee remains covered under the administratively continued permit, so long as prior to the expiration date, the permittee complies with the requirements of 18 AAC 83.155(c)(1). A permittee granted permit coverage prior to the expiration date will automatically be covered under the administratively continued permit until the earliest of the following:

- Reissuance or replacement of the permit, at which time the permittee must comply with the conditions of the new permit, as it applies to ongoing projects, to maintain authorization to discharge;
- Submittal of a NOT;
- Issuance of an individual permit for the project's discharges; or
- A formal permit decision by DEC to not reissue the general permit, at which time the permittee must seek coverage under an alternative general permit or an individual permit.

### 3.2.6 NOI Submission Deadlines

New Projects the operator must submit a complete and accurate NOI a minimum of 30-days prior to the date the discharge is to commence consistent with Part 2.2 NOI requirements.

Permitted ongoing projects from the prior general permit must submit a complete, accurate, and updated NOI and BMP plan within 90 calendar days of the effective permit. If the permittee is eligible to submit a NOT (e.g., dewatering activities are completed) before the 90<sup>th</sup> day, a new NOI is not required to be submitted provided a NOT is submitted within the 90 calendar days after the effective date of this permit. Note, if you have missed the deadline to submit your NOI, any and all discharges will continue to be unauthorized under the CWA until they are covered by this or a different APDES permit. DEC may take enforcement action for any unpermitted discharges that occur between the commencement of discharging and discharge authorization.

### 3.2.7 Submittal of a Modification to Original NOI

A permittee must file an NOI modification form to DEC to update or correct the following information on the original NOI within 30 calendar days of the change:

- Owner/Operator address and contact information
- Site information, or
- Estimated start or end dates.

No general permit authorization fee is required when submitting an NOI modification.

### 3.3 Compliance with Standards and Limits

#### 3.3.1 Basis for Permit Effluent Limits

The CWA requires that the limits for a particular pollutant be the more stringent of either technology-based effluent limits (TBELs) or water quality-based effluent limits (WQBELs). TBELs are established by EPA and are adopted by reference in regulation by DEC. TBELs are set according to the level of treatment that is achievable using available technology to protect water quality. A WQBEL is designed to ensure that the WQS for a water body is met. WQBELs may be more stringent than TBELs. EPA has not promulgated TBELs for excavation dewatering surface water discharges.

WQBELs included in APDES permits are derived from WQS. APDES regulation 18 AAC 83.435(a)(1) requires that permits include WQBELs that can “achieve water quality standards established under CWA §303, including state narrative criteria for water quality.”

No TBELs exist for these specific types of discharges; therefore, the WQBELs set equal to applicable water quality criteria for pollutants that are believed to be present will apply to all surface water discharges. Land discharges will be managed through BMPs, which are the best available demonstrated control technology to minimize pollutant discharges.

#### 3.3.2 Land Discharging Operations

The general permit authorizes land discharges of excavation dewatering through the use of BMPs described in Permit Parts 4 and 5.1. The Department has applied the narrative oil and grease criterion that all discharges shall be free of an oil sheen. Through the prohibition of an oil sheen discharge and the implementation of basic erosion and sediment BMPs at the point of discharge, all land discharges will be protective of the environment.

The BMPs include discharging into an area with permeable soils that allow complete infiltration to prevent a surface water discharge as well as erosion controls at the point of discharge. Through the use of appropriate erosion and sediment controls in addition to BMPs (i.e., settling basins, filter bags, or other similar filtering mechanisms), the land discharges will minimize environmental impact.

#### 3.3.3 Surface Water Discharging Operations

For the purpose of the permit, excavation dewatering discharges primarily consist of water pumped from shallow excavations or dewatering wells to lower the surface of the water table in the excavated area. The water will consist primarily of uncontaminated groundwater, with exception to dewatering that occurs within 1,500 feet of a “DEC-identified contaminated site or groundwater plume”. The permit allows the Department to specify additional monitoring and sampling requirements in the discharge authorization for activities near contaminated sites where the standard permit conditions may not provide sufficient protection. Operator’s excavation dewatering discharges near contaminated sites may be required to sample for specific pollutants of concern and meet applicable water quality criteria prior to discharge. Excavation dewatering discharges may contain total suspended solids and petroleum hydrocarbons, so monitoring for pH, settleable solids, turbidity, TAqH, and TAH will be necessary to ensure water quality criteria are met. Some discharges may require treatment to achieve the water quality criteria or implementation of basic BMPs described in Permit Parts 3 and 4.

##### 3.3.3.1 Water Quality-Based Effluent Limits

DEC concluded, based on application of the WQS and review of available sampling data, that pH, settleable solids, TAqH, TAH, and turbidity must be limited in order to meet the State’s WQS for surface water discharges.

### 3.3.3.1.1 pH

Alaska WQS at 18 AAC 70.020(b)(6)(A)(iii) and 18 AAC 70.020(b)(18)(C) state that the pH water quality criteria for the growth and propagation of fish, shellfish, other aquatic life, and wildlife for both fresh and marine water may not be less than 6.5 or greater than 8.5 standard units.

### 3.3.3.1.2 Settleable Solids

Alaska WQS at 18 AAC 70.020(b)(9)(A)(i) and 18 AAC 70.020(b)(21)(B) state that the sediment water quality criteria for the fresh water drinking water supply and marine water contact recreation shall have no measurable increase in concentration of settleable solids above natural conditions, as measured by the volumetric Imhoff cone method. The no measurable increase in settleable solids translates to a WQBEL of 0.2 milliliters per Liter (ml/L) above natural conditions.

### 3.3.3.1.3 TAqH – Total Aqueous Hydrocarbons

Alaska WQS at 18 AAC 70.020(b)(5)(A)(ii) and 18 AAC 70.020(b)(17)(A)(ii) state that the petroleum hydrocarbons water quality criterion for the fresh water agriculture, including irrigation and stock watering supply use and marine water seafood processing water supply use may not cause a visible sheen upon the surface of the water.

Alaska WQS at 18 AAC 70.020(b)(5)(A)(iii) and 18 AAC 70.020(b)(17)(A)(i) state that the petroleum hydrocarbon water quality criterion for the fresh and marine water aquaculture water supply use shall not have a TAqH concentration in the water column to exceed 15 microliters per Liter ( $\mu\text{g/L}$ ). The permit does not authorize a mixing zone for TAqH; therefore, the WQBEL for TAqH will be assigned the WQC of 15  $\mu\text{g/L}$  to be met at the point of discharge. The analytical measurement for TAqH consists of the sum of the monoaromatic hydrocarbons (TAH) plus the sum of the polynuclear aromatic hydrocarbons listed in EPA method 610 or 625. Monitoring for TAqH if a visual sheen is observed will provide assurance that the dewatering process will not discharge any TAqH above the WQC into the receiving waterbody.

### 3.3.3.1.4 TAH – Total Aromatic Hydrocarbons

Alaska WQS at 18 AAC 70.020(b)(5)(A)(ii) and 18 AAC 70.020(b)(17)(A)(ii) state that the petroleum hydrocarbon WQC for the fresh water agriculture, including irrigation and stock watering supply use and marine water seafood processing water supply use may not cause a visible sheen upon the surface of the water.

Alaska WQS at 18 AAC 70.020(b)(5)(A)(iii) and 18 AAC 70.020(b)(17)(A)(i) state that the petroleum hydrocarbon water quality criteria for the fresh and marine water aquaculture water supply use shall not have a TAH concentration in the water column to exceed 10  $\mu\text{g/L}$ . The permit does not authorize a mixing zone for TAH; therefore, the WQBEL for TAH will be assigned the WQC of 10  $\mu\text{g/L}$  to be met at the point of discharge. The analytical measurement for TAH consists of summing the concentration of the monoaromatic hydrocarbons which include benzene, chlorobenzene, toluene, ethylbenzene, 1-3, 1-4, and 1-2 di-chlorobenzenes and total xylenes (sum of m, p, and o xylene). Monitoring for TAH if a visual sheen is observed will provide assurance that the dewatering process will not discharge any TAH above the water quality criteria into the receiving water body.

### 3.3.3.1.5 Turbidity

Alaska WQS at 18 AAC 70.020(b)(12)(B)(i) states that the turbidity WQC for the fresh water contact recreation use may not exceed 5 NTUs above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than a 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 15 NTU. May not exceed 5 NTU above natural turbidity for all lake waters.

Alaska WQS at 18 AAC 70.020(b)(24)(A)(i) states that the turbidity WQC for the marine water aquaculture water supply shall not exceed 25 NTUs.

### 3.3.3.2 Discharges to Impaired Water Body

For the purposes of the general permit, the CWA §303(d) impaired water bodies are those cited in the Final DEC Integrated Report<sup>1</sup> or most current EPA approved version. If the permittee is discharging into a water body with an EPA-established or approved TMDL, the permittee must implement measures to ensure that the discharge of pollutants from the site is consistent with the assumptions and requirements of the EPA-established or approved TMDL, including ensuring that the discharge does not exceed specific wasteload or load allocation that has been established that would apply to the discharge. The permittee must also evaluate the recommendations in the Implementation Section of the TMDL and incorporate applicable measures into the operations.

## 3.4 Control Measures

### 3.4.1 Best Management Practices (BMPs)

BMPs are measures that are intended to prevent or minimize the generation and the potential for the release of pollutants to either land or waters of the U.S. All discharges of excavation dewatering are to be managed with appropriate BMPs to minimize environmental impact. The BMPs for land discharges of excavation dewatering would consist of basic erosion and sediment controls within the land disposal areas. Examples of BMPs for erosion control at the point of discharge would be velocity dissipation devices such as rock lined channels to reduce the erosive velocity of the water. Sediment controls such as rock check dams and other similar temporary constructed settling basins could be implemented to provide settling areas for sediment.

Specific BMPs such as temporary lined settling basins, filter bags, or other similar filtering and retention mechanisms are to be used to reduce sediment discharges to the land. The general permit allows permittees the flexibility to use these BMPs or similar devices as a means to control erosion at the discharge point and reduce sediment deposition within the land disposal area. Discharges from an excavation dewatering site within 1,500 feet of a “DEC-identified contaminated site or groundwater plume” will require additional information to be submitted about the contaminated site in accordance to Permit Part 2.8. The BMP plan must also provide a more detailed description of the land disposal area including soils and geology information to provide assurance that either discharges to the land or water will be managed appropriately to minimize the discharge of pollutants. Applicants will be required to submit their signed BMP plan with a completed NOI for all discharges that require NOI submittal in accordance with Permit Part 2.2.

## 3.5 Limitations, Inspections, and Monitoring Requirements

APDES regulations require that permits include monitoring to determine compliance with permit requirements (18 AAC 83.455). Monitoring may also be required to gather data for evaluation of future effluent limitations or to monitor effluent impacts on receiving water quality. The permittee is responsible for conducting the monitoring and for reporting results to DEC.

### 3.5.1 Land Discharge Operations

The permit authorizes land discharges of excavation dewatering with the implementation of BMPs. The permit allows for the flexibility of BMPs to control erosion and sedimentation at the disposal area and also promote greater infiltration. The only monitoring required for all land discharges is a visual

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<sup>1</sup> DEC, *Integrated Water Quality Monitoring and Assessment Report – Alaska’s List of Impaired or 303(d) listed waterbodies*. Most recent report can be found at DEC’s website at <https://dec.alaska.gov/water/water-quality/integrated-report/>.

assessment for sheen and erosion at the point of discharge. The monitoring requirements for land discharges are found in Table 3 of the permit. Visual monitoring will ensure that BMPs are effective to reduce the sediment deposition in the infiltration area and that no petroleum products are discharged to the land surface. The visual monitoring is required on a daily basis along with documenting the estimated daily flow rate, all of which are to be recorded and kept on file in accordance to Permit Part 6.1.

**Table 1: Effluent Monitoring Requirements for Land Disposal Discharges**

<b>Effluent Characteristic</b>	<b>Monitoring Location</b>	<b>Monitoring Frequency</b>	<b>Sample Type</b>
Erosion	Point of Discharge	Daily	Visual
Sheen*	Effluent	Daily	Visual
Flow Rate	Effluent	Daily	24-hour Estimate or Measured

\* Discharge shall be free of any visible sheen.

### 3.5.2 Surface Water Discharge Operations

The permit requires effluent monitoring for all excavation dewatering discharges to waters of the U.S. Effluent limits were established for pH, settleable solids, TAqH, TAH, and turbidity. Effluent monitoring requirements listed in Table 4 of the permit consist of collecting all effluent samples prior to discharge to assure all water quality criteria are met. As a precautionary measure, all discharges shall be monitored for a daily visual sheen and a daily flow rate estimate. The monitoring for TAqH and TAH is only required if a visual sheen is observed, at which time the permittee ceases the discharge until corrective actions or treatment devices are implemented to prevent an oily sheen discharge. The required monitoring will provide assurance that the permittee will install BMPs or treatment that will provide protection of water quality.

(Table 2: Effluent Limits and Monitoring Requirements for Discharges to Waters of the U.S. is located on the following page)



**Table 2: Effluent Limits and Monitoring Requirements for Discharges to Surface Waters**

Effluent Characteristic	Maximum Value	Monitoring Location	Monitoring Frequency	Sample Type	Sample Method
pH	6.5 – 8.5 SU <sup>a</sup>	Effluent	Before discharge and once per week	Grab	Field
		Upstream			
Settleable Solids	0.2 ml/L above natural conditions	Effluent	Before discharge and once per week	Grab	Field (see 18 AAC 70.020(b) Note 11)
		Upstream			
Sheen	No presence	Effluent	Daily	Grab	Visual
Total Aqueous Hydrocarbons (TAqH) <sup>b, c</sup>	15 µg/l	Effluent	Once a month	Grab	Lab (See 18 AAC 70.020(b) Note 7)
Total Aromatic Hydrocarbons (TAH) <sup>b, c</sup>	10 µg/l	Effluent	Once a month	Grab	Lab Method 602 (plus Xylenes) or EPA Method 624 (see 18 AAC 70.020(b) Note 7)
Total Flow	No Limit	Effluent	Daily	24 – Hour Estimate or Measured	Field
Turbidity (freshwater) No Mixing Zone	5 NTUs above natural conditions <sup>d</sup>	Effluent	Before discharge and once per week	Grab	Field
		Upstream			
Turbidity (marine) No Mixing Zone	25 NTUs	Effluent	Before discharge and once per week	Grab	Field
Turbidity (freshwater) Mixing Zone <sup>e</sup>	5 NTUs above natural conditions	Effluent	Before discharge and once per week	Grab	Field
		Upstream			
Turbidity (marine) Mixing Zone <sup>e</sup>	Report	Effluent and Upstream	Before discharge and once per week	Grab	Field
	Visual Monitoring <sup>f</sup>	Downstream			

**Notes:**

- The effluent limit for pH shall be between 6.5 and 8.5 pH units or within 0.2 units (marine water), or 0.5 units (fresh water) of the receiving water pH at all times.
- TAqH and TAH shall only be monitored if a visual sheen is detected in the daily visual monitoring. Upon detection of a sheen the permittee shall notify DEC in accordance with Part 3.1.6, a sample for TAqH and TAH shall be collected at the frequency in Table 2 for the duration of the discharge, and corrective actions or treatment devices implemented to prevent an oily sheen discharge.
- Samples to determine concentrations of TAqH and TAH must be collected in marine and fresh waters below the surface and away from any observable sheen; concentrations of TAqH must be determined and summed using a combination of: (A) EPA Method 602 (plus xylenes) or EPA Method 624 to quantify monoaromatic hydrocarbons and to measure TAH; and (B) EPA Method 610 or EPA Method 625 to quantify polynuclear aromatic hydrocarbons listed in EPA Method 610; use of an alternative method requires department approval; the EPA methods referred to in this note may be found in Appendix A of 40 C.F.R. §136, Appendix A, as revised as of July 1, 2003 and adopted by reference.
- If a mixing zone is not authorized, effluent turbidity shall not have more than a 10% increase in turbidity when the natural condition is more than 50 NTU, not to exceed a maximum increase of 15 NTU. Turbidity shall not exceed 5 NTU over natural conditions for all lake waters.
- If a mixing zone is authorized: For freshwater, turbidity may not exceed 5 NTU above natural conditions 500 feet downstream of the discharge when the natural turbidity is 50 NTU or less. When the natural condition is greater than 50 NTU, turbidity shall not to exceed more than a 10% increase up to a maximum increase of 15 NTU above ambient conditions 500 feet downstream of the discharge. For lake waters, turbidity may not exceed 5 NTUs above natural turbidity 500 feet from the discharge point. Report effluent turbidity for information only. Turbidity concentration naturally present in the receiving water is determined at a location upstream of the mixing zone boundary and unaffected by the discharge of any dewatering activity.
- See Permit Part 5.2.14.6 and 5.2.14.11 for visual monitoring requirements.



### 3.6 Mixing Zone.

Excavation dewatering is preferentially discharged to locations that do not have an open water surface (e.g., wetlands, tundra, dry river channels, frozen conditions). Vegetation naturally removes sediment prior to the discharge entering a receiving water. In the event that such a location is unavailable or discharges to a waterbody are unavoidable, settling ponds are often used to remove settleable sediment prior to discharge. Still, settling ponds or other methods may not be able to achieve water quality criteria for turbidity and residues prior to discharge, and in limited instances project site footprint may restrict use of a settling pond. Accordingly, a mixing zone may be authorized for excavation dewatering discharges to meet water quality criteria over the short duration of the discharge event.

Mixing Zone Size Determination. The Department has continued the standard 500-foot mixing zone for excavation dewatering as was used previously authorized in the previous permit.

Mixing Zone Application and Review Process. Mixing zones are DEC authorized areas where an effluent undergoes initial dilution. A mixing zone is an allocated impact zone in the receiving waterbody where water quality criteria can be exceeded as long as toxic conditions are prevented and the designated use of the water as a whole is not impaired as a result of the mixing zone. All water quality criteria must be met at the boundary of the mixing zone.

In accordance with 18 AAC 70.240, the Department may authorize a mixing zone in a permit upon receipt of a complete application. A NOI serves as the mixing zone application under the general permit. The NOI provides information required by 18 AAC 70.240 (application requirements), including the information and available evidence necessary to demonstrate consistency with 18 AAC 70.240. Permittees may request modification to effluent limits pursuant to 18 AAC 70.240. The Department will consider mixing zone requests on a case-by-case basis, and the Department will, in its discretion, only authorize a mixing zone if it finds that available evidence reasonably demonstrates that the requirements of 18 AAC 70 will be met.

Appendix B outlines criteria that must be met prior to the Department authorizing a mixing zone. These criteria include an analysis by the Department of the size of the mixing zone, treatment technology, existing uses of the waterbody, human consumption, spawning areas, human health, aquatic life, and endangered species in the proposed mixing zone. All criteria must be met to authorize a mixing zone. If criteria are not met, then a mixing zone is prohibited, and effluent limits must be met at the end of the outfall line prior to discharge to the receiving waterbody.

The Permit is intended to cover various locations throughout the state; exact locations of potential discharges are not known until applications are received. Therefore, the Department uses empirical data from other statewide permits with mixing zones to inform application procedures. The application process requires a NOI, where an applicant provides any requested receiving water and discharge data in the mixing zone section of the form. The NOI is not a mixing zone application, per se. The information in the NOI is used to inform the Department if the request for a mixing zone is consistent with the mixing zone evaluation conducted during permit development. If consistent, then a mixing zone authorization may be approved.

### 3.7 Quality Assurance Project Plan

The permittee must develop and implement a quality assurance project plan (QAPP) for all monitoring required by this permit for discharges to waters of the U.S. The QAPP must be developed and implemented in accordance with Permit Part 5.2.15. Any existing QAPP may be modified under this section.

### 3.8 Reporting and Record Keeping

Permit Part 6.0 contains recording and reporting requirements that are either based on standard regulatory language found in Appendix A or are specific to the general permit. The permit requires the

permittee to maintain daily records, which must be kept for a period of three years after the termination of the discharge and made available upon request. Permit Part 6.2 requires permittee with a discharge to waters of the U.S. or waters of the State to submit a summary of effluent monitoring data with their Notice of Termination; or if the project duration is greater than one year, not later than the 28<sup>th</sup> calendar day of the following month past the annual authorization issuance date (ex: authorization issued June 10, 2024, DMR due not later than July 28, 2025) to DEC via EDMS or unless DEC approves another method of submittal. Specific report requirements are outlined under Permit Part 6.2. Additionally, Permit Appendix A, Part 3.4 (Twenty-four Hour Reporting) requires reports of any noncompliance event that may endanger health or the environment to be submitted orally within 24 hours after the permittee becomes aware of the circumstances and in writing within five days after the permittee becomes aware of the circumstances.

### **3.9 Terminating Coverage**

#### **3.9.1 Submitting a Notice of Termination**

Permit Part 7.1 requires permittees to submit the Notice of Termination (NOT) via EDMS or unless DEC approves another method of submittal. A permittee shall submit an NOT within thirty days upon completion of the excavation dewatering project that received coverage through the submittal of an NOI in accordance with Permit Part 2.2. All required reports (effluent monitoring reports) and certifications are to have been submitted. DEC will review the NOT and will notify the permittee of the effective date of termination.

#### **3.10 Standard Conditions**

Appendix A of the permit contains standard regulatory language that must be included in all APDES permits. These requirements are based on the regulations and cannot be challenged in the context of an APDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements.

#### **3.11 Permit Expiration**

The permit will expire five years from the effective date of the permit.

## **4.0 ANTIBACKSLIDING**

Anti-backsliding requirements found in 18 AAC 83.480(a) prohibit relaxation of effluent limitations, standards, or conditions when a permit is reissued, except under prescribed circumstances. 18 AAC 83.480(c) also states that a permit may not be reissued “to contain an effluent limitation that is less stringent than required by effluent guidelines in effect at the time the permit is renewed or reissued.” This reissued permit does not contain effluent limitations that are less stringent than the previous permit, therefore, antibacksliding analysis under 18 AAC 83.480(c) does not apply.

## **5.0 ANTIDEGRADATION**

The antidegradation policy of the Alaska Water Quality Standards requires that the existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected; and if the quality of water exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality must be maintained and protected (18 AAC 70.015). The Department will authorize a reduction in water quality only after the applicant submits evidence in support of the application and the Department finds that specific requirements of the antidegradation policy are satisfied.

The Department’s approach to implementing the antidegradation policy is found in 18 AAC 70.016 (Antidegradation implementation methods for discharges authorized under the federal Clean Water Act). Using these requirements and policies, the Department determines whether a waterbody or portion of a waterbody is classified as Tier 1, Tier 2, or Tier 3. A higher tier indicates a greater level of water quality protection. Antidegradation analyses generally conservatively presume that all operations under a general permit will be in Tier 2 waters [18 AAC 70.016(c)(1)]. At this time, the Department has not designated any Tier 3 waters in Alaska.

Antidegradation implementation methods at 18 AAC 70.016(c)(3) state that “the Department will not conduct a Tier 2 antidegradation analysis for (A) reissuance of a license or general or individual permit for a discharge that the applicant is not proposing to expand; (B) issuance of a license or general or individual permit for an existing discharge that did not previously require authorization and that the applicant is not proposing to expand; or (C) reissuance of an administratively extended license or permit, if the applicant is not proposing an expanded discharge.” Because the reissued general permit does not propose expansion of discharge coverage, a Tier 2 antidegradation analysis is not required for this issuance.

## **6.0 OTHER LEGAL REQUIREMENTS**

### **6.1 Endangered Species Act**

The National Marine Fisheries Service (NMFS) is responsible for administration of the Endangered Species Act (ESA) for listed cetaceans, seals, sea lions, sea turtles, anadromous fish, marine fish, marine plants, and corals. All other species (including polar bears, walrus, and sea otters) are administered by the U.S. Fish and Wildlife Service (USFWS). Section 7 of the ESA requires federal agencies to consult with NMFS and USFWS (collectively referred to as the Services) if their actions could beneficially or adversely affect any threatened or endangered species. As a state agency, DEC is not required to consult with the Services regarding permitting actions. However, the Department values input from the Services and solicits comments from them on issuance of the permit.

### **6.2 Essential Fish Habitat**

The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) designates Essential Fish Habitat (EFH) in waters used by anadromous salmon and various life stages of marine fish under NMFS jurisdiction. EFH refers to those waters and associated river bottom substrates necessary for fish spawning, breeding, feeding, or growth to maturity –including aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish. Spawning, breeding, feeding, or growth to maturity covers a species’ full life cycle necessary for fish from commercially-fished species to spawn, breed, feed, or grow to maturity.

The EFH regulations define an adverse effect as any impact which reduces quality and/or quantity of EFH and may include direct (e.g. contamination or physical disruption), indirect (e.g. loss of prey, reduction in species’ fecundity), site-specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

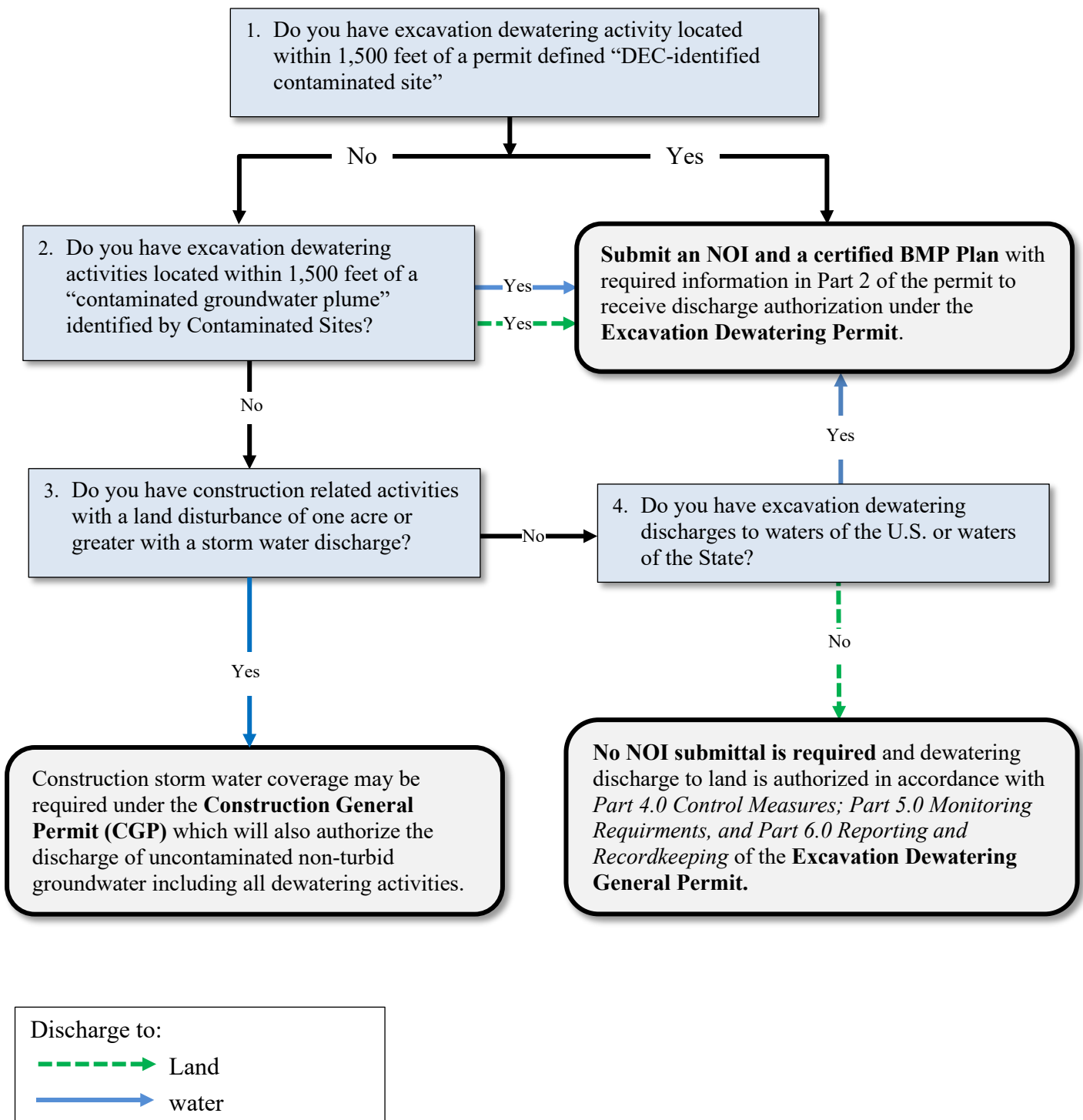
Section 305(b) of the Magnuson-Stevens Act 916 USC 1855(b)) requires federal agencies to consult the NMFS when any activity proposed to be permitted, funded, or undertaken by a federal agency may have an adverse effect on designated EFH as defined by the Act. As a state agency, DEC is not required to consult with NMFS regarding permitting actions, but interacts voluntarily with NMFS to identify EFH.

To protect EFH the permit Part 2.2.9.1 requires the permittee to contact ADF&G Office of Habitat for all discharges to fish bearing waterbodies.

## 7.0 REFERENCES

- ADF&G (Alaska Department of Fish and Game). *Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes*. ADF&G, Habitat Division, Juneau, Alaska. Revised periodically. <https://www.adfg.alaska.gov/sf/SARR/AWC/>
- DEC (Alaska Department of Environmental Conservation). 2003a. *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substance*, as amended through September 8, 2022. State of Alaska, Department of Environmental Conservation.
- DEC. 2022. 18 AAC 70 Water Quality Standards, as amended through November 13, 2022. State of Alaska, Department of Environmental Conservation
- DEC. 2008. National Pollutant Discharge Elimination System Memorandum of Agreement Between State of Alaska and United States Environmental Protection Agency Region 10, as amended through August 11, 2011. State of Alaska, Department of Environmental Conservation.
- DEC. *Integrated Water Quality Monitoring and Assessment Report – Alaska’s List of Impaired or Clean Water Act Section 303(d) listed waterbodies*. State of Alaska, Department of Environmental Conservation. <https://dec.alaska.gov/water/water-quality/integrated-report/>.
- EPA (Environmental Protection Agency). 1991. *Technical Support Document for Water Quality-based Toxics Control*. US Environmental Protection Agency, Office of Water, EPA /505/2-90-001, Washington, DC.

## APPENDIX A. NOI SUBMITTAL REQUIREMENT FLOW CHART



\* A contaminated site or groundwater plume with an “Active” or “Cleanup Complete-Institutional Controls” status identified by DEC Contaminated Sites Program. For assistance in locating mapped contaminated sites or listing of groundwater plumes, see <https://dec.alaska.gov/spar/csp/>.

## APPENDIX B. MIXING ZONE CHECKLIST

### Mixing Zone Authorization Checklist based on Alaska Water Quality Standards (2022)

The purpose of the Mixing Zone Checklist is to guide the permit writer through the mixing zone regulatory requirements to determine if all the mixing zone criteria at 18 AAC 70.240 are satisfied, as well as provide justification to authorize a mixing zone in an APDES permit.

Criteria	Description	Resources	Regulation
Size	Is the mixing zone as small as practicable? If yes, mixing zone may be approved as proposed or authorized with conditions.	EPA Permit Writer's Manual	18 AAC 70.240(k)
Technology	Were the most effective technological and economical methods used to disperse, treat, remove, and reduce pollutants? If yes, mixing zone may be approved as proposed or authorized with conditions.		18 AAC 70.240(c)(1)
Low Flow Design	For river, streams, and other flowing freshwaters. Determine low flow calculations or documentation for the applicable parameters.		18 AAC 70.240(l)
Existing Use	Does the mixing zone... 1) Maintain and protect designated and existing uses of the waterbody as a whole? If yes, mixing zone may be approved as proposed or authorized with conditions.		18 AAC 70.240(c)(2)
	2) impair overall biological integrity of the waterbody? If yes, mixing zone may be approved as proposed or authorized with conditions.		18 AAC 70.240(c)(3)
	3) create a public health hazard that would preclude or limit existing uses of the waterbody for water supply or contact recreation? If yes, mixing zone may be approved as proposed or authorized with conditions.		18 AAC 70.240(c)(4)(B)
	4) preclude or limit established processing activities or established commercial, sport, personal use, or subsistence fish and shellfish harvesting? If yes, mixing zone may be approved as proposed or authorized with conditions.		18 AAC 70.240(c)(4)(C)
Human Consumption	Does the mixing zone ... 1) produce objectionable color, taste, or odor in aquatic resources harvested for human consumption? If yes, mixing zone may not be approved.		18 AAC 70.240(d)(6)
Spawning Areas	Does the mixing zone ... 1) discharge in a spawning area for anadromous fish or Arctic grayling, northern pike, rainbow trout, lake trout, brook trout, cutthroat trout, whitefish, sheefish, Arctic char (Dolly Varden), burbot, and landlocked coho, king, and sockeye salmon? If yes, mixing zone prohibited, may not be approved.		18 AAC 70.240(f)

Criteria	Description	Resources	Regulation
Human Health	Does the mixing zone ... 1) contain bioaccumulating, bioconcentrating, or persistent chemical above natural or significantly adverse levels? If yes, mixing zone may not be approved.		18 AAC 70.240(d)(1)
	2) contain chemicals expected to cause carcinogenic, mutagenic, tetragenic, or otherwise harmful effects to human health? If yes, mixing zone may not be approved.		18 AAC 70.240(d)(2)
	3) occur in a location where the department determines that a public health hazard reasonably could be expected? If yes, mixing zone may be approved as proposed or authorized with conditions		18 AAC 70.240(k)(4)
Aquatic Life	Does the mixing zone ... 1) Cause a toxic effect in the water column, sediments, or biota outside the boundaries of the mixing zone? If yes, mixing zone may be approved as proposed or authorized with conditions		18 AAC 70.240(c)(4)(A)
	2) result in a reduction in fish and shellfish population levels? If yes, mixing zone may be approved as proposed or authorized with conditions.		18 AAC 70.240(c)(4)(D)
	3) result in permanent or irreparable displacement of indigenous organisms? If yes, mixing zone may be approved as proposed or authorized with conditions.		18 AAC 70.240(c)(4)(E)
	4) form a barrier to migratory species or fish passage? If yes, mixing zone may be approved as proposed or authorized with conditions.		18 AAC 70.240(c)(4)(G)
	5) result in undesirable or nuisance aquatic life? If yes, mixing zone may not be approved		18 AAC 70.240(d)(5)
	6) prevent lethality to passing organisms; or exceed acute aquatic life criteria at and beyond the boundaries of a smaller initial mixing zone surrounding the outfall, the size of which shall be determined using methods approved by the Department? If yes, mixing zone may not be approved.		18 AAC 70.240(d)(7) 18 AAC 70.240(d)(8)
Endangered Species	Are there threatened or endangered species (T/E spp) at the location of the mixing zone? If yes, are there likely to be adverse effects to T/E spp based on comments received from USFWS or NOAA? If yes, will conservation measures be included in the permit to avoid adverse effects? If yes, mixing zone may be approved as proposed or authorized with conditions		18 AAC 70.240(c)(4)(F)