



ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

Permit Fact Sheet – FINAL

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: **May 2, 2014**

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

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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 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 appeal procedures
- a description of the industry
- a listing of effluent limitations, monitoring, and other conditions
- technical material supporting the conditions in the permit

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.

The Department has both an informal review process and a formal administrative appeal process for final APDES permit decisions. An informal review request must be delivered within 15 days after receiving the Department’s decision to the Director of the Division of Water at the following address:

Director, Division of Water
Alaska Department of Environmental Conservation
410 Willoughby Ave, Suite 303
Juneau, AK 99811-1800

Interested persons can review 18 AAC 15.185 for the procedures and substantive requirements regarding a request for an informal Department review.

See <http://dec.alaska.gov/commish/InformalReviews.htm> for information regarding informal reviews of Department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the Department within 30 days of the permit decision or a decision issued under the informal review process. An adjudicatory hearing will be conducted by an administrative law judge in the Office of Administrative Hearings within the Department of Administration. A written request for an adjudicatory hearing shall be delivered to the Commissioner at the following address:

Commissioner
Alaska Department of Environmental Conservation
410 Willoughby Street, Suite 303
Juneau AK, 99811-1800

Interested persons can review 18 AAC 15.200 for the procedures and substantive requirements regarding a request for an adjudicatory hearing. See <http://dec.alaska.gov/commish/ReviewGuidance.htm> for information regarding appeals of Department decisions.

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: <http://dec.alaska.gov/water/wwdp/index.htm>.

Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 555 Cordova Street Anchorage, AK 99501 (907) 269-6285	Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 610 University Avenue Fairbanks, AK 99709 (907) 451-2136
Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 410 Willoughby Avenue, Suite 310 Juneau, AK 99801 (907) 465-5180	

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1.0 INTRODUCTION

1.1 Basis for Permit

1.1.1 Section 301(a) of the Clean Water Act (CWA) and Alaska Administrative Code (AAC) 18 AAC 83.015 provide that the discharge of pollutants to waters of the U.S. is unlawful except in accordance with an Alaska Pollutant Discharge Elimination System (APDES) permit. 18 AAC 72.500 requires the issuance of a permit to discharge nondomestic wastewater to land. Although such permits are usually issued to individual dischargers, Alaska Department of Environmental Conservation (DEC or the Department) regulations at 18 AAC 83.205, 18 AAC 72.900, and Alaska Statute (AS) 46.03.100(b)(2) also authorize the issuance of "general permits" to categories or subcategories 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.

1.1.2 A violation of a condition applicable to a discharge to waters of the U.S. 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.

1.2 Permit Issuance History

This is a first time issuance of an excavation dewatering APDES permit. The most recent 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 # 2009DB0003) that expired on March 23, 2014. The APDES Program (18 AAC 83) regulates point source discharges to waters of the U.S., whereas discharges to land are regulated under the authority of 18 AAC 72.500. The Department's statutory authority for issuing permits under 18 AAC 83 and 18 AAC 72 comes from AS 46.03.100. In order to meet the requirements of 18 AAC 83 to appropriately regulate surface water discharges, as well as 18 AAC 72 to appropriately regulate land discharges, both discharges to waters of the U.S. and land are authorized under this new general permit.

Between April 2, 2009 to July 1, 2013, 57 excavation dewatering discharges were authorized under the original excavation dewatering general permit. Of the dewatering authorizations issued, 28 were to land and 29 to surface water. Excavation dewatering discharges were

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.

Due to the large presence of oil and natural gas exploration on the North Slope, a specific NPDES general permit was developed by the Environmental Protection Agency (EPA). The NPDES permit became an APDES permit at program transfer on October 31, 2012 to cover the various discharges associated with oil and gas facilities located on the North Slope Borough. The current version of the permit (Permit # AKG331000) authorizes a construction dewatering discharge to facilitate construction in the North Slope, which contains permafrost and shallow water tables. AKG331000 requires effluent monitoring to meet all the same water quality criteria that are proposed in the 2014 Excavation Dewatering general permit. The 2014 Excavation Dewatering general permit is necessary to cover those same types of dewatering operations elsewhere in Alaska, and applicants who have coverage with AKG331000 do not need to seek dual permit coverage.

In addition to the North Slope Oil and Gas Exploration general permit, the state is in the preliminary stages of developing a statewide hydrocarbon transport general permit (AKG332000) that will cover hydrostatic testing, excavation dewatering, and other related discharges necessary for the operation and maintenance of hydrocarbon transport pipelines. The 2014 Excavation Dewatering general permit authorizes excavation dewatering discharges that do not meet the eligibility criteria of either the North Slope Oil and Gas Exploration general permit or the statewide hydrocarbon transport general permit (pending) and again, applicants do not need to seek dual permit coverage. The only situation where dual permit coverage would exist is for construction projects covered under the Construction General Permit (AKR100000) that have dewatering discharges from sites located within 1,500 feet of an “DEC identified contaminated site or groundwater plume of concern¹” (See Section 3.1.1 for more information).

¹ 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 and listing of groundwater plumes, see <http://dec.alaska.gov/Water/wnpssc/stormwater/edhsgp.html>.

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 specified by the Contaminated Sites Program. 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. WQBELs for TAH and TAqH set equal to their applicable criteria are 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 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 mullusks 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. The most recent report is the *Alaska's Final 2010 Integrated Water Quality Monitoring and Assessment Report* (DEC, 2010).

A permittee can access DEC's Integrated Water Quality Monitoring and Assessment Report at <http://dec.alaska.gov/water/wqsar/waterbody/integratedreport.htm> and the Alaska's Section 303(d) List of Impaired Waterbodies at <http://dec.alaska.gov/water/wqsar/waterbody/2010integratedreport.htm>.

Waters that do not meet the numeric and/or narrative criteria for their use designation(s) are listed as impaired, in compliance with the CWA and state rules. DEC currently lists approximately 65 waters as impaired, with about 30 listed as candidates for development of a Total Maximum Daily Load (TMDL) (DEC, 2010). TMDLs are a calculation of the maximum amount of a pollutant that a water body can receive, which is referred to as a pollutant allocation, and still meet WQS. Section 303(d) of the CWA requires states to identify waters that do not meet applicable WQS applying technology-based controls alone. The Department identifies and prioritizes the water quality-limited waters and then develops TMDLs necessary to achieve the applicable WQS.

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. 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 through the use of 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. 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 2014 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 AKG331000. The statewide hydrocarbon transport general permit AKG332000 (pending) will cover hydrostatic testing, dewatering, and other operational and maintenance activity discharges associated with the operation of hydrocarbon transport pipelines. As previously mentioned in Part 1.2, dual permit coverage for these type of discharges is not needed.

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 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).

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 either use DEC's electronic NOI system (accessible at <http://dec.alaska.gov/water/wnpspc/stormwater/APDESeNOI.html>) or use a paper form (included at this website) and then submit that paper form to the appropriate address (See Permit Appendix A Part 1.1).

DEC encourages operators to submit an NOI via the electronic filing system and emphasizes that filing via the electronic filing system will be a quicker way to obtain permit coverage, because the system will automatically process the information, disallow incomplete submissions, and flag certain entries as possibly incorrect.

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 which is posted on DEC's website <http://www.ADEC.state.ak.us/water/wnpspc/stormwater/stormwater.htm>. The authorization will remain in effect until midnight of the date of the Notice of Termination (NOT).

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. For non-electronic NOI (eNOI) submissions, DEC cannot guarantee the paper NOI will be processed as quickly as the eNOI. DEC strongly encourages applicants to use the eNOI system to expedite processing. DEC will attempt to contact the NOI submitter directly with information about delays as soon as possible (by telephone, fax, or email), but it is the applicant's responsibility to ensure that authorization has been granted.

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:

- 3.2.5.1 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;
- 3.2.5.2 Submittal of a NOT;
- 3.2.5.3 Issuance of an individual permit for the project's discharges; or
- 3.2.5.4 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.

3.3 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 measureable 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**

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; 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**

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; 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 2010 Integrated Report² or most current 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 an “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

² DEC, *2010 Integrated Water Quality Monitoring and Assessment Report – Alaska’s List of Impaired or 303(d) listed waterbodies*. <http://dec.alaska.gov/wqsr/waterbody/integratedreport.htm> and the Alaska’s Section 303(d) List of Impaired Waterbodies at http://dec.alaska.gov/wqsr/Docs/2010impaired_waters.pdf.

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 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

Effluent Characteristic	Monitoring Location	Monitoring Frequency	Sample Type
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.

Effluent Characteristic	Maximum Value	Monitoring Location	Monitoring Frequency	Sample Type	Sample Method
pH	6.5 – 8.5 SU ^a	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 note 11 to 18 AAC 70.020(b))
		Upstream			
Sheen	No presence	Effluent	Daily	Grab	Visual
Total Aqueous Hydrocarbons (TAqH) ^b	15 µg/l	Effluent	Once a month	Grab	Lab (See note 7 to 18 AAC 70.020(b))
Total Aromatic Hydrocarbons (TAH) ^b	10 µg/l	Effluent	Once a month	Grab	Lab Method 602 (plus Xylenes) or EPA Method 624 (see note 7 to 18 AAC 70.020(b))
Total Flow	No Limit	Effluent	Daily	24 – Hour Estimate or Measured	Field
Turbidity (marine)	25 NTUs	Effluent	Before discharge and once per week	Grab	Field
Turbidity (freshwater)	5 NTUs above natural conditions ^c	Effluent	Before discharge and once per week	Grab	Field
		Upstream			

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 Permit Part 2.2.9.3, a sample for TAqH and TAH shall be collected at the frequency in Permit Table 4 for the duration of the discharge, and corrective actions or treatment devices implemented to prevent an oily sheen discharge.
- 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.

3.6 Reporting and Record Keeping

Permit Part 6.0 contains recording and reporting requirements that are either based on standard regulatory language found in Appendix B 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. to submit monthly DMR by the 15th day of the month following the month that each sampling occurs. Specific report requirements are outlined under Permit Part 6.2. Additionally, Permit Appendix B, 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.

3.7 Terminating Coverage

3.7.1 Submitting a Notice of Termination

Permit Part 7.1 requires permittees should use either the electronic NOI system or the paper form to file Notices of Termination (NOT). 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. Coverage under the permit shall automatically terminate at midnight on the signature date of the NOT.

3.8 Standard Conditions

Appendix B 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.

3.9 Permit Expiration

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

4.0 ANTIBACKSLIDING

Per 18 AAC 83.480(a), except as provided in (b) of the section, “when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit, unless the circumstances on which the previous permit was based have materially and substantially changes since the permit was issued, and the change in circumstances would constitute cause for permit modification or revocation and reissuance under 18 AAC 83.135.” The permit does not propose any interim effluent limitations nor is this reissuance based on cause established in 18 AAC 83.135. Accordingly, the provisions of 18 AAC 83.480(a) do not apply to this permitting action.

18 AAC 83.480(b) only applies to effluent limitations established on the basis of CWA Section 402(a)(1)(B), and modification of such limitations based on effluent guidelines that were issued under CWA Section 304(b). Accordingly, 18 AAC 83.480(b) applies to the relaxation previously established case-by-case TBELs developed using Best Professional Judgment (BPJ). To determine if the provisions of 18 AAC 83.480(b) can be applied, the regulation provides five regulatory criteria (18 AAC 83.480[b][1-5]) that DEC must evaluate. This permitting action does not propose the relaxation of any case-by-case TBELs developed by BPJ; therefore, there is not a need to conduct further analysis under this regulation.

Finally, the first sentence of 18 AAC 83.480(c) establishes that for a permit to which 18 AAC 83.480(b) applies, a permit “may not be renewed, reissued, or modified to contain an effluent limitation that is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. As established in the preceding paragraph, 18 AAC 83.480(b) does not apply; therefore, no further analysis is required. The second sentence of 18 AAC 83.480(c) indicates that case-by-case TBELs developed by BPJ may not be renewed, issued, or modified to contain a less stringent effluent limitation if implementation of the less stringent limitation would result in a violation of WQS. This permitting action does not propose the relaxation of any case-by-case TBELs developed by BPJ; therefore, there is no need to conduct further analysis under this regulation.

5.0 ANTIDEGRADATION

Section 303(d)(4) of the CWA states that, for water bodies where the water quality meets or exceeds the level necessary to support the water body’s designated uses, WQBELs may be revised as long as the revision is consistent with the State’s antidegradation policy. The Antidegradation Policy of the Alaska WQS (18 AAC 70.015) states that the existing water uses and the level of water quality necessary to

protect existing uses must be maintained and protected. This section analyzes and provides rationale for the Department's decisions in the permit issuance with respect to the Antidegradation Policy.

The Department's approach to implementing the Antidegradation Policy, is based on the requirements in 18 AAC 70 and the Department's *Policy and Procedure Guidance for Interim Antidegradation Implementation Methods*, dated July 14, 2010. Using these procedures and policy, the Department determines whether a waterbody, or a portion of a waterbody, is classified Tier 1, Tier 2, or Tier 3, where a higher numbered tier indicates a greater level of water quality protection. At this time, no Tier 3 waters have been designated in Alaska.

For the purpose of this analysis, the Department classifies the impaired water bodies as Tier 1 for the parameters causing the impairment. Compliance with permit conditions will limit discharges to those water bodies listed as impaired. As a result, water quality in those water bodies is likely to improve subject to compliance with permit conditions. Accordingly, DEC finds that the existing uses in those water bodies designated as Tier 1 for the parameters they are impaired for will be maintained and protected. The remainder of this antidegradation analysis conservatively assumes that all other waters are Tier 2 waters, which provides for the next highest level of protection. The Tier 2 analysis for these waters follows.

The State's Antidegradation Policy in 18 AAC 70.015(a)(2) states that if the quality of water exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water (i.e., Tier 2 waters), that quality must be maintained and protected. The Department may allow a reduction of water quality only after finding that five specific requirements of the antidegradation policy at 18 AAC 70.015(a)(2)(A-E) are met. The Department's findings are as follows.

1. *18 AAC 70.015 (a)(2)(A). Allowing lower water quality is necessary to accommodate important economic or social development in the area where the water is located.*

The Alaskan economy in general, and the construction industry in particular, provide economic and social benefits from construction activities that might affect water quality. Alaska's economy has experienced steady growth over the past 20 years. In 2012, Alaska's Gross Domestic Product totaled \$51.9 billion. The state's population grew by 0.62 percent in 2013, placing the total number of Alaska residents at 736,399. In 2014, construction activity is estimated to increase by 18% from 2013 to a total of \$9.2 billion. Wage and salary employment in the construction industry which was stable last year at about 16,300 workers, is expected to remain stable. Growth has focused in natural resource related industries, with the oil and gas sector accounting for most totaling \$4.9 billion, up from \$3.2 billion in 2013. Alaska construction spending, excluding oil and gas sector, is expected to be \$4.9 billion, up from \$4.6 billion in 2013.

The general permit authorizes the discharge of excavation dewatering that is often associated with construction activity. As areas undergo commercial and residential development, new utilities including water, sewer, and natural gas lines, are installed that often require excavation dewatering to facilitate construction. A large portion of Alaska contains permafrost and poorly drained silty soils, where excavation in these areas will often require some form of dewatering. The authorization of various excavation dewatering discharges associated with construction activity is critical to the continued economic development of the state through the creation of jobs, generation of tax revenue, and transmission and delivery of goods.

The Department has determined that the lowering of water quality is necessary to accommodate important economic and social development in the area where the waters are located; therefore, 18 AAC 70.015(a)(2)(A) is satisfied.

2. *18 AAC 70.015 (a)(2)(B). Reducing water quality will not violate the applicable criteria of 18 AAC 70.020 or 18 AAC 70.235 or the whole effluent toxicity limit in 18 AAC 70.030.*

The general permit requires that discharges must be controlled as necessary to meet applicable WQS (Part 3.2.1.1), thereby prohibiting a violation of the water quality criteria in 18 AAC 70.020.

Discharges authorized under the permit will not violate applicable water quality criteria, including any site-specific criteria established in 18 AAC 70.235. Under this regulation, the Department may establish a site-specific water quality criteria that modifies a water quality criterion set for a water body. There are no site-specific criteria established for any receiving waters applicable to the permit, no further evaluation is required.

Discharges authorized under this permit will not violate applicable water quality criteria, including the whole effluent toxicity limit in 18 AAC 70.030. The permit does not require whole effluent toxicity testing for the innocuous discharges, but rather implements measures found to adequately control or limit individual parameters potentially present in the discharge from causing excursions of WQC.

The Department finds that the selected WQBELs for surface water discharges from excavation dewatering discharges will not violate the criteria of 18 AAC 70.020, 18 AAC 70.235, or 18 AAC 70.030; therefore, 18 AAC 70.015(a)(2)(B) is satisfied.

3. *18 AAC 70.015(a)(2)(C). The resulting water quality will be adequate to fully protect existing uses of the water.*

As previously discussed in this document, the permit authorizes discharges to impaired water bodies; however, permit conditions (e.g., control measures and WQBELs equal to applicable water quality criteria found in the WQS) have been developed to maintain and protect WQC, which include the preservation of existing uses for both Tier I and Tier II water bodies.

Accordingly, the Department finds that the resulting water quality will be adequate to fully protect existing uses; therefore, 18 AAC 70.015(a)(2)(C) is satisfied.

4. *18 AAC 70.015(a)(2)(D). The most effective and reasonable methods of pollution prevention control and treatment will be applied to all wastes and other substances to be discharged.*

The general permit implements WQBELs for all parameters expected to be potentially present in excavation dewatering discharges to protect existing water quality. Since TBELs have not been developed for dewatering related discharges, the most stringent water quality criteria for applicable parameters were selected as final permit effluent limits. If pollutant concentrations have the potential to exceed an effluent limit, treatment may be necessary such as temporary settling basins, sediment filters, weir tanks, or similar filtering mechanisms.

The permit specifies that BMPs be implemented (e.g., temporary settling basins, filter bags, and similar filtering and retention mechanisms) for discharges. Discharges will be required to use various BMPs to ensure the discharges do not result in erosion of existing features. BMPs commonly used in the construction industry to control erosion and sedimentation can be implemented to manage excavation dewatering discharges. The requirement to implement BMPs to manage and the establishment of WQBELs will ensure that all effective and reasonable methods will be utilized to meet the permit requirements.

The Department has determined the methods of prevention, control, and treatment in the permit to be most effective and reasonable, which will be applied to all wastes and other substances to be discharged; therefore, 18 AAC 70.015(a)(2)(D) is satisfied.

5. *18 AAC 70.015(a)(2)(E). All wastes and other substances discharged will be treated and controlled to achieve (i) for new and existing point sources, the highest statutory and regulatory requirements; and (ii) for nonpoint sources, all cost-effective and reasonable best management practices.*

Applicable “highest statutory and regulatory requirements” are defined in 18 AAC 70.990(30) (June 26, 2003 version of the WQS). Accordingly, there are three parts to the definition. The first part of the definition includes all federal technology-based effluent limitation guidelines (ELGs). Upon review of the federal technology-based ELGs, no ELGs exist for the temporary discharges created by excavation dewatering activities. The second part of the definition considers domestic wastewater and is not applicable to the permit action. The third part of the definition includes any more stringent treatment required by state law, including 18 AAC 70 and 18 AAC 72. The state does not have any more stringent treatment requirements for the types of discharges authorized under the general permit. Through the establishment of WQBELs based on the most stringent water quality criteria for all pollutants believed present, all operators discharges will be required to implement any and all best available demonstrated control technologies to meet the terms and conditions of the general permit.

The Department has determined that the permit complies with the highest statutory and regulatory requirements; therefore, 18 AAC 70.015(a)(2)(E) is satisfied.

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 solicited comments from them on issuance of the permit. The Services provided no input during the development of this 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.

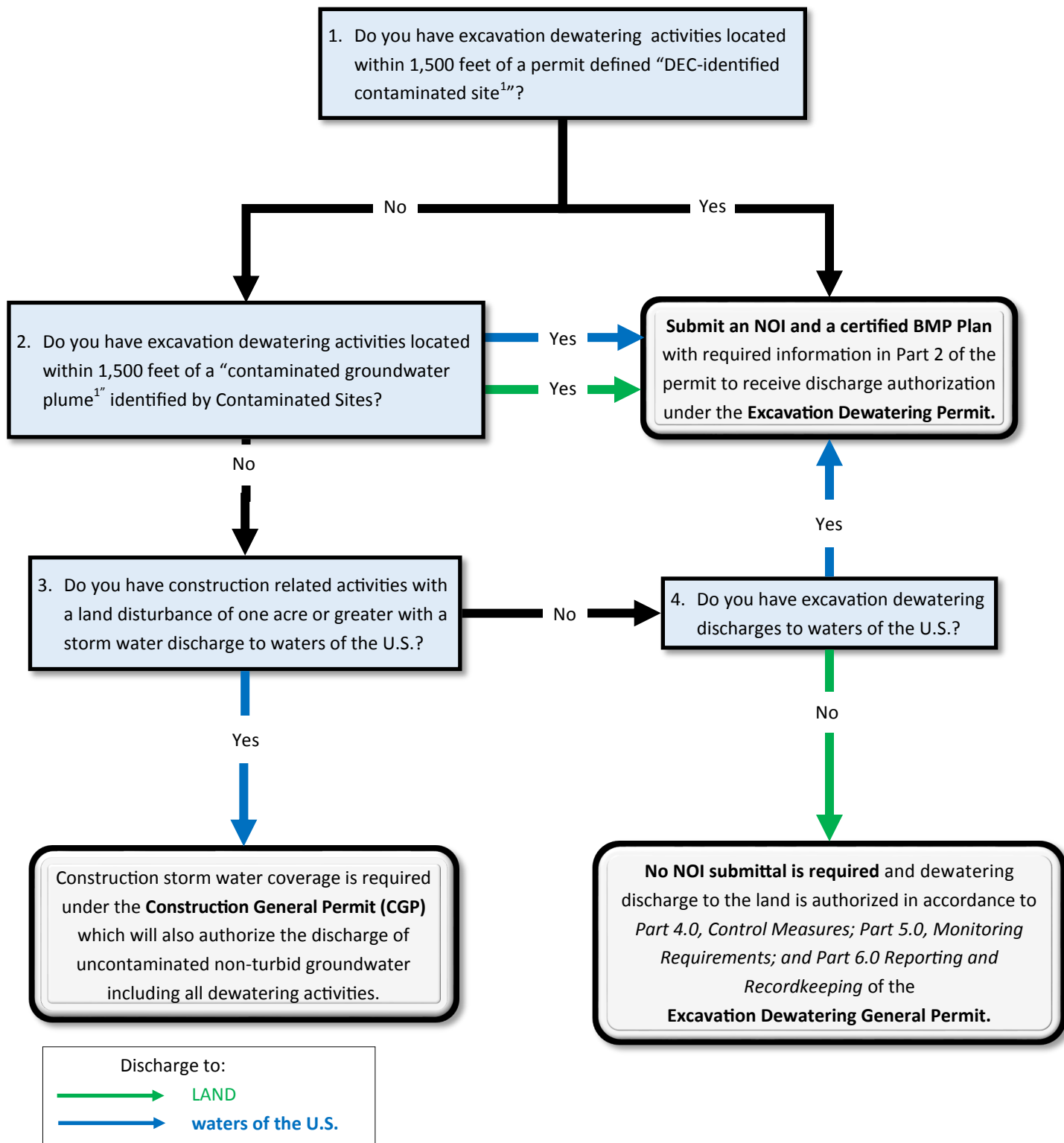
Section 305(b) of the Magnuson-Stevens Act 916 USC 1855(b)) requires federal agencies to consult the NMFS when any activity proposed to be permitted, funded, or undertaken by a federal agency may have an adverse effect on designated EFH as defined by the Act. As a state agency, DEC is not required to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

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APPENDIX A. NOI SUBMITTAL REQUIREMENT FLOW CHART



1. 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 <http://dec.alaska.gov/Water/wnpssp/stormwater/edhsgp.html>.

APPENDIX B. BASIS FOR EFFLUENT LIMITATIONS

B.1 Land discharges:

B.1.1 Best Management Practices

The Alaska Department of Environmental Conservation (DEC) determined that the implementation of BMPs that control erosion, sediment, and promote greater infiltration are the most effective and reasonable pollution control practices for land discharges.

B.2 Discharges to Surface Water:

B.2.1 Technology Based Effluent Limits (TBELs)

The Clean Water Act (CWA) requires permittees in industrial sectors to comply with effluent limitation guidelines (ELG) based on available wastewater treatment technology for those sectors EPA has promulgated ELGs. EPA has not promulgated technology-based ELGs for excavation dewatering discharges, so no TBELs have been incorporated into the permit.

B.2.2 Water Quality Based Effluent Limits (WQBELs) for Excavation Dewatering

The CWA requires the imposition of ". . . any more stringent limitation, including those necessary to meet water quality standards, . . . or required to implement any applicable water quality standard established pursuant to this Act" by July 1, 1977 [Section 301(b)(1)(c)]. All discharges to state waters must comply with State water quality standards (WQS), including the State's antidegradation policy.

Alaska Pollutant Discharge Elimination System (APDES) regulations require that permits include conditions necessary to "achieve water quality standards established under 33 U.S.C. 1313, including state narrative criteria for water quality" [18 AAC 83.435(a)(1)].

DEC has concluded, based on application of the WQS and review of available sampling data, that the following pollutants that are commonly found in excavation dewatering must be limited in order to meet the State WQS.

B.2.2.1 *pH*

The most stringent pH water quality criterion for freshwater is 6.5 to 8.5 S.U. and within 0.5 S.U. from natural conditions which is protective of the aquaculture water supply designated use. The most stringent pH criterion for marine discharges is the same but within 0.2 S.U. from natural conditions and is also protective of the aquaculture water supply designated use.

B.2.2.2 *Settleable Solids*

The concentration of settleable solids in wastewater discharged from excavation dewatering must not exceed 0.2 ml/L above natural conditions. (Permit Part 2.2.1.3). The concentration of 0.2 ml/L was taken from the fresh water sediment water quality criterion for the drinking water supply designated use which states there should be no measurable increase in the concentration of settleable solids above natural conditions. Using best professional judgment an increase of 0.2 ml/L is the smallest incremental rise that can accurately be measured. The marine water sediment water quality criterion for the contact recreation designated use also

states there should be no measurable increase in the concentration of settleable solids above natural conditions.

B.2.2.3 *TAqH*

The most stringent water quality criteria for petroleum hydrocarbons for both fresh water and marine water is the narrative criteria which states the discharge shall not cause a sheen. The numeric water quality criterion for TAqH is 15 µg/L, which is protective of the aquaculture water supply use in both fresh and marine water.

B.2.2.4 *TAH*

The most stringent water quality criteria for petroleum hydrocarbons for both fresh water and marine water is the narrative criteria which states the discharge shall not cause a sheen. The numeric water quality criterion for TAH is 10 µg/L, which is protective of the aquaculture water supply use in both fresh water and marine water.

B.2.2.5 *Turbidity*

The most restrictive turbidity criterion applies to fresh water sources classified for water contact recreation uses. This criterion [18 AAC 70.020(b)(12)(B)(i)] states that turbidity "May not exceed 5 NTU above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 15 NTU." The criterion for Water Supply, Drinking, Culinary and Food Processing [18 AAC 70.020(1)(A)(i)] is identical except that the maximum increase is 25 NTU.

The adoption of the aquaculture water supply water quality criterion of 25 NTUs is the most stringent marine water quality standard for turbidity. Through the establishment of a WQBEL of 25 NTUs for any marine water discharge all marine water designated uses will be protected. This effluent limit for marine water discharges is also consistent with the turbidity limit set for both hydrostatic and excavation dewatering discharges in the North Slope Oil and Gas Exploration general permit.