



Asplund Water Pollution Control Facility NPDES Permit Renewal

IEUOC Briefing

July 16, 2026

Overview

- EPA's initial comments on NPDES Application
- The NPDES renewal process
- How Asplund meets the required nine criteria
- Biological Evaluation results required for ESA-listed species
- Key Takeaways and what comes next



Sediment Monitoring during low tide near the Asplund Outfall



EPA is reviewing the permit application

- EPA is currently in the process of reviewing the permit application and biological evaluation
- Permit has been administratively extended since 2005.
- EPA intends to take action this fall



REGION 10
SEATTLE, WA 98101

September 9, 2025

Reply to
Attn of: WD-19-C04

David Persinger
Assistant General Manager
Anchorage Water and Wastewater Utility
300 Arctic Boulevard
Anchorage, Alaska 99503

(transmitted by email to: david.persinger@awwu.biz)

Re: Updated NPDES and 301(h) Application – AK0022551

Dear David Persinger:

Thank you for providing the EPA with an updated National Pollutant Discharge Elimination System permit application and Clean Water Act Section 301(h) questionnaire.

We appreciate the close coordination between the EPA, AWWU, and Alaska DEC as the updated application materials were developed. Since your 2005 permit renewal application was timely and complete, your existing permit remains in effect and enforceable until the effective date of a new permit. See 40 C.F.R. § 122.6; 5 U.S.C. 558(c).

Permit renewal relies on compliance with nine criteria



2022-
2024

Renewal Process Flow Chart

2026

DATA COLLECTION

REGULATORY PROCESS

FEDERAL

AWWU
prepares
permit
application and
BE

AWWU
submits
NPDES permit
renewal
application to
the EPA

EPA reviews

EPA Drafts Permit

NMFS reviews BE and
issues a BiOp

Consultation with Alaska
Native Tribes

45-day Public
Comment this
fall

EPA addresses
public
comments

**EPA issues
the NPDES
permit
renewal**

STATE

AWWU
prepares the
application for
the CWA
Section 401
Certificate

The State of
Alaska reviews
the CWA
Section 401
certification
process
application

Draft 401
Certification and
Public Comment

State of Alaska
addresses
public
comments

**State of
Alaska issues
the CWA
Section 401
Certificate**

National Marine Fisheries Service

NMFS

Biological Evaluation

BE

Biological Opinion

BiOp



NPDES permit

Clean Water Act Section 301(h)

Asplund is allowed to operate without secondary treatment under CWA amendments authorized by congress in 1978

- ✓ Water quality requirements are only less restrictive for oxygen demand and total suspended solids.
- ✓ All other state and federal water quality parameters are the same or more restrictive.
- ✓ Must also meet the nine criteria which include additional monitoring requirements, toxics control and consideration of the receiving water.



Criteria are more protective under a 301(h) variance

More comprehensive monitoring plan

Meets NPDES
permit
requirements

Meets State
water quality
standards

Environmental
monitoring
program

Removes 30%
of BOD/TSS*

Toxics control program

Toxics control

Enforce
industrial
pretreatment
requirements

Maintain
pretreatment
programs

Consideration of the receiving water

Balanced
native
population of
shellfish, fish,
and wildlife

Does not
constrain other
discharges





Comprehensive Monitoring Plan

Meeting standards since 1985

**Meets NPDES
permit
requirements**

- The Asplund plant has consistently met or beat discharge requirements in its NPDES permit.
- Asplund's NPDES permit requires a much more extensive monitoring program than a typical permit:
 - More frequent samples
 - More samples required in the influent and sludge
 - Samples for more analytes

**Meets State
water quality
standards**

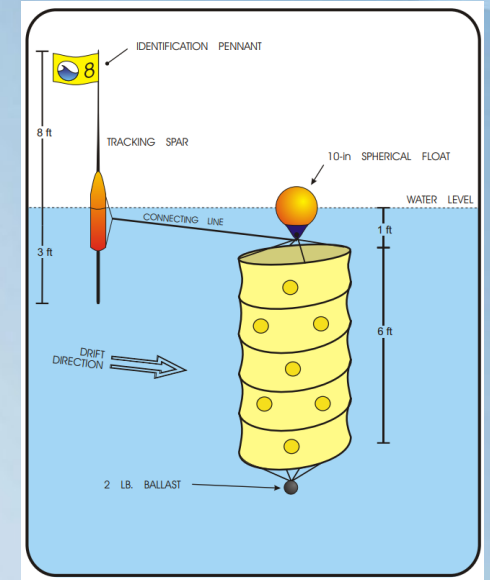


Closely monitoring the receiving water

Environmental monitoring program

The area of the wastewater discharge is monitored to verify biological conditions are not impacted:

- **Receiving water quality** is monitored annually to verify biological conditions are not impacted
 - Drogues are used to achieve varying sample depths
 - Annual sampling for fecal coliform, color, chlorine, hydrocarbons, metals, cyanide, total suspended solids, turbidity, pH, temperature, dissolved oxygen, salinity
- **Sediment and Bioaccumulation** monitoring is done once every 5 years.



Results have consistently met permit requirements



Asplund permit requires more toxics monitoring



Results have consistently met permit requirements



Asplund's primary treatment is very effective

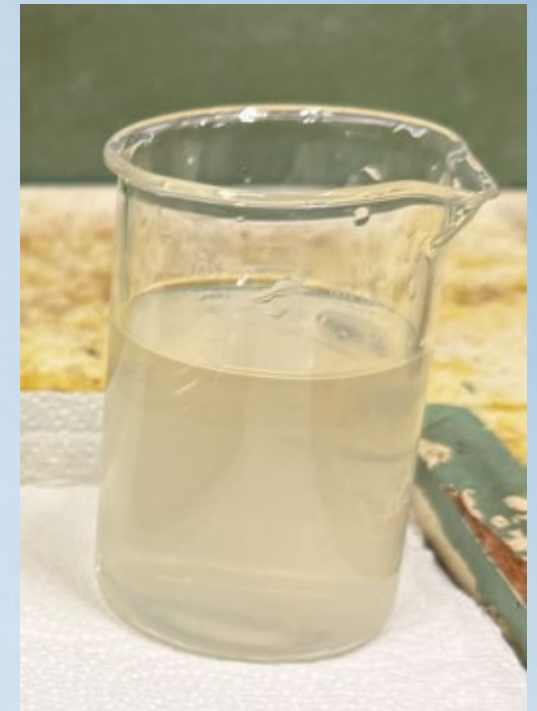
Removes 30%
of BOD/TSS*

Biological Oxygen Demand represents the amount of dissolved oxygen consumed by microorganisms while they decompose organic matter under aerobic conditions

Existing Permit Limit	2023 Annual Average
240 mg/L	158 mg/L

Total Suspended Solids is a measure of clarity and is defined as particles smaller than 2 microns

Existing Permit Limit	2023 Annual Average
170 mg/L	65 mg/L



Asplund's Effluent





Toxic Control Program

Preventing toxics from entering the wastewater is most effective

- The pretreatment program sets limits on what can be discharged into sewers. It is up to the industrial user to meet these standards.
- Pretreatment extends beyond wastewater treatment to preventative programs including
 - prescription drug take-back,
 - solid waste services hazardous material program, and
 - community education.

Toxics control

**Enforce
industrial
pretreatment
requirements**

**Maintain
pretreatment
programs**





Consideration of the Receiving Water

Must maintain a healthy receiving water environment

- The area of Asplund's discharge is unique because of the limited intertidal community. The limited benthic infauna population has been documented to be due to the physical environment in upper Cook Inlet and Knik Arm – with strong tidal currents, high suspended sediment loads, and areas of coarse sediments.
- Unlike a more metropolitan area with multiple sources of influence, Ted Steven's Anchorage International Airport's stormwater general permit is the only permitted discharge in the area.

**Balanced
native
population of
shellfish, fish,
and wildlife**

**Does not
constrain other
discharges**





Biological Evaluation

National Marine Fisheries Consultation

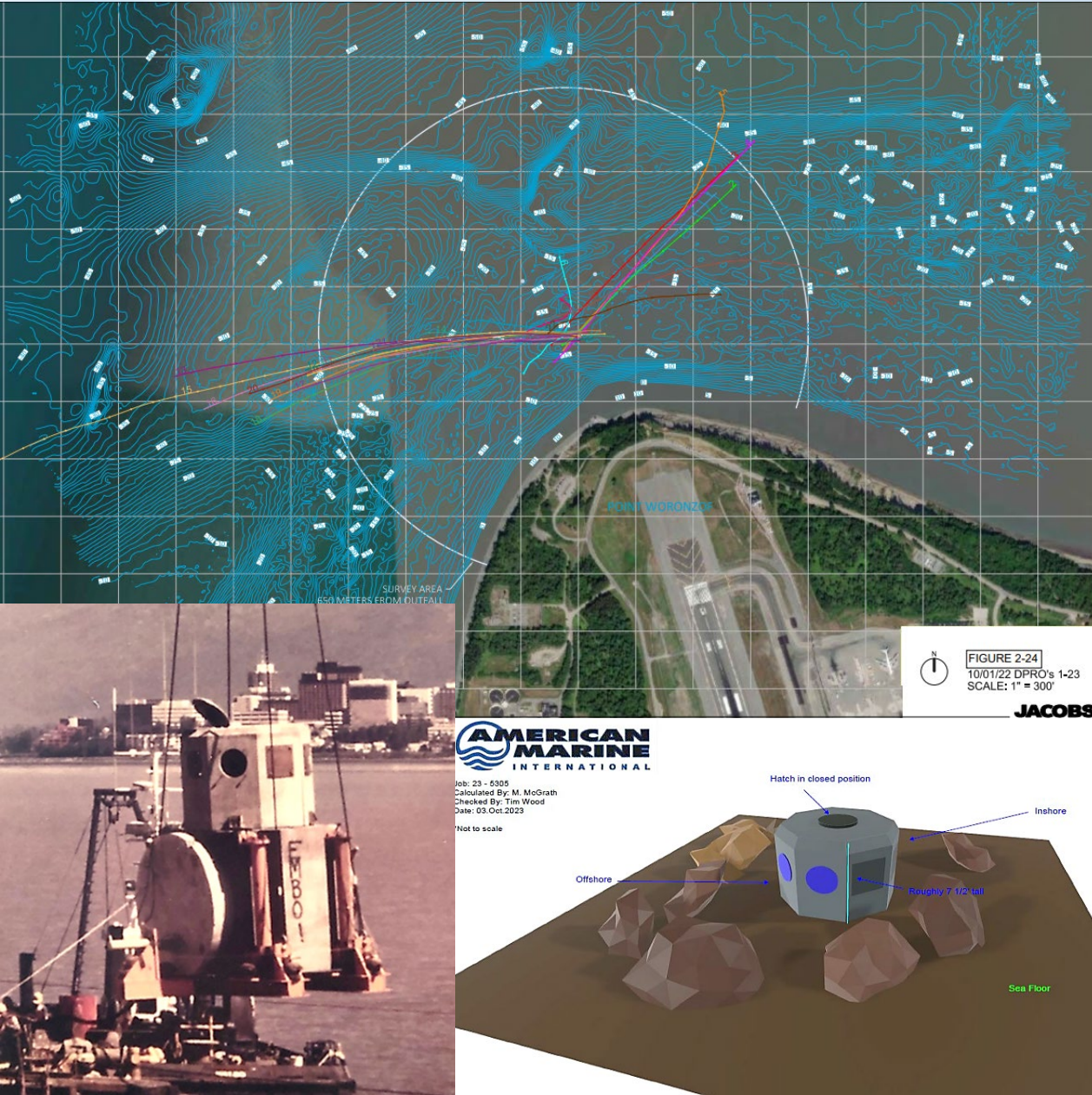
- Because Asplund discharges into marine waters, federal permit renewal requires consultation between EPA and National Marine Fisheries Service (NMFS).
- NMFS will use our Biological Evaluation to issue its Biological Opinion.
- BE recommends that Asplund's discharge is *not likely to adversely affect the Cook Inlet beluga whale and the Steller Sea Lion*.



Biological Evaluation examines impacts on Endangered Species



Biological Evaluation



- Comprehensive technical document assessing the effect of Asplund's discharge on ESA-listed marine mammals.
- Permit-required monitoring was supplemented with water, sediment and fish samples collected over a period of 3 years.
- A model was developed to understand how the effluent is diluted in Cook Inlet.
- A risk assessment used this data to understand the toxicity of the effluent to the Cook Inlet beluga whale and its prey.

Ecological Risk was Assessed in Two Ways

Risk to food sources for the beluga whales

- Evaluate the potential for effects of contaminants on populations of aquatic organisms that could serve as a food source for the Cook Inlet beluga whale.

Risk to beluga whales

- Evaluate the potential for effects of contaminants on the Cook Inlet beluga whales from contaminants that bioaccumulate through the food chain.

Biological Evaluation

Biological Evaluation

Support for NPDES 301(h)-Modified Permit for Asplund Water Pollution Control Facility

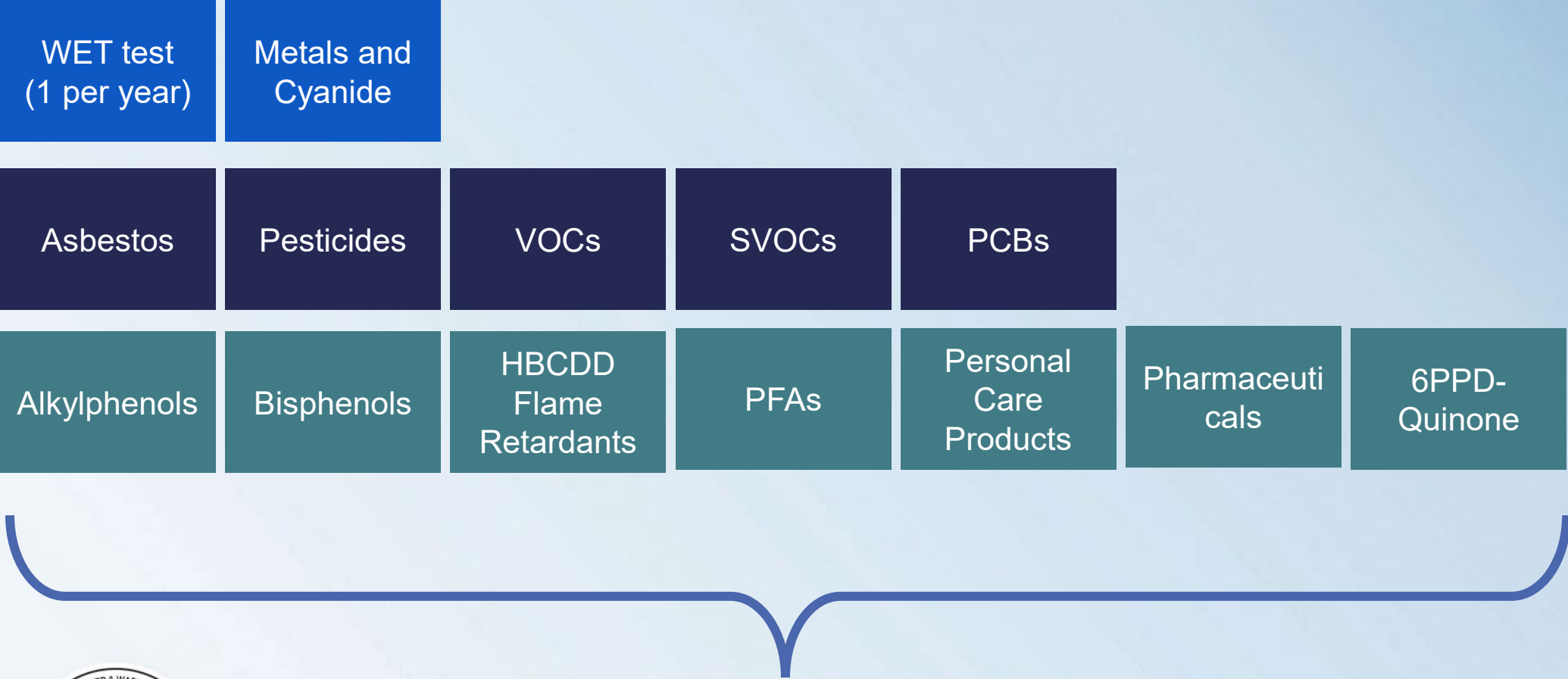
Prepared for
Anchorage Water and Wastewater Utility

Project Name
April 25, 2025

Jacobs
ECO49



Over 250 analytes were analyzed for their risk to Cook Inlet belugas and their prey



**Monitoring
Program:**

Typical NPDES
Permit

Asplund NPDES
Permit additional
requirements

AWWU's additional
sampling



AWWU's additional sampling

- Considered emerging contaminants of concern however are not currently regulated, and therefore do not have water quality standards.
- Therefore, a risk evaluation was used to help understand the toxicity of these potential contaminants.



Risk was calculated for each of over 250 potential contaminants

$$\textit{Risk} = \frac{\textit{Concentration in Exposure Area}}{\textit{Toxicity Benchmark}}$$

The *Concentration in the Exposure Area* is calculated using:

- Results from the permit-required sampling
- Additional water samples for potential contaminants not currently regulated
- Additional fish tissue sample results
- Dilution factors calculated using the modeling study

The *Toxicity Benchmark* is pulled from:

- Alaska Site Specific Water Quality Criteria
- Alaska State Water Quality Standards
- EPA water quality standards, where available
- Ecological screening values derived at national laboratories



Risk evaluated at five exposure scenarios

Exposure Scenario

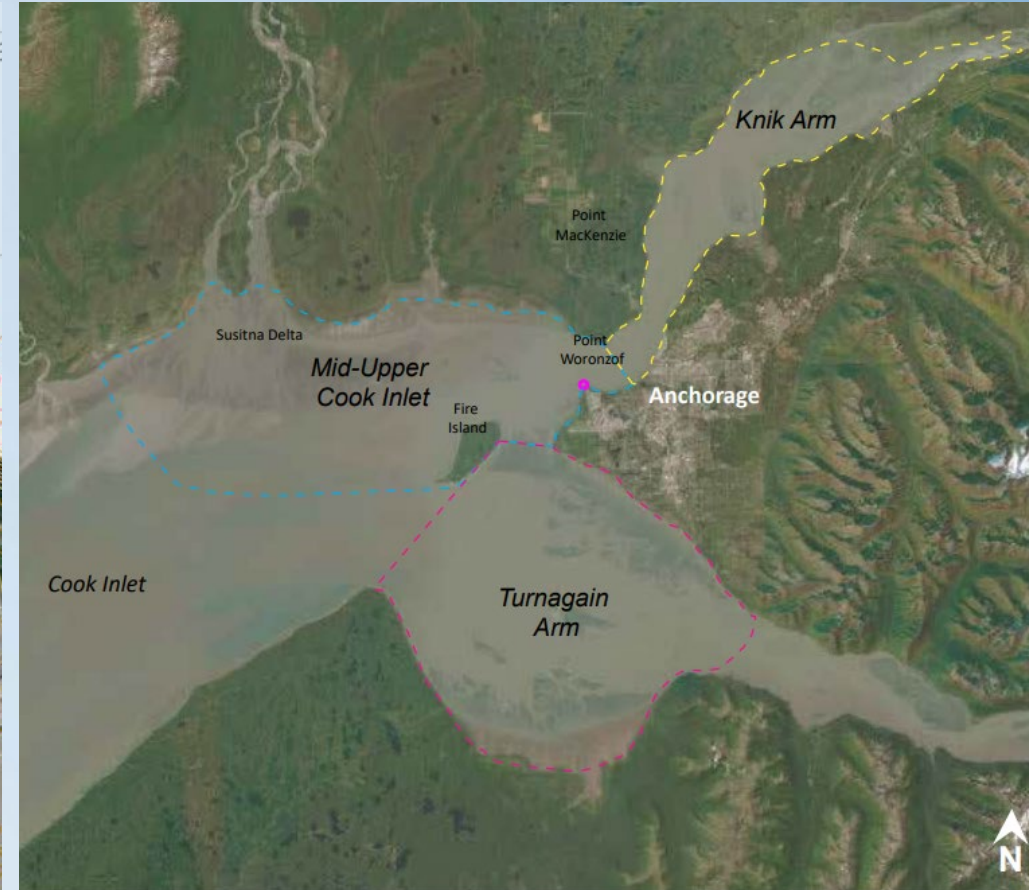
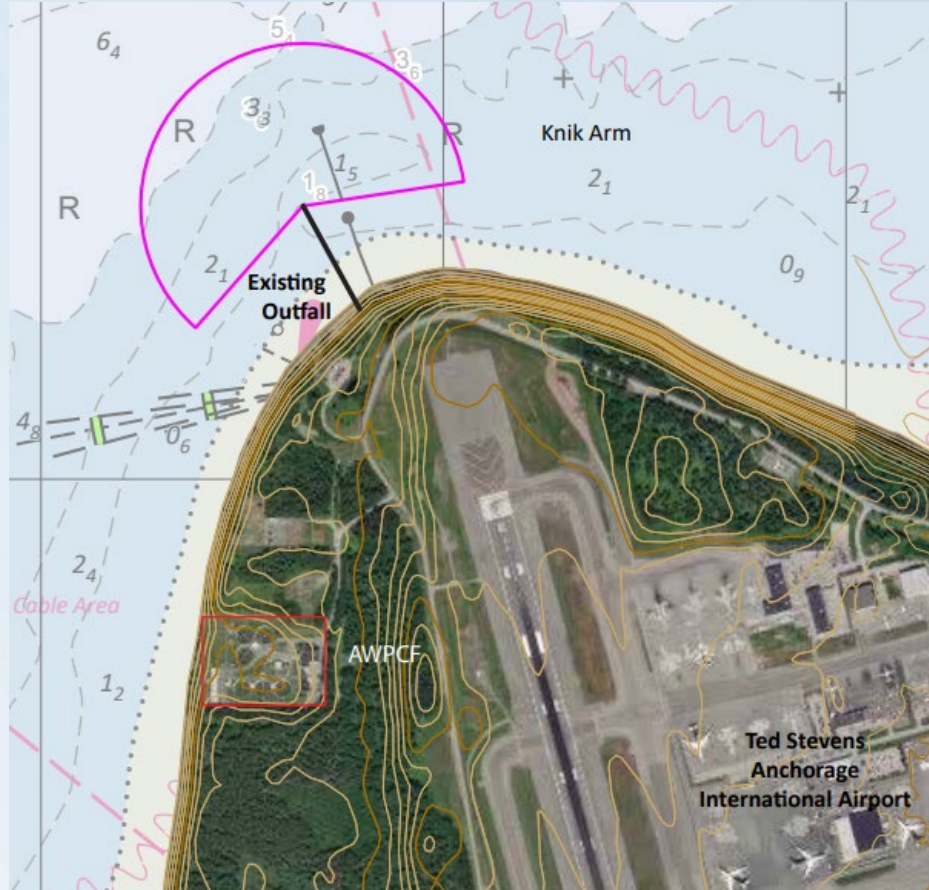
End of Pipe

Permitted Zone of Initial Dilution

Knik Arm

Mid-Upper Cook Inlet

Turnagain Arm



Modeling was used to determine dilution factors at each exposure scenario



Risk was found only in an overly conservative scenario

Exposure Scenario	Risk present
End of Pipe	Risk
Permitted Zone of Initial Dilution	No Risk
Knik Arm	No Risk
Mid-Upper Cook Inlet	No Risk
Turnagain Arm	No Risk

The End of Pipe exposure scenario is overly conservative assuming the marine life lives 100% of their life in the outfall pipe.



Key Takeaways

- Asplund has consistently met the nine criteria required for permit renewal
- Asplund has consistently met its permit requirements.
- AWWU maintains an in-depth characterization of its discharge using its monitoring plan and special studies.
- AWWU conducted a risk evaluation on over 250 analytes concluding no risk to Cook Inlet beluga whales and their prey under realistic conditions.



What comes next

- EPA is currently reviewing the draft permit application.
- Public comment period is anticipated this fall if/when draft permit is published.
- EPA is continuing to consult with Alaska Tribes.
- EPA will provide the draft permit and Biological Evaluation to NMFS for their review.





Questions?

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