REGION 10

SEATTLE, WA 98101

Public Comments Received on EPA's Draft National Pollutant Discharge Elimination System (NPDES) Permit for Haines Borough Wastewater Treatment Plant from May 4, 2023 through July 3, 2023

The U.S. Environmental Protection Agency (EPA) has compiled the public comments received on the draft NPDES permit for the Haines Borough Wastewater Treatment Plant from May 4, 2023 through July 3, 2023. The EPA received comments from 2 entities, listed below.

Alaska Department of Environmental Conservation
Haines Borough

If you experience a problem reading this document with assistive technology, please contact us at R10_Web_Team@epa.gov.

Abigail,

The Alaska Division of Water, Wastewater Discharge Authorization Program provides the following comments on the subject permit, currently on public notice until July 3, 2023. If you have any questions regarding the comments, please contact Marie Klingman.

1. Permit Section I.B. Table 1. Permit contains copper effluent limits 64 µg/L, 21 µg/L. DEC's RPA resulted in copper effluent limits 58 µg/L, 29 µg/L total recoverable. DEC's RPA supports CORMIX inputs and the mixing zone. Therefore, DEC's resultant effluent limits should be used rather than EPA's.
2. Permit Section I.B. Table 1. Copper effluent limits should be noted that they are total recoverable.
3. Permit Section I.B. Table 1. Enterococcus bacteria should have interim monitoring reporting requirements.
4. Permit Section I.C.5.a. WET dilution series should include the IWC 5.3% (based on 19:1 dilution)
5. Permit Section I.C.5.a. 100% effluent concentration should be removed from dilution series. The highest concentration that can be tested using hypersaline brine is 70% effluent.

I realize these comments are somewhat truncated, but each comment centers on the intent to align the permit conditions with the 401 Certification stipulations (or removal of the need to insert a stipulation at all).

Thank you!

Gene McCabe
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Public Works 907.766.6414

July 3, 2023

Abigail Conner
conner.abigail@epa.gov
NPDES Permits Section
Environmental Protection Agency, Region 10

Dear Ms. Conner:

This letter addresses concerns the Haines Borough has regarding the proposed draft 301(h) Waiver, NPDES Permit #AK0021385, released in May 2023 by the United States Environmental Protection Agency (EPA) for the Wastewater Treatment Plant (WWTP) in Haines, Alaska. Outlined below are our comments about the proposed changes for the NPDES permit we have operated under since 2001.

- **Financial Impact to Local Government and Users**

The proposed changes in the draft permit, especially the increased sampling and the disinfection requirement, will produce substantial rate increases for individual users of the Haines Townsite Sanitary Sewer System. *Haines Borough Ordinance No. 22-02-609* increased user rates for sewer approximately 3 percent each year between 2022 to 2025. For the Haines Borough to implement these proposed permit requirements, without any other financial support such as federal or state grants, will require doubling, tripling or even quadrupling the current monthly user fees, both residential and commercial. (See *Attachment 1* for a spreadsheet and explanatory outline detailing the anticipated additional costs beyond the scope of the current permit.)

As stated in the ARRI Report, *Water Quality Measures in Alaska's Ports and Shipping Lanes: 2020 Annual Report,* prepared for the Alaska Department of Environmental Conservation (ADEC), samples taken at the edge of the mixing zone for Haines-Chilkoot Inlet have results less than the proposed permit's final limits of 200 fecal coliform per 100 ml and 665 enterococcus per 100 ml. This report summarizes samples taken in June 2020, showing a maximum value for fecal coliform of 5 per 100 ml, more than an order of magnitude less than the proposed final limit. For enterococcus, the values reported were two orders of magnitude less – 5 MPN per 100 ml. Further, the average temperature noted by ARRI for the Haines-Chilkoot Inlet ranged from 11.4 to 12.4 degrees; C. Fecal coliform bacteria prefer 37 to 45 degrees C. The ARRI Report records levels without disinfection.

Chlorination may cause effects beyond wastewater treatment. Disinfection with chlorine may kill pathogenic bacteria and other disease-causing microbes in the Haines WWTP effluent. However, this disinfectant may also kill other microbes essential to the aquatic environment in the mixing zone and beyond, endangering the survival of species dependent on these other microbes.

- **Increased Sampling Necessitates Additional Staff and Increased Lab Costs**

As outlined in *Attachment 1*, the proposed sampling requirements place significant additional expenses on our community for little apparent gain in water quality. Further, if one set of tests yields satisfactory results for the WET series as well as the five ZID stations, why does this costly testing for these parameters warrant multiple annual repeats? (See *Attachment 1*, *Section 1*, last bullet.) Moreover, for the ZID area, the accuracy of the specific GPS locations for the five sample sites will be impossible to maintain in a boat with variable weather and sea conditions.

We also must build contingencies into our sampling programs. Between weather issues with sampling and sample transportation to labs, multiple sets must be retaken each year as hold times are exceeded. If sample results are unsatisfactory for whatever reason, this triggers additional sampling, requiring more staff time with added transportation and lab fees.

- **Proposed Sampling Substantially Scaled Up**

The type and frequency of sampling increases significantly with the proposed permit. For example, the number of samples for enterococcus in receiving waters goes from zero in the current permit to 55 per year. The Water and Sewer Department staff includes only three operators. This testing will place an additional sampling burden on staff with a heavy work load, creating a need for additional personnel. Please explain what useful data will be gathered by taking samples five times a year from 11 different sites within a thousand meters of the effluent discharge outfall in Portage Cove. We request that the number of sites and/or the frequency of sampling for this parameter be reduced.

- **Some Sampling Schedules Lack Flexibility and Viability**

The proposed sediment and benthic survey, with the requirement to only be conducted in August, is a narrow timetable for Water and Sewer Department staff to comply. Maintenance and improvement projects that can only be completed during summer months have priority. There are also concerns about storms and boating safety. August can have severe inclement weather. A timeframe of May through September would allow more flexibility for staff scheduling and weather conditions.

- **Inclement Weather and Limited Transportation Options for Sample Integrity**

All samples requiring processing in Juneau labs and beyond place a challenge on our community due to hold times and the few flights from Haines to Juneau, especially in the winter with frequent storms. The last time a WET test was completed for Haines, it took four sets of samples to make the hold time to a Pacific Northwest lab, and this effort required special courier services with expediting fees. Each set of samples necessitated contract services with an out-of-community diver.

- **Disinfection Requires Substantial Upfront Capital and Ongoing Maintenance Costs**

Please explain why disinfection is needed for the WWTP effluent outfall in Portage Cove, an area with significant tidal influence and limited recreational activity due to cold water temperatures and boating traffic. Fecal coliform test results from previous monitoring of the outfall mixing zone do not indicate a public health concern in these receiving waters. Incorporating disinfection into the current Haines WWTP will require a substantial capital improvement as the current facility would require design and construction of a disinfection system. Further, there will be additional annual costs for chemicals, labor and maintenance. Purchasing and delivering the chlorine will run at least $200 per day or $73,000 per year.

- **De-Chlorination May be Required to Protect Lynn Canal Fisheries**

If disinfection is required, given the importance of the salmon, halibut, crab and shrimp fisheries in this area, de-chlorination may be an essential system component. The projected costs for a disinfection system with de-chlorination will run over four million dollars, requiring a significant, financial investment by the community. (See *Attachment 1*, page 8 of 23.)

- **More Reporting Requirements Decreases Staff Time for Regular Operations**

The proposed increased monitoring for temperature requires an annual data dump after the end of each year. Current staffing levels make additional reporting demands onerous. We suggest that this reporting be replaced with the Haines Borough maintaining five years of data on-site at the WWTP, readily available for EPA and ADEC personnel to review.

- **Lack of Standard Monitoring Parameters and Requirements for Alaska 301(h) Waiver Communities**

State of Alaska Water Quality Standards are statewide. Please explain why there are ranges of values for the same parameters listed in the proposed 301(h) draft permits for Wrangell, Sitka and Haines. For instance, why does Wrangell's WWTP effluent and receiving waters have a proposed final fecal coliform count more than seven times higher than the one EPA is proposing for Haines: 1,568 FC per 100 ml versus 200 FC per 100 ml?

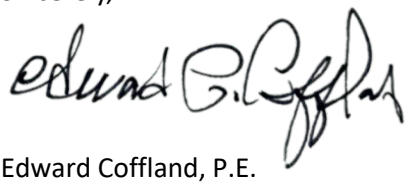
In closing, we ask that you review and consider the entirety of *Attachment 1* as it details anticipated annual costs to the Haines community for the changes EPA is proposing without any financial assistance. This supplement provides further details and comments in two sections. The first contains a list of general comments with six bulleted items.

The second section organizes proposed changes in 12 sub-sections with anticipated costs shown in 15 tables. Our responses, whether acceptance, partial acceptance or objection with a justification statement, are shown here. A cover spreadsheet summarizes the expenses from the 15 tables.

We view some of these changes as acceptable- the ones with minimal budget impacts and those required by updated State of Alaska Water Quality Standards. Yet the permit elements requiring substantial costs to implement place a financial burden on the Haines Borough, while producing minimal benefits to the community's environment and public health.

We appreciate the opportunity to comment on the proposed NPDES permit changes and look forward to continuing a dialogue with EPA to find a workable solution that best serves our community and residents while protecting the local environment and public health.

Sincerely,



Edward Coffland, P.E.
Director of Public Facilities
Haines Borough

Attachment 1

Review Comments re: Public Notice Issued May 4, 2023

Draft NPDES Permit #AK0021385

Haines Borough, Haines, Alaska, Wastewater Treatment Plant

This document contains comments and questions regarding factual accuracy, and operational and cost feasibility concerning the May 4, 2023 Draft NPDES Permit #AK0021385.

Our comments are organized in two sections. The first contains a list of general comments including noted inaccuracies in the proposed permit. The second section reviews changes from the current permit the Haines Borough is operating under, and includes projected expenses to implement the proposed changes. These are organized in 12 sub-sections with 15 tables summarizing the financial impact to the Haines Borough for implementation.

SECTION 1: GENERAL COMMENTS

- Page 1 of 54: Latitude and longitude needs to be corrected. Latitude: 59.232,647 degrees; Longitude: -135.430,868 degrees WGS 84
- Page 17 of 54, Table 3: Secchi Disk is measured to the depth where the disk is no longer visible, not every 5 meters to the bottom. Table 3 does not include metals, dissolved organic carbon, conductivity and hardness, as mentioned on page 19 of 54, item 9. What is the actual requirement?
- Page 44 of 54 and Page 45 of 54, Receiving Water Monitoring Maps: Diffuser location: see first bullet above, Page 1 of 54. Latitude and longitude of other sites need verification. Current information based on effluent pipe discharge location. End of pipe location based on PND Engineers, Inc., Haines Borough Portage Cove Harbor Expansion, Wastewater Outfall Plan & Profile, 2.01, Sheet 8 of 32, September 2018 As-Built Drawing. EPA location is approximately 1,600 ft NE from PND location.
- Page 7 of 54, Table 1 – PFAS: Table 1 shows sampling frequency of 2 per year whereas footnote 10 states 2 years (8 quarters). Which one is the actual proposed sampling frequency?
- The November 13, 2022 ADEC recreational water quality limits for contact and secondary activities in marine waters are 35 enterococcus in 100 ml (30-day geometric mean) for contact recreation and 200 FC in 100 ml for secondary recreation (30-day geometric mean) respectively. Why is the proposed effluent discharge level at the Haines WWTP outfall in Portage Cove, which is 56 feet below sea level, being changed from a monthly average of 977,000 FC per 100 ml (in the current permit) to 200 FC per 100 ml - the same value as the secondary contact recreation standard – when significant dilution occurs with tidal action? This is nearly a five-thousand-fold decrease. In contrast, the proposed enterococcus level for WWTP effluent is 19-times higher than the ADEC contact recreation standard of 35 enterococcus in 100 ml.
- Proposed testing requirements are expected to increase costs significantly as documented in *Section 2*. What are the potentials for waivers and/or reductions in testing after completing a specific number of tests with satisfactory results? A specified process for potential waivers would be useful.

For instance, the current permit states: *If fecal coliform bacteria concentrations monitored at the edge of the mixing zone do not exceed a monthly average of 14 FC per 100 ml and a daily maximum of 43 FC per 100 ml during the first two years of monitoring, then the required monitoring frequency for fecal coliform will be reduced to once per year in each subsequent year, performed on the same day as the water quality monitoring of Section 1.B.4.a above.* (See page 7 of 32 of Permit #AK-002138-5.)

Total Costs of Additional 301(h) Testing for AK0021385
Annual Cost with Capital Cost for Disinfection / De Chlorination

Parameter	Additional Annual Testing	In House Staff	Contractor	Total
Wastewater Treatment Plant – Annual Costs				
Total Flow	1	$31,720	$0	$31,720
Fecal Coliform	12	$15,132	$10,452	$15,132
Enterococcus -- Final	24	$30,264	$9,516	$30,264
Copper	8	$1,248	$2,392	$3,640
Temperature	Continuous	$30,732	$0	$30,732
Ammonia	4	$624	$962	$1,586
PFAS	6	$936	$6,864	$7,800
Whole Effluent Toxicity	1.8	$432	$19,710	$20,142
Toxic Pollutant Scan	0	$0	$0	$0
			Annual Total	
			5 – Year Total	**$705,080**
Wastewater Treatment Plant – Disinfection (Capital Cost & 5 Years O&M)				
	Continuous			
	Continuous			$1,091,350
			5 – Year Total	**$4,991,350**
Receiving Water Monitoring				
Temperature, Salinity, DO, pH, Turbidity, Sechhi Disk	18	$6,474	$0	$6,474
Fecal Coliform	39	$13,078	$0	$13,078
Enterococcus	55	$28,210	$0	$28,210
Benthic Infauna & Sediment Analysis	0.8	$333	$62,530	$62,863
			Annual Total	**$110,625**
			5 – Year Total	**$553,125**
Scheduled Submissions – Plans				
Draft Permit Review & Mixing Zone Determination	Pre-Permit			$49,660
Quality Assurance Plan	First 180 Days			$49,660
O&M Plan	First 180 Days			$49,660
ER&PN Plan	First 180 Days			$49,660
Disinfection Compliance Plan				$24,830
			5 – Year Total	**$223,470**
			Total Estimated 5 – Year Cost	**$6,473,025**

The following 15 tables detail the cost breakdown for the parameters listed above.

SECTION 2: CONTENTS

1) TOTAL FLOW

Proposed Permit Requirement: Changes from ***Influent or Effluent*** to ***Influent and Effluent*****,** requiring a total of two flow meters.

Response: Unacceptable, as this is an added expense providing little additional information. Only a minimal amount of sludge is removed from the WWTP influent.

Justification: The additional monitoring each month will require at least one extra 10-hour shift for daily monitoring with an on-going need for meter calibration with flow testing. Since there is negligible loss of effluent through the WWTP, what data are gained by measuring the WWTP flows twice?

Budget Option: In-House

2001	1	Continuous		
2023	2	Continuous	1	
Difference:	Measure both influent and effluent instead of just one			

Description	Quantity	Unit	Cost/Unit	Annual Cost
In-House				
Labor:	120	hours/year	$60	$7,200
Equipment & Supplies:	1	each	$5,000	$5,000
Laboratory Fees:				$0
Other Contractual:		each		$12,200
Σ				$24,400
Contingency (30%):				$7,320
TOTAL				**$31,720**

Contract Laboratory	
Labor:	$0
Equipment & Supplies:	$0
Laboratory Fees:	$0
Other Contractual:	$0
Σ	$0
Contingency (30%):	$0
TOTAL	**$0**

2) FECAL COLIFORM: Interim & Final Limits

Proposed Permit Requirement: This parameter is included in the current permit with one grab sample per month. This proposed change is two-fold: 1) Sampling increased to twice per month, 2) Lower interim limit and a much lower final limit, one requiring disinfection to achieve.

Response: Two samples per month is acceptable. Final lower limit count of 200 fecal coliform per 100 ml unacceptable (see **DISINFECTION / DE-CHLORINATION**, page 9).

Justification: The additional testing each month increases labor costs. To achieve the proposed final limit, engineering services will be required to develop a design for a disinfection / de-chlorination process. Then there will be the accompanying equipment procurement and construction and/or remodeling to accommodate this new treatment. Public would be adversely impacted by chlorination as many residents rely on subsistence fisheries in Lynn Canal waters, requiring the addition of de-chlorination.

Budget Option: In-House

2001	1	Month			
2023	2	Month	1	12	
Difference:	One grab sample per month to two grab samples per month				

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
		In-House			
Labor:	12	hours/month	$60		$8,640
Equipment & Supplies:	1	each	$3,000		$3,000
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$11,640
Contingency (30%):					$3,492
TOTAL					**$15,132**

		Contract Laboratory			
Labor:	4	hours/month	$60		$2,880
Equipment & Supplies:					$0
Laboratory Fees:	2	each month	$115	$100	$5,160
Other Contractual:					$0
Σ					$8,040
Contingency (30%):					$2,412
TOTAL					**$10,452**

3) ENTEROCOCCUS: Final Limit

Proposed Permit Requirement: This is a new parameter not included in the current permit.

The ADEC November 13, 2022 Water Quality Standards *18 AAC 70* set the enterococcus level at no more than 35 per 100 ml for marine water involving contact recreation (swimming, diving and water skiing). Recreation in the Portage Cove area mostly consists of secondary recreation: boating, camping, hunting, hiking, wading, recreational fishing (does not include fish consumption). The secondary recreation standard involves only fecal coliform and the level is no more than 200 FC per 100 ml.

NOTICE:

HAINES BOROUGH ALASKA

The Haines Borough Wastewater Treatment Facility located on East Fair Drive, is discharging treated domestic wastewater into the Portage Cove mixing zone. The mixing zone is a 1600 meter radius centered on the outfall, which includes this area. We recommend that activities involving direct water contact and harvesting of shellfish for raw consumption should not take place in the mixing zone. The HB Sewer Department monitors the mixing zone for water quality and fecal coliform bacteria. No discharge permit violations have been reported to the U.S. EPA during this permitted period. This notice is made as a precautionary measure required by our NDPES permit.

For more information or questions please contact the HB Sewer Dept. at 1-907-766-6452

Haines has an annual January 1 New Year's Day Polar Bear Swim where several people participate in contact reaction: diving and swimming. Even so, the ARRI 2020 Report shows the Haines-Chilkoot Inlet with enterococcus levels of 5 MPN per 100 ml, well below the new 35 standard as well as the 665 FCU per 100 ml level in the draft permit. At least one rugged individual regularly swims in Portage Cove daily for about 20 minutes year-round although this person keeps their head above water.

Response: Acceptable as this is a new indicator organism and recreation in Portage Cove creates some limited, potential risk to public health.

Justification: If we elect to do the testing in-house, additional equipment and staff time will be required. If these samples are shipped to a Juneau lab for processing, there will be additional cost for shipping and contract services as well as more staff time required to acquire the samples.

Budget Option: In-House

2001	0	Month			
2023	2	Month	2	24	
Difference:	New analyte, not previously tested				

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
		In-House			
Labor:	12	hours/month	$60		$17,280
Equipment & Supplies:	1	each	$6,000		$6,000
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$23,280
Contingency (30%):					$6,984
TOTAL					**$30,264**
		Contract Laboratory			
Labor:	4	hours/month	$60		$2,880
Equipment & Supplies:					$0
Laboratory Fees:	2	each month	$85	$100	$4,440
Other Contractual:					$0
Σ					$7,320
Contingency (30%):					$2,196
TOTAL					**$9,516**

4) DISINFECTION / DE-CHLORINATION

Proposed Permit Requirement: This is a new requirement to meet the proposed fecal coliform and enterococcus levels for the Haines Borough.

Response: Please explain why the acceptable bacteria levels proposed for effluent were reduced nearly 5,000-fold.This change will place considerable cost upon our community, causing a financial hardship. This proposal is unacceptable without grants.

Justification: To achieve the proposed final limits for fecal coliform and enterococcus counts, engineering services will be required to develop a design for a disinfection process. Then there will be the accompanying equipment procurement and construction and/or remodeling to accommodate this new treatment process. Because of fisheries concerns, a de-chlorination process will be included in this system. We are estimating the WWTP expansion to accommodate this system will run over four million dollars.

Budget Option: In-House

2001	0
2023	1
Difference:	New requirement to meet proposed fecal coliform & enterococcus limits

Description	Quantity	Unit	Cost/Unit	Annual Cost
In-House				
Labor:	1	hour/day	$60	$21,900
Chemicals -- Chlorine	50	lbs/day	$4	$73,000
Chemicals -- De-Chlorinate	50	lbs/day	$4	$73,000
Σ				$167,900
Contingency (30%):				$50,370
TOTAL				**$218,270**
Contract Laboratory				
Labor:				$0
Equipment & Supplies:				$0
Laboratory Fees:				$0
Other Contractual:				$0
Σ				$0
Contingency (30%):				$0
TOTAL				**$0**
Capital Costs				
Building / System	2500	ft^2	$400	$3,000,000
Σ				$3,000,000
Contingency (30%):				$900,000
TOTAL				**$3,900,000**

5) COPPER: Lower Limit

Proposed Permit Requirement: Current permit requires quarterly monitoring. Proposed changes require monthly monitoring. Maximum daily limit and monthly average are substantially reduced.

Response: We object to the eight additional tests per year, preferring quarterly tests.

Justification: Community cannot afford to substantially increase sewer rates for consumers to support the proposed increased number of tests for several parameters. Copper analyses are sent to a contract laboratory. There will also be additional staff workload to collect and ship the samples. Another SE Alaska community similar in size to Haines and operating with a 301(h) permit for their WWTP, is being asked only to monitor this parameter in their proposed permit.

Budget Option: In-House and Contract Laboratory

2001	4	Year		
2023	12	Year	8	
Difference:	Quarterly 24-hour composite sample to monthly grab sample			

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
In-House					
Labor:	2	hours/sample	$60		$960
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$960
Contingency (30%):					$288
TOTAL					**$1,248**
Contract Laboratory					
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:	1	each sample	$130	$100	$1,840
Other Contractual:					$0
Σ					$1,840
Contingency (30%):					$552
TOTAL					**$2,392**

6) TEMPERATURE: Continuous Monitoring

Proposed Permit Requirement: Current permit requires weekly monitoring of the WWTP. The change to continuous monitoring will require set-up costs for a probe, conduit and cable, as well as a data logger.

Response: We object as we do not see any added value for these additional expenses. Please explain what this information will be used for.

Justification: More tasks for a small Public Works Staff with a heavy workload. Budget constraints make the hiring of additional personnel to accommodate the increased work load created by additional sampling for multiple parameters problematic. Previous data show that temperature fluctuations are based on seasonality and storms.

Budget Option: In-House

2001	1	Week	
2023	1	Continuous	>>
Difference:	Weekly grab sample to continuous monitoring		

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
In-House					
Labor:	12	hours/month	$60		$8,640
Equipment & Supplies:	1	each	$15,000		$15,000
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$23,640
Contingency (30%):					$7,092
TOTAL					**$30,732**

Contract Laboratory	
Labor:	$0
Equipment & Supplies:	$0
Laboratory Fees:	$0
Other Contractual:	$0
Σ	$0
Contingency (30%):	$0
TOTAL	**$0**

7) AMMONIA: Quarterly Monitoring

Proposed Permit Requirement: This is a new parameter.

Response: We object as there is no maximum contaminant level for ammonia. Please explain why this data collection is required.

Justification: These quarterly samples would be sent to a Juneau lab, creating additional contractual expense as well as more staff time to collect and ship samples.

Budget Option: In-House and Contract Laboratory

2001	0	Year		
2023	4	Year	4	

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
In-House					
Labor:	2	hours/sample	$60		$480
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$480
Contingency (30%):					$144
TOTAL					**$624**
Contract Laboratory					
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:	1	each sample	$85	$100	$740
Other Contractual:					$0
Σ					$740
Contingency (30%):					$222
TOTAL					**$962**

8) PFAS – INFLUENT, EFFLUENT & SLUDGE

Proposed Permit Requirement: This is a new parameter, requiring testing of influent, effluent (composite samples) and sludge (grab sample) twice per year.

Response: We object as there are no standards for PFAS levels in wastewater or sediment presently.

Justification: These semi-annual samples will be sent to a lab for analysis, creating added expense. Staff time will be needed to collect samples.

Budget Option: In-House and Contract Laboratory

	Quantity	Time	Additional
2001	0	Year	
2023	2	Year	2
Number of Sample Sites			3
Σ Samples			6
Difference:	New analyte -- test influent, effluent & sludge		

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
In-House					
Labor:	2	hours/sample	$60		$720
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$720
Contingency (30%):					$216
TOTAL					**$936**
Contract Laboratory					
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:	1	each sample	$780	$100	$5,280
Other Contractual:					$0
Σ					$5,280
Contingency (30%):					$1,584
TOTAL					**$6,864**

9) WHOLE EFFLUENT TOXICITY (WET)

Proposed Permit Requirement: The proposed permit increases the WET testing from one composite sample every five years to ten composite samples every five years (two per year).

Response: We object as previous sample results showed no violation of limits. Please explain what benefit these additional samples will provide.

Justification: The last time Public Works Staff did a WET sample, it took four tries for the contract lab to receive the samples within the allowable hold time, creating significant expense for contract divers, staff time and sample transportation. The estimate below includes a cushion for repeat samples and shipping as our rural location makes samples reaching out-of-state laboratories in a timely manner difficult.

Budget Option: In-House and Contract Laboratory

2001	1	5 Years			
2023	10	5 Years	9	1.8	
Difference:	One sample in 5 years to 2 samples per year				

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
In-House					
Labor:	2	hours/sample	$60		$216
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$216
Contingency (100%):					$216
TOTAL					**$432**
Contract Laboratory					
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:	1	each sample	$5,375	$100	$9,855
Other Contractual:					$0
Σ					$9,855
Contingency (100%):					$9,855
TOTAL					**$19,710**

10) TOXIC POLLUTANT SCAN

Proposed Permit Requirement: The proposed permit maintains the same level of testing as the current permit for this parameter, once every five years.

Response: Acceptable

Justification: No change from current permit.

Budget Option: No additional cost

2001	2	5 Years		
2023	2	5 Years	0	0

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
In-House					
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$0
Contingency (30%):					$0
TOTAL					**$0**
Contract Laboratory					
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$0
Contingency (30%):					$0
TOTAL					**$0**

11) RECEIVING WATERS MONITORING: Expanded from 8 to 9 Parameters with 3 Additional Testing Sites at 6 Additional Depths

Proposed Permit Requirement: The proposed permit requires more sampling sites as well as more frequent sampling. See following four tables for specific details regarding sample types and frequency. These tables contain information for physical parameters, fecal coliform, enterococcus, and benthic infauna monitoring and sediment analysis. These tables also detail projected costs for these proposed changes.

Response: We object to the additional tests, although we are willing to take on limited enterococcus testing to show we meet the November 13, 2022 Alaska Water Quality Standards *18 AAC 70* for marine water recreation.

Justification: The sampling for these parameters is significantly increased from the current permit. It is unfeasible with the variable sea and weather conditions in the Portage Cove area to accurately secure samples from five different sites within a 100-ft radius.

Budget Option: In-House and Contract Laboratory

Receiving Water Monitoring **Temperature, Salinity, DO, pH, Turbidity, Sechhi Disk**			
	Quantity	**Time**	**Additional**
2001	4	Year	
2023	7	Year	3
Depth -- 0, every 5 m	6	Σ	18
Difference:	Four sites once per year every 5 m to 7 sites once per year every 5 m		

Description	**Quantity**	**Unit**	**Cost/Unit**	**Annual Cost**
In-House				
Labor:	16	hours/site	$60	$2,880
Equipment & Supplies:	1	each site	$200	$600
Laboratory Fees:				$0
Other Contractual:	1	each site	500	$1,500
Σ				$4,980
Contingency (30%):				$1,494
TOTAL				**$6,474**
Contract Laboratory				
Labor:				$0
Equipment & Supplies:				$0
Laboratory Fees:				$0
Other Contractual:				$0
Σ				$0
Contingency (30%):				$0
TOTAL				**$0**

Receiving Water Monitoring Fecal Coliform					
2001	4	Year		4	16
2023	5	Year	1	11	55
Depth -- Surface	1	Σ	1	Δ	39

Description	Quantity	Unit	Cost/Unit	Shipping	Annual Cost
In-House					
Labor:	4	hours/sample	$60		$9,360
Equipment & Supplies:	1	each	$200		$200
Laboratory Fees:					$0
Other Contractual:	1	each site	500		$500
Σ					$10,060
Contingency (30%):					$3,018
TOTAL					**$13,078**
Contract Laboratory					
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$0
Contingency (30%):					$0
TOTAL					**$0**

Receiving Water Monitoring Enterococcus					
	Quantity	**Time**	**Additional**	**Sites**	**Σ**
2001	0	Year		4	0
2023	5	Year	5	11	55
Depth -- Surface	1	Σ	5	Δ	55
Difference:	New analyte, 11 sites, 5 samples per year				

Description	**Quantity**	**Unit**	**Cost/ Unit**	**Shipping**	**Annual Cost**
		In-House			
Labor:	4	hours/sample	$60		$13,200
Equipment & Supplies:	1	each	$6,000		$6,000
Laboratory Fees:					$0
Other Contractual:	1	each	500		$2,500
Σ					$21,700
Contingency (30%):					$6,510
TOTAL					**$28,210**
		Contract Laboratory			
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$0
Contingency (30%):					$0
TOTAL					**$0**

Receiving Water Monitoring Benthic Infauna & Sediment Analysis					
Permit Year		**Time**	**Additional**	**Sites**	**Σ**
2001	1	5 Years		3	3
2023	1	5 Years	0	7	7
Depth -- Bottom	1	Σ	0	Δ	4
Difference:	Three sites per 5 years to 7 sites per 5 years				

Description	**Quantity**	**Unit**	**Cost/Unit**	**Shipping**	**Annual Cost**
		In-House			
Labor:	2	hours/sample	$60	$100	$256
Equipment & Supplies:					$0
Laboratory Fees:					$0
Other Contractual:					$0
Σ					$256
Contingency (30%):					$77
TOTAL					**$333**
		Contract Laboratory			
Labor:					$0
Equipment & Supplies:					$0
Laboratory Fees:	4	each	$30,000		$48,000
Other Contractual:	1	each	$500		$100
Σ					$48,100
Contingency (30%):					$14,430
TOTAL					**$62,530**

12) SCHEDULED SUBMISSIONS: Reviews / Plans

Proposed Permit Requirement: The proposed permit requires the development of multiple plans as specified on page 2 of 54 of the draft permit. We also were required to provide specific details about the mixing zone from a software program, and to review / comment on the draft permit.

Response: Acceptance with reservations. Current workloads for staff lack time for preparing these documents. We will need to use contractual services with some staff involvement, creating significant additional costs.

Justification: Due to the in-house staff workload and budget constraints, we prefer the timeline for some of these plans to have greater flexibility than 180 days from permit finalization.

Budget Option: In-House and Contract Services

DRAFT PERMIT REVIEW & MIXING ZONE DETERMINATION					
Description	**Quantity**	**Unit**	**Cost/Unit**	**Cost**	
In-House Staff	40	hour	$80	$3,200	
Engineer	200	hour	$175	$35,000	
Estimated Cost				$38,200	
Administration (5%), Contingency (25%)				$11,460	
				$49,660	**$49,660**
QUALITY ASSURANCE PLAN (QAP)					
Description	**Quantity**	**Unit**	**Cost/Unit**	**Cost**	
In-House Staff	40	hour	$80	$3,200	
Engineer	200	hour	$175	$35,000	
Estimated Cost				$38,200	
Administration (5%), Contingency (25%)				$11,460	
				$49,660	**$49,660**
OPERATION & MAINTENANCE (O&M) PLAN					
Description	**Quantity**	**Unit**	**Cost/Unit**	**Cost**	
In-House Staff	40	hour	$80	$3,200	
Engineer	200	hour	$175	$35,000	
Estimated Cost				$38,200	
Administration (5%), Contingency (25%)				$11,460	
				$49,660	**$49,660**
EMERGENCY RESPONSE & PUBLIC NOTICE (ER&PN) PLAN					
Description	**Quantity**	**Unit**	**Cost/Unit**	**Cost**	
In-House Staff	40	hour	$80	$3,200	
Engineer	200	hour	$175	$35,000	
Estimated Cost				$38,200	
Administration (5%), Contingency (25%)				$11,460	
				$49,660	**$49,660**
DISINFECTION COMPLIANCE PLAN					
Description	**Quantity**	**Unit**	**Cost/Unit**	**Cost**	
In-House Staff	20	hour	$80	$1,600	
Engineer	100	hour	$175	$17,500	
Estimated Cost				$19,100	
Administration (5%), Contingency (25%)				$5,730	
				$24,830	**$24,830**