

Non-Code Ordinance

By: Public Works Department
Introduced: November 9, 2020
Public Hearing: November 23, 2020
Adopted: November 23, 2020
Yes: Burney, Harvey, Johnson, Velock
No: None
Absent: Brown
Clerk's Note: Seat A Vacant

**City of Wasilla
Ordinance Serial No. 20-36**

An Ordinance Of The Wasilla City Council Amending The Fiscal Year 2021 Budget By Appropriating \$300,000 From The Sewer Fund, Fund Balance For The Wastewater Treatment Plant Outfall Pilot Study Through September 2021.

Section 1. Classification. This is a non-code ordinance.

Section 2. Purpose. To appropriate funding from the sewer fund, fund balance for the wastewater treatment plant outfall pilot study through September 2021.

Section 3. Appropriation of Funds. The funds are appropriated to the following:

Sewer Treatment Plant Impr.	310-4359-435.45-35	\$300,000
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Section 4. Source of Funds.

Sewer Fund, Fund Balance	310-0000-253.20-00	\$300,000
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Section 5. Effective date. This ordinance shall take effect upon adoption by the Wasilla City Council.

ADOPTED by the Wasilla City Council on November 23, 2020.


Glenda D. Ledford, Mayor

ATTEST:

[SEAL]


Jamie Newman, MMC, City Clerk

**City of Wasilla
Legislative Staff Report
Ordinance Serial No. 20-36
(Non-Code Ordinance)**

Amending The Fiscal Year 2021 Budget By Appropriating \$300,000 From The Sewer Fund, Fund Balance For The Wastewater Treatment Plant Outfall Pilot Study Through September 2021.

Originator: Public Works Director
Date: 10/28/2020

Agenda of: 11/9/2020

Route to:	Department Head	Signature	Date
X	Public Works Director		10/28/20
X	Finance Director		10/28/20
X	Deputy Administrator		10/28/2020
X	City Clerk		10/29/2020
X	Mayor		10/28/2020

Fiscal Impact: yes or no

Funds Available: yes \$300,000

Account name/number: Sewer Treatment Plant Impr. 310-4359-435.45-35

Attachments: Ordinance Serial No. 20-36 (1 page)
Stantec 9/18/20 letter to ADEC (4 pages)
Stantec Proposal (4 pages)

Summary Statement: This ordinance is proposed to amend the FY2021 budget by appropriating \$300,000 from the sewer fund, fund balance for the wastewater treatment plant outfall pilot study through September 2021. This project began in 2014 with a \$3 million State of Alaska legislative grant to study the viability of treating ammonia in the city's wastewater effluent through native wetlands at the treatment plant. The wetland parcel and surrounding parcels were studied over a 2-year period through 2016 to document existing conditions of the plant life, soil, surface water, and groundwater, and determine the viability of these elements to treat wastewater for ammonia.

Stantec engineers found the wetland parcel had potential to improve treatment performance at the wastewater plant. A one-half mile outfall pipe and diffusers were installed to the north end of the wetland parcel in 2018 and the pilot study began in 2019 discharging treated wastewater over the wetland parcel. Results have been excellent to date, and another year is needed to complete the pilot study. The goal of the pilot study is to obtain a long-term permit for this outfall.

Pilot study engineering cost through September 2021 are approximately \$500,000. In addition, approximately \$70,000 is needed to add material to the gravel berm that was constructed in 2018 along the west wetland boundary, as it has settled in one location. The remaining grant funding budgeted for this project is \$271,000. This ordinance is proposed to appropriate \$300,000 that will be added to the remaining budget to complete this project in 2021.

Proposed Action: Introduce and set the ordinance for public hearing.



Stantec Consulting Services Inc.
725 East Fireweed Lane, Anchorage, AK 99503

September 18, 2020
File: 204700415

Attention: Oran Woolley

Alaska Department of Environmental Conservation
1700 E Bogard Road
Building B, Suite 103
Wasilla, AK 99654

Project: City of Wasilla Treated Effluent Discharge Pilot Study
Subject: Request for Pilot Study Extension

Dear Oran Woolley,

On June 28, 2019, the Alaska Department of Environmental Conservation (ADEC) issued conditional approval to operate the subject project on a pilot study basis. Discharge began in June 2019 and has continued continuously without apparent issue for approximately 15 months with limited interruption in March, April, and May of this year when discharge was temporarily stopped as discussed in the 1st and 2nd 2020 Quarterly reports. Aside from this interruption, all data to date continues to show good removal of nutrients and bacteria within the wetlands, with no evidence of nutrients or bacteria leaving the test site at levels higher than background. As discussed below, we are starting to see evidence that off-site nutrients are actually reducing.

At this time, Stantec Consulting Services (Stantec), on behalf of the City of Wasilla (City) is requesting extension of the Pilot Study until at least September 30, 2021 to allow continued collection of study data. Rational for the extension request is as follows:

- Initial plan was to acquire at least two summer and winter seasons of study data. At this time, we have only one winter season.
- Discharge in 2019 was limited to 115,000 gpd and was insufficient to involve the whole wetland area. In 2020, two additional discharge diffusers were added, and flow has been increased to 300,000 gpd. At this time, the whole of the wetlands is being utilized, and we are seeking data for a second winter and summer season at full flow.
- 2019-2020 Winter data is incomplete. Winter discharge was terminated in March 2019 when it appeared effluent might breach the western property line due to settlement of the containment berm into the wetland muskeg. The containment berm has since been reinforced. It is believed the higher berm, in addition to the two new diffusers located much further to the east, will mitigate tendency for winter flow to migrate to the west. We need an additional winter season to confirm this theory, and to confirm that discharge year round is feasible.
- Since we have started discharge at 300,000 gpd (near full plant flow), the nitrate levels in surface waters below the WWTP have been steadily declining. Historically, there has always been 2-6 mg/l of nitrate at our two sampling locations (SW17 and SW18) in the small stream at the toe of the WWTP bluff. As of this August, there was zero nitrates at SW17 and only 0.491 mg/L at SW18. This is the lowest the nitrates have ever been recorded, but it took at least 5 months for the groundwater mound under the WWTP to dissipate.

September 18, 2020
Oran Woolley
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Reference: City of Wasilla Treated Effluent Discharge Pilot Study

Continuation of the pilot study will allow 1) confirmation offsite nutrients are decreasing, and 2) confirmation groundwater nitrate levels are also declining.

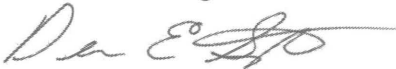
We believe the pilot study has improved both surface water and groundwater quality in the vicinity of the WWTP without impact to surrounding properties. Stantec has sampled a number of the private drinking wells surrounding the effluent discharge in 2019 and 2020, with no evidence of impact to the ground water. Extending the study will provide further proof, while continuing to improve water quality.

We have attached the Q1 and Q2 2020 reports to this request. The Q3 report is pending September laboratory results and will be provided to you in November.

In conclusion, we are asking ADEC to extend the pilot study until at least September 30, 2021. Thank you for your attention to this matter. Should you have any questions, or need additional information, please do not hesitate to contact me or Archie Giddings at City of Wasilla.

Regards,

Stantec Consulting Services Inc.

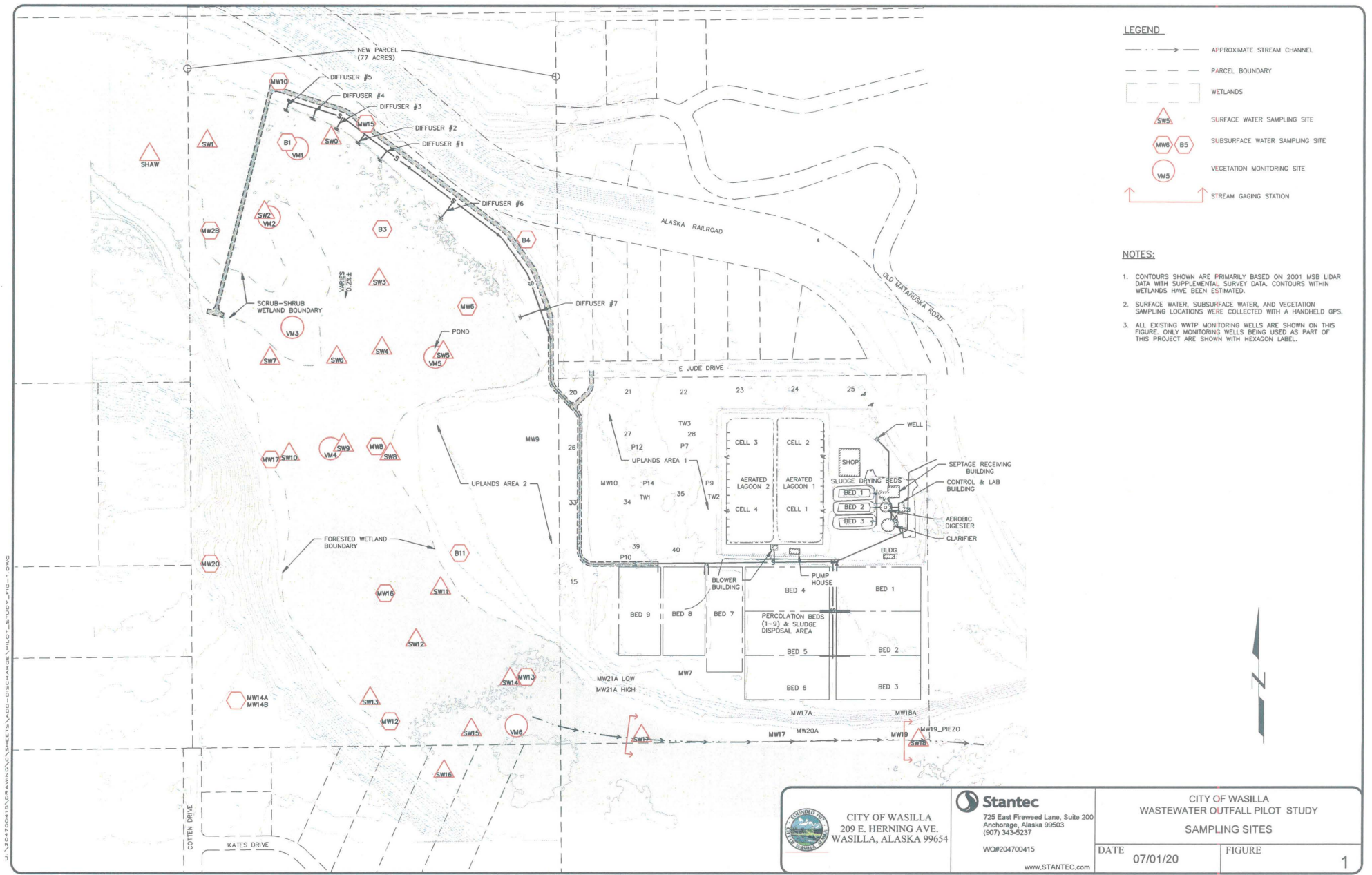


Dean Syta, P.E.
Principal
Phone: 907-343-5260
dean.syta@stantec.com

Attachment: Q1, Q2 Reports

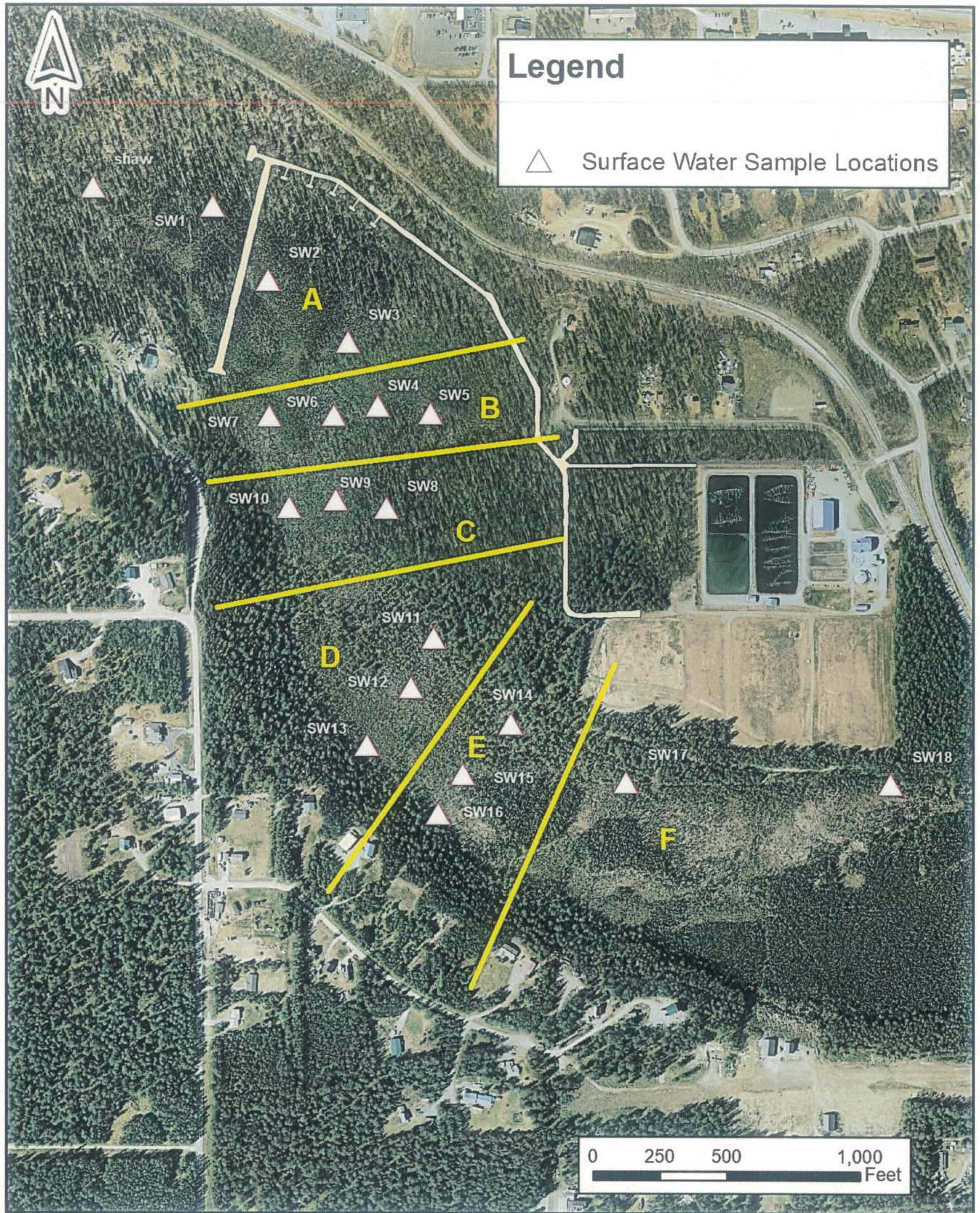
c. Archie Giddings – City of Wasilla
Gene McCabe – ADEC
Earl Crapps – ADEC

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J:\2024\70041\DRAWING\CSHEET\3_VADD-DISCHARGE\PILOT-STUDY-FIG-1.DWG

 <p>CITY OF WASILLA 209 E. HERNING AVE. WASILLA, ALASKA 99654</p>	 <p>725 East Fireweed Lane, Suite 200 Anchorage, Alaska 99503 (907) 343-5237</p>	<p>CITY OF WASILLA WASTEWATER OUTFALL PILOT STUDY</p>	
		<p>SAMPLING SITES</p>	
<p>WO#204700415</p>		<p>DATE: 07/01/20</p>	<p>FIGURE 1</p>
<p>www.STANTEC.com</p>			



CITY OF WASILLA
 290 e. HERNING AVE
 WASILLA, ALASKA 99654



www.STANTEC.com

CITY OF WASILLA
 WASTE WATER OUTFALL FEASIBILITY STUDY
Pilot Study - Surface Water Groups

DATE
 2020

FIGURE



725 East Fireweed Lane Suite 200, Anchorage AK 99503-2245

October 12, 2020
File: 204700415

Attention: Archie Giddings
City of Wasilla
290 East Herning Avenue
Wasilla, AK 99654-7091

Reference: Wasilla Wastewater Outfall
Subject: Request for Amendment 5 - Pilot Study Continuation 2020/21

Dear Mr. Giddings:

The Wasilla Wastewater Pilot Study Discharge began in June of 2019, and has continued continuously without apparent issue for approximately 16 months with only limited interruption. The discharge has been at 300,000 gpd since June of 2020, essentially full plant flow. All data to date continues to show good removal of nutrients and bacteria within the wetlands, with no evidence of nutrients or bacteria leaving the test site at levels higher than background. There is evidence that nutrient concentrations downstream of the WWTP are declining, suggesting improvements to water quality in the project area. Testing of offsite residential wells has found no degradation of groundwater. Based on success to date, the Alaska Department of Environmental Conservation has extended the pilot study until at least September 2021. The pilot study extension is predicated, in part, upon continuation of discharge monitoring.

Previous Amendment #4 (April 2019) established the budget for the first year of pilot study monitoring, field work and laboratory testing. This work has been completed, and the authorized budget is exhausted.

Stantec is requesting Contract Amendment 5 to allow for continuation of pilot study monitoring for an additional 12 months, thru at least September 2021.

Amendment #5 Scope:

This amendment adds the following scope of work to the Stantec contract:

Task 1 – Wetlands Discharge Pilot Study Continuation

This task includes field, laboratory, and reporting efforts to monitor the effluent discharge and water quality within the project limits during the pilot study discharge. Monitoring for the pilot study will be implemented based on sampling procedures conducted since the startup of the project. All 19 surface sites and 16 sub-surface sites will continue to receive the same set of tests with the exception that total suspended solids (TSS) will no longer be tested. It was determined after reviewing the past years results that TSS gave no real insight on changing water conditions in the wetland.



October 12, 2020
Archie Giddings
Page 2 of 4

Reference: Wasilla Wastewater Outfall
Subject: Request for Amendment 5 - Pilot Study

The budget for this task includes sampling for an additional 12 months. Subsurface water (i.e. onsite monitoring wells), and vegetation will be sampled quarterly (December 2020, and March, June, and September 2021). Surface water will be sampled monthly. During winter months, November to February, the budget includes sampling for only half the sites due to freezing conditions. Duplicates are built into the testing quantities for quality control purposes. Stantec will collect the samples and field data. Samples will be processed by SGS Laboratory.

Reporting for the pilot study will be done with each sampling event. A field report will be completed for each month of sampling, a quarterly report will be compiled for each quarter for submission to ADEC, and a yearly summary report will be completed for 2020 and 2021. This will be provided for City review and posting to the project website.

Task 1 also continues two additional pilot study elements:

- DNA specific fecal bacteria sampling. This test is used to differentiate human fecal bacteria from other mammal fecal matter; this is important, since much of the bacteria on site is from animals, and not necessary the wastewater discharge. Two sampling batteries were completed in 2019-2020. Two additional DNA monitoring events are planned for 2021. Both events will test all surface water sites for human fecal bacteria. Samples are processed by Microbial Insights, Inc.
- Aerial Drone Photography. Multi-spectra photography via aerial drone is being used to monitor vegetation health, nutrient uptake, and the spread of the wastewater. The site has been flown twice a year; the ammendment includes two flights for 2021. The cost for this item includes the camera rental and imagery processing.

Task 2 – Public Involvement

This task includes 2 public involvement meetings, one winter 2020 and one summer 2021 to provide the community updates on the project. It is assumed the meetings will be held at the City of Wasilla City Hall and be co-hosted by the City and Stantec, and that the City will handle advertising

Task 3 – Private Well Testing

Private well testing was implemented at the request of the public to confirm the pilot study was not impacting drinking water wells in the project area. Wells were tested twice in 2020. The program has relative low participation - only 13 homeowners have signed up, but the offsite data will still be useful when it comes time to provide to ADEC the effluent discharge has no offsite impact. For this reason, we are proposing to continue testing of the private wells. The ammendment request includes two sets of private well testing in 2021. It the event that more

Design with community in mind



October 12, 2020
Archie Giddings
Page 3 of 4

Reference: Wasilla Wastewater Outfall
Subject: Request for Amendment 5 - Pilot Study

properties request testing at the public meeting in spring 2021, they will be added to the testing schedule.

Remaining Tasks

The following tasks remain under our current authorizations. No budget modifications are requested at this time for these tasks.

- **Expanded Feasibility Study** – Stantec will continue to finalize the expanded feasibility study as outlined in Task 1 of Amendment 2.
- **Permitting** – Stantec will continue to coordinate with ADEC on the results of the Pilot Study.

Amendment Cost Summary

The total estimated fee for all tasks and services expected under this amendment is \$518,912. A spreadsheet showing the development of the fee is attached.

As of October 7, there is approximately \$22,800 total remaining in prior pilot study authorizations (Amendments 3 and 4) that will be rolled forward. Therefore, Stantec is requesting Amendment #5 in the total amount of \$496,976 to cover the balance of the 2020-2021 pilot study efforts.

	2020-2021 Budget	Remaining Authorization to Roll Forward	Requested Amendment
Task 1 – Pilot Study	\$484,178	\$22,800	\$461,378
Task 2 – Public Involvement	\$17,028	---	\$17,028
Task 3 – Private Well Testing	\$18,570	---	\$18,570
Total	\$519,776		\$496,976

Work for Amendment #5 tasks will be performed on a time and materials basis under the executed Contract for Professional Services between Stantec and the City. Rates shown on the budget worksheet are estimated rates for 2021. Actual effort will be invoiced monthly at the standard Stantec rates in effect at the time the work was completed.



October 12, 2020
Archie Giddings
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Reference: Wasilla Wastewater Outfall
Subject: Request for Amendment 5 - Pilot Study

Closure

We trust this proposal meets your needs and are ready to begin immediately upon your approval. If you have any questions please contact me or Stephanie Gould (343-5235, Stephanie.gould@stantec.com).

Sincerely,
Stantec Consulting Services Inc,

A handwritten signature in black ink, appearing to read "Dean Syta".

Dean Syta
Senior Principal
Phone: (907) 343-5260
Fax: (907) 258-4653
dean.syta@stantec.com

Attachment: Fee Proposal

c. file

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