

**Dave Bronson, Mayor** 

# 2022 Dry Weather Screening Report APDES Permit No. AKS052558

### FINAL REPORT

NOVEMBER 2022

### **MUNICIPALITY OF ANCHORAGE**

### WATERSHED MANAGEMENT SERVICES

- Prepared for: Municipality of Anchorage Project Management and Engineering Department Watershed Management Services
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## 1.0 Introduction

### 1.1 Background

The U.S. Environmental Protection Agency (EPA) issued the Municipality of Anchorage (MOA) and the Alaska Department of Transportation and Public Facilities (ADOT&PF) a Municipal Separate Storm Sewer System (MS4) permit under the National Pollutant Discharge Elimination System (NPDES) in 1999. To meet the requirements of the permit, the MOA Watershed Management Services (WMS) initiated a Dry Weather Screening (DWS) program to identify potential illicit discharges to the MS4. This program was conducted during the dry season (typically May through mid-July) each year through 2009.

The EPA re-issued the permit in 2009 prior to the State of Alaska receiving primacy to operate the NPDES program. The re-issued permit became effective February 1, 2010, under the administration of the Alaska Department of Environmental Conservation (ADEC) as an Alaska Pollutant Discharge Elimination System (APDES) MS4 permit. ADEC reissued APDES Permit No. AKS052558, with revisions, on August 1, 2015, and August 1, 2020. The expiration date of the current permit is July 31, 2025.

The APDES MS4 permit continues the requirement of dry weather screening and subsequent follow-up actions to identify illicit discharges and associated pollutants to the MS4. The 2022 program was completed in accordance with the *2021 Monitoring, Evaluation, and Quality Assurance Plan* (QAP; MOA 2021a).

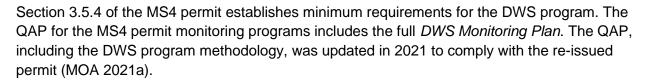
### 1.2 **Problem Definition**

Section 3.5 of the MS4 permit requires that the MOA implement an illicit discharge management program to reduce the unauthorized and illegal discharge of pollutants to the MS4. An illicit discharge is defined as any discharge to a MS4 that is not entirely composed of stormwater.<sup>1</sup> Illicit discharges, such as those from industrial process wastewater, domestic wastewater, car wash water, and other sources, can inadvertently introduce pollutants both directly and indirectly to the storm sewer system. Flow from storm drain outfalls during dry weather is generally an indicator of illicit discharges to the MS4.

### 1.3 Screening Program

Dry weather screening is conducted to identify and eliminate illicit discharges to the MS4 within the MOA. To identify potential illicit discharges, approved field screening and laboratory testing methods are used to identify pollutant concentrations of known parameters typically found in the illicit discharges described in Section 1.2. Guidance on illicit discharge screening identifies a list of 15 indicator parameters that can be used to confirm the presence of illicit discharges, noting that generally only three to five of these parameters need to be used to characterize the discharge for subsequent identification and elimination of the discharge (CWP and Pitt 2004).

<sup>&</sup>lt;sup>1</sup> Excepting any discharges authorized under an NPDES permit and discharges resulting from fire-fighting activities (40 Code of Federal Regulations [CFR] §122.26(b)(2)).



The MS4 permit requires the MOA to survey a minimum of 30 outfalls a year for illicit discharges. Surveyed outfalls must be geographically dispersed and represent all major land uses within the municipality. Monitoring of the following seven parameters must be conducted at outfalls where illicit discharges are suspected: pH; total chlorine; detergents; total copper; phenols; fecal coliform bacteria; and turbidity. Benchmark or threshold exceedances are used to trigger MOA investigative action and provide information to support that action.

## 2.0 Project Summary

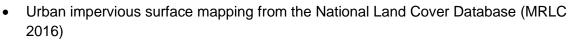
### 2.1 Outfall Evaluation and Prioritization

The QAP requires that outfalls from the MS4 be evaluated and scored for monitoring under the DWS program at the beginning of the 5-year permit cycle. The QAP contains the full methodology for evaluating and prioritizing outfalls (MOA 2021a).

Before beginning field activities, HDR Engineering, Inc. (HDR) evaluated outfalls for suitability for inclusion in the DWS program in a geographic information system (GIS) using the MOA hydrography geodatabase (HGDB; MOA 2021b) and field observations on outfall condition and location made during previous years' monitoring programs. GIS evaluation consisted of reviewing the outfalls and drainageway network within each subbasin of the MS4 as mapped within the HGDB. Outfalls were considered not suitable for monitoring under the DWS program if the subbasin is not drained by closed conveyances that are part of the MS4 infrastructure owned and maintained by MOA and/or ADOT&PF (i.e., the subbasin is drained only by open conveyances such as drainage ditches or surface runoff or the HGDB does not show a mapped network of closed conveyances within the subbasin); if a segment of piped stream is co-routed with the MS4 through the subbasin; or if the outfall is located below a road or other infrastructure. Review of previous years' field observations identified additional outfalls that were excluded from the DWS program for reasons, including access constraints (private property, safety considerations), damage to the outfall that prevents monitoring or sampling, significant backwater flow into the outfall, the outfall is partially or fully submerged within a creek or waterbody, or inability to locate the outfall.

Once outfalls suitable for inclusion in the DWS program were identified, HDR scored and prioritized them for monitoring. Outfalls were given a numerical score based on factors that may contribute to the likelihood of illicit discharges within the outfall's contributing area (i.e., subbasin). The following datasets were used in GIS to score the outfalls according to the procedures in the QAP:

- 2021 HGDB (MOA 2021b)
- MOA zoning designations mapping (MOA 2021c)



- Previous threshold exceedances documented under the DWS program (MOA 2016b, 2017, 2018, 2019, 2020, 2021d)
- Previous reports to 2021 of illicit discharge investigated by WMS (MOA 2021e)<sup>2</sup>
- Alaska 303(d) Impaired Waters List (ADEC 2020)

HDR evaluated all 935 outfalls mapped in the HGDB for inclusion in the DWS program and determined 331 outfalls were suitable for monitoring under the DWS program and 7 would require field reconnaissance to confirm suitability for inclusion. An additional 14 outfalls that are not mapped in the HGDB but have been identified through GIS evaluation or field reconnaissance are also included. These 352 outfalls were scored and prioritized for the current 5-year permit cycle. The results of the outfall prioritization are included in Appendix A.

For the 2022 program, additional datasets were used in GIS to update the previous prioritization.

- 2022 HGDB (MOA 2022a)
- June 2021 to May 2022 illicit discharge reports investigated by WMS (MOA 2022b)<sup>2</sup>

### 2.2 Screening Locations

In 2022, field crews surveyed 30 outfalls and could not access or locate 10 targeted outfalls. Investigated outfalls are listed in Table 1 and shown on the maps included in Appendix B.

<sup>&</sup>lt;sup>2</sup> Duplicate records or reports where no enforcement action or violation was substantiated were not included.

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Table 1. Outfalls Investigated	During 2022 DWS Program
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Outfall Code	Latitude	Longitude	Prioritization Score	Location Description	Condition	Water flowing?
Chester Creek	L					
578-1	61.1855	-149.7925	7	Could not locate in 2022. Could not locate in 2016 during construction on Wesleyan Drive. Submerged in 2015.	ocate in 2016 during construction on Could not access/locate	
683-1	61.1866	-149.7905	7	Could not locate in 2022. Could not locate in 2016 during construction on Wesleyan Drive. Submerged in 2015.	Could not access/locate	-
339-1	61.1854	-149.7925	7	Could not locate in 2022. Could not locate in 2016 during construction on Wesleyan Drive. Submerged in 2015.	Could not access/locate	-
Eagle River						
303-1	61.2980	-149.5348	7	Access from May Court, outfall on north bank.	Good, CMP, perched	Yes, medium flow, cascades onto rocks, suspected GW influence.
1375-1	61.3150	-149.5705	10	EOP between Vanover Circle and Meadow Creek Drive. Storm outfall in same headwall as stream crossing.	reek Drive. Storm outfall in Trash and debris stuck in	
1390-2	61.3360	-149.5823	4	In backyard of residence on Rosenburg Circle. Drains from street down a moderate slope. Good, HDPE. Some algae on collar, some debris in grate. Flowing water can be heard in culvert.		Yes, low, suspected GW influence.
1417-1	61.2986	-149.5136	10	North bank, south of Driftwood Bay Drive at Meadow Park Circle. Good, HDPE with collar. Well defined flow path after EOP. Flowing water can be heard in culvert.		Yes, medium, suspected GW influence.
1450-2 (HDR)	61.3008	-149.4868	10	HDR ID of 1450-2. Located off end of Driftwood Bay Drive.	HDR ID of 1450-2. Located off end of Outfall has some sediment	



Outfall Code	Latitude	Longitude	Prioritization Score	Location Description	Condition	Water flowing?
1451-1	61.2996	-149.5085	10	East side of bank, drainage for Riverside Drive.	Good, HDPE with collar. Riprap in downstream channel. Old carcass (beaver) in DS channel.	Yes, medium, suspected GW influence.
1455-1	61.3256	-149.5854	4	Unable to access, behind fence on JBER property.	No access	-
Fire Creek						
1392-1	61.3459	-149.5745	4	South bank, along Vasili Drive. Access between houses in drainage right-of-way.	Good, HDPE. Rocks, debris, and organics behind grate, possibly compromised pipe, <b>needs maintenance</b> .	No, stagnant water.
Fish Creek						
7-1	61.1880	-149.9352	18	At intersection of West 36th Avenue and East Turnagain Boulevard. ID FSH 7 in 2011. Flows directly into main channel's flow.	East Turnagain Boulevard. ID Good, smooth wall HDPE 7 in 2011. Flows directly into with collar.	
79-353	61.1649	-149.9374	7	Behind residences on 62nd Avenue. Fair, CMP with collar an grate. Rust line at 1/4 of pipe.		No, stagnant water
191-1	61.1834	-149.9142	6	Between residences on Jefferson Avenue.		
264-1	61.1745	-149.9313	4	Access from corner of Klamath Drive and Kershner Avenue. Fair, smooth, sliplined HDPE with collar, partially exposed. Soil build up in collar.		No
391-1	61.1821	-149.9347	14	Along Spenard Road, drains parking lot between Barbara Drive and East Turnagain Boulevard.		-
555-1	61.1610	-149.9651	7	Access from Delong Landing Circle, flows north into the sediment basin. Good, smooth wall HDPE. Minimum sediment buildup Riprap in downstream channel.		No

Outfall Code	Latitude	Longitude	Prioritization Score	Location Description	Condition	Water flowing?
573-48	61.1826	-149.8386	15	West side of intersection of West 42nd Avenue and Lake Otis Parkway. Corouted with stream.	Good. Small amount trash/debris in grate. Good, defined DS channel.	Yes, very low, orange colored water.
610-1	61.1789	-149.9337	4	Access on Iris Drive.	Could not locate pipe. Water found at mapped flow line.	-
661-26	61.1616	-149.9526	7	On Jewel Lake Road at Lakeway Drive, near multi-use paved trail.	Could not locate	-
684-1	61.2025	-149.9356	4	Access off of Lousaac Dr. behind residences.	Access off of Lousaac Dr. behind Poor, unraveling and corroding. Drains directly to	
686-1	61.1821	-149.9348	14	Access from the intersection of West 42nd Avenue and East Turnagain Boulevard.	2nd Avenue and East Turnagain Fair, CMP with collar. Good	
686-167	61.1821	-149.9348	14	Access from the intersection of West 42nd Avenue and East Turnagain Boulevard.	Door ( WD with collar	
1003-1	61.1812	-149.9185	11	Access from Tudor Road. Good, smooth, sliplined HDPE. Riprap in DS char		No, dry.
1054-1	61.1781	-149.9299	4	Access from multi-use trail off of 47th Avenue.	Fair, CMP with collar. Culvert has sediment build-up and some vegetation growing in the collar.	No, stagnant water
1278-1	61.1799	-149.9425	13	Access at Lake Hood, in small fenced area.	Good, CMP with collar. Visible rust line. Outfall has concrete DS apron, riprap, weir, and oil waddles outside of weir.	No, dry.
1310-201	61.1887	-149.9351	7	At intersection of McRae Road and East Turnagain Boulevard.		No, dry.
Furrow Creek						
34-2	61.0986	-149.8617	7	Access from the end of Reef Place.	Poor, HDPE, 75% buried. Was hidden by tall grass.	No, dry.
216-10	61.1058	-149.8400	7	Between residences on Loren Circle.	Could not locate	-



Outfall Code	Latitude	Longitude	Prioritization Score	Location Description	Condition	Water flowing?
292-192	61.1142	-149.8505	18	On west side of Bowman Elementary School.	Good, CMP with collar, thaw pipe, grate has fallen off.	Yes, medium, 2" depth, some suds in DS channel.
293-1	61.1104	-149.8402	7	Between residences on Rainbow Avenue.	Could not locate	-
306-1	61.1081	-149.8644	10	Access near Old Seward Highway and Huffman Road roundabout. In same concrete headwall as the main stream.	Good, CMP with concrete headwall.	Yes, low, 1/4" depth, small organic scum/oily sheen.
332-1	61.1124	-149.8308	7	Along Woodway Cir. Some surface scum, debris in DS channel, and vegetation growth.	Good, CMP with collar and grate. Collar has vegetation growing in it.	Yes, very low, 2" depth, backwatered.
395-1	61.1044	-149.8881	7	Access from Pacific View Drive, down steep embankment, at base of hill. Good, CMP with grate. Cleaned out organic debris grate.		No, dry.
592-1	61.1085	-149.8683	7	Access at end of Beachcomber Drive, cleaned out channel to main stream. Good, HDPE. Flows directly into main stream. Cleaned out channel.		Yes, low, 1.5" depth, orange/iron precipitant, organic surface scum.
617-1	61.1024	-149.8789	7	Access from intersection of Johns Road and High View Drive. Down steep embankment at base of hill.	Road and High View Drive. Down Good, thick plastic. Outlet	
634-1	61.1018	-149.8747	7	Access from Oceanview Drive, right below property line, culvert outfalls into open channel flume that runs down the steep embankment.		No, dry.
1344-8	61.1157	-149.8463	4	On north side of Bowman Elementary School.	Fair, CMP with collar. Pipe has rust line.	Yes, very low, 0.5" depth
Rabbit Creek					·	
745-1	61.0792	-149.8300	16	Access along northbound Seward Highway, outfall located north of East 54th Avenue. Good, CMP in concrete headwall. Some sediment buildup. DS channel full of tree branches/clippings.		Yes, low flow, slightly backwatered.

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Outfall Code	Latitude	Longitude	Prioritization Score	Location Description	Condition	Water flowing?
745-86	61.0958	-149.8140	16	Access on Matthews Drive, series of cross drainages, multiple not mapped.	Good, HDPE with collar. Organic debris in culvert.	No, dry.

Note: CMP = corrugated metal pipe; EOP = end of pipe; GW = groundwater; HDPE = High-density polyethylene; DS = downstream

### 2.3 Screening Parameters

Table 2 lists the screening parameters required by the permit and the sampling methods, reporting ranges, and the program thresholds for each parameter. Appendix E, *DWS Monitoring Plan*, of the QAP (MOA 2021a) provides rationale for screening parameter thresholds. The thresholds for all parameters were maintained from the previous MS4 permit cycle (MOA 2016b). Thresholds are established at concentrations measurably distinct from authorized discharges to detect potential illicit discharges. In a guidance manual, the Center for Watershed Protection and Robert Pitt (2004) recommend benchmarks (thresholds) orders of magnitude higher than ambient stormwater quality to reduce the incidences of false positives. Thresholds in Table 2 were established based on available environmental data and field test kit specifications. Values below the threshold are considered to be within an acceptable range for background concentrations. Values at or above the threshold concentration for a parameter indicate that the parameter may be above background concentrations. Outfalls with results that exceeded the threshold (or are outside the pH range) for one or more of the pollutant indicators are targeted for follow-up action.

Parameter	Method	Sensitivity	Reporting Range	Threshold
Turbidity	Hach 2100P Turbidimeter, EPA method 180.1 Rev 2.0	() 1  for  1 - 10  NU		≥ 250 NTU
Fecal Coliform	SM 9222D	1 cfu/100 mL	1 cfu/100 mL – too numerous to count	≥ 400 cfu/100 mL
Hach Stormwat	er Test Kit, Model SW-1 #2481300			
рН	Hach Pocket Pro pH Tester, ion selective electrode, EPA method 150.2	0.1 units	0 - 14 STD	≤ 4 or ≥ 9 STD
Total Chlorine	Hach Method 8167ª, DPD/Color Disc, SM 4500-Cl G	0.1 mg/L	0.1 – 3.4 mg/L	≥ 1.0 mg/L
Detergents	Hach Model DE-2, Toluidine Blue-O Chloroform Colormetric (Analytical Chemistry #38-791)	0.05 mg/L	0.05 – 1.2 mg/L	≥ 1.0 mg/L
Total Copper	Hach Methods 8506 and 8026 <sup>a</sup> , Bicinchoninate/Color Disc, SM 3500- Cu C or E	0.1 mg/L	0.1 – 4.0 mg/L	≥ 1.0 mg/L
Total Phenols	Hach Method 8047 <sup>a</sup> : 4- Aminoantipyrine/Color Disc, EPA method 420.1	0.1 mg/L	0.1 - 5 mg/L	≥ 0.5 mg/L

Table 2. Sampling Methods, Reporting	Ranges, and Thresholds for Measured Parameters
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Notes: NTU = nephelometric turbidity; SM = Standard Method; cfu = colony forming unit; mL = milliliters; STD = standard units; mg/L = milligrams per liter

<sup>a</sup> Test kit uses equivalent or adapted method.

### 2.4 Monitoring Procedures

HDR conducted monitoring in accordance with monitoring procedures and methodology outlined in the QAP.

#### 2.4.1 Field Preparation

The MS4 permit stipulates that dry weather screening should be conducted between June 1 and August 30 of each year, following at least 48 hours of dry weather after any storm event that created runoff in the MS4.<sup>3</sup> Precipitation in the Anchorage area in summer 2022 was drier than normal in May and June and then significantly wetter than normal in July (Figure 1).

HDR conducted monitoring on three days in June, consulting recent precipitation recorded by the National Weather Service at the Ted Stevens Anchorage International Airport to determine appropriate monitoring timing, when necessary (NWS 2022a). Precipitation for the entire month of June was lower than normal, and monitoring was conducted before the fall storms commenced. Figure 2 shows the daily precipitation and 48 hour running total precipitation for summer 2022. The dates when sampling occurred are indicated by the black arrows.

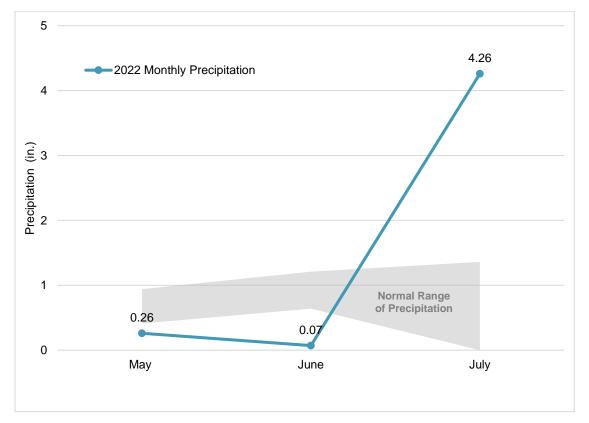
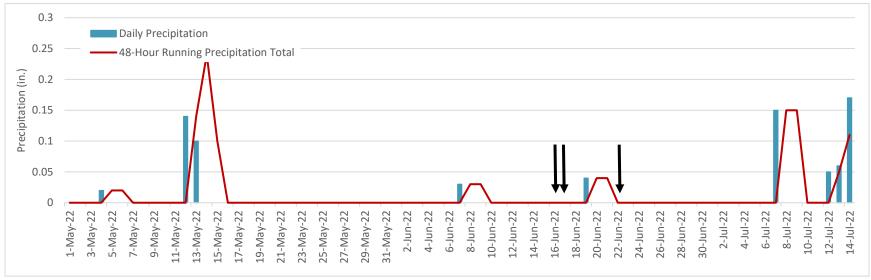


Figure 1. Monthly Precipitation in Anchorage, Summer 2022

Notes: 2022 monthly precipitation data recorded at Ted Stevens International Airport. Source: NWS 2022b. Normal range of precipitation shown is the range between the 25<sup>th</sup> and 75<sup>th</sup> percentiles of monthly precipitation averages recorded at the Ted Stevens International Airport for the 30-year period from 1991 to 2010. Source: NOAA 2021.

<sup>&</sup>lt;sup>3</sup> Precipitation greater than 0.1 inches typically generates runoff.



#### Figure 2. Daily Precipitation in Anchorage, Summer 2022

Notes: Daily precipitation data recorded at Ted Stevens International Airport. Source: NWS 2022c. Black arrows indicate monitoring dates.

The field team conducted calibration and equipment blank analyses at the beginning of each day of sampling prior to entering the field. This equipment blank analysis examined each test kit by testing deionized water provided by SGS North America, Inc. (SGS), the laboratory conducting fecal coliform analysis. The calibration and field test kit equipment blank data were recorded on the field data forms and are provided in Appendix C.

Each day before departing for field sampling the field team conducted a safety briefing. The team took the following items into the field:

- List of targeted outfalls
- Global positioning system (GPS)enabled iPad loaded with HGDB and aerial imagery
- Field forms with guidelines
- Water quality analysis protocols (included in the QAP)
- Field sampling supplies
- Personal protective equipment

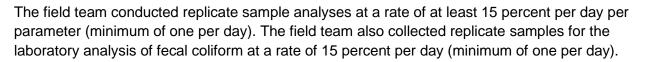
- Hach Pocket Pro pH tester
- pH test strips
- Hach water quality field test kits
- Laboratory-supplied fecal coliform bottles
- Hach turbidimeter
- Job Hazard Analysis and Travel Safety Forms

#### 2.4.2 Monitoring Activities

Monitoring activities conducted at each outfall consisted of recording visual observations about the condition of the outfall and the discharging water (if flowing), taking photographs of the outfall, measuring or qualitatively describing the flow of the discharging water. Observations were recorded on field data forms.

At outfalls that were flowing during dry weather conditions, field crews considered previous observations of dry weather flow from the outfall, if any had been documented, to determine whether the observed flow was consistent with baseline conditions that may originate from groundwater infiltration. Based on the visual observations and flow analysis, the field crew determined whether the dry weather flow from the outfall was suspected of being an illicit discharge. When an illicit discharge was suspected, field crews collected a sample for laboratory analysis of fecal coliform and two grab samples to measure all other parameters using field test kits or water quality meters. Detailed sampling methodology, including instructions for the field test kits, is included in the QAP (MOA 2021a).

The sample bottle for laboratory analysis of fecal coliform and grab samples for field test kits were filled directly from the outfall flow. Samples were collected using clean sample bottles as required by the QAP. Field test kits were recorded as soon as possible after sample collection, and field measurements were recorded and compared against the thresholds described in Table 2.



Completed data sheets are included as Appendix C, and photographs of sampled outfalls are included as Appendix D.

### 2.4.3 Follow-Up Activities

The QAP outlines notification procedures and follow-up activities to be performed when a sample exceeds the program threshold for any parameter (MOA 2021a). As an additional measure, HDR provided results of the field measurements to the MOA WMS immediately following every sampling day. SGS provided results of the fecal coliform analysis to HDR as soon as the results were available (typically within 24 hours), and HDR provided these results to the MOA WMS.

### 2.5 Chain of Custody Records

The field team leader completed a chain-of-custody record, which included each fecal coliform sample collected during a single field day for sample tracking. The original form was delivered with the samples to SGS. Copies of the chain-of-custody records are included in the laboratory analysis reports provided in Appendix E.

### 2.6 Laboratory Sampling Procedures

The field team collected fecal coliform samples in laboratory-supplied sample bottles, clearly marking each with the project name, sample ID, and sample date and time on the sample bottle labels. Samples were stored in a cooler with gel ice and a temperature blank while in the field. The samples were delivered to SGS within 6 hours to satisfy the short hold time of the fecal coliform samples. Fecal coliform was analyzed using standard method (SM) 9222D.

SGS provided results of the laboratory analysis to HDR via email or telephone immediately after the analysis was complete (typically within 24 hours). The expedited turn-around time allows for expedited follow-up sampling in the event of an exceedance of the fecal coliform threshold. SGS provided a full report of the analysis within a week.

## 3.0 Results

### 3.1 Screening Results

Field crews surveyed 30 outfalls in 2022. Flow from four outfalls was tested for indicators of illicit discharge. The sample results are provided in Table 3. Complete laboratory analysis reports are provided in Appendix E.



Watershed	Outfall ID	Date	Flow	рН	Total Chlorine (mg/L)	Detergents (mg/L)	Total Copper (mg/L)	Total Phenols (mg/L)	Turbidity (NTU)	Fecal Coliform (colonies/100mL)			
Eagle River	1375-1	6/16/2022	Medium	8.4	<0.1	<0.05	<0.1	<0.1	0.63	1.7			
	1451-1	6/16/2022	0/40/2022	0/40/2022	0/40/2022	Maaliuwa	7.8	<0.1	<0.05	<0.1	<0.1	1.49	1.7
Eagle River			Medium	R = 7.7	R = <0.1	R = <0.05	R = <0.1	R = <0.1	R = 1.37	R = 1.67			
Furrow Creek	292-192	6/17/2022	Medium	8.3	<0.1	<0.05	<0.1	<0.1	6.48	6.7			
Furrow Creek	332-1	6/17/2022	0/47/0000	8.5	<0.1	<0.05	<0.1	<0.1	12.5	1.67			
			Very Low	R = 8.2	R = <0.1	R = <0.05	R = <0.1	R = <0.1	R = 11.3	R = 1.7			

#### Table 3. Sample Results for Field Parameters and Laboratory Analyses

Notes: mg/L = milligram per liter; NTU = nephelometric turbidity; mL = milliliters; R = replicate sample;

Detection limit for fecal coliform is 1.67 col/100mL.

### 3.2 Quality Assurance and Quality Control

Field crews followed quality assurance and quality control (QA/QC) procedures according to the QAP (MOA 2021a). The procedures included analytical checks (field replicates, equipment blanks), instrument calibration, and procedures to assess data for precision, accuracy, representativeness, comparability, and completeness.

SGS is certified by the EPA and the Alaska Drinking Water Program and has an approved QA/QC program. Analytical methods and testing procedures were in adherence with the QAP (MOA 2021a) and standard methods (APHA 2005).

### 3.3 Data Validation

SGS conducted verification analyses for laboratory parameters. The data review was focused on criteria for the following QA/QC parameters and their overall effects on the data:

- Data validation
- Sample handling (chain of custody)
- Holding time compliance
- Field replicate comparison

Field crews collected samples from the water flowing from the end of pipe (EOP) at the outfall to avoid mixing with the stream water. Field analyses met the sensitivities prescribed in the QAP (MOA 2021a).

Field crews collected replicate samples at a rate of at least one per day or 15 percent to determine field precision and variability. For the field test kits, the QAP requires that the relative percent difference between primary and replicate samples is calculated. For the fecal coliform samples analyzed at the laboratory, the QAP requires that relative percent difference between the primary and replicate samples be within 60 percent. For turbidity, the QAP requires that the absolute difference between the primary and replicate samples are presented in Table 4. Additionally, the results of the primary and replicate samples need to be within the precision of the equipment used.



Parame	eter	рН	Total Chlorine (mg/L)	Detergents (mg/L)	Total Copper (mg/L)	Total Phenols (mg/L)	Turbidity (NTU)	Fecal Coliform (colonies/100mL)
Unit	S	pH Units	%	%	%	%	NTU	%
QAP star	ndard	± 0.1	30%	30%	30%	30%	±1NTU	60%
Watershed	Outfall ID	pH Units	%	%	%	%	NTU	%
Eagle River	1451-1	± 0.1	-	-	-	-	0.1	а
Furrow Creek	332-1	± 0.3	-	-	-	-	1.2	a

#### Table 4. Comparison of Replicate Samples to Primary Samples

Note: Bold values indicate replicate variance that exceeds the QAP standard.

'-' indicates that both the primary and replicate samples were below the method detection limit.

<sup>a</sup> Either the primary or replicate sample was not detected at or above the method detection limit.

Furrow Creek outfall 332-1 slightly exceeded the variance threshold for turbidity. Variability in turbidity measurements can be expected due to the heterogeneous nature of flow from storm sewar outfalls. The primary and replicate samples for turbidity were below the exceedance threshold and these results were not flagged for follow-up action.

None of the other replicate samples exceeded QAP standards for allowable variation from the primary sample. Fecal coliform in either the primary or replicate sample was non-detect for both outfalls where replicate samples were taken.

Sample custody was adequately maintained for the samples. The coolers transporting the fecal coliform samples were chilled with gel ice to maintain temperatures of less than 8 degrees Celsius (°C). The holding times were met for all samples.

## 4.0 Discussion

Of the outfalls monitored under the 2022 DWS program, field teams observed 16 to be flowing during dry weather conditions. Of these, six outfalls were suspected to convey groundwater that infiltrates into the MS4. These outfalls have been observed to flow regularly during dry weather conditions in the previous 10 years of DWS program investigations, and/or exhibited other indicators of groundwater influence (i.e., iron oxide flocculation or staining). Field crews were either unable to access or locate 10 outfalls and investigated an additional 7 outfalls that were submerged in or backwatered by the receiving water or had standing water within the EOP.

Samples were collected at four outfalls where flow from the MS4 was suspected of being illicit discharge. Field crews documented cloudy or colored water, visible turbidity, surface scum, soapy suds, urban debris, and decaying matter at these outfalls. None of the outfalls sampled exceeded the threshold for any parameter. All six outfalls had been previously sampled during previous years' DWS programs and have never exceeded the threshold for any parameter.

Field crews also documented outfalls in poor condition or otherwise requiring maintenance during screening activities. These outfalls are noted in Table 1.

## 5.0 References

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# Appendix A Outfall Prioritization

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Watershed	Outfall ID	Subbasin ID	Total Score
Campbell Creek	1488-1	1007	29
Chester Creek	489-2	523	25
Chester Creek	489-357	523	25
Campbell Creek	651-1	817	24
Fish Creek	1287-994	775	24
Chester Creek	654-1	594	23
Chester Creek	179-1	475	22
Fish Creek	388-197	1178	21
Fish Creek	388-201	1178	21
Fish Creek	682-1	772	21
Chester Creek	295-56	575	20
Campbell Creek	1454-1	1449	19
Campbell Creek	1454-2	1449	19
Ship Creek	<null></null>	1001	19
Ship Creek	1338-1	999	19
Ship Creek	396-1	1001	19
Ship Creek	571-1	999	19
Ship Creek	96-2	998	19
Campbell Creek	105-1	1221	18
Campbell Creek	556-1	830	18
Eagle River	1335-1	1294	18
Fish Creek	7-1	1023	18
Furrow Creek	292-192	675	18
Ship Creek	71-1	979	18
Campbell Creek	579-1	804	17
Eagle River	1383-1	1147	17
Campbell Creek	207-3	805	16
Chester Creek	2-2	130	16
Chester Creek	4-1	1251	16
Chester Creek	464-1	616	16
Chester Creek	554-2	527	16
Rabbit Creek	745-1	701	16
Rabbit Creek	745-86	701	16
Chester Creek	299-20	133	15
Chester Creek	299-22	133	15
Chester Creek	484-1	133	15
Fish Creek	573-156	788	15
Fish Creek	573-48	788	15
Ship Creek	550-2	961	15
Campbell Creek	111-2	835	14
Campbell Creek	17-1	1372	14

Table A-1. Outfall Prioritization for the 2021-2025 APDES Permit Cycle

Watershed	Outfall ID	Subbasin ID	Total Score
Campbell Creek	463-1	886	14
Campbell Creek	548-1	863	14
Chester Creek	3-1	598	14
Chester Creek	86-1	549	14
Fish Creek	391-1	1031	14
Fish Creek	686-1	1024	14
Fish Creek	686-167	1024	14
Furrow Creek	34-26	916	14
Furrow Creek	34-54	916	14
Campbell Creek	1001-16	1333	13
Campbell Creek	1478-1	1195	13
Campbell Creek	1493-1	1382	13
Campbell Creek	475-1	349	13
Campbell Creek	485-1	828	13
Campbell Creek	485-98	828	13
Campbell Creek	593-1	821	13
Chester Creek	1298-275	489	13
Chester Creek	25-1	492	13
Chester Creek	296-1	495	13
Chester Creek	549-1	555	13
Chester Creek	552-105	619	13
Chester Creek	553-1	513	13
Chester Creek	577-1	515	13
Eagle River	541-1	1295	13
Fish Creek	1278-1	1269	13
Ship Creek	436-1	978	13
Campbell Creek	569-1	811	12
Campbell Creek	675-1	250	12
Chester Creek	103-1	568	12
Chester Creek	30-1	127	12
Hood Creek	609-218	1011	12
Ship Creek	1414-1	976	12
Ship Creek	245-1	989	12
Campbell Creek	100-1	1224	11
Campbell Creek	1479-1	1222	11
Campbell Creek	271-1	1317	11
Campbell Creek	44-1	1194	11
Campbell Creek	468-1	1318	11
Chester Creek	1449-1	1459	11
Chester Creek	568-1	479	11
Chester Creek	884-1	597	11
Fish Creek	1003-1	1044	11

Watershed	Outfall ID	Subbasin ID	Total Score
Campbell Creek	1014-41	1235	10
Campbell Creek	1056-8	1217	10
Campbell Creek	1339-1	826	10
Campbell Creek	1339-38	826	10
Campbell Creek	1438-2	862	10
Campbell Creek	1494-1	1386	10
Campbell Creek	175-1	1375	10
Campbell Creek	18-107	299	10
Campbell Creek	279-1	878	10
Campbell Creek	279-55	878	10
Campbell Creek	383-1	323	10
Campbell Creek	400-1	864	10
Campbell Creek	435-9	1444	10
Campbell Creek	490-1	890	10
Campbell Creek	490-93	890	10
Campbell Creek	490-95	890	10
Campbell Creek	585-1	870	10
Campbell Creek	608-39	779	10
Campbell Creek	656-31	290	10
Chester Creek	188-1	494	10
Chester Creek	318-1	562	10
Chester Creek	347-1	505	10
Chester Creek	482-1	173	10
Chester Creek	645-1	623	10
Chester Creek	678-1	541	10
Eagle River	<null></null>	1439	10
Eagle River	1336-1	1142	10
Eagle River	1375-1	752	10
Eagle River	1417-1	1425	10
Eagle River	1451-1	1439	10
Eagle River	1482-1	1347	10
Eagle River	1483-1	1346	10
Fish Creek	27-1	767	10
Fish Creek	462-1	773	10
Furrow Creek	1343-2	1396	10
Furrow Creek	281-1	177	10
Furrow Creek	306-1	1111	10
Furrow Creek	348-1	1103	10
Furrow Creek	407-1	184	10
Furrow Creek	407-2	177	10
Furrow Creek	407-24	184	10
Ship Creek	119-1	962	10

Watershed	Outfall ID	Subbasin ID	Total Score
Ship Creek	46-1	1437	10
Ship Creek	47-1	972	10
Ship Creek	491-1	963	10
Campbell Creek	1348-1	1196	9
Campbell Creek	1466-1	460	9
Campbell Creek	1466-17	460	9
Campbell Creek	300-1	462	9
Chester Creek	236-1	590	9
Chester Creek	282-1	496	9
Chester Creek	282-3	496	9
Chester Creek	499-1	132	9
Chester Creek	499-17	132	9
Chester Creek	527-1	506	9
Fish Creek	411-8	733	9
Furrow Creek	5-1	1104	9
Ship Creek	81-73	960	9
Campbell Creek	1489-1	1371	8
Campbell Creek	317-1	376	8
Campbell Creek	447-64	322	8
Campbell Creek	62-1	255	8
Campbell Creek	701-4	389	8
Campbell Creek	10-1	799	7
Campbell Creek	<null></null>	1314	7
Campbell Creek	112-1	1202	7
Campbell Creek	113-1	785	7
Campbell Creek	120-13	1040	7
Campbell Creek	120-22	1040	7
Campbell Creek	122-1	884	7
Campbell Creek	1347-1	1314	7
Campbell Creek	1349-1	1223	7
Campbell Creek	1351-1	1384	7
Campbell Creek	1352-1	1385	7
Campbell Creek	1352-14	1385	7
Campbell Creek	1367-1	1369	7
Campbell Creek	1367-26	1369	7
Campbell Creek	1410-1	1456	7
Campbell Creek	1441-1	1441	7
Campbell Creek	1464-1	1313	7
Campbell Creek	1467-1	1442	7
Campbell Creek	1490-1	1378	7
Campbell Creek	1495-1	838	7
Campbell Creek	190-1	288	7

Watershed	Outfall ID	Subbasin ID	Total Score
Campbell Creek	21-1	737	7
Campbell Creek	219-1	887	7
Campbell Creek	220-1	855	7
Campbell Creek	243-24	268	7
Campbell Creek	297-1	854	7
Campbell Creek	305-1	824	7
Campbell Creek	320-5	324	7
Campbell Creek	401-1	876	7
Campbell Creek	417-1	877	7
Campbell Creek	474-1	815	7
Campbell Creek	495-1	853	7
Campbell Creek	496-1	365	7
Campbell Creek	500-1	1367	7
Campbell Creek	500-6	1367	7
Campbell Creek	506-1	881	7
Campbell Creek	546-2	1200	7
Campbell Creek	565-1	1198	7
Campbell Creek	581-1	843	7
Campbell Creek	588-1	259	7
Campbell Creek	602-1	794	7
Campbell Creek	616-1	837	7
Campbell Creek	642-1	866	7
Campbell Creek	673-1	883	7
Campbell Creek	673-16	883	7
Campbell Creek	84-1	896	7
Chester Creek	117-1	564	7
Chester Creek	1267-251	1248	7
Chester Creek	258-1	131	7
Chester Creek	302-2	554	7
Chester Creek	314-23	219	7
Chester Creek	339-1	586	7
Chester Creek	376-1	612	7
Chester Creek	399-1	521	7
Chester Creek	416-1	517	7
Chester Creek	418-1	560	7
Chester Creek	509-12	128	7
Chester Creek	519-1	599	7
Chester Creek	525-2	554	7
Chester Creek	53-1	129	7
Chester Creek	547-1	596	7
Chester Creek	578-1	499	7
Chester Creek	679-21	134	7

Watershed	Outfall ID	Subbasin ID	Total Score
Chester Creek	683-1	546	7
Chester Creek	700-10	584	7
Chester Creek	98-2	221	7
Eagle River	303-1	754	7
Fish Creek	1310-201	1278	7
Fish Creek	1312-19	1280	7
Fish Creek	137-1	1260	7
Fish Creek	228-1	1030	7
Fish Creek	234-1	867	7
Fish Creek	32-1	774	7
Fish Creek	37-1	1020	7
Fish Creek	429-1	761	7
Fish Creek	480-1	1018	7
Fish Creek	555-1	816	7
Fish Creek	584-1	782	7
Fish Creek	595-1	777	7
Fish Creek	595-8	777	7
Fish Creek	661-26	1273	7
Fish Creek	79-353	1267	7
Furrow Creek	1345-1	1102	7
Furrow Creek	216-10	1046	7
Furrow Creek	293-1	673	7
Furrow Creek	332-1	1050	7
Furrow Creek	34-2	915	7
Furrow Creek	395-1	1109	7
Furrow Creek	402-1	1051	7
Furrow Creek	592-1	725	7
Furrow Creek	617-1	905	7
Furrow Creek	634-1	1028	7
Furrow Creek	95-2	915	7
Hood Creek	502-16	1013	7
Ship Creek	1363-1	1335	7
Ship Creek	690-1	956	7
Chester Creek	574-1	490	6
Chester Creek	575-1	490	6
Fish Creek	191-1	783	6
Campbell Creek	<null></null>	1331	5
Campbell Creek	1477-1	1201	5
Campbell Creek	65-2	410	5
Campbell Creek	685-1	875	5
Campbell Creek	685-7	875	5
Campbell Creek	703-1	1331	5

Watershed	Outfall ID	Subbasin ID	Total Score
Chester Creek	163-5	136	5
Chester Creek	244-2	136	5
Chester Creek	319-1	220	5
Chester Creek	321-1	557	5
Chester Creek	361-1	606	5
Fish Creek	1277-59	1279	5
Campbell Creek	<null></null>	1443	4
Campbell Creek	1432-1	1432	4
Campbell Creek	1456-1	1433	4
Campbell Creek	1465-1	1377	4
Campbell Creek	1474-1	1311	4
Campbell Creek	181-1	836	4
Campbell Creek	285-1	1205	4
Campbell Creek	40-4	1310	4
Campbell Creek	405-1	849	4
Campbell Creek	408-1	326	4
Campbell Creek	433-1	844	4
Campbell Creek	433-14	844	4
Campbell Creek	446-1	1206	4
Campbell Creek	461-16	403	4
Campbell Creek	487-1	834	4
Campbell Creek	505-1	897	4
Campbell Creek	529-1	874	4
Campbell Creek	551-1	309	4
Campbell Creek	586-1	277	4
Campbell Creek	598-18	404	4
Campbell Creek	60-1	889	4
Campbell Creek	619-1	888	4
Campbell Creek	626-1	892	4
Campbell Creek	626-5	892	4
Campbell Creek	732-1	894	4
Campbell Creek	99-1	898	4
Chester Creek	115-1	486	4
Chester Creek	1265-40	1246	4
Chester Creek	139-1	565	4
Chester Creek	140-1	565	4
Chester Creek	1462-1	1458	4
Chester Creek	218-1	580	4
Chester Creek	259-1	615	4
Chester Creek	26-14	519	4
Chester Creek	301-1	174	4
Chester Creek	304-1	603	4

Watershed	Outfall ID	Subbasin ID	Total Score
Chester Creek	415-1	528	4
Chester Creek	419-6	510	4
Chester Creek	488-1	508	4
Chester Creek	492-1	545	4
Chester Creek	517-17	225	4
Chester Creek	587-1	168	4
Chester Creek	665-1	488	4
Chester Creek	889-1	617	4
Eagle River	1390-2	1297	4
Eagle River	1391-1	1298	4
Eagle River	1455-1	1287	4
Eagle River	646-71	1292	4
Fire Creek	1392-1	1299	4
Fire Creek	1393-1	1300	4
Fish Creek	1054-1	1190	4
Fish Creek	264-1	798	4
Fish Creek	494-1	762	4
Fish Creek	610-1	739	4
Fish Creek	684-1	759	4
Furrow Creek	1344-8	1393	4
Hood Creek	1264-37	1264	4
Hood Creek	142-1	768	4
Hood Creek	315-2	1014	4
Hood Creek	486-1	765	4
Ship Creek	1431-1	1436	4
Ship Creek	278-1	1250	4
Campbell Creek	1019-2	1352	2
Campbell Creek	155-3	1203	2
Campbell Creek	183-8	736	2
Campbell Creek	290-46	1324	2
Campbell Creek	364-1	296	2
Campbell Creek	427-2	163	2
Campbell Creek	501-4	1326	2
Campbell Creek	612-1	1204	2
Campbell Creek	74-2	1327	2
Chester Creek	125-1	529	2
Chester Creek	378-3	571	2
Chester Creek	387-1	620	2
Chester Creek	542-1	610	2
Chester Creek	580-11	622	2
Chester Creek	624-4	611	2
Hood Creek	249-1	781	2

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Watershed	Outfall ID	Subbasin ID	Total Score
Campbell Creek	692-15 <sup>a</sup>	-	-
Campbell Creek	692-24 <sup>a</sup>	-	-
Glacier Creek	_b	-	-

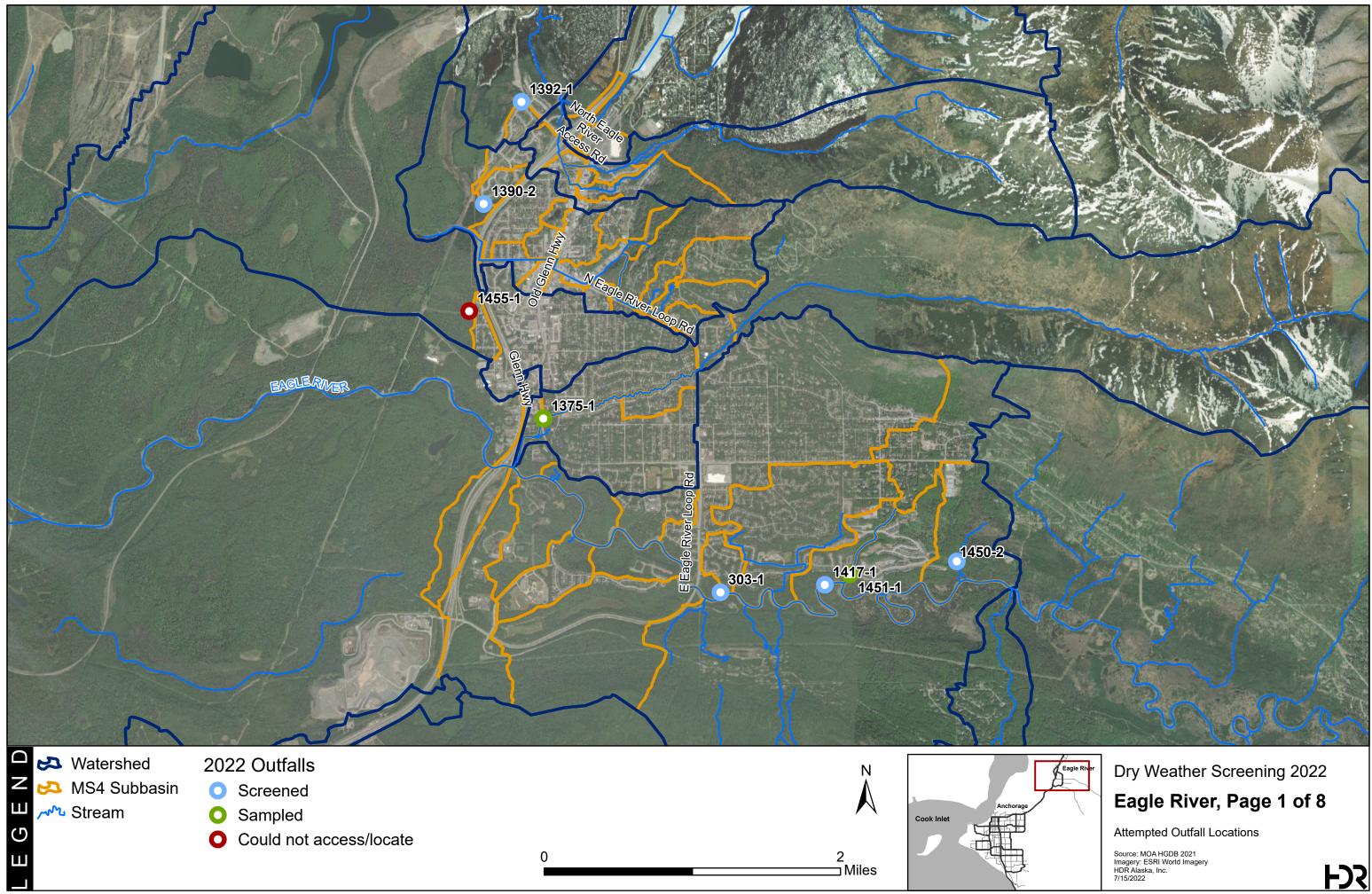
<sup>a</sup> Outfalls 692-15 and 692-24 drain to Campbell Creek at E. 68<sup>th</sup> Ave. between Brayton Dr. and Meadow St. As of May 23, 2022, the HGDB does not have the subbasin that drains to the outfall mapped. The HGDB needs to be updated and the outfalls need to receive a prioritization score.

<sup>b</sup> An unnumbered outfall drains to Glacier Creek at Girdwood PI. and Holmgren PI. This outfall and the connected drainageways were added to the HGDB on August 20, 2020. As of May 23, 2022, a subbasin for this network has not delineated in the HGDB. The HGDB needs to be updated and the outfall needs to receive a prioritization score.

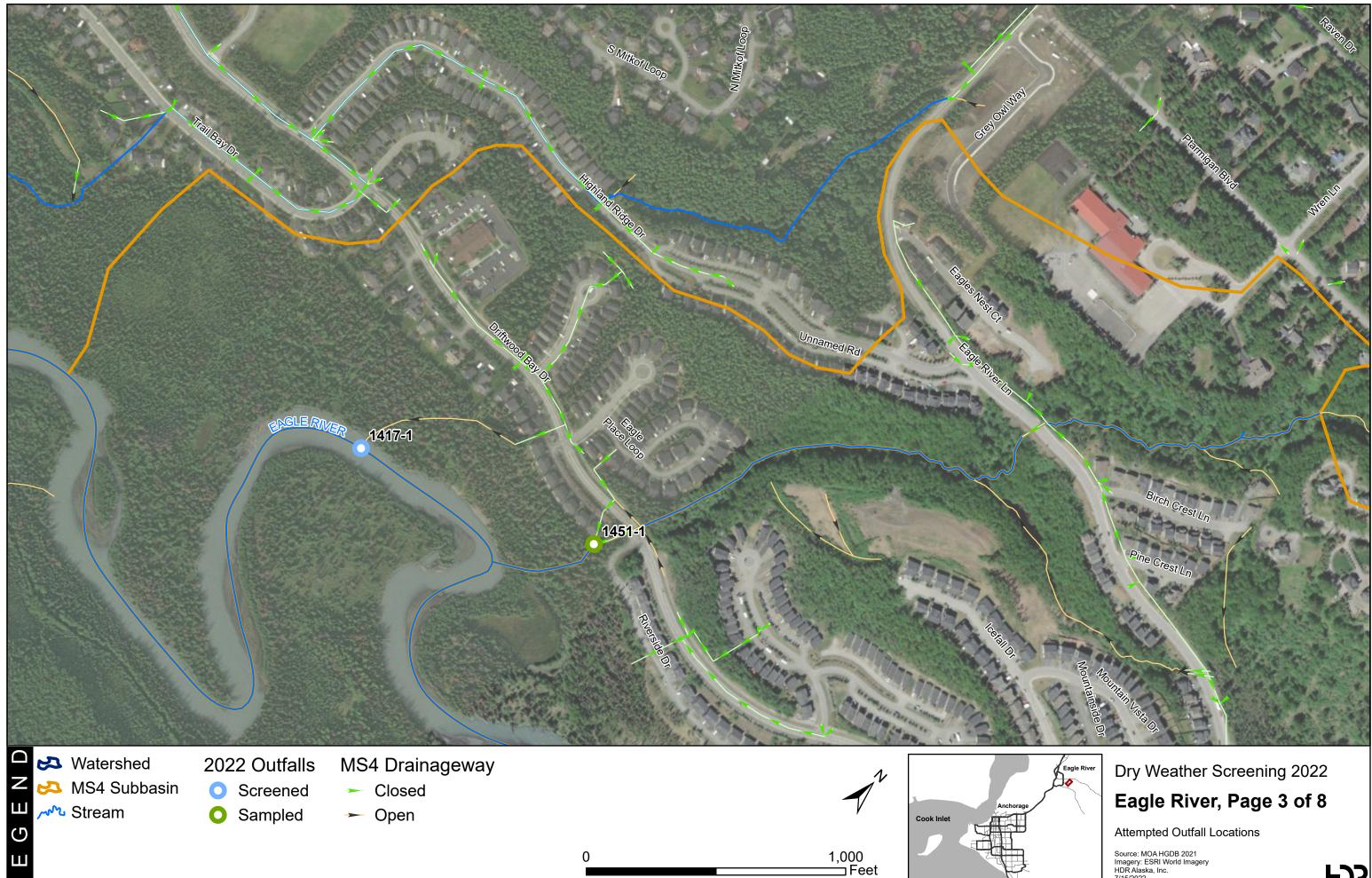
# Appendix B Watershed Maps

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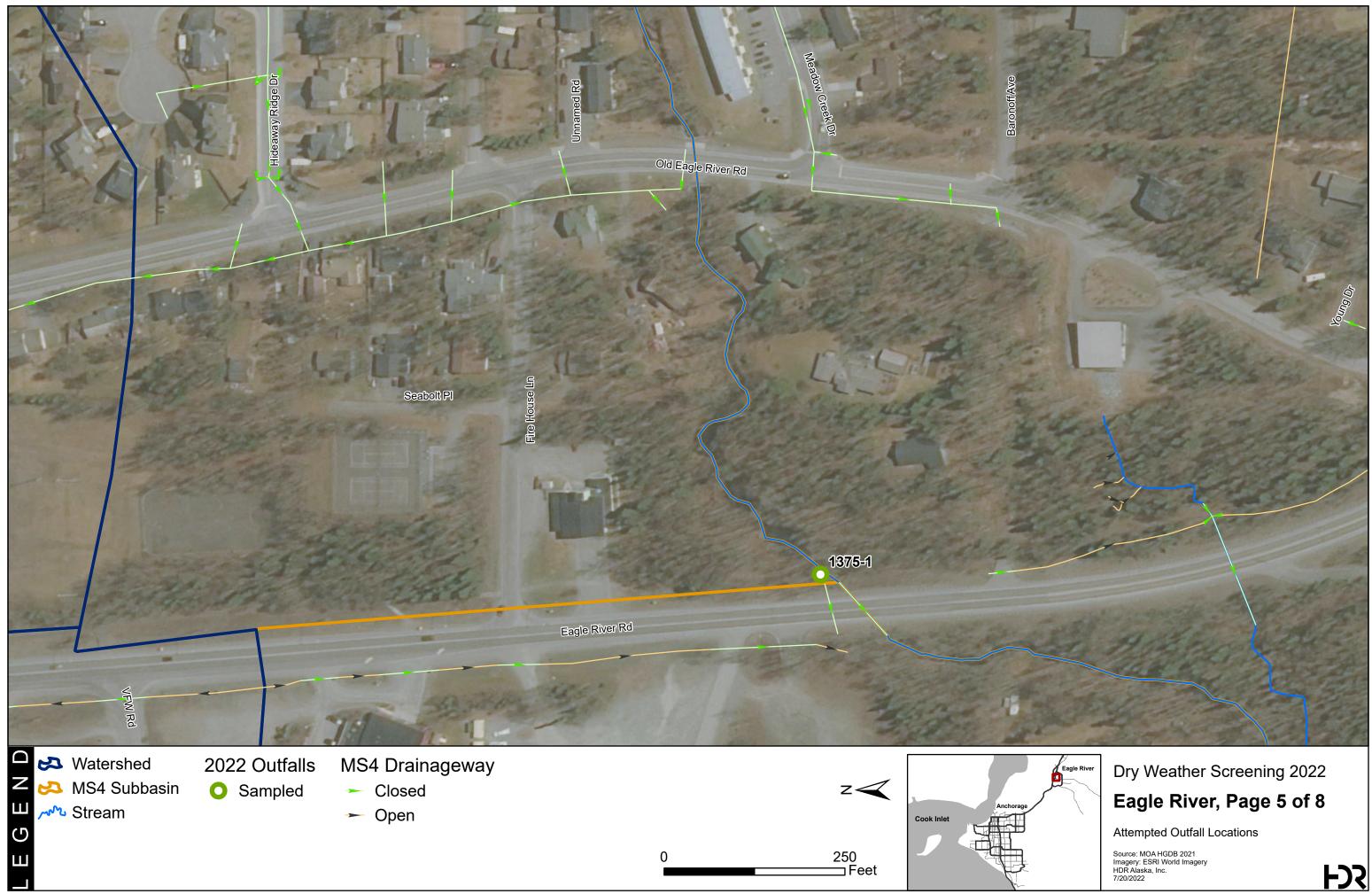


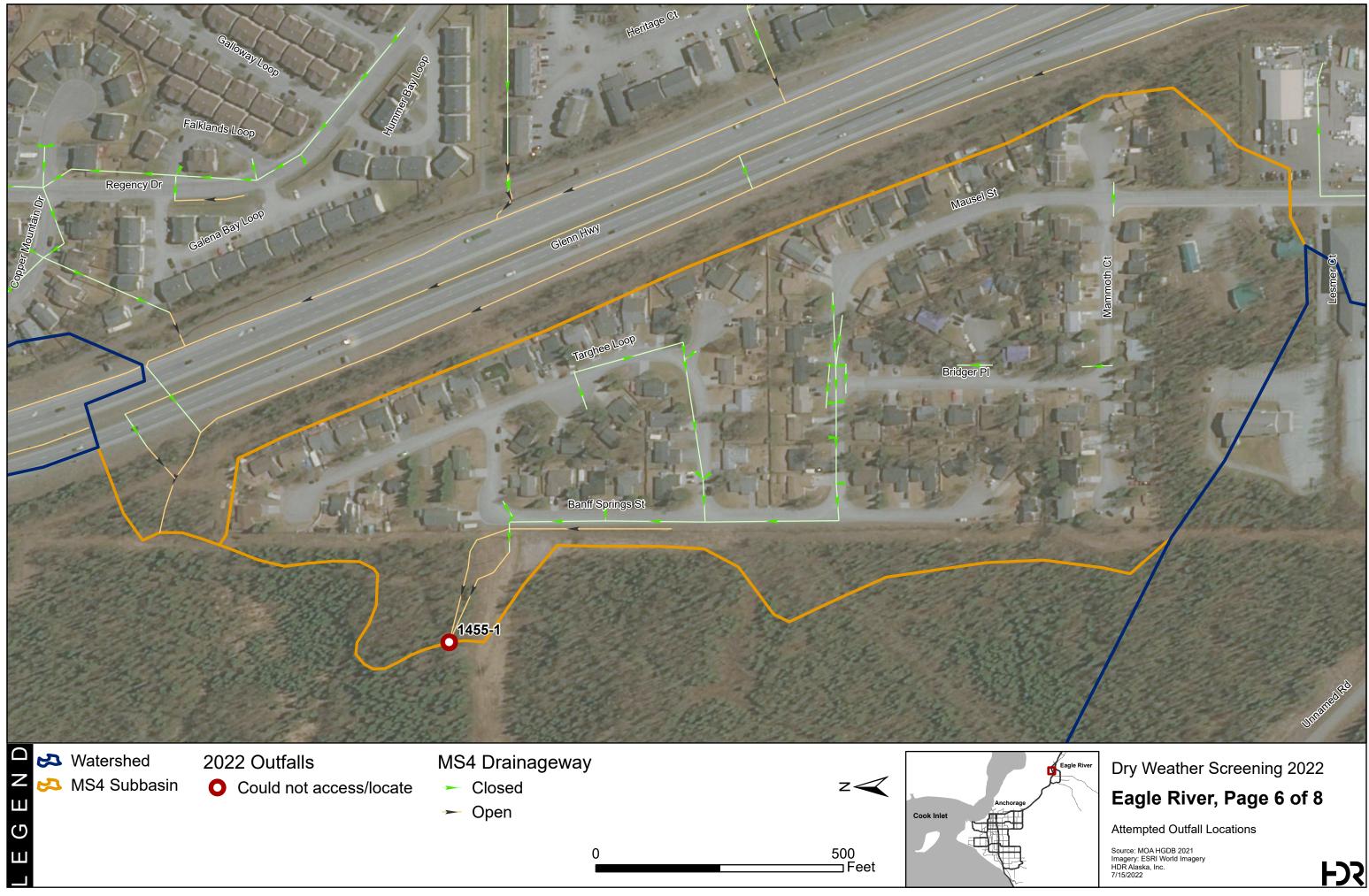


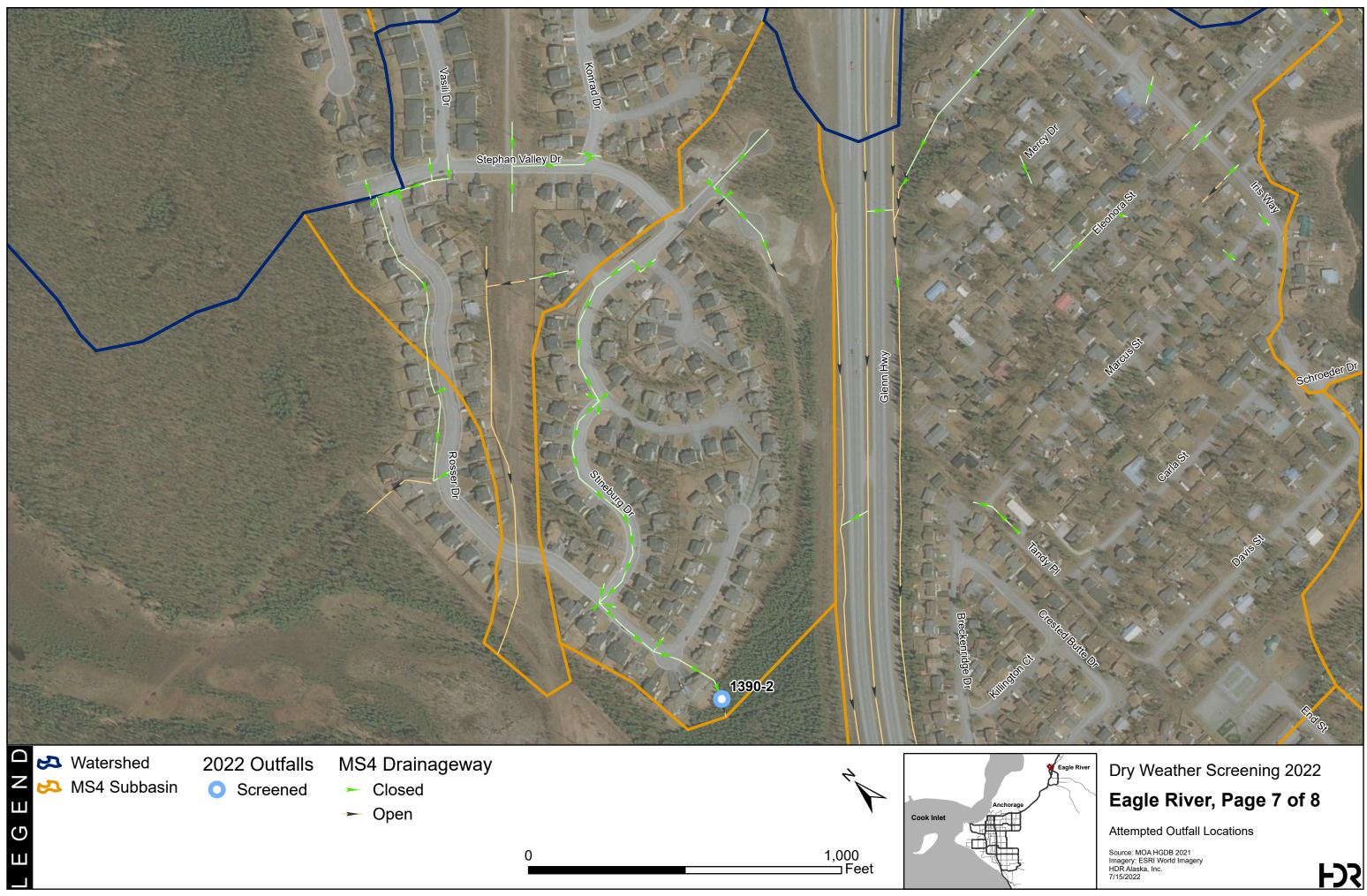
Source: MOA HGDB 2021 Imagery: ESRI World Imagery HDR Alaska, Inc. 7/15/2022



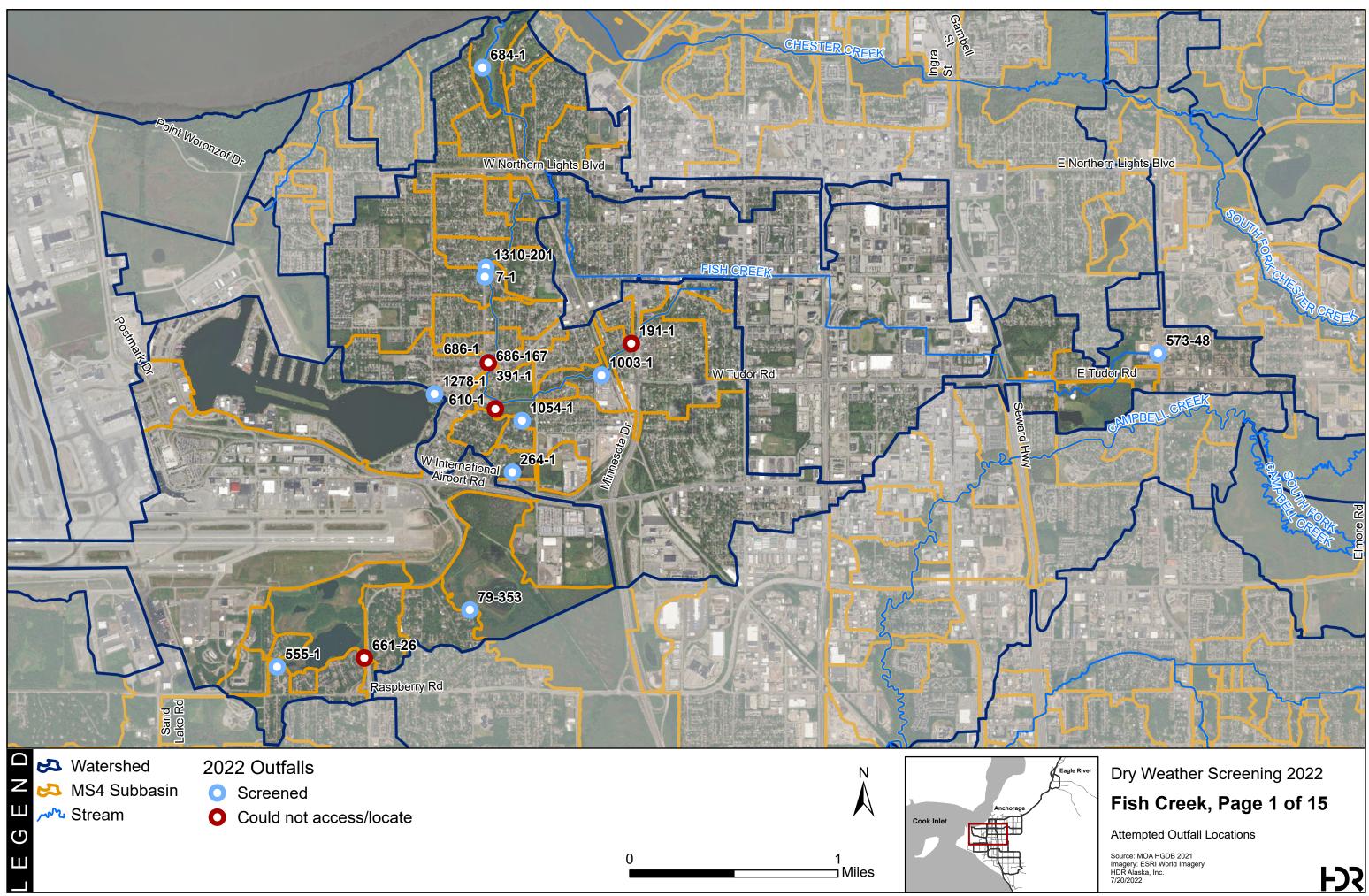


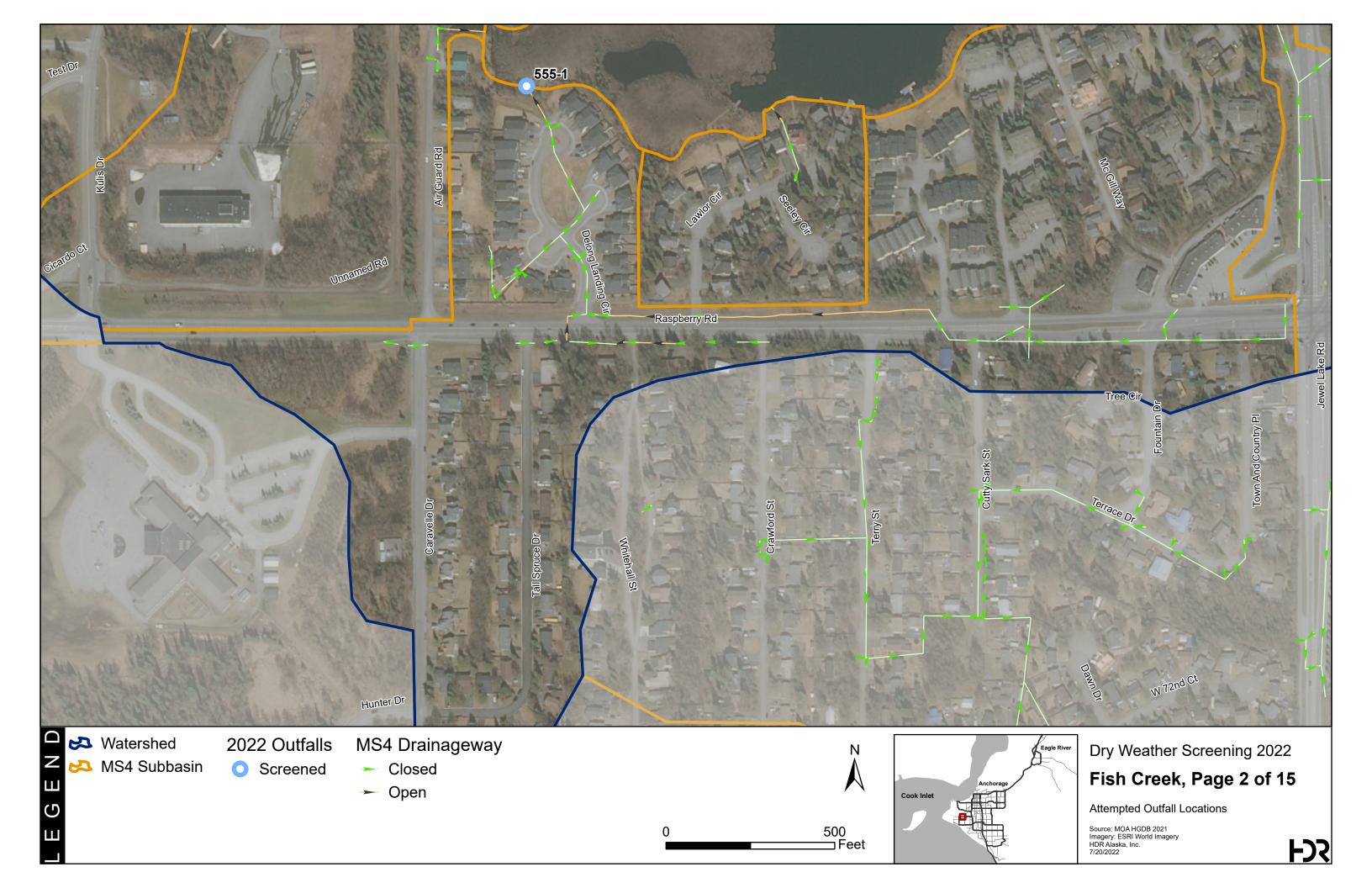


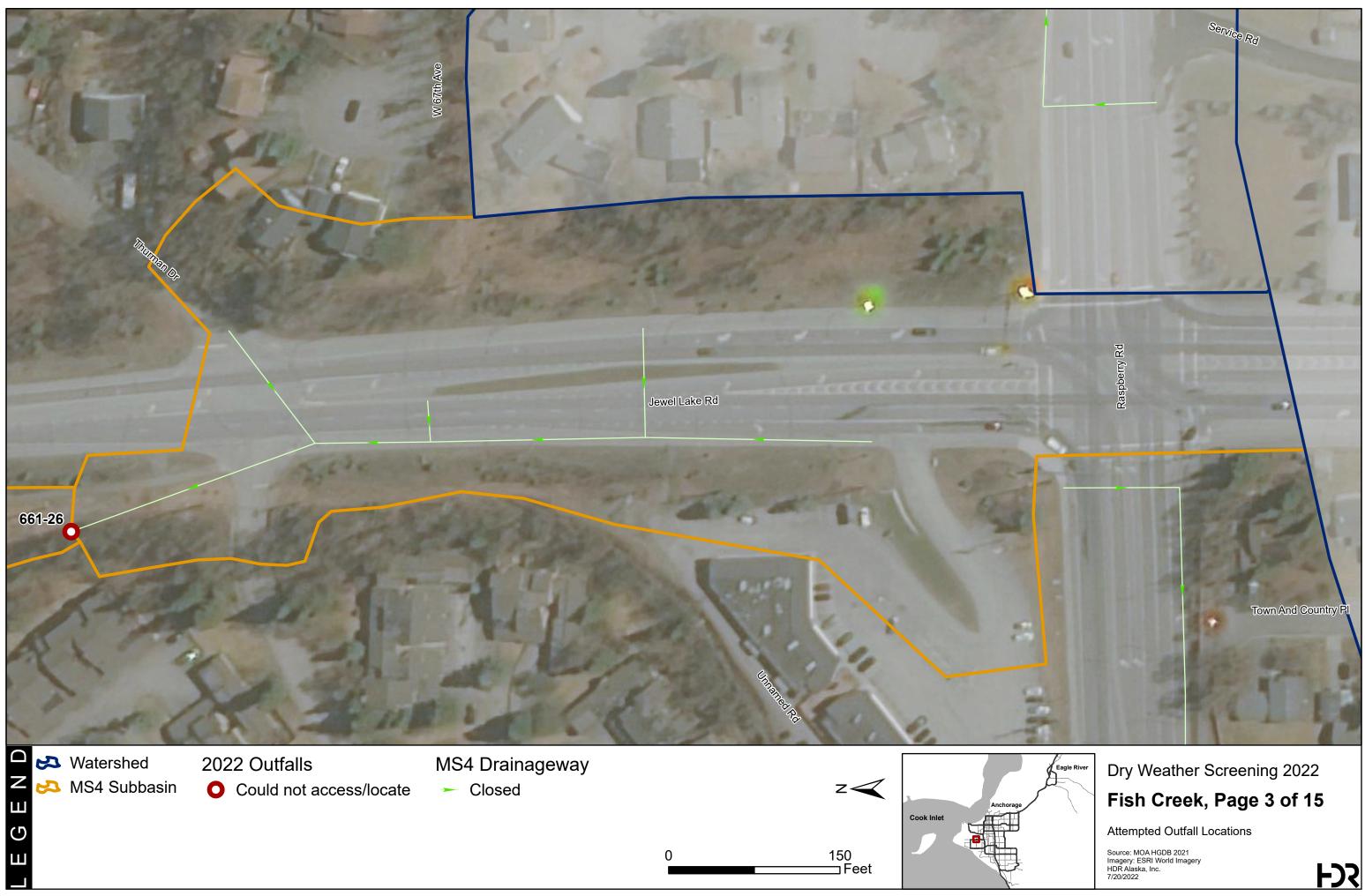


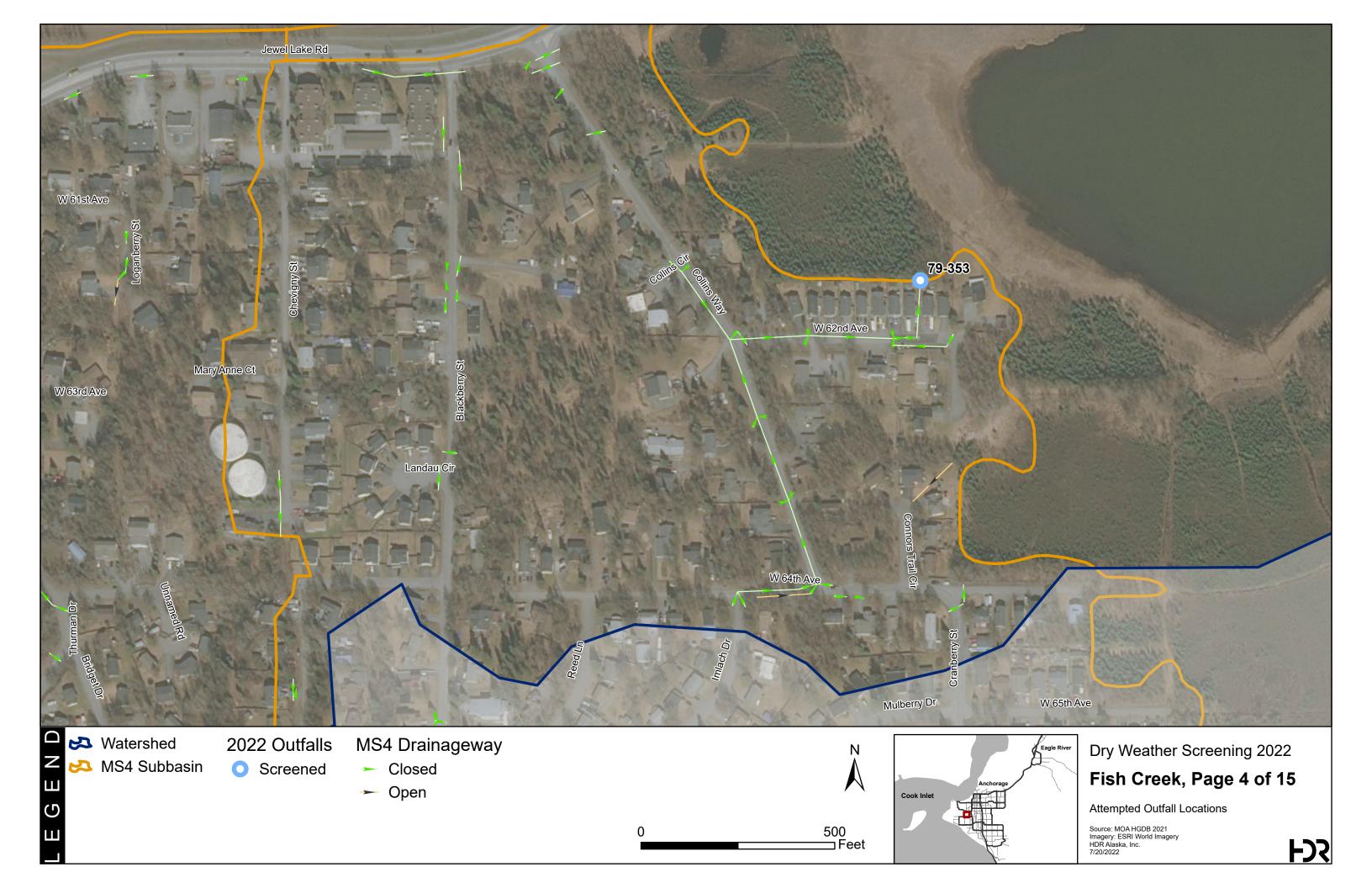


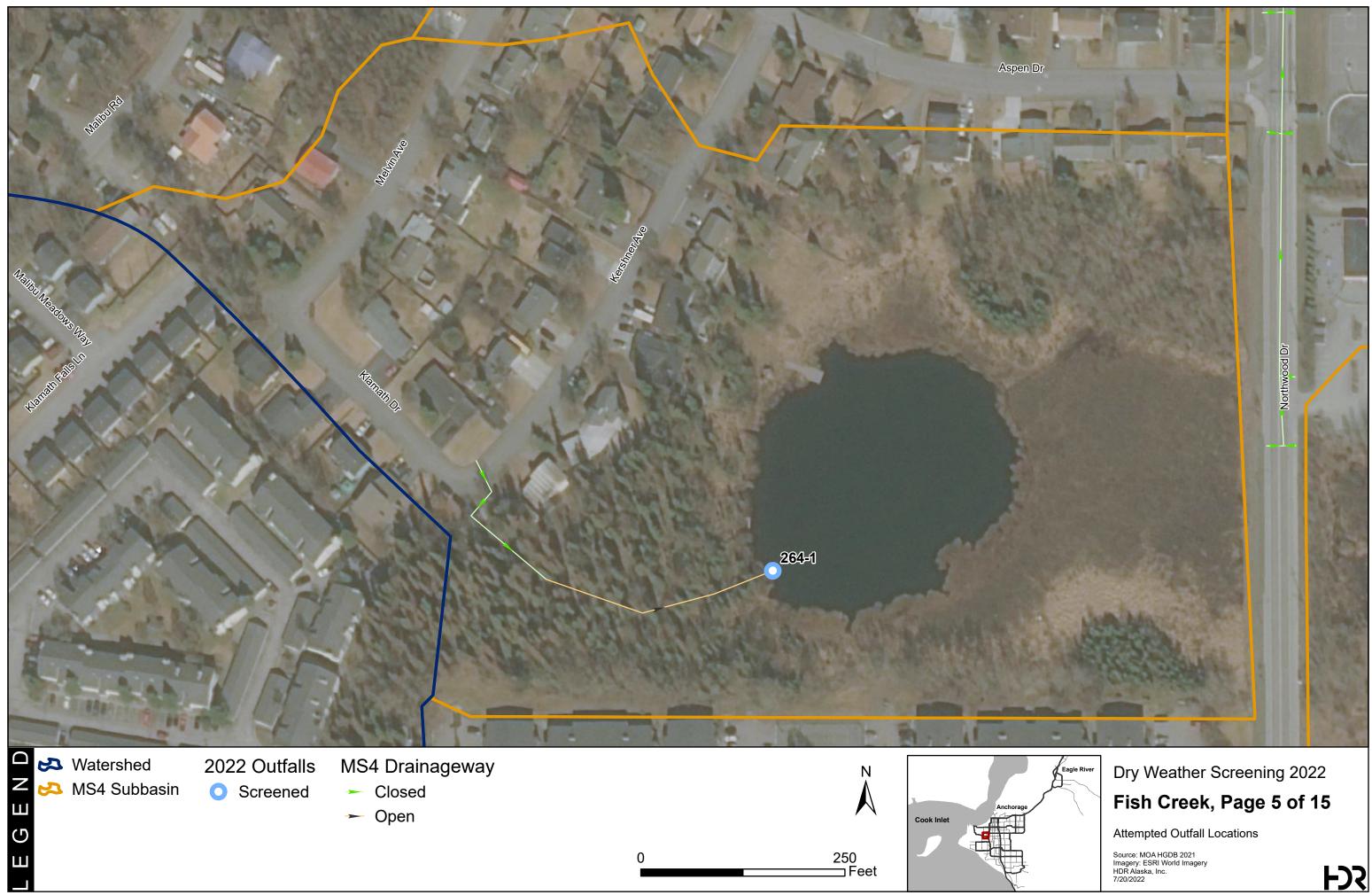






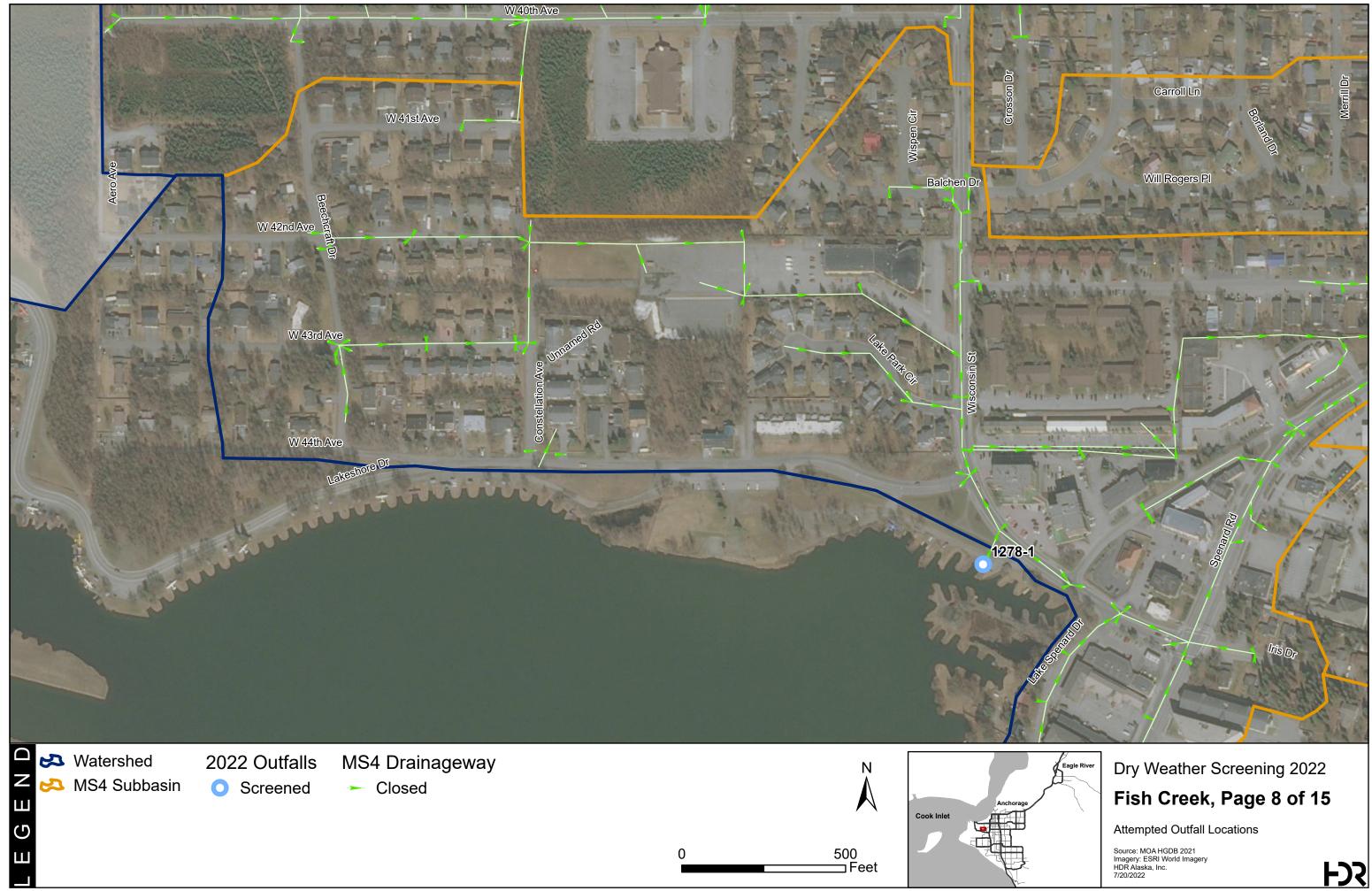


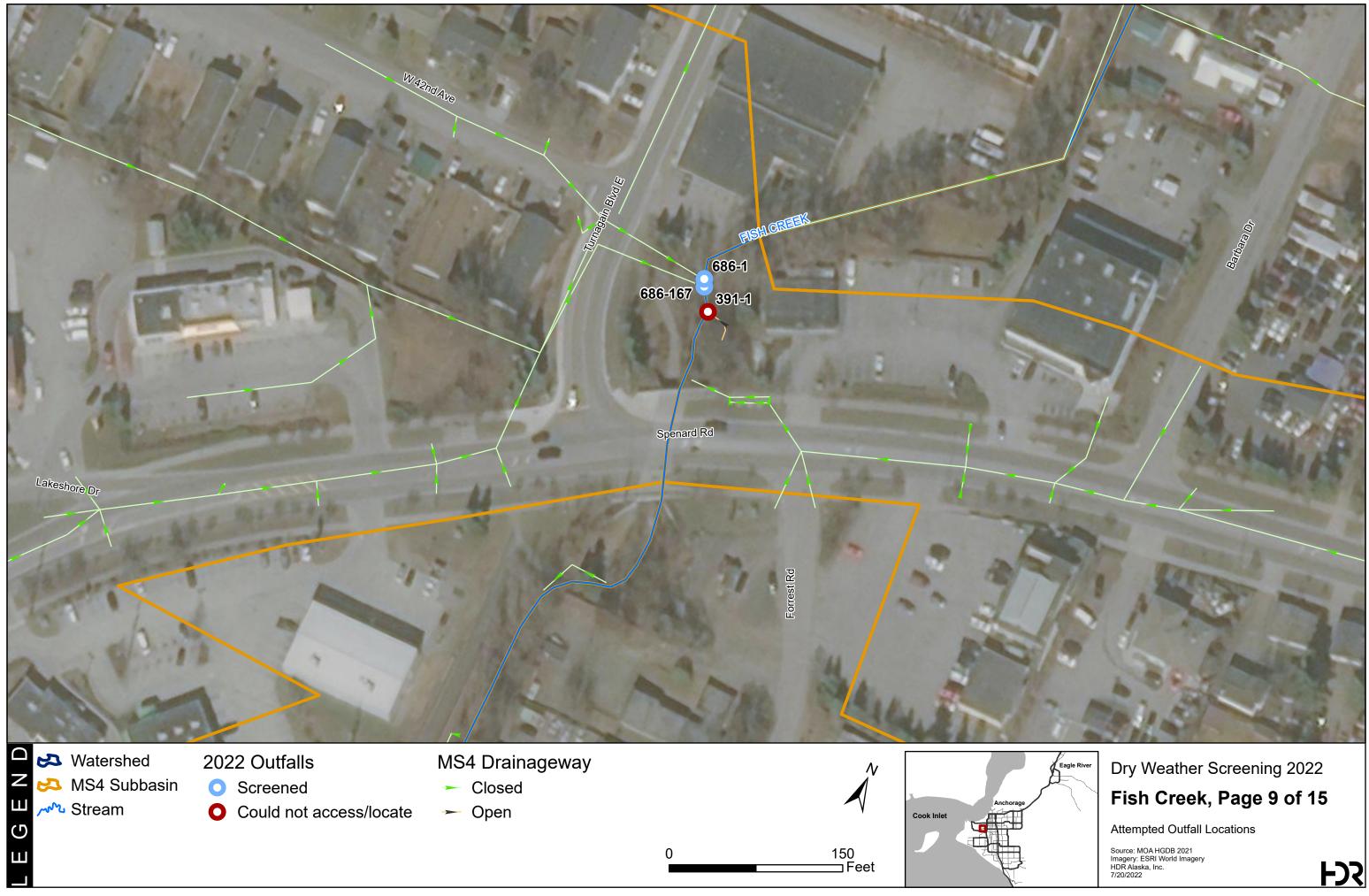




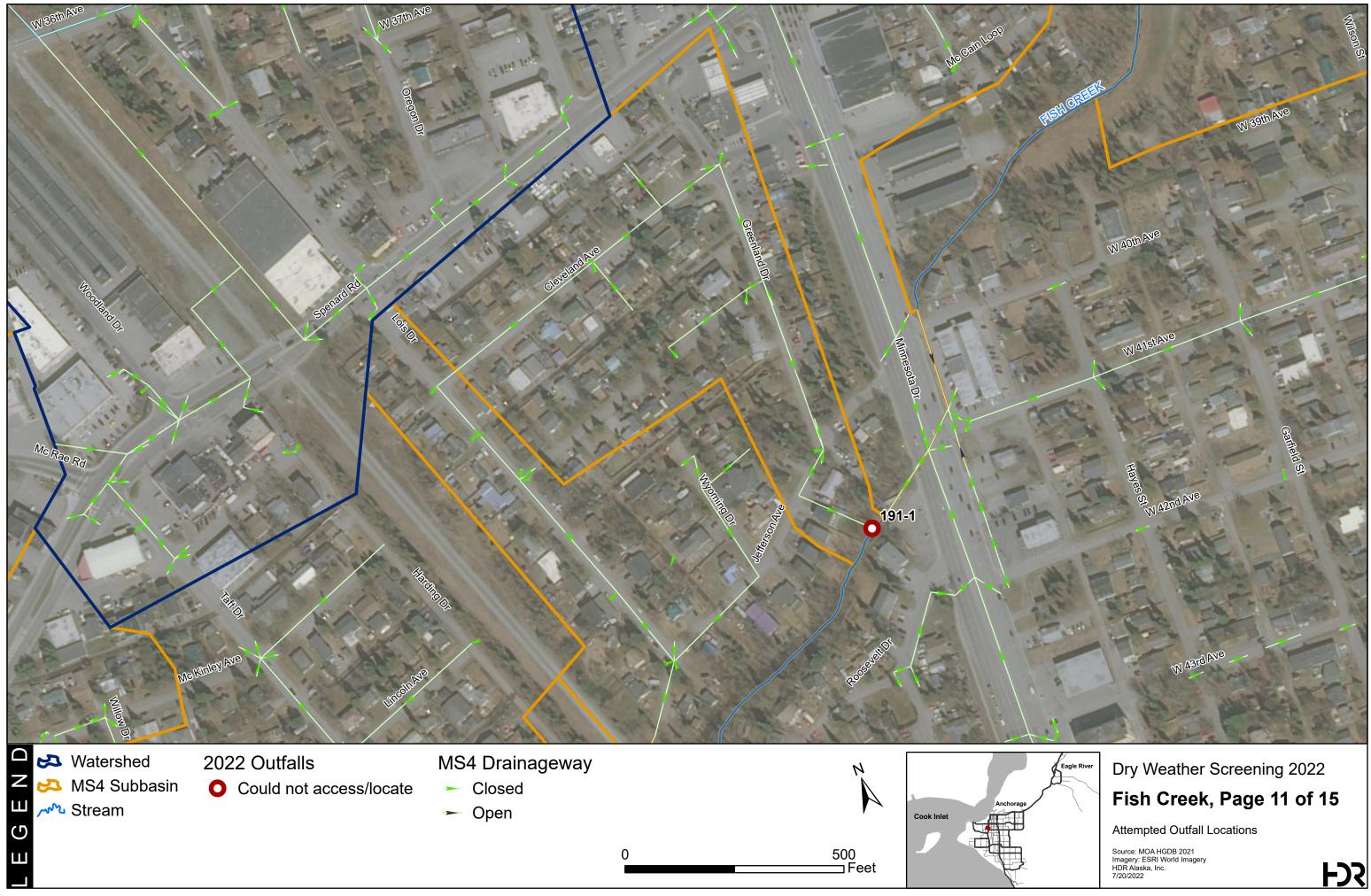


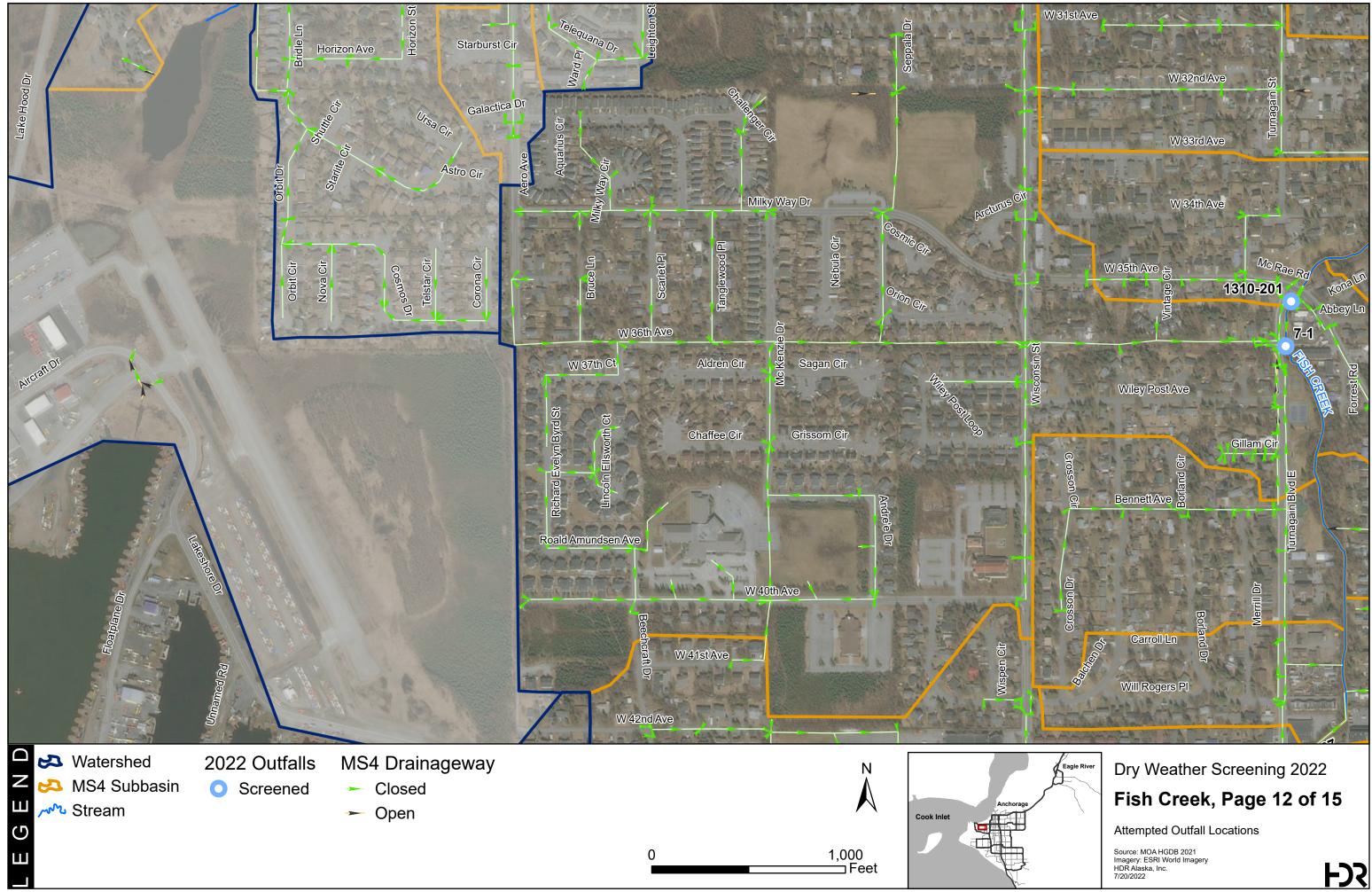














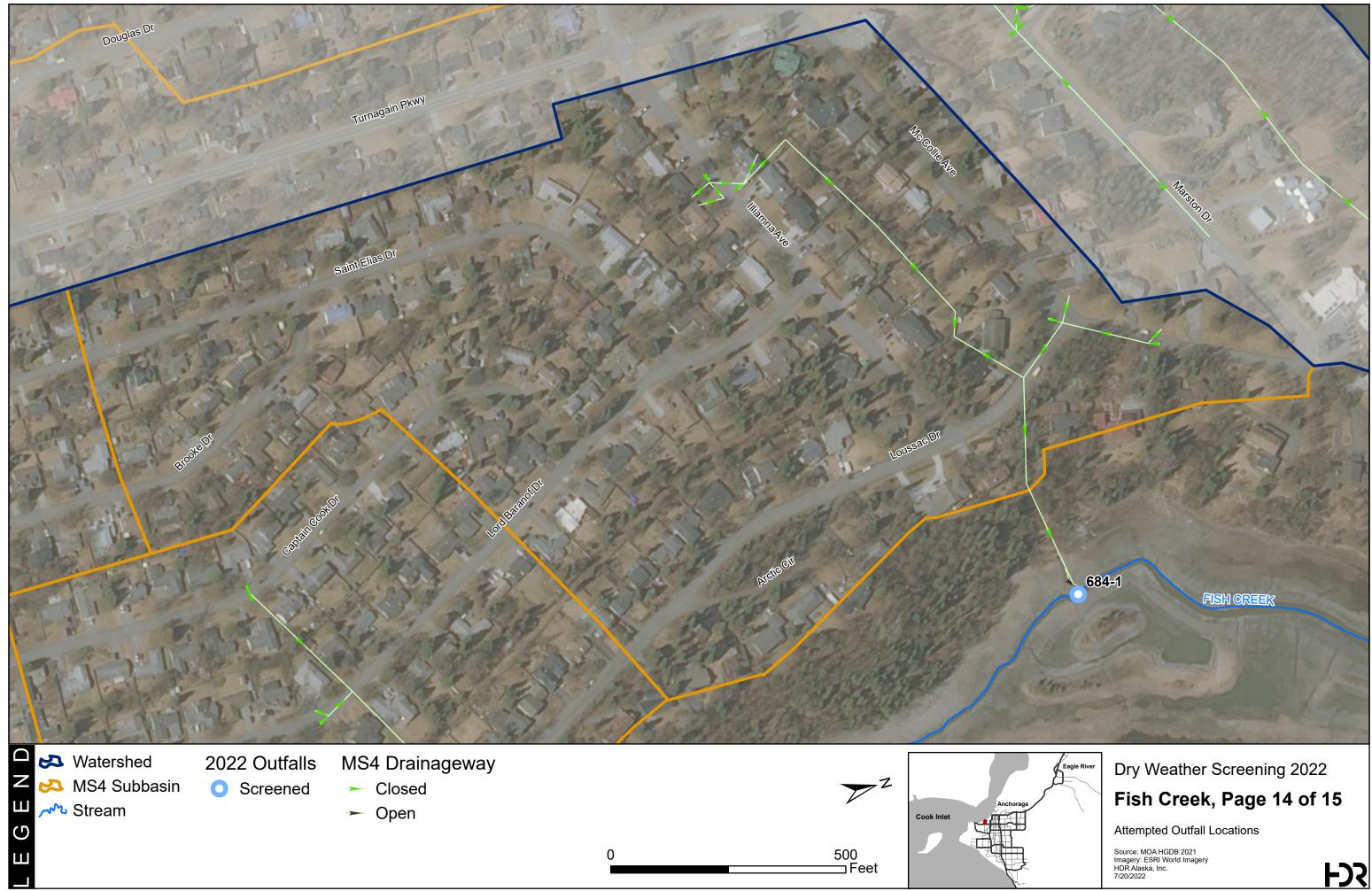
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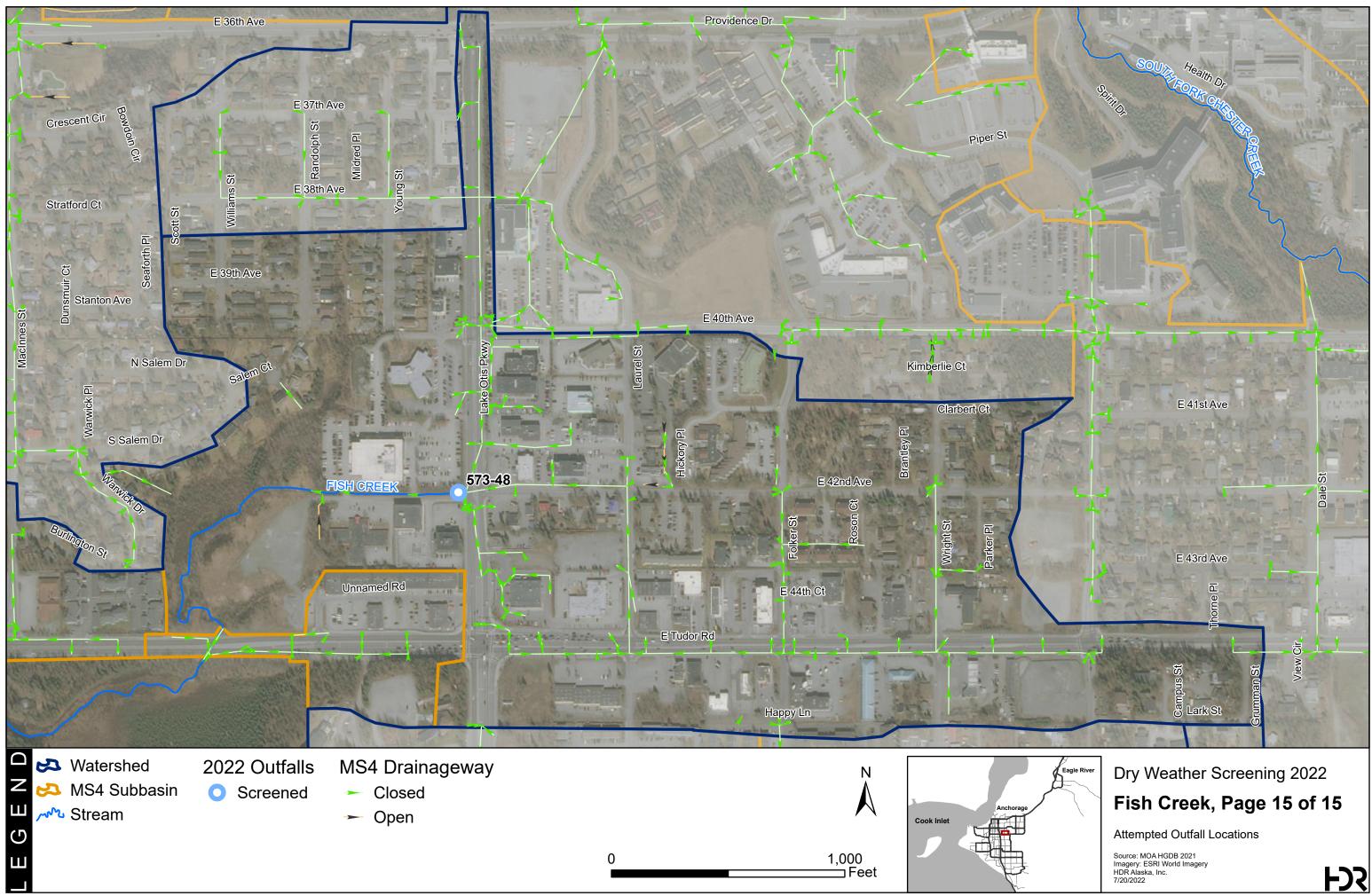
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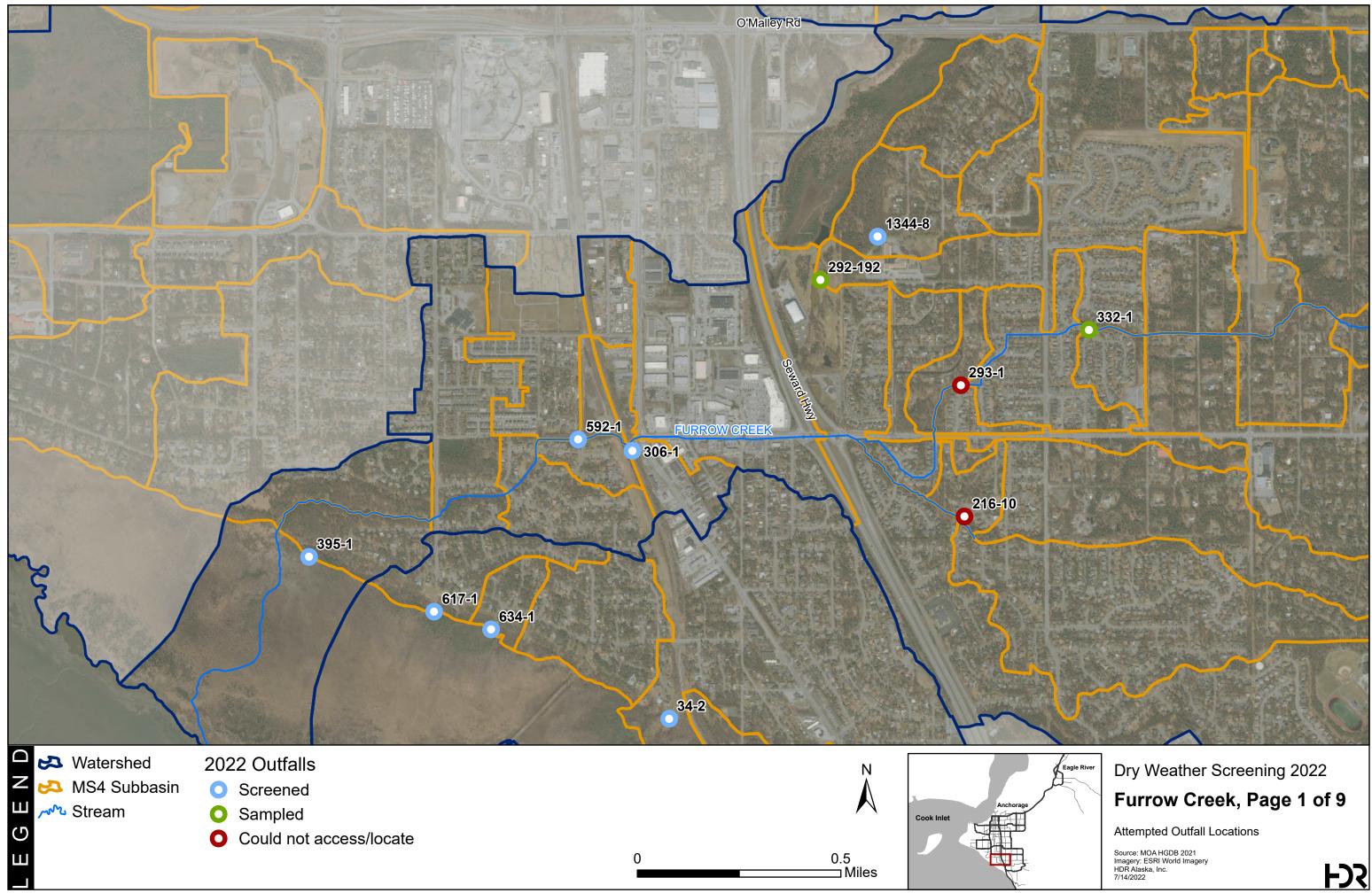
Attempted Outfall Locations

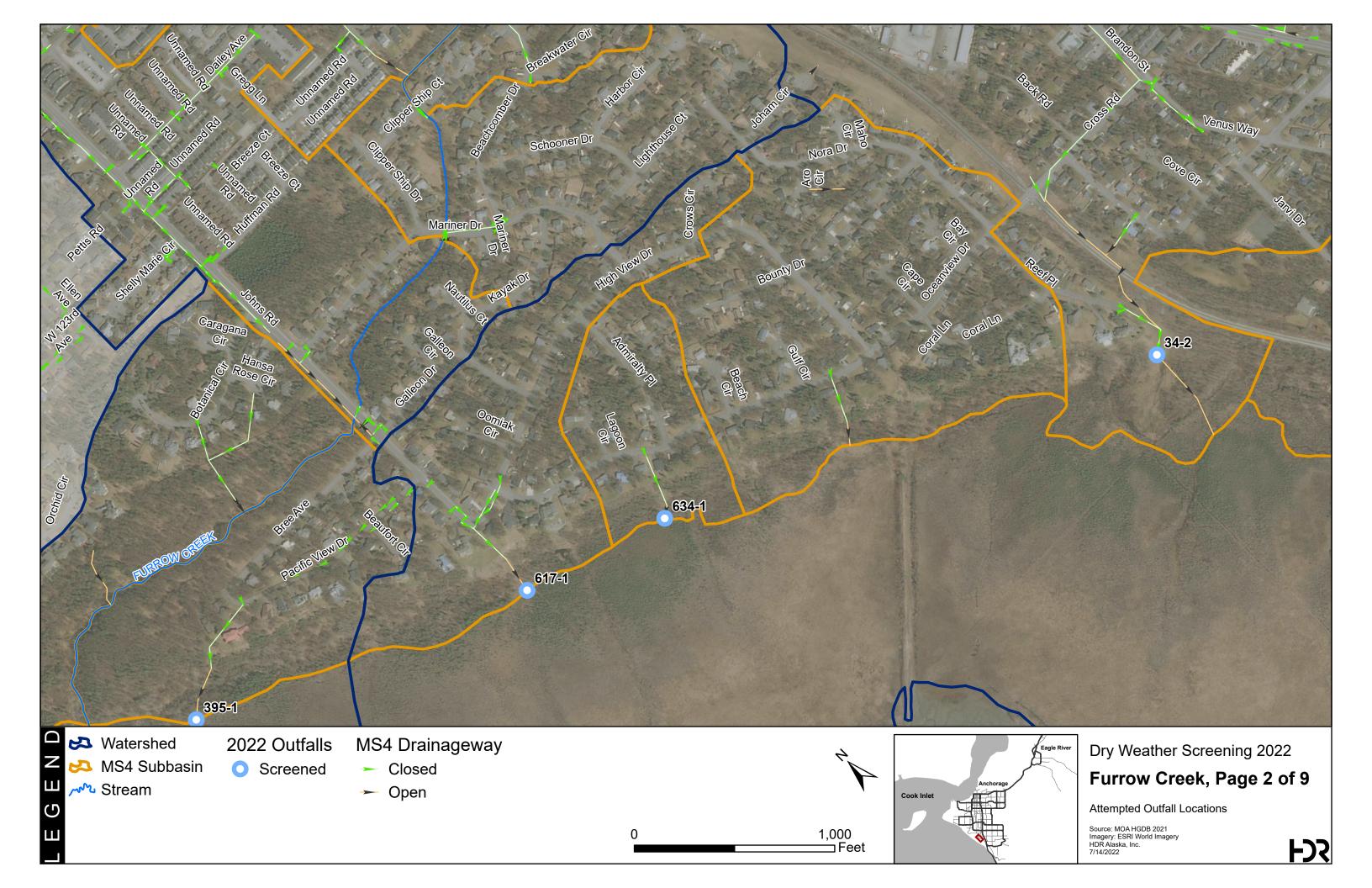
Source: MOA HGDB 2021 Imagery: ESRI World Imagery HDR Alaska, Inc. 7/20/2022

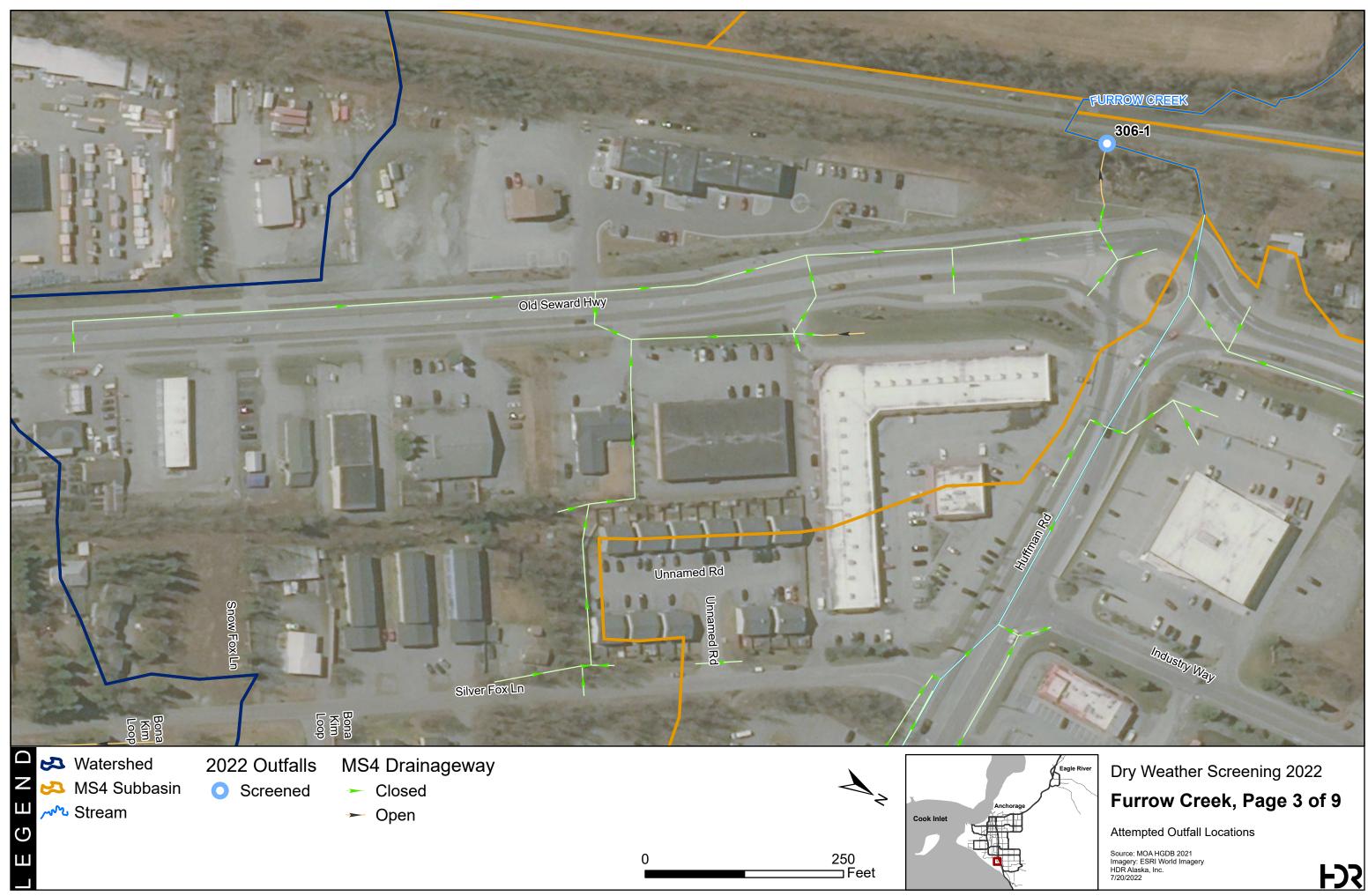


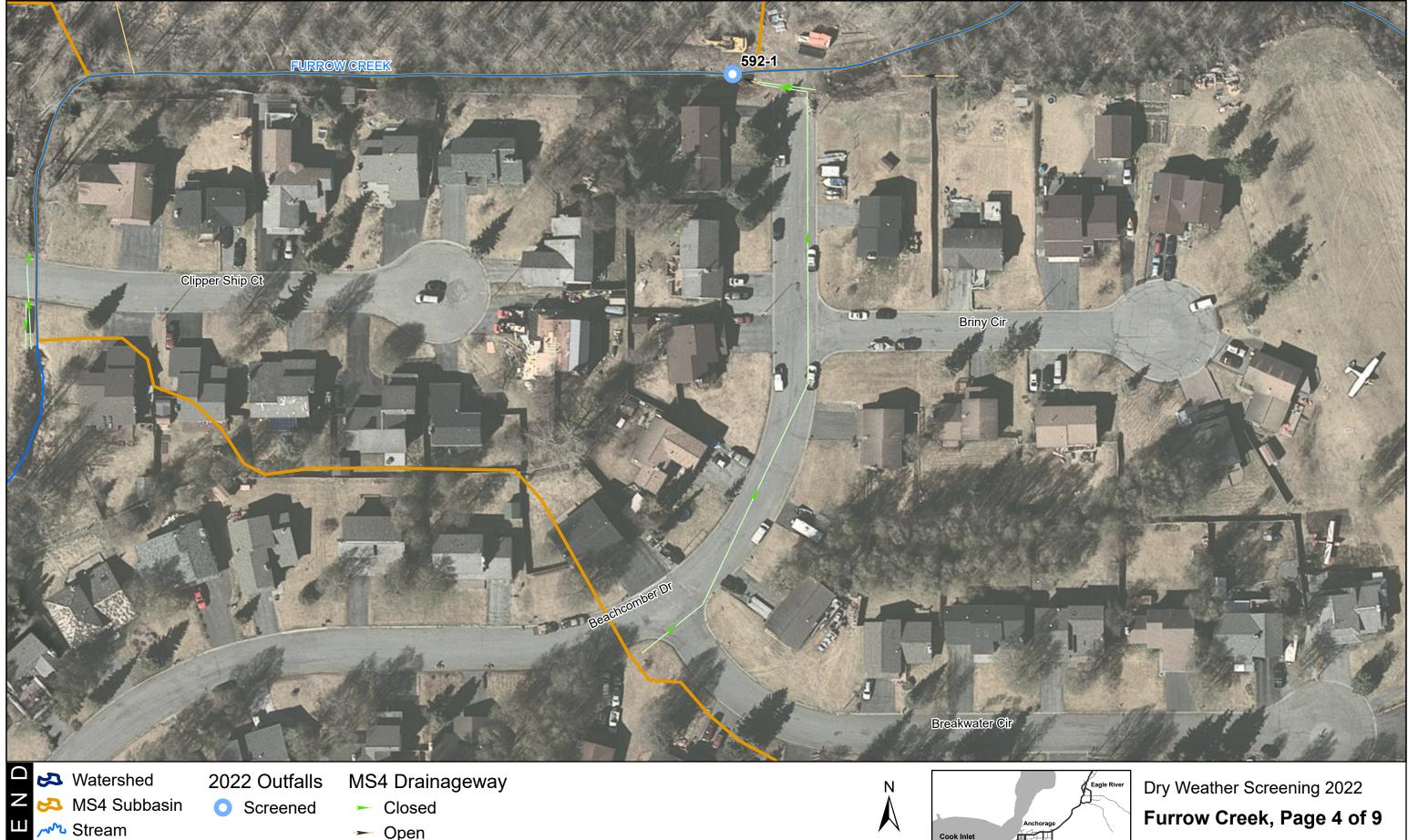












- Open

G

Ш

Attempted Outfall Locations

Source: MOA HGDB 2021 Imagery: ESRI World Imagery HDR Alaska, Inc. 7/20/2022







Silver Spruce Dr



## Dry Weather Screening 2022 Furrow Creek, Page 5 of 9

Attempted Outfall Locations

Source: MOA HGDB 2021 Imagery: ESRI World Imagery HDR Alaska, Inc. 7/14/2022

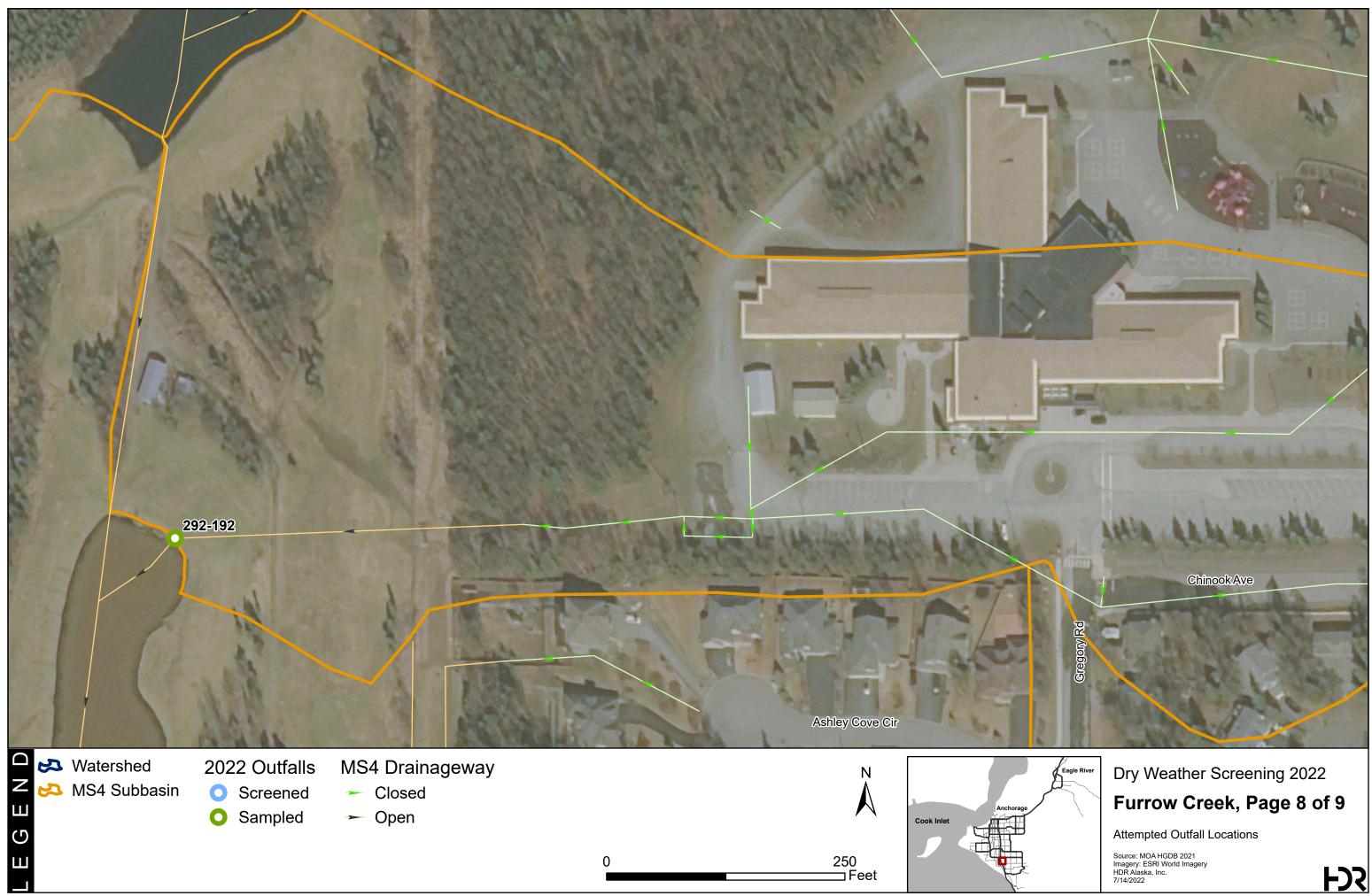


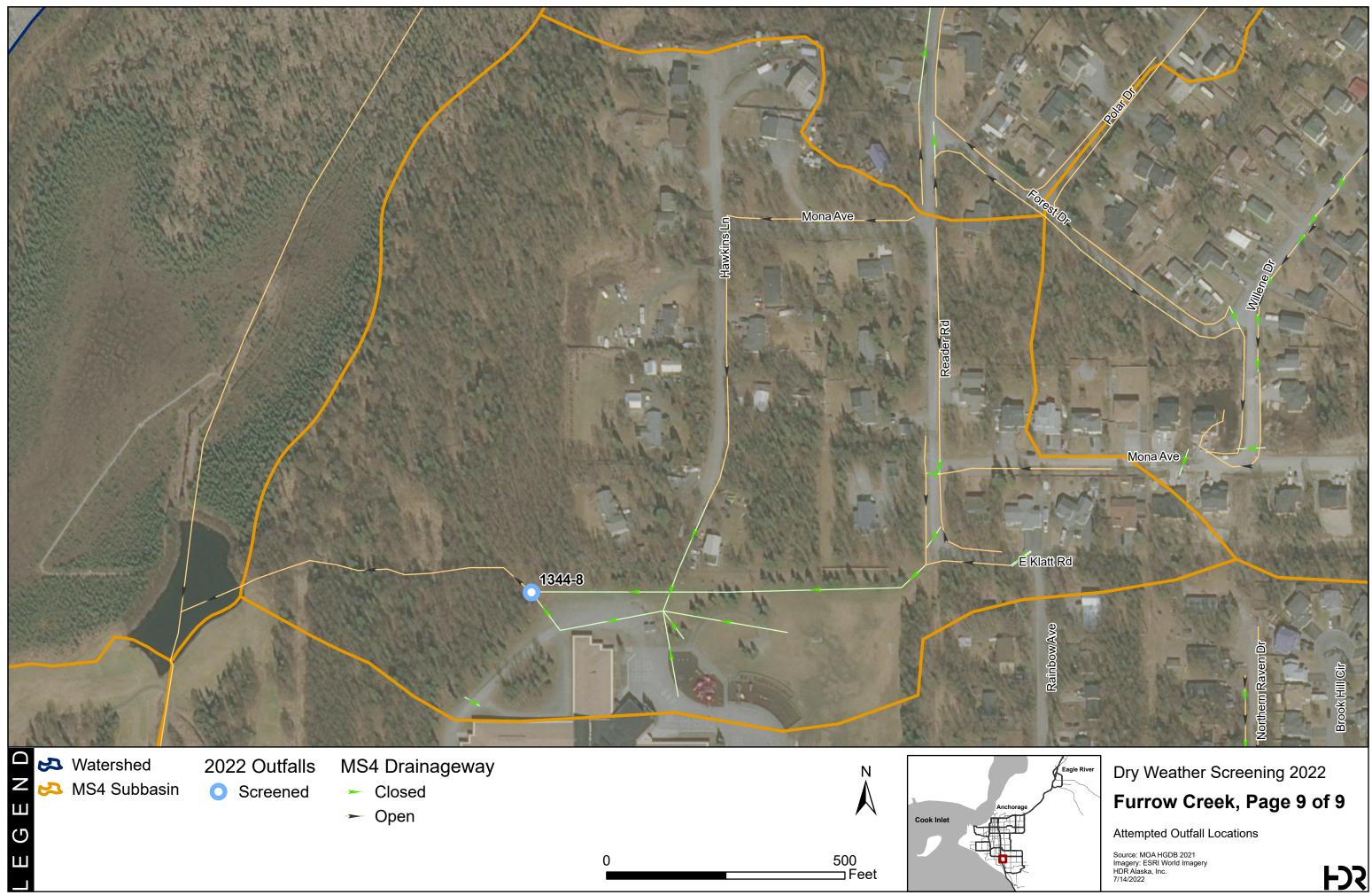


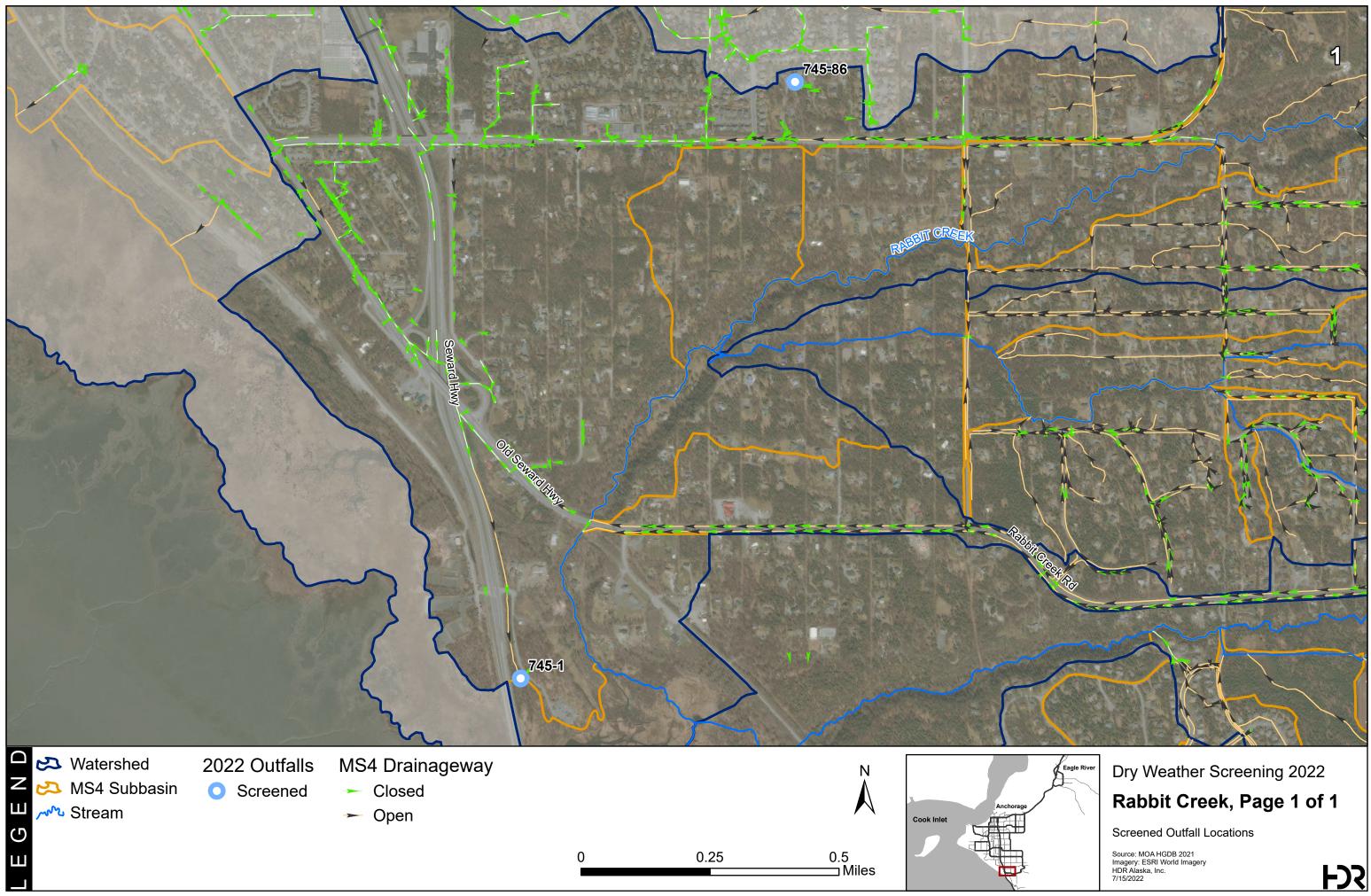


Source: MOA HGDB 2021 Imagery: ESRI World Imagery HDR Alaska, Inc. 7/14/2022









# Appendix C Field Data Forms

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Watershed: <u>FK</u>	°	Out	fall Number: <u>303-</u>	
Part 1. General Info	ormation.	6		÷
1. Date <u>0-16-2</u>	022	Time <u>10:1</u>	0	
2. Field Crew $KG$ ,	ma	Water quality	analyses conducted by	HN/A
	n event 🗹 More than 48 h			
	entinches			ens Inth Arrp
Part 2. Visual Obse				
	ter20''	T. Characteristics - division	Good and	
			n: 0000, cmp	
8. Photographs (incl	ude camera name/#) <u>  Pa</u>	d		
9. Suitable for sampl	ing under DWS Program?	No Yes Grood	Flore	
0. Water flowing fr	om end of pipe? 🖄 No 🛛 🖸	Yes If yes, depth (	of water in end of pipe	an -
12	· · · 2 · v			
j wo, take priotograp	hs of outfall and record any	pertinent observations in t	comments. If tes, continue	
-	ing water exhibit any of the			
Ddors? 🗹 No 🗆 Y	es Color? 🗹 Cle	ar 🛛 Cloudy/Muddy	Clarity? 🗹 Clear 🗆	Colored
	□ Moving oily sheen □			
··· ()··		A REAL PROPERTY AND A REAL		
2. Vegetation <u>199</u>	ne	13. Biology	None	0. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10.
	95			
Part 3. Field Analys	¢3			
		Medium D High		
14. Flow	gal/min OR 🗆 Low		61 am (* 111 31 11 m 54 141	
4. Flow			and water ch	Arartenftics
14. Flow	gal/min OR 🗆 Low	r flow? Similar flow	s and water ch	Aracterifyics ations in 2020.
14. Flow 15. Previous observat 16. Is an illicit discha	gal/min OR □ Low ions of baseline dry weathe rge suspected at the outfall	r flow? <u>Similar flow</u> ? 12 No 🗆 Yes	from observ	Arartenftics allows in 2020,
<ul> <li>14. Flow</li></ul>	gal/min OR □ Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. Des	r flow? <u>Similar flow</u> ? IINO I Yes scribe any additional monit	frem _oberv coring recommendations in	Aracterifyics atons in 2020. comments.
<ul> <li>14. Flow</li></ul>	gal/min OR □ Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. Des	r flow? <u>Similar flow</u> ? 12 No 🗆 Yes	frem _oberv coring recommendations in	Aracteriftics atons in 2020, comments.
<ul> <li>14. Flow</li> <li>15. Previous observat</li> <li>16. Is an illicit discha</li> <li><i>f No, proceed to next</i></li> </ul>	gal/min OR □ Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. Des	r flow? <u>Similar flow</u> ? IINO I Yes scribe any additional monit	frem _oberv coring recommendations in	Aracterifyics Mons in 2020 comments.
<ul> <li>14. Flow</li></ul>	gal/min OR 🗆 Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupli	r flow? <u>Similar flow</u> ? [2] No 미 Yes scribe any additional monit icate sample collected? 교	frem observ coring recommendations in No □Yes	61 K 2016 - 20
<ul> <li>14. Flow</li></ul>	gal/min OR Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupli	r flow? <u>Similar flow</u> ? IINO IYes scribe any additional monit icate sample collected? I Duplicate Sample	frem oberv coring recommendations in No □Yes Equipment Blank	Program Threshold
<ul> <li>14. Flow</li></ul>	gal/min OR Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupli Primary Sample 8.3 units	r flow? <u>Similar flow</u> ? 図 No ロ Yes scribe any additional monit icate sample collected? Duplicate Sample ろっつ units	from observ coring recommendations in No UYes Equipment Blank units	Program Threshold ≤ 4.0 or ≥ 9.0
<ul> <li>14. Flow</li></ul>	gal/min OR □ Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupli Primary Sample 0.3 units mg/L mg/L mg/L	r flow? <u>Similar flow</u> ? INO IYes scribe any additional monit icate sample collected? I Duplicate Sample B, 2 units mg/L mg/L	frem coord coring recommendations in No UYes Equipment Blank units mg/L mg/L	Program Threshold         ≤ 4.0 or ≥ 9.0         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 1.0 mg/L
<ul> <li>15. Previous observat</li> <li>16. Is an illicit discha</li> <li>16. Is an illicit discha</li> <li>17. Water Quality Ar</li> <li>17. Water Quality Ar</li> <li>Parameter</li> <li>pH</li> <li>Total chlorine</li> <li>Detergents</li> </ul>	gal/min OR □ Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. Des halyses Dupli Primary Sample 0.3 units mg/L mg/L	r flow? <u>Similar flow</u> ? INO IYes scribe any additional monit icate sample collected? I Duplicate Sample B. Q units mg/L mg/L	frem observ coring recommendations in No	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L

### Part 4. Comments

Outfalls on to rock. Is perched ~ 5ft

Access via May court.

Watershed:	2		Out	fall Number: <u>1375-</u> 1	- 45k	
Part 1. General In	formation.	85	1		:: X	
1. Date (g-) le	2022		Time	5		
2. Field Crew <u>K</u> G	mA		Water quality	v analyses conducted by <u>v</u>	G, MA	
3. Time since last r				18 hours		
4. Size of last rain	event	_inches 5	. Measured at weather	station Ted Steve	ins Inthe Airp	ort
Part 2. Visual Obs	ervations				<u>92</u>	11
6. End of pipe dian	neter <u>24"</u>		7. Structural Conditio	n: Goud, HDPE		
8. Photographs (in	clude camera nam	ne/#) Pac	d		1:3= =	- 6
				-abk flow.		ю е. р.
				of water in end of pipe		
			es in yes, depund	of water in end of pipe	L	
If No, take photogra	phs of outfall and	record any pe	ertinent observations in c	comments. If Yes, continue		
11. Does the discha	ging water exhibi	t any of the fol	llowing (if yes, describe	in comments):		
11. Does the discha	ging water exhibi	t any of the fol	llowing (if yes, describe	in comments):		Y
11. Does the discha Odors? 🖸 No 🛛	ging water exhibi Yes Co	t any of the fol blor? I Clear	llowing (if yes, describe □ Cloudy/Muddy		Colored	Y
11. Does the discha Odors? 🖸 No 🗖 Floatables? 🗹 Non	rging water exhibi Yes Co e □ Moving oil	t any of the fol blor? I Clear y sheen I St	llowing (if yes, describe Cloudy/Muddy urface scum Coopy	in comments): Clarity? 🗹 Clear 🗖	Colored er (describe)	
11. Does the discha Odors? 🖸 No 🗖 Floatables? 🖸 Non 12. Vegetation 🗍	rging water exhibi Yes Co e ロ Moving oil	t any of the fol blor? I Clear y sheen I St	llowing (if yes, describe Cloudy/Muddy urface scum Coopy	in comments): Clarity? 🗹 Clear 🗖 suds 🗆 Debris 🗆 Oth	Colored er (describe)	
11. Does the discha Odors? 🖸 No Floatables? 🗹 Non 12. Vegetation <b>Part 3. Field Analy</b>	rging water exhibi Yes Co e D Moving oil Vont	t any of the fol olor? I Clear y sheen I Si	Ilowing (if yes, describe	in comments): Clarity? 🗹 Clear 🗖 suds 🗆 Debris 🗆 Oth	Colored er (describe)	
11. Does the discha Odors? 🖸 No 🗖 Floatables? 🗹 Non 12. Vegetation <u>1</u> <b>Part 3. Field Analy</b> 14. Flow	rging water exhibi Yes Co e D Moving oil Vont rses gal/min Of	t any of the fol blor? I Clear y sheen I St	Ilowing (if yes, describe Cloudy/Muddy urface scum Soapy 13. Biology Medium High	in comments): Clarity? 🗹 Clear 🗖 suds 🗆 Debris 🗆 Oth	Colored er (describe)	
11. Does the discha Odors? No Floatables? No 12. Vegetation <u></u> <b>Part 3. Field Analy</b> 14. Flow 15. Previous observ	rging water exhibi Yes Co e D Moving oil Vont rses gal/min Of ations of baseline	t any of the fol olor? I Clear y sheen I Si Si Low I dry weather flo	Ilowing (if yes, describe	in comments): Clarity? 🗹 Clear 🗖 suds 🗆 Debris 🗆 Oth	Colored er (describe)	
11. Does the discha Odors? No Floatables? No 12. Vegetation <u></u> <b>Part 3. Field Analy</b> 14. Flow 15. Previous observ	rging water exhibi Yes Co e D Moving oil Vont rses gal/min Of ations of baseline	t any of the fol olor? I Clear y sheen I Si Si Low I dry weather flo	Ilowing (if yes, describe	in comments): Clarity? 🗹 Clear 🗖 suds 🗆 Debris 🗆 Oth None	l Colored er (describe)	
11. Does the discha Odors? No Floatables? No 12. Vegetation <u></u> <b>Part 3. Field Analy</b> 14. Flow 15. Previous observ 16. Is an illicit disch	rging water exhibit Yes Co e D Moving oil Vont rses gal/min Of ations of baseline arge suspected at	t any of the fol olor? I Clear y sheen I Si Si Clear y sheen I Si Si t the outfall?	Ilowing (if yes, describe Cloudy/Muddy Furface scum Soapy 13. Biology Medium High Iow? <u>none</u> Medium Yes Outf	in comments): Clarity? 🗹 Clear 🗖 suds 🗆 Debris 🗆 Oth	l Colored er (describe)	
11. Does the discha Odors? No Floatables? No 12. Vegetation <u></u> <b>Part 3. Field Analy</b> 14. Flow 15. Previous observ 16. Is an illicit disch If No, proceed to ne	rging water exhibit Yes Co e D Moving oil Vont rses gal/min Of ations of baseline arge suspected at arge suspected at	t any of the fol olor? I Clear y sheen I Si t Low I dry weather fil t the outfall?	Ilowing (if yes, describe Cloudy/Muddy Furface scum Soapy 13. Biology Medium High Iow? <u>none</u> Medium Yes Outf	in comments): Clarity? In Clear In suds In Debris In Other None All is full of trass toring recommendations in	l Colored er (describe)	
11. Does the discha Odors? No Floatables? No 12. Vegetation <u></u> <b>Part 3. Field Analy</b> 14. Flow 15. Previous observ 16. Is an illicit disch	rging water exhibit Yes Co e D Moving oil Vont rses gal/min Of ations of baseline arge suspected at arge suspected at	t any of the fol olor? I Clear y sheen I So dry weather flo t the outfall? Duplicat	Ilowing (if yes, describe	in comments): Clarity? In Clear In suds In Debris In Other None All is full of trass toring recommendations in	l Colored er (describe)	
11. Does the discha Odors? No Floatables? No 12. Vegetation <u></u> <b>Part 3. Field Analy</b> 14. Flow 15. Previous observ 16. Is an illicit disch <i>If No, proceed to ne</i> 17. Water Quality <i>J</i>	rging water exhibit Yes Co e D Moving oil Vont ses gal/min Of ations of baseline arge suspected at arge suspected at at outfall. If Yes, co analyses	t any of the fol olor? I Clear y sheen I So dry weather flo t the outfall? Duplicat	Ilowing (if yes, describe	in comments): Clarity? Clear c suds clebris cloth None All is full of trass toring recommendations in No clear	l Colored er (describe)	

mg/L

mg/L

NTU

mg/L

mg/L

NTU

≥ 1.0 mg/L

≥ 0.5 mg/L

≥ 250 NTU

**Total copper** 

**Total phenols** 

#### Part 4. Comments

Turbidity

Than pipe Same head wall as stream.

Green algae downstream

150/10

0

0.43

Outfall grate Full of trash. Report to maintenance.

mg/L

mg/L

NTU

Not at the end of Baranof, closer to meadow Creek

#### Revised January 2021

<b>Dry Weather</b>	Screening	Field	Data	Form
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Municipality of Anchorage APDES Monitoring Program

Watershed: _]	FR		Outfall Number: <u> </u>	390-2	<u>L</u>
Part 1. Genera	I Information.				
1. Date (2-)	6-2022	Time	13:55		
	KG, MA		quality analyses conduct	ed bv 🔛	-
	st rain event 🛛 More		s than 48 hours	····/	5
		inches 5. Measured at v		Steven	J Intl. Arport
Part 2. Visual (					
		7. Structural C	andition. Goal Mr	105	
8. Photographs	(include camera name,	/#) <u> Pad</u>			
9. Suitable for s	ampling under DWS Pr	rogram? 🗆 No 🖾 Yes			
10. Water flowi	ing from end of pipe?	🗆 No 🖾 Yes 👘 If yes,	depth of water in end of	ріре <u> </u>	
If No, take photo	graphs of outfall and r	ecord any pertinent observati	ons in comments. If Yes, c	continue.	
11. Does the disc	charging water exhibit a	any of the following (if yes, de	escribe in comments):		
Odors? 🖾 No	🗆 Yes 🛛 Colo	or?	ddy Clarity? 🛛 Cl	ear □C	olored
	/	sheen 🗆 Surface scum 🗆			
Part 3. Field Ar					
15. Previous obs 16. Is an illicit d	ervations of baseline di ischarge suspected at t	Low □ Medium □ Hi ry weather flow? <u>Sime'lar</u> the outfall? ☑ No □ Yes ntinue. Describe any additione	to previous inve		
17. Water Qual	ity Analyses	Development and a sellent	ed? 🗆 No 🗆 Yes 🏼 🏚	Ma	
		Duplicate sample collect		ЧН	
Parameter	Primary Sample	e Duplicate Sample		k	Program Threshold
рН	Primary Sample	e Duplicate Sample	Equipment Blan	k units	≤ 4.0 or ≥ 9.0
pH Total chlorii	Primary Sample	e Duplicate Sample units mg/L	Equipment Blan units mg/L	k units mg/L	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L
рН	Primary Sample	e Duplicate Sample units mg/L mg/L	Equipment Blan	k units	≤ 4.0 or ≥ 9.0
pH Total chlorin Detergents	Primary Sample	e Duplicate Sample units mg/L mg/L mg/L	e Equipment Blan units mg/L mg/L	k units mg/L mg/L	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L ≥ 1.0 mg/L
pH Total chlorin Detergents Total coppe	Primary Sample	e Duplicate Sample units mg/L mg/L mg/L mg/L	Equipment Blan units mg/L mg/L mg/L	k units mg/L mg/L mg/L	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L ≥ 1.0 mg/L ≥ 1.0 mg/L
pH Total chlorin Detergents Total coppe Total pheno Turbidity Part 4. Comme Some gr Sprinkler	Primary Sample ne r ols nts een algae or on in neigh	e Duplicate Sample units mg/L mg/L mg/L mg/L NTU NTU	e Equipment Blan units mg/L mg/L mg/L mg/L NTU	k units mg/L mg/L mg/L NTU	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L ≥ 1.0 mg/L ≥ 1.0 mg/L ≥ 0.5 mg/L
pH Total chlorin Detergents Total coppe Total pheno Turbidity Part 4. Comme Some gr Sprinkler Some gr	Primary Sample ne r vis nts een algae or on in neigh debnis in grat	e Duplicate Sample units mg/L mg/L mg/L mg/L NTU NTU	Equipment Blan units mg/L mg/L mg/L mg/L NTU NTU	k units mg/L mg/L mg/L NTU	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L ≥ 1.0 mg/L ≥ 1.0 mg/L ≥ 0.5 mg/L ≥ 250 NTU

Revised January 2021

PS: 4

### **Dry Weather Screening Field Data Form**

Municipality of Anchorage APDES Monitoring Program

Watershed: <u>ER</u> Outfall Number: <u>1417 - 1</u>						
Part 1. General Infor	mation.	· ·	n (k. 1921) St. 1921			
1. Date (1/1/2	022	Time <u>  :</u> @	.5			
2. Field Crew KG	mA	Water quality	y analyses conducted by	JA		
	event 🛛 More than 48			/		
				الم مع	,	
4. Size of last rain eve	ntinches	5. Measured at weather	station Ted Stevi	ens Intl: Airp	<u>h:†</u>	
Part 2. Visual Observ			1.0			
6. End of pipe diamete	er_12"	7. Structural Condition	n: Good HPPE	w collar		
	le camera name/#) <u> </u>		•	1 -	11.	
		□ No				
		/				
10. Water flowing from	n end of pipe? 🛛 No	☑ Yes If yes, depth	of water in end of pipe	1		
If No, take photograph	s of outfall and record an	y pertinent observations in (	comments. If Yes, continue	•		
11. Does the dischargin	g water exhibit any of th	e following (if yes, describe	in comments):			
		lear Cloudy/Muddy		Colored		
,						
Floatables? 🖸 None	Moving oily sheen	Surface scum     Soapy	suds 🛛 Debris 🗖 Oth	er (describe)		
12. Vegetation	ne	13. Biology	None	40	00	
Part 3. Field Analyse	5	0			-0-	
	gal/min OR 🗆 Low					
	ns of baseline dry weath		2 350ms S>	-G	93 1 - 24	
16. Is an illicit discharg	e suspected at the outfa	ll? 🗹 No 🛛 Yes				
If No, proceed to next o	utfall. If Yes, continue. D	escribe any additional moni	toring recommendations in	comments.	311 	
17. Water Quality Ana	lvses Dur	olicate sample collected?				
	- 14 - S <sub>ee</sub>	10	24 A A	196 off 0=	a'g	
Parameter pH	Primary Sample	Duplicate Sample units	Equipment Blank units	Program Threshold $\leq 4.0 \text{ or } \geq 9.0$	- 24	
Total chlorine	<u>7.4</u> units mg/L	mg/L	mg/L	≤ 4.0 or 2 9.0 ≥ 1.0 mg/L	11	
Detergents	mg/L	mg/L	mg/L	≥ 1.0 mg/L	-1	
Total copper	mg/L	mg/L	mg/L	≥ 1.0 mg/L	<del>.</del> 313	
Total phenols	mg/L	mg/L	mg/L	≥ 1.0 mg/L ≥ 0.5 mg/L		
		NTU	NTU	≥ 0.5 mg/L ≥ 250 NTU		
			I INTER	· ////////////////////////////////////		
Turbidity	NTU	, internet in the second secon		Ezbollito	_	
	NIU			22501110	_	
	NIU			2250110	_	

Good defined downstream channel possible ground water in Altration counds in

pipe)

**Municipality of Anchorage APDES Monitoring Program** 

	atershed: <u>ER</u>		- Out	fall Number: <u>(HDR)</u>	1450-2	
Pa	rt 1. General Inf	ormation.				
1.	Date 10-16-2	022	Time <u>11:39</u>			
2.	Field Crew <u>KG</u>	, MA	Water quality	y analyses conducted by		1
3.	Time since last ra	in event 🗹 More than 48 h	ours 🛛 Less than 4	48 hours		
4.	Size of last rain ev	ventinches	5. Measured at weather	station Ted Steven	S Intl. Arrp	erf.
Par	rt 2. Visual Obse	rvations				
6.	End of pipe diame	eter <u>30"</u>	7. Structural Conditio	on: Good, HDPE		
o.		ude camera name/#) <u>  Pa</u> ling under DWS Program?		Ų:		
						8
10.	Water flowing fr	om end of pipe? 🗆 No 🛛 🛛	Yes If yes, depth	of water in end of pipe <u></u>	75 "	
If N	io, take photograp	hs of outfall and record any	pertinent observations in a	comments. If Yes, continue		
11	Does the dischare	ing water exhibit any of the	following lif ves describe	in comments):		4.8
		(es Color? I Cle		•	A Sugaran A	
			••••••	·		
Floa	atables? 🗹 None	□ Moving oily sheen □	🛛 Surface scum 🛛 🖾 Soapy	suds 🛛 Debris 🖾 Oth	er (describe)	
12.	Vegetation N	one	13. Biology	None	1126	
Dat	rt 3. Field Analys	200			100	
	•		/			
14.	Flow	gal/min OR 🗆 Low	🛛 Medium 🛛 High			
15.	Previous observat	tions of baseline dry weathe	rflow? <u>none</u> .	<u>A</u>	20	
	Is an illicit discha	Irge suspected at the outfall	? 🛛 No 🗌 Yes			
16.						
	o, proceed to next	t outfall. If Yes, continue. De	scribe any additional monit	-	i comments.	
			icate sample collected?	]No □Yes N/A		
If N	Water Quality A	nalyses Dupi	·····			
If N		· · · · · · · · · · · · · · · · · · ·		Equipment Blank	Program Threshold	7
If N	Water Quality An Parameter pH	Primary Sample 7, 9 units	Duplicate Sample units	Equipment Blank units	Program Threshold $\leq 4.0 \text{ or } \geq 9.0$	
If N	Parameter	Primary Sample	Duplicate Sample units mg/L	units mg/L		
If N	Parameter pH Total chlorine Detergents	Primary Sample 7,9 units mg/L mg/L	Duplicate Sample units mg/L mg/L	units mg/L mg/L	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L ≥ 1.0 mg/L	
If N	Parameter pH Total chlorine Detergents Total copper	Primary Sample 7,9 units mg/L mg/L mg/L	Duplicate Sample units mg/L mg/L	units mg/L mg/L mg/L	<pre>≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L ≥ 1.0 mg/L ≥ 1.0 mg/L</pre>	
If N	Parameter pH Total chlorine Detergents	Primary Sample 7,9 units mg/L mg/L	Duplicate Sample units mg/L mg/L	units mg/L mg/L	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L ≥ 1.0 mg/L	

### Than pipe. (Outfall has some sediment buildup Muddy downstream channel

0

Municipality of Anchorage APDES Monitoring Program

Watershed: <u>ER</u> Outfall Number: <u>1451-1</u>						
Part 1. General Inf	ormation.			ίč.,		
1. Date <u>(0-16-20</u>	22	Time <u>10:4</u>	U			
2. Field Crew <u>KG</u>	MA	Water quality	y analyses conducted by	KG, MA		
3. Time since last ra	in event Ø More than 48 h			A 6		
4. Size of last rain ev	ventinches	5. Measured at weather	station Ted Steven	r. Intl. Arrport		
Part 2. Visual Obse	rvations					
6. End of pipe diame	eter20''	7. Structural Condition	n: Good, HDPE w	/ collar		
	ude camera name/#)Pa	A			10	
			W 20			
<ol><li>Suitable for samp</li></ol>	ling under DWS Program?					
10. Water flowing fr	om end of pipe? 🗆 No 🛛 🖥	Yes If yes, depth	of water in end of pipe $\underline{\mathbb{V}}$	4		
f No, take photograp	hs of outfall and record any	pertinent observations in	comments. If Yes, continue			
	ing water exhibit any of the					
Ddors? 🖾 No 🗆 ١	les Color? 🗹 Cle	ear 🛛 Cloudy/Muddy	Clarity? 🖸 Clear 🛛	Colored	10	
Floatables? 🗹 None	Moving oily sheen	□ Surface scum <sup>□</sup> 🖬 Soapy	suds 🗆 Debris 🗖 Oth	er (describe)		
	one			i s i		
		15. Biology				
Part 3. Field Analys	ies					
L4. Flow	gal/min OR 🗆 Low	🗹 Medium 🛛 High				
전화(영향) [1]	12		1. KO			
5. Previous observat	tions of baseline dry weathe	r flow? <u>none</u>	1145 - U		-	
.6. Is an illicit discha	rge suspected at the outfall	? 🗹 No 🛛 Yes 🗛	imal cercass do	wn etcam		
f No. proceed to next	outfall. If Yes, continue. De	scribe anv additional moni	torina recommendations in	comments.		
	nalyses Dupl		_			
	14A			Descurry Threadedd	Ten	
Parameter pH	Primary Sample	Duplicate Sample           7.7         units	Equipment Blank units	Program Threshold $\leq 4.0 \text{ or } \geq 9.0$	19.40	
Total chlorine	Omg/L	O mg/L	mg/L	≥ 1.0 mg/L	- 000	
Detergents	mg/L	0 mg/L	0 mg/L	≥ 1.0 mg/L	<b>3</b> 0	
Total copper	F.O / T.O mg/L	FO/TO mg/L	F:0 / T:0 mg/L	≥ 1.0 mg/L	-	
Total phenols	O mg/L	© mg/L	o mg/L	≥ 0.5 mg/L		
Turbidity	1.49 NTU	1.37 NTU	0.52 NTU	≥ 250 NTU		

#### Part 4. Comments

Ripropp in downstream channel.

Beaver careass found beside streambed appears to be old.

	RE	Our	tfall Number: <u>392</u> -	
Part 1. General Info	ormation.	a 8		- <u>3</u> 4
1. Date <u>(e-16-7</u>	022	Time <u>13</u>	40	
2. Field Crew <u>K.G.</u>	ma	Water qualit	y analyses conducted by	
3. Time since last rai	n event 🛛 More than 48 l	hours 🛛 Less than	48 hours	
4. Size of last rain ev	entinches	5. Measured at weathe	rstation Ted steve	ns Inthi Airpoi
Part 2. Visual Obse	rvations			
	iter <u>12"</u>			
	ude camera name/#) <u>  P</u>			
<ol><li>Suitable for sample</li></ol>	ing under DWS Program?	No Yes Spm4	stagnant water	
LO. Water flowing fr	om end of pipe? I No [	☐ Yes If yes, depth	of water in end of pipe	RID
f No, take photograp	hs of outfall and record any	v pertinent observations in	comments. If Yes, continue	ā.
1 Does the discharg	ing water exhibit any of the	following (if yes, describe	in comments):	
	- Alexandre	N/A		
	es colory Li Cli	ear 🛛 Cloudy/Muddy	Clarity?     Clear	
			-	
	☐ Moving oily sheen [		-	
loatables? 🖉 None		□ Surface scum □ Soapy	y suds 🗆 Debris 🖾 Oth	er (describe)
loatables? PNone	☐ Moving oily sheen [	□ Surface scum □ Soapy	y suds 🗆 Debris 🖾 Oth	er (describe)
Ioatables? PNone	☐ Moving oily sheen [ es	□ Surface scum □ Soapy 13. Biology	y suds 🗆 Debris 🖾 Oth	er (describe)
Ioatables? PNone L2. Vegetation Part 3. Field Analys L4. Flow	☐ Moving oily sheen [ es gal/min OR ☐ Low	□ Surface scum □ Soapy 13. Biology □ Medium □ High <sup>1</sup>	y suds Debris DOth	er (describe)
Ioatables? PNone L2. Vegetation Part 3. Field Analys L4. Flow	☐ Moving oily sheen [ es	□ Surface scum □ Soapy 13. Biology □ Medium □ High <sup>1</sup>	y suds Debris DOth	er (describe)
Floatables?       PNone         L2.       Vegetation         Part 3. Field Analys         L4.       Flow         L5.       Previous observat	☐ Moving oily sheen [ es gal/min OR ☐ Low	Surface scum Soapy I3. Biology Medium High	y suds Debris DOth	er (describe)
Floatables? Prone L2. Vegetation Part 3. Field Analys L4. Flow L5. Previous observat L6. Is an illicit discha	□ Moving oily sheen [ es gal/min OR □ Low ions of baseline dry weathe	Surface scum Soapy I3. Biology Medium High  Medium High  I7. Mone	y suds Debris DOth	er (describe)
Floatables? PNone L2. Vegetation Part 3. Field Analys L4. Flow L5. Previous observat L6. Is an illicit discha f No, proceed to next	☐ Moving oily sheen [ es gal/min OR ☐ Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. De	Surface scum Soapy I3. Biology Medium High  Medium High  r flow?  No Yes cribe any additional moni	itoring recommendations in	er (describe)
Floatables? Prone 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit dischar 16. Is an illicit dischar 17. Water Quality An	☐ Moving oily sheen [ es gal/min OR ☐ Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. De palyses Dup	Surface scum □ Soapy 13. Biology □ Medium □ High er flow? I? ☑ No □ Yes escribe any additional moni licate sample collected? □	itoring recommendations in	er (describe)
Floatables? PNone 2. Vegetation Part 3. Field Analyse 4. Flow 5. Previous observat 6. Is an illicit discha f No, proceed to next 7. Water Quality An Parameter	□ Moving oily sheen □ es gal/min OR □ Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. De palyses Dup	□ Surface scum □ Soapy 13. Biology □ Medium □ High <sup>1</sup> er flow? <u>pone</u> 1? ☑ No □ Yes escribe any additional moni licate sample collected? □ <b>Duplicate Sample</b>	itoring recommendations in No Yes	er (describe)
Floatables? PNone 2. Vegetation Part 3. Field Analyse 4. Flow 5. Previous observat 6. Is an illicit dischar f No, proceed to next 7. Water Quality An Parameter pH	☐ Moving oily sheen [ es gal/min OR ☐ Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. De nalyses Dup Primary Sample units	Surface scum Soapy  Surface scum Soapy  Medium High  Medium High  r flow?  No Yes  scribe any additional moni licate sample collected?  Duplicate Sample  units	itoring recommendations in No Yes Shine Equipment Blank units	er (describe) a comments. Program Threshold ≤ 4.0 or ≥ 9.0
<ul> <li>Floatables? Provide the second state of the second st</li></ul>	□ Moving oily sheen [ es gal/min OR □ Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. De valyses Dup Primary Sample units ng/L	Surface scum Soapy  Surface scum Soapy  Medium High  Medium High  Medium Yes  Scribe any additional moni  Scribe any additional moni  Scribe Sample  Units  Medium	itoring recommendations in No Yes Inon Equipment Blank units mg/L	er (describe) a comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$
<ul> <li>Floatables? PNone</li> <li>12. Vegetation</li> <li>Part 3. Field Analys</li> <li>14. Flow</li> <li>15. Previous observat</li> <li>16. Is an illicit dischart</li> <li>16. Is an illicit dischart</li> <li>17. Water Quality An</li> <li>Parameter</li> <li>pH</li> <li>Total chlorine</li> <li>Detergents</li> </ul>	□ Moving oily sheen □ esgal/min OR □ Low ions of baseline dry weathe rge suspected at the outfall outfall. If Yes, continue. De halyses Dup Primary Sample units mg/L mg/L	Surface scum □ Soapy  13. Biology  Medium □ High  Medium □ High  flow? No □ Yes  scribe any additional moni licate sample collected? □  Duplicate Sample  units  mg/L  mg/L	itoring recommendations in No Yes Shine Equipment Blank units mg/L mg/L	er (describe) a comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$
Floatables? PNone L2. Vegetation Part 3. Field Analys L4. Flow L5. Previous observat L6. Is an illicit dischar f No, proceed to next Total chlorine Detergents Total copper	□ Moving oily sheen □ es gal/min OR □ Low ions of baseline dry weather rge suspected at the outfall outfall. if Yes, continue. De halyses Dup Primary Sample units mg/L mg/L mg/L	Surface scum Soapy  Surface scum Soapy  13. Biology  Medium High  Medium High  Medium High  Medium Yes  Scribe any additional moni  Scribe any additional moni  Scribe any additional moni  Complicate Sample  Units  Mg/L  M	itoring recommendations in No Yes Shine Equipment Blank units mg/L mg/L	er (describe) a comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$
<ul> <li>L2. Vegetation</li> <li>Part 3. Field Analys</li> <li>L4. Flow</li> <li>L5. Previous observat</li> <li>L6. Is an illicit dischart</li> <li><i>f No, proceed to next</i></li> <li>L7. Water Quality An</li> <li>Parameter</li> <li>pH</li> <li>Total chlorine</li> <li>Detergents</li> </ul>	□ Moving oily sheen □ es gal/min OR □ Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. De valyses Dup Primary Sample 	Surface scum □ Soapy  13. Biology  Medium □ High  Medium □ High  flow? No □ Yes  scribe any additional moni licate sample collected? □  Duplicate Sample  units  mg/L  mg/L	itoring recommendations in No Yes Shime Equipment Blank units mg/L mg/L	er (describe) a comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$

Concrete in downstream channel

Can access between houses along druinage row

14

0	2	
r -	$\mathcal{O}$	 0

Municipality of Anchorage APDES Monitoring Program

Part 1. General Inf	ormation.			-
1. Date 6/22/	22	Time <u>1업</u> : 이	0	
2. Field Crew <u>K</u>	_		analyses conducted by	NA 601 -
	14			
3. Time since last ra	in event AMore than 48 h	nours 🛛 Less than 4	la hours	
4. Size of last rain ev	/entinches	5. Measured at weather	station Ted stevens	Int. Arport
Part 2. Visual Obse	<u>6/20/22, 3:200A</u> rvations		¢	
			- and (su	(comments)
5. End of pipe diame	eter <u>16in</u>	7. Structural Conditio	n: <u>9</u> 5509,(32	c commental
	ude camera name/#)			
	ling under DWS Program?			
		*		
10. Water flowing fr	om end of pipe? 💭 No 🏌	A Yes If yes, depth o	of water in end of pipe	F.P
f No, take photograp	hs of outfall and record any	pertinent observations in c	omments. If Yes, continue	
11 Does the dischare	ing water exhibit any of the	following (if yes, describe)	in comments).	
	ing water exhibit any of the			en Meri (2000) -
	ring water exhibit any of the /es Color? 전 Cl			Colored
Odors? No		ear 🛛 Cloudy/Muddy	Clarity? 🕅 Clear 🗆	
Ddors? 🕅 No 🗆 1 Floatables? 🖾 None	es Color? کر Color ط Moving oily sheen ا	ear □ Cloudy/Muddy □ Surface scum □ Soapy	Clarity? 🕹 Clear 🗆 suds 🗆 Debris 🗖 Oth	er (describe)
Ddors? XNO D Floatables? X None 12. Vegetation	(es Color? ∑Cle ☐ Moving oily sheen [	ear □ Cloudy/Muddy □ Surface scum □ Soapy	Clarity? 🕹 Clear 🗆 suds 🗆 Debris 🗖 Oth	er (describe)
Ddors? XNO D Floatables? X None	(es Color? ∑Cle ☐ Moving oily sheen [	ear □ Cloudy/Muddy □ Surface scum □ Soapy	Clarity? 🕹 Clear 🗆 suds 🗆 Debris 🗖 Oth	er (describe)
Ddors? XNO D Floatables? X None L2. Vegetation Part 3. Field Analys	res Color? Color?	ear Cloudy/Muddy Surface scum Soapy	Clarity? 🕹 Clear 🗆 suds 🗆 Debris 🗖 Oth	er (describe)
Ddors? XNO D Floatables? XNO L2. Vegetation Part 3. Field Analys	res Color? Color Moving oily sheen C ses gal/min OR Color	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High	Clarity? 🖄 Clear 🗆 suds 🗆 Debris 🗆 Oth	er (describe)
Dodors? XNO IN Hoatables? XNO None 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat	res Color? Color Moving oily sheen C gal/min OR Color toos of baseline dry weather	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High er flow? <u>2019, 2021, J</u>	Clarity? 🖄 Clear 🗆 suds 🗆 Debris 🗆 Oth	er (describe)
Ddors? XNO IN Floatables? X None 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat	res Color? Color Moving oily sheen C ses gal/min OR Color	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High er flow? <u>2019, 2021, J</u>	Clarity? 🖄 Clear 🗆 suds 🗆 Debris 🗆 Oth	er (describe)
Ddors? No D Floatables? None 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat	res Color? Color Moving oily sheen C gal/min OR Color toos of baseline dry weather	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High er flow? <u>2019, 2021, J</u> I? ÇKNO Yes	Clarity? XClear suds Debris DOth	er (describe)
Ddors? No D Floatables? No D 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit discha f No, proceed to next	res Color? Color? Color?	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High er flow? <u>2019, 2021, 1</u> ? ÇKNO Yes scribe any additional monit	Clarity? XClear	er (describe)
Dodors? No IN Floatables? No IN 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit discha f No, proceed to next 17. Water Quality An	Image: Color?       Image: Color?<	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High flow? <u>2019, 2021, 1</u> PKN0 Yes scribe any additional monit	Clarity? XClear	er (describe)
Ddors? No D Floatables? No D 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit discha f No, proceed to next	res Color? Color Moving oily sheen C gal/min OR Color tions of baseline dry weather trige suspected at the outfall coutfall. If Yes, continue. De	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High er flow? <u>2019, 2021, 1</u> ? ÇKNO Yes scribe any additional monit	Clarity? XClear	er (describe)
Dodors? No IN Floatables? No IN 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat 15. Previous observat 16. Is an illicit discha 16. Is an illicit discha 17. Water Quality Al	(es       Color? Color         Image: Moving oily sheen       Image: Moving oily sheen         inge: gal/min       OR         gal/min       OR         inge: ga	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High flow? <u>2019, 2021, 1</u> P CKNO Yes scribe any additional monit	Clarity? KClear	er (describe)
Dodors? No IN Floatables? No IN Floatables? None L2. Vegetation Part 3. Field Analys L4. Flow L5. Previous observation L5. Previous observation L5. Is an illicit dischar f No, proceed to next L7. Water Quality And Parameter pH	Image: See See See See See See See See See S	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High flow? 2019, 2021, 4 Proventional monit Scribe any additional monit Scribe Sample collected? Duplicate Sample units	Clarity? Clear	er (describe) <u>prec: pitek</u> / floci comments. Program Threshold ≤ 4.0 or ≥ 9.0
Odors? No IN Floatables? None 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit discha 16. Is an illicit discha 17. Water Quality An Parameter pH Total chlorine Detergents Total copper	(es       Color? Color?         Image: Moving oily sheen       Image: Moving oily sheen         ises	ear Cloudy/Muddy Surface scum Soapy	Clarity? Clear	er (describe) $p_{rec: pitck} / floci comments. Program Threshold \leq 4.0 \text{ or } \geq 9.0\geq 1.0 \text{ mg/L}$
Odors? No IN Floatables? None 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit discha 17. Water Quality An Parameter pH Total chlorine Detergents	Image: Sees	ear Cloudy/Muddy Surface scum Soapy 13. Biology Medium High flow? 2019, 2021, 4 Provide the sample collected? Duplicate Sample units mg/L mg/L	Clarity? Clear	er (describe) $p_{rec}: p_{tele} / floce$ comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$

HDPE SNOOTH Wall -1 collar. Flows into main channel orange iron floc. Floc Hows downsheath into main channel

## Dry Weather Screening Field Data Form Municipality of Anchorage APDES Monitoring Program

Watershed:     FSH     Outfall Number:     79 - 353						
Part 1. General Info	ormation.	1	2	w 77551		
1. Date 6122	122	Time_B+16	)			
2. Field Crew <u>KG</u>	IB	Water quality	analyses conducted by	N/A		
	n event 🗖 More than 48 h					
4. Size of last rain ev		5. Measured at weather	station Ted stevens	Inthe Airport		
Part 2. Visual Obser	6/20/12, <u>3:00</u> Am rvations	<u> </u>				
6 End of nine diame	ter 48 in 4	7 Structural Conditio	n: Fait (ar	comments)		
	ude camera name/#) <u>  p e</u>					
	ing under DWS Program?					
10. Water flowing fro	om end of pipe? 🗆 Xio 🛛	Yes If yes, depth o	of water in end of pipe	714		
f No, take photograpi	hs of outfall and record any	pertinent observations in a	comments. If Yes, continue.			
11. Does the dischargi	ing water exhibit any of the	following (if yes, describe	in comments):			
	es Color? 🗆 Cle			Colored		
	□ Moving oily sheen □					
12. Vegetation		13. Biology				
Part 3. Field Analyse	es					
14. Flow	gal/min OR 🗆 Low	🗆 Medium 🛛 High 🗹	ione			
L5. Previous observati	ions of baseline dry weathe	rflow? none	- W 9	X		
	rge suspected at the outfall	<u>20</u>	-			
	Be suspected at the outlan					
		N. 281	16 = C			
	outfall. If Yes, continue. Des	scribe any additional monit	coring recommendations in	comments.		
f No, proceed to next	outfall. If Yes, continue. Des alyses Dupli			comments.		
f No, proceed to next	Louiste.			comments. Program Threshold		
if No, proceed to next 17. Water Quality An Parameter pH	Primary Sample Units	icate sample collected?	No 🗆 Yes 😿 N/A Equipment Blank units	Program Threshold ≤ 4.0 or ≥ 9.0		
f No, proceed to next L7. Water Quality An Parameter pH Total chlorine	Primary Sample Units mg/L	icate sample collected?	No □Yes ゼル/A Equipment Blank units mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L		
f No, proceed to next L7. Water Quality An Parameter pH Total chlorine Detergents	Primary Sample Units mg/L mg/L	icate sample collected?	No 🗆 Yes 🗹 N/A Equipment Blank units mg/L mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L		
If No, proceed to next 17. Water Quality An Parameter pH Total chlorine Detergents Total copper	Primary Sample Units mg/L mg/L mg/L	icate sample collected?	No Yes N/A Equipment Blank units mg/L mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L           ≥ 1.0 mg/L		
if No, proceed to next 17. Water Quality An Parameter pH Total chlorine Detergents	Primary Sample Units mg/L mg/L	icate sample collected?	No Yes KNA Equipment Blank units mg/L mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L		

Dry	Weather	Screening	Field	Data	Form

Municipality of Anchorage APDES Monitoring Program

Watershed: <u>FSH</u>		Out	fall Number:	-1
Part 1. General Info	rmation.		100 500	
1. Date 6 22/2	2	Time_09:1	23	
	JB		 y analyses conducted by	N/A
	event More than 48 h			
	-			Tath Anast
	ent 0.03 inches 6/20/22, 3:00 Am	5. Measured at weather	station <u>Ted</u> stevens	
Part 2. Visual Obser	vations			
6. End of pipe diamet	er <u>/0 in</u>	7. Structural Condition	on: Fair, thin p	plastic w/ rullar
8. Photographs (inclu	de camera name/#) <u> </u>	ad		
9. Suitable for sampli	ng under DWS Program?	No Ves no flo	w	10 <sup>10</sup> 10
	m end of pipe? 🗖 No 🛛 🛛	955		
	s of outfall and record any			
	ng water exhibit any of the es Color? 🛛 Cle	B N/A		Colorad
•				Colored
	□ Moving oily sheen □	E 500		
12. Vegetation		13. Biology		<u> </u>
Part 3. Field Analyse	s xx	A Dig Al Areana e		] = 3a <u>M</u> _0
14. Flow	gal/min OR 🗆 Low	🗆 Medium 🛛 High 😢 M	JOWE	
15. Previous observation	ons of baseline dry weathe	r flow? none		
	ge suspected at the outfall		× =>>	20 100 100 101
	outfall. If Yes, continue. De	· · · · · · · · · · · · · · · · · · ·	torina recommendations in	comments.
	alyses Dupl			
Parameter	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold
Total chlorine	units mg/L	units mg/L	units mg/L	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L
Detergents	mg/L	mg/L	mg/L	≥ 1.0 mg/L
Total copper	mg/L	mg/L	mg/L	≥ 1.0 mg/L
Total phenols	mg/L	mg/L	mg/L	≥ 0.5 mg/L
Turbidity	NTU	NTU	NTU	≥ 250 NTU
Part 4. Comments	buildup in co	llar HOPE possibly	pipe partia suplined	ily exposed,

PS:4

Watershed: <u>FS</u>	<u>,                                     </u>	Out	fall Number: 555 -	
Part 1. General Infe	ormation.		_	1 - X - X
1. Date 6/22	122	Time <u>/3: 4</u>	3	
2. Field Crew 🗠 🤇	a. JB		y analyses conducted by	NIR
	in event 🖉 More than 48 h			
	vent <u>0,03</u> inches		rstation Ted stevens	Lott Amount
	6/20/22, 3:00AM	J. Wedsured at weather		
Part 2. Visual Obse	rvations			
6. End of pipe diame	eter <u>18</u>	7. Structural Condition	on: good (see	comments)
	ude camera name/#)			
	ling under DWS Program?			
	om end of pipe? 🗹 No	`		
	hs of outfall and record any			
11. Does the discharg	ing water exhibit any of the	e following (if yes, describe	in comments):	K.
Odors? 💭 No 🗖 \			Clarity? 🗆 Clear 🛛	
Floatables? R None	□ Moving oily sheen [		suds <sup>11</sup> Debris DOth	er (describe)
2 2 3 9			Color.	
12. Vegetation		13. Biology		
Part 3. Field Analys	es	ol		8
14. Flow	gal/min OR 🗆 Low	🗆 Medium 🛛 High 🗾	One	
	ions of baseline dry weathe			
	0 0 000	1		
16. Is an illicit discha	rge suspected at the outfall	I? 🖉 No 🗆 Yes		
If No, proceed to next	outfall. If Yes, continue. De	scribe any additional moni	toring recommendations in	comments.
17. Water Quality Ar	alyses Dup	licate sample collected?	No Yes NA	
	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold
Parameter			+	
Parameter pH	units	units	units	≤ 4.0 or ≥ 9.0
	· · · · · · · · · · · · · · · · · · ·	units mg/L	units mg/L	≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L
рH	units	+		
pH Total chlorine	units mg/L	mg/L	mg/L	≥ 1.0 mg/L
pH Total chlorine Detergents	units mg/L mg/L	mg/L mg/L	mg/L mg/L	≥ 1.0 mg/L ≥ 1.0 mg/L
pH Total chlorine Detergents Total copper	units mg/L mg/L	mg/L mg/L mg/L	mg/L mg/L mg/L	≥ 1.0 mg/L ≥ 1.0 mg/L ≥ 1.0 mg/L
pH Total chlorine Detergents Total copper Total phenols	units mg/L mg/L mg/L mg/L	mg/L mg/L mg/L mg/L	mg/L mg/L mg/L mg/L	<ul> <li>≥ 1.0 mg/L</li> <li>≥ 1.0 mg/L</li> <li>≥ 1.0 mg/L</li> <li>≥ 0.5 mg/L</li> </ul>
pH Total chlorine Detergents Total copper Total phenols Turbidity	units mg/L mg/L mg/L mg/L NTU	mg/L mg/L mg/L mg/L NTU	mg/L mg/L mg/L mg/L NTU	<ul> <li>≥ 1.0 mg/L</li> <li>≥ 1.0 mg/L</li> <li>≥ 1.0 mg/L</li> <li>≥ 0.5 mg/L</li> <li>≥ 250 NTU</li> </ul>
pH Total chlorine Detergents Total copper Total phenols	units mg/L mg/L mg/L mg/L NTU	mg/L mg/L mg/L mg/L NTU	mg/L mg/L mg/L mg/L	<ul> <li>≥ 1.0 mg/L</li> <li>≥ 1.0 mg/L</li> <li>≥ 1.0 mg/L</li> <li>≥ 0.5 mg/L</li> <li>≥ 250 NTU</li> </ul>

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### Dry Weather Screening Field Data Form Municipality of Anchorage APDES Monitoring Program

P				-	
Part 1. General Inf	ormation.		D 3		-
I. Date <u>(e-11a-2</u>	022	Time	25 AM		
2. Field Crew <u>K. G</u>	., m.a.	Water qualit	y analyses conducted by		5
3. Time since last ra	in event 🗹 More than 48 h	hours 🛛 Less than	48 hours		
. Size of last rain ev	ventinches	5. Measured at weathe	rstation Tel Steven	s Int Airport	2
Part 2. Visual Obse		D.		4.) -	
5. End of pipe diame	eter_36"	7. Structural Conditi	on: Good		
	ude camera name/#)			140 v.	
	ling under DWS Program?	/ /	through all second	8	
			v	1.1	
.0. Water flowing fr	om end of pipe? 🖸 No 🛛	☑ Yes If yes, depth	of water in end of pipe <u>in</u>	nnecsur #6 le.	
f No, take photograp	ohs of outfall and record any	y pertinent observations in	comments. If Yes, continue	. 7	
1. Does the discharg	ging water exhibit any of the	e following (if yes, describe	in comments):	181	
	Yes Color? SCh Moving oily sheen		Clarity? 🖸 Clear 🗹 y suds 🔲 Debris 🗌 Oth		ige.
loatables? None 2. Vegetation <u>Oro</u>	Moving oily sheen [ ange algae	Surface scum Doopy	y suds 🔲 Debris 🗌 Oth		198
iloatables? I None 2. Vegetation <u>Ora</u> Part 3. Field Analys 4. Flow	Be Moving oily sheen [ <u>ange Algae</u> <b>ses</b> <u>alvery Lo</u> gal/min OR [] Low	Surface scum Disapy 13. Biology	y suds 🔲 Debris 🗌 Oth		198
loatables? None 2. Vegetation <u>Ora</u> Part 3. Field Analys 4. Flow 5. Previous observat	Be Moving oily sheen I ange Algae Ses EVery Lo gal/min OR I Low tions of baseline dry weather	✓ Behind grate order c Surface scum □ Soapy 13. Biology w Medium □ High er flow? <u>Nore</u>	y suds 🔲 Debris 🗌 Oth		196
iloatables? None 2. Vegetation <u>Ora</u> Part 3. Field Analys 4. Flow 5. Previous observat 6. Is an illicit discha	Be Moving oily sheen I ange Algae EVery Lo gal/min OR I Low tions of baseline dry weather arge suspected at the outfal	✓ Behind grate order c Surface scum □ Soapy 13. Biology Medium □ High er flow? <u>Nore</u> I? ☑ No □ Yes	rsuds Debris Oth <u>None</u>	er (describe)	19 <b>e</b>
iloatables? None 2. Vegetation <u>Ora</u> Part 3. Field Analys 4. Flow 5. Previous observat 6. Is an illicit discha	Be Moving oily sheen I ange Algae Ses EVery Lo gal/min OR I Low tions of baseline dry weather	✓ Behind grate order c Surface scum □ Soapy 13. Biology Medium □ High er flow? <u>Nore</u> I? ☑ No □ Yes	y suds Debris Oth <u>None</u>	er (describe)	19 <b>4</b>
Ioatables? None 2. Vegetation <u>Ora</u> Part 3. Field Analys 4. Flow	Moving oily sheen	✓ Behind grate order c Surface scum □ Soapy 13. Biology Medium □ High er flow? <u>Nore</u> I? ☑ No □ Yes	y suds Debris DOth <u>None</u> itoring recommendations in	er (describe)	19e
loatables? ☑ None         2. Vegetation ②ra         Part 3. Field Analys         4. Flow	Moving oily sheen	✓ Behind grate order c         ✓ Surface scum         I3. Biology         ✓	y suds Debris DOth <u>None</u> itoring recommendations in	er (describe)	
Ioatables? ☑ None 2. Vegetation <u>() ra</u> <b>art 3. Field Analys</b> 4. Flow 5. Previous observat 6. Is an illicit discha <i>No, proceed to next</i> 7. Water Quality An Parameter pH	Moving oily sheen	Surface scum Soapy  Surface scum Soapy  13. Biology  Medium High  r flow? <u>Norc</u> No Yes  scribe any additional monitalicate sample collected? [  Duplicate Sample  units	y suds Debris Oth <u>None</u> itoring recommendations in No Yes ビッ/A Equipment Blank units	er (describe)	
Ioatables? ☑ None 2. Vegetation <u>Ora</u> art 3. Field Analys 4. Flow 5. Previous observat 6. Is an illicit discha <i>No, proceed to next</i> 7. Water Quality An Parameter pH Total chlorine	Moving oily sheen	Surface scum     Surface scum     Soapy     Surface scum     Soapy     Soapy     I3. Biology     IMedium     High er flow? <u>Norc</u> I? ⊠ No □ Yes escribe any additional monit licate sample collected? [     Duplicate Sample     units     mg/L	y suds Debris Oth <u>None</u> itoring recommendations in No Yes ビッ/A Equipment Blank units mg/L	er (describe) er (describe) e comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$	
Ioatables? ☑ None 2. Vegetation <u>Ora</u> art 3. Field Analys 4. Flow 5. Previous observat 6. Is an illicit discha 7. Water Quality Analys 7. Water Quality Analys 9H Total chlorine Detergents	Moving oily sheen	✓ Surface scum       Soapy         Surface scum       Soapy         13. Biology         ✓       Medium         I Medium       High         er flow?       No         I?       No         I?       No         I?       No         I?       No         I?       No         I?       No         Iicate sample collected?       Iicate sample         units       mg/L         mg/L       mg/L	y suds □ Debris □ Oth <u>None</u> itoring recommendations in No □ Yes <sup>IS</sup> <sup>N</sup> /A Equipment Blank units mg/L mg/L	er (describe) er (describe) e comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$	
<ul> <li>iloatables? None</li> <li>2. Vegetation <u>Ora</u></li> <li>Part 3. Field Analys</li> <li>4. Flow</li></ul>	Moving oily sheen	Surface scum Surface scum Soapy Surface scum I3. Biology Medium High er flow? Norc Norc Norc Duplicate Sample units mg/L mg/L mg/L	y suds Debris Oth <u>None</u> itoring recommendations in No Yes ビッ/A Equipment Blank units mg/L mg/L	er (describe) er (describe) e comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$	
<ul> <li>iloatables? None</li> <li>2. Vegetation <u>Ora</u></li> <li>Part 3. Field Analys</li> <li>4. Flow</li></ul>	Moving oily sheen	✓ Surface scum       Soapy         Surface scum       Soapy         13. Biology         ✓       Medium         I Medium       High         er flow?       No         I?       No         I?       No         I?       No         I?       No         I?       No         I?       No         Iicate sample collected?       Iicate sample         units       mg/L         mg/L       mg/L	y suds □ Debris □ Oth <u>None</u> itoring recommendations in No □ Yes <sup>IS</sup> <sup>N</sup> /A Equipment Blank units mg/L mg/L	er (describe) er (describe) e comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$	

DS channel

P	s	t	4
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W	atershed: <u>FS</u>	Η	Out	tfall Number: <u>+BAAA</u>	<u>− 684-1</u>
Pa	art 1. General Info	ormation.			1041 W
		2	Time 12:01		
2.	Field Crew KC	)B	Water qualit	y analyses conducted by	P/A
3.	Time since last rai	n event DMOre than 48 h	ours 🛛 🗆 Less than	48 hours	
		rent 0.03 inches 6/20/22, 3:00 Am		rstation Ted steven.	5 Int. Arcport
Pa	irt 2. Visual Obse	rvations			
6.	End of pipe diame	ter <u>1010</u>	7. Structural Condition	on: DODY (see co	mments)
		ude camera name/#)			
9.	Suitable for sampl	ling under DWS Program?	🕅 No 🗆 Yes <u>no f</u> i	ous.	01.9433
10	. Water flowing fro	om end of pipe? 🕱 No 🛛 🛛	] Yes If yes, depth	of water in end of pipe	
		10			
		hs of outfall and record any			
11	. Does the discharg	ing water exhibit any of the	following (if yes, describe	in comments):	
00	lors? 🖾 No 🗆 Y	ing water exhibit any of the 'es Color? □Cle	ear Cloudy/Muddy	Clarity?	Colored
	_	Moving oily sheen			
	0	-			
Pa	rt 3. Field Analys	es <sub>7</sub>			
14	. Flow	gal/min OR 🕅 Low	🗇 Medium 🗇 High 🛛	or no flow	
15	. Previous observat	ions of baseline dry weathe	rflow? none	.U. 1191	· · · · · · · · · · · · · · · · · · ·
16	<ul> <li>Is an illicit discharge</li> </ul>	rge suspected at the outfall	? 🖄 No 🗆 Yes		
		outfall. If Yes, continue. De	- 12 U U	toring recommendations in	comments
			-		comments.
17	. Water Quality An	alyses Dupl	icate sample collected? [	]No □Yes ⊠ №/۸	
	Parameter	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold
	рН	units	units	units	≤ 4.0 or ≥ 9.0
	Total chlorine	mg/L	mg/L	mg/L	≥ 1.0 mg/L
	Detergents	mg/L	mg/L	mg/L	≥ 1.0 mg/L
	Total copper	mg/L	mg/L	mg/L	≥ 1.0 mg/L
	Total phenols	mg/L	mg/L	mg/L	≥ 0.5 mg/L
	Turbidity	NTU	NTU	NTU	≥ 250 NTU
Pa	rt 4. Comments	CMP. corroding downstream a roming out	on bottom. c rganic bubbles or pipe. 2	ulvert unwraveli and stream i inch depth at p	n) not ipr
		access below	ud corner road	house .	

P	5	10	1

Watershed: FS	Η	Out	tfall Number: <u>686</u> -1	l s
Part 1. General Info	ermation.			
1. Date 6122	122	Time <u>10:2</u>	9	
			y analyses conducted by	N/A
	-			
	n event More than 48 h			
4. Size of last rain eve	ent <u>0.03</u> inches <u>6/20/22</u> , 3:00A/	5. Measured at weathe	rstation <u>Ted</u> Stevens	- Joth Arport
Part 2. Visual Obser	vations			
6. End of pipe diame	ter18_i^	7. Structural Condition	on: Fair CMP	w   collar
	ude camera name/#);		-	,
		1.0	X a la mili	÷
		No BYes bock		
10. Water flowing fro	om end of pipe? 🗆 No 🔎	2 Yes If yes, depth	of water in end of pipe <u>k</u>	<u>) în </u>
if No, take photograph	hs of outfall and record any	v pertinent observations in	comments. If Yes, continue	
11. Does the dischargi	ing water exhibit any of the	e following (if yes, describe	in comments):	
	es Color? Dich	ear 🗆 Cloudy/Muddy	Clarity ? - 12 Clear	Colored brawn
			/ suds 🔲 Debris 🔲 Oth	
12. Vegetation		13. Biology		1960 D. 18
Part 3. Field Analyse	es		es =	11
14. Flow	gal/min OR 🗹 Low	🗆 Medium 👘 🗆 High		
	,		watered from cree	
			1	
	ge suspected at the outfall			
If No, proceed to next	outfall. If Yes, continue. De	scribe any additional moni	toring recommendations in	comments.
17. Water Quality An	alyses Dup	licate sample collected?	]No □Yes ☑№/A	
Parameter	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold
рН	units	units	units	≤ 4.0 or ≥ 9.0
Total chlorine	mg/L	mg/L	mg/L	≥ 1.0 mg/L
Detergents	mg/L	mg/L	mg/L	≥ 1.0 mg/L
Total copper	mg/L	mg/L	mg/L	≥ 1.0 mg/L
Total phenois	mg/L	mg/L	mg/L	≥ 0.5 mg/L
Turbidity	NTU	NTU	NTU	≥ 250 NTU
Part 4. Comments		ar 18 in 60 to main stre	ildup in collar	backwatered

PS	5 1	4
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Municipality of Anchorage APDES Monitoring Program

2. Field Crew KG S       Water         3. Time since last rain event More than 48 hours       Less         4. Size of last rain event O.o3 inches       5. Measured at w         6/20/22. 3(50 Am       Part 2. Visual Observations         6. End of pipe diameter 30 inc.       7. Structural Co         8. Photographs (include camera name/#)       10 of Yes         9. Suitable for sampling under DWS Program?       No         10. Water flowing from end of pipe?       No         11. Does the discharging water exhibit any of the following (if yes, de         Odors?       No         Yes       Color?         12. Vegetation       13. Bi         Part 3. Field Analyses         14. Flow       gal/min OR         15. Previous observations of baseline dry weather flow?         16. Is an illicit discharge suspected at the outfall?         17. No, proceed to next outfall. If Yes, continue. Describe any additional	epth of water in end of pipe _ ns in comments. If Yes, contin cribe in comments): dy Clarity? X Clear boapy suds I Debris I C	S Intl. Airport P W Collev 9 in ue. Colored Other (describe)
2. Field Crew KG S       Water         3. Time since last rain event More than 48 hours       Less         4. Size of last rain event O.o3 inches       5. Measured at w         6/20/22. 3(50 Am       Part 2. Visual Observations         6. End of pipe diameter 30 inc.       7. Structural Co         8. Photographs (include camera name/#)       10 of Yes         9. Suitable for sampling under DWS Program?       No         10. Water flowing from end of pipe?       No         11. Does the discharging water exhibit any of the following (if yes, de         Odors?       No         Yes       Color?         12. Vegetation       13. Bi         Part 3. Field Analyses         14. Flow       gal/min OR         15. Previous observations of baseline dry weather flow?         16. Is an illicit discharge suspected at the outfall?         17. No, proceed to next outfall. If Yes, continue. Describe any additional	uality analyses conducted by than 48 hours ather station <u>Ted Stever</u> ndition: <u>۲۵۵ ۲ (M</u> <u>دیک اوred</u> epth of water in end of pipe _ ns in comments. If Yes, contin cribe in comments): dy Clarity? X Clear ioapy suds Debris DC	S Intl. Airport P W Collev 9 in we. Colored Other (describe)
3. Time since last rain event ☑ More than 48 hours       □ Less         4. Size of last rain event <u>0.03</u> inches       5. Measured at w         6. Size of last rain event <u>0.03</u> inches       5. Measured at w <b>Part 2. Visual Observations</b> 6. End of pipe diameter <u>30 in</u> 7. Structural Co         8. Photographs (include camera name/#) <u>1000</u> 1000       Yes <u>6</u> 9. Suitable for sampling under DWS Program?       No       X Yes <u>6</u> 10. Water flowing from end of pipe?       No       X Yes <u>6</u> 11. Does the discharging water exhibit any of the following (if yes, de       Odors? ☑ No       Yes       Color? ☑ Clear       Cloudy/Muc         Floatables? ☑ None       □ Moving oily sheen       □ Surface scum       □         12. Vegetation	than 48 hours ather station <u>Ted Stever</u> ndition: <u>POOV</u> , <u>CM</u> epth of water in end of pipe _ epth of water in end of pipe _ ns in comments. If Yes, contin cribe in comments): dy Clarity? X Clear ioapy suds I Debris I C	S Intl. Airport P W Collev 9 in we. Colored Other (describe)
3. Time since last rain event ☑ More than 48 hours       □ Less         4. Size of last rain event <u>0.03</u> inches       5. Measured at w         6. Size of last rain event <u>0.20/22, 3(con Arm</u> Part 2. Visual Observations         6. End of pipe diameter <u>30 in</u> 7. Structural Constructural Constructurations         6. End of pipe diameter <u>30 in</u> 7. Structural Constructurations         7. Structural Constructuration       9. Suitable for sampling under DWS Program? No ☑ Yes <u>6</u> 9. Suitable for sampling under DWS Program? No ☑ Yes       16 yes, constructuration         10. Water flowing from end of pipe? No ☑ Yes       If yes, constructuration         11. Does the discharging water exhibit any of the following (if yes, de       Odors? ☑ No □ Yes       Color? ☑ Clear □ Cloudy/Muc         Floatables? ☑ None □ Moving oily sheen □ Surface scum □       13. Bi         12. Vegetation	ather station <u>Ted</u> Stever ndition: <u><math>POOV</math></u> , (M <b>Contended</b> epth of water in end of pipe _ ns in comments. If Yes, contine cribe in comments): dy Clarity? $X$ Clear ioapy suds $\Box$ Debris $\Box$ C	P w CIIGV 9 in ue. Colored Other (describe)
4. Size of last rain event       0.03 inches       5. Measured at w         6/20/22.3000 Am       5. Measured at w         9. Part 2. Visual Observations       7. Structural Co         6. End of pipe diameter       30 in.       7. Structural Co         8. Photographs (include camera name/#)       1000       9. Suitable for sampling under DWS Program?       No       No       Yes       10.         9. Suitable for sampling under DWS Program?       No       No       Yes       10.         10. Water flowing from end of pipe?       No       No       Yes       10.         11. Does the discharging water exhibit any of the following (if yes, de       11. Does the discharging water exhibit any of the following (if yes, de         12. Vegetation       13. Bi         12. Vegetation       13. Bi         14. Flow       gal/min       OR       Low       Medium       Hig         15. Previous observations of baseline dry weather flow?       None       None       10.       Yes         16. Is an illicit discharge suspected at the outfall?       No       Yes       No       Yes         16. No, proceed to next outfall. If Yes, continue. Describe any additional       Motional       10.       Yes	ndition: <u>POOV</u> , <u>CM</u> woolered epth of water in end of pipe <i>ns in comments. If Yes, contin</i> cribe in comments): dy Clarity? X Clear to apy suds Debris DC	P w CIIGV 9 in ue. Colored Other (describe)
Part 2. Visual Observations   5. End of pipe diameter	epth of water in end of pipe _ ns in comments. If Yes, contin cribe in comments): dy Clarity? X Clear boapy suds I Debris I C	ସ୍ i ମ ue. 디 Colored Other (describe)
<ul> <li>8. Photographs (include camera name/#)</li> <li>9. Suitable for sampling under DWS Program? DNO X Yes</li> <li>10. Water flowing from end of pipe? DNO X Yes</li> <li>11. Water flowing from end of pipe? DNO X Yes</li> <li>12. Does the discharging water exhibit any of the following (if yes, de Odors? X No</li> <li>13. Bit Color? Clear</li> <li>14. Flow</li> <li>15. Previous observations of baseline dry weather flow?</li> <li>15. Previous observations of baseline dry weather flow?</li> <li>16. Is an illicit discharge suspected at the outfall? X No</li> </ul>	epth of water in end of pipe _ ns in comments. If Yes, contin cribe in comments): dy Clarity? X Clear boapy suds I Debris I C	ସ୍ i ମ ue. 디 Colored Other (describe)
<ul> <li>8. Photographs (include camera name/#)</li></ul>	epth of water in end of pipe _ ns in comments. If Yes, contin cribe in comments): dy Clarity? X Clear boapy suds I Debris I C	ସ୍ i ମ ue. 디 Colored Other (describe)
9. Suitable for sampling under DWS Program? No Yes	epth of water in end of pipe _ ns in comments. If Yes, contin cribe in comments): dy Clarity? X Clear boapy suds I Debris I C	ସ୍ (ମ ue. 디 Colored Other (describe)
10. Water flowing from end of pipe?       No       No       Yes       If yes, of         if No, take photographs of outfall and record any pertinent observation       11. Does the discharging water exhibit any of the following (if yes, decoders?         11. Does the discharging water exhibit any of the following (if yes, decoders?       If No       Yes       Color?       If Clear       If Cloudy/Muc         12. Orgetation       If No       Yes       None       Moving oily sheen       Surface scum       If No         12. Vegetation       If Yes       If Yes       If Yes       If Yes       If Yes         13. Bi       If Yes       If Yes       If Yes       If Yes       If Yes         14. Flow       gal/min       OR       If Yes       No       If Yes         15. Previous observations of baseline dry weather flow?       No       If Yes         16. Is an illicit discharge suspected at the outfall?       If Yes       If Yes, continue. Describe any additional         16. No, proceed to next outfall. If Yes, continue. Describe any additional       If Yes       If Yes       If Yes	epth of water in end of pipe _ ns in comments. If Yes, contin cribe in comments): dy Clarity? X Clear boapy suds I Debris I C	ସ୍ (ମ ue. 디 Colored Other (describe)
f No, take photographs of outfall and record any pertinent observations 11. Does the discharging water exhibit any of the following (if yes, dered Doors? No Yes Color? Clear Cloudy/Muc Cloatables? None Moving oily sheen Surface scum 12. Vegetation	ns in comments. If Yes, contin cribe in comments): dy Clarity? 太 Clear toapy suds 口 Debris 口 C	ue.
1. Does the discharging water exhibit any of the following (if yes, dependence of the follo	cribe in comments): dy Clarity? 🖄 Clear doapy suds 🗆 Debris 🗖 C	Colored Other (describe)
Odors? No Yes Color? Clear Cloudy/Muc   Cloatables? None Moving oily sheen Surface scum 1   2. Vegetation 13. Bi   Part 3. Field Analyses 13.   4. Flow gal/min OR Low Medium   5. Previous observations of baseline dry weather flow? None Mone   6. Is an illicit discharge suspected at the outfall? No Yes	dy Clarity? 🖄 Clear Toapy suds 🗆 Debris 🗖 C	)ther (describe)
Odors? No Yes Color? Clear Cloudy/Muc   Color? None Moving oily sheen Surface scum 1   I2. Vegetation 13. Bi   Part 3. Field Analyses 13.   I4. Flow gal/min OR   I5. Previous observations of baseline dry weather flow? None   I6. Is an illicit discharge suspected at the outfall? No   If No, proceed to next outfall. If Yes, continue. Describe any additional	dy Clarity? 🖄 Clear Toapy suds 🗆 Debris 🗖 C	)ther (describe)
Ioatables? None Moving oily sheen Surface scum   12. Vegetation 13.   13. Bi   Part 3. Field Analyses .4. Flow	oapy suds 🛛 Debris 🖾 C	)ther (describe)
12. Vegetation       13. Bi         Part 3. Field Analyses         14. Flow      gal/min OR 🛛 Low □ Medium □ Hig         15. Previous observations of baseline dry weather flow?		
Part 3. Field Analyses 14. Flowgal/min OR Low Dedium Hig 15. Previous observations of baseline dry weather flow? <u>None</u> 16. Is an illicit discharge suspected at the outfall? No Describe 16. Is an illicit discharge suspected at the outfall?	logy	a an
<ul> <li>4. Flowgal/min OR k Low □ Medium □ Hig</li> <li>5. Previous observations of baseline dry weather flow?</li> <li>6. Is an illicit discharge suspected at the outfall? k No □ Yes</li> <li>F No, proceed to next outfall. If Yes, continue. Describe any additional</li> </ul>		1 40 T
5. Previous observations of baseline dry weather flow? <u>None</u> 6. Is an illicit discharge suspected at the outfall? XNO <b>Ves</b> FNO, proceed to next outfall. If Yes, continue. Describe any additional		
5. Previous observations of baseline dry weather flow? <u>None</u> 6. Is an illicit discharge suspected at the outfall? XNO <b>Ves</b> f No, proceed to next outfall. If Yes, continue. Describe any additional	1	
6. Is an illicit discharge suspected at the outfall? 📩 No 🛛 🗆 Yes f No, proceed to next outfall. If Yes, continue. Describe any additional		
f No, proceed to next outfall. If Yes, continue. Describe any additional	IDE	
	monitoring recommendation:	s in comments.
7. Water Quality Analyses Duplicate sample collecte		
Parameter Primary Sample Duplicate Sample	Equipment Blank	Program Threshold
	nits units	
	g/L mg/l	
	g/L mg/l	
	g/L mg/l	
Turbidity NTU I	g/L mg/l	
		J ≥ 250 NTU

rusted bottom. visible rustline coller. no illicit discharge

good channel to main Stream

PS	l	1

Municipality of Anchorage APDES Monitoring Program

W	atershed: FSt	+	Out	fall Number: <u>1003</u> ~	
Pa	irt 1. General Info	rmation.			1187C
1.	Date 6 22 2	2	Time 11	7	
2.	Field Crew KG	)B	Water quality	analyses conducted by	N/A
3.	Time since last rair	event 🖾 More than 48 h			
		ent 0.03 inches 6/20/22, 3:40 AM		station Tel stevens	In H. Arport
Pa	rt 2. Visual Obser		····		
			7. Structural Conditio		
8.	Photographs (inclu	de camera name/#) <u>1</u>	> 4 9		
9.	Suitable for sampli	ng under DWS Program?	KNO □Yes <u>DM</u>		
10	. Water flowing fro	m end of pipe? 🗷 No 🛛 🛙	☐ Yes If yes, depth (	of water in end of pipe	-
			v pertinent observations in a		
Flo 12. <b>Pa</b> 14. 15.	Vegetation rt 3. Field Analyse Flow Previous observation	Moving oily sheen		suds Debris DOth	er (describe)
lf N	-		scribe any additional monit		comments.
	Water Quality Ana	alyses Dupl	licate sample collected?	No TYes CATA	
17.	Parameter	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold
17.			units	units	≤ 4.0 or ≥ 9.0
17.	рН	units		1	
17.	pH Total chlorine	mg/L	mg/L	mg/L	≥ 1.0 mg/L
17.	pH Total chlorine Detergents	mg/L mg/L	mg/L	mg/L	≥ 1.0 mg/L
17.	pH Total chlorine Detergents Total copper	mg/L mg/L mg/L	mg/L mg/L	mg/L mg/L	≥ 1.0 mg/L ≥ 1.0 mg/L
17.	pH Total chlorine Detergents	mg/L mg/L	mg/L	mg/L	≥ 1.0 mg/L

Part 4. Comments 18 in HDPE shooth slipling. rip Wrap in ground outlet

	atershed: <u>FS</u> +	1	Out	fall Number: <u>1054-</u>	<u> </u>
Pa	rt 1. General Info	ormation.			
1.	Date 6 1221	22	Time <u>9:38</u>	<u> </u>	
2.	Field Crew KG	JB	Water quality	analyses conducted by	N/A ·
3.	Time since last rai	n event 🛛 More than 48 h	ours 🛛 Less than 4	18 hours	
4.	Size of last rain ev		5. Measured at weather	station Ted Stevens	Intl. Augert
Pa	rt 2. Visual Obser			<b>—</b> •••••••••	121
6.	End of pipe diame	ter_20.1^	7. Structural Conditio	n: Fair, (MP w)	collar
		ude camera name/#) <u>(P</u> S	· · · · · · · · · · · · · · · · · · ·	· · · · ·	
9.	Suitable for sampl	ing under DWS Program?	No Ves Stagnan	: water	
		om end of pipe? 🕱 No 🛛 🛛			lim
		hs of outfall and record any			
					•
		ing water exhibit any of the	SKN/k	N NI	A
Ode	ors? 🖾 No 🛛 Y	es Color? 🗆 Cle	ear 🛛 Cloudy/Muddy	Clarity? 🛛 Clear 🛛	Colored
Flo	atables? 🗹 None	☐ Moving oily sheen □	Surface scum Soapy	suds 🛛 Debris 🖾 Oth	er (describe)
12.	Vegetation		13. Biology		
	rt 3. Field Analys	<u>1</u>		4	
14.	Flow	gal/min OR 🗆 Low	🗆 Medium 🗆 High 😼	none	
		ions of baseline dry weathe			
15.					
	ls an illicit discha		1., 15		1
16.		rge suspected at the outfall	? 🖾 No 🗆 Yes		" 552
16. If N	io, proceed to next	rge suspected at the outfall outfall. If Yes, continue. De	? ௴No □ Yes scribe any additional monit	-	comments.
16. If N	io, proceed to next	rge suspected at the outfall	? ௴No □ Yes scribe any additional monit	-	comments.
16. If N	io, proceed to next	rge suspected at the outfall outfall. If Yes, continue. De	? ௴No □ Yes scribe any additional monit	-	Program Threshold
16. If N	lo, proceed to next Water Quality An Parameter pH	rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupl Primary Sample units	? ☑(No ☐ Yes scribe any additional monit icate sample collected? ☐ Duplicate Sample units	No 🗆 Yes 🗹 y <sup>j</sup> /A Equipment Blank units	Program Threshold ≤ 4.0 or ≥ 9.0
16. If N	io, proceed to next Water Quality An Parameter pH Total chlorine	rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupl Primary Sample units mg/L	? ☑No □Yes scribe any additional monit icate sample collected? □ Duplicate Sample units mg/L	No 🗆 Yes 🗹 y <sup>i</sup> /A Equipment Blank units mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L
16. If N	io, proceed to next Water Quality An Parameter pH Total chlorine Detergents	rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupl Primary Sample units mg/L mg/L	? Interpretation of the second secon	No 🗆 Yes 👿 yi/k Equipment Blank units mg/L mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L
16. If N	lo, proceed to next Water Quality An Parameter pH Total chlorine Detergents Total copper	rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupl Primary Sample units mg/L mg/L	? IŽNO ☐ Yes scribe any additional monit icate sample collected? ☐ Duplicate Sample units mg/L mg/L	No Ves v/k Equipment Blank units mg/L mg/L	Program Threshold         ≤ 4.0 or ≥ 9.0         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 1.0 mg/L
16. If N	io, proceed to next Water Quality An Parameter pH Total chlorine Detergents	rge suspected at the outfall outfall. If Yes, continue. Des alyses Dupl Primary Sample units mg/L mg/L	? Interpretation of the second secon	No 🗆 Yes 👿 yi/k Equipment Blank units mg/L mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L

from bine brail

0	C	1	2
٩.,	5	- 1	2

Watershed: <u>FSH</u>	12 2 3 1 1 <b>3 4 3 6 1 6</b> 1	Ou	tfall Number: <u>1278-</u>	853-04 5 Ø
Part 1. General Info	rmation.	201		
1. Date 6 22	22	Time <u>}0: (</u>	24	
2. Field Crew KG	0		y analyses conducted by	й /A
	event More than 48 l			
			11 CA (2) - 14 CA	• U • J
4. Size of last rain eve	ent 6,20/22 inches 6/20/22 3:04 AM	5. Measured at weathe	r station <u>Ted Sleven</u>	Lott Airport
Part 2. Visual Observ	vations			
6. End of pipe diamet	er23	7. Structural Condition	on: good (see co	m ments)
	de camera name/#) <u>P</u>		9 	
			of water in end of pipe	
			comments. If Yes, continue	
11. Does the dischargin	ng water exhibit any of the	e following (if yes, describe 역 시A	in comments):	
Odors? 🖾 No 🗆 Ye	es Color? 🗆 Cl	ear 🖾 Cloudy/Muddy	Clarity? 🗆 Clear 🗆	Colored
Floatables? 🗹 None	□ Moving oily sheen	□ Surface scum  □ Soapy	v suds 🛛 Debris 🖾 Oth	er (describe)
12. Vegetation		13. Biology	-	
Part 3. Field Analyse	\$	10 194 10 10		and a second sec
14. Flow	gal/min OR 🗆 Low	🗆 Medium 🛛 High 🚧	onl	
	ons of baseline dry weathe			
	ge suspected at the outfal			10 SNG 10
			· · · · · · · · · · · · · · · · · · ·	
			toring recommendations in	comments.
17. Water Quality Ana	alyses Dup	licate sample collected?	No Yes 2 N/A	
Parameter	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold
рН	units	units	units	≤ 4.0 or ≥ 9.0
Total chlorine	mg/L	mg/L	mg/L	≥ 1.0 mg/L
Detergents	mg/L	mg/L	mg/L	≥ 1.0 mg/L
Total copper	mg/L	mg/L	mg/L	≥ 1.0 mg/L
Total phenols	mg/L	mg/L	mg/L	≥ 0.5 mg/L
Turbidity	NTU	NTU	NTU	≥ 250 NTU
		Ų	2	
Part 4. Comments √19	sible restline	CMP w/ collar	outfalls into waddles on since of we	ueir system with outside (in take) ir Kipwap.

### Dry Weather Screening Field Data Form Municipality of Anchorage APDES Monitoring Program

	sH	out	fall Number: <u>   ろ]♡ -</u>	
Part 1. General Inf	ormation.			-02
1. Date 6127	2122	Time 12-5	7	
2. Field Crew	KG, JB	Water quality	analyses conducted by	NA
	ain event 🛛 More than 48 h	ours 🛛 Less than 4	18 hours	
4. Size of last rain e	vent 0.03 inches 6/20/22 + 3:00 AM	5. Measured at weather	station Ted statens	Int Airport
Part 2. Visual Obse				
6. End of pipe diam	eter1ది.్న	7. Structural Conditio	n: fair (see	comments)
	lude camera name/#)			
	bling under DWS Program?			
		. J		
	ohs of outfall and record any			
			-	1
11. Does the dischar	ging water exhibit any of the	following (if yes, describe	in comments):	
Odors?	Yes Color? 🗆 Cle	ear Cloudy/Muddy	Clarity? 🗆 Clear 🗍 🗆	Colored
•				
Floatables? <b>5</b> None	Moving oily sheen			
	e 🗆 Moving oily sheen 🛛	] Surface scum 🛛 Soapy	suds 🛛 Debris 🗌 Oth	er (describe)
12. Vegetation		] Surface scum 🛛 Soapy	suds 🛛 Debris 🗌 Oth	er (describe)
12. Vegetation Part 3. Field Analys	ses	□ Surface scum □ Soapy 13. Biology	suds 🗆 Debris 🗆 Oth	er (describe)
12. Vegetation      Part 3. Field Analys      14. Flow	ses gal/min OR 🗆 Low	□ Surface scum □ Soapy 13. Biology □ Medium □ High ∞γ.ο	suds 🗆 Debris 🗆 Oth	er (describe)
12. Vegetation         Part 3. Field Analys         14. Flow         15. Previous observa	ses gal/min OR 🗆 Low tions of baseline dry weathe	□ Surface scum □ Soapy 13. Biology □ Medium □ High & no r flow?	suds 🗆 Debris 🗆 Oth	er (describe)
12. Vegetation         Part 3. Field Analys         14. Flow         15. Previous observa	ses gal/min OR 🗆 Low	□ Surface scum □ Soapy 13. Biology □ Medium □ High & no r flow?	suds 🗆 Debris 🗆 Oth	er (describe)
12. Vegetation         Part 3. Field Analys         14. Flow         15. Previous observa         16. Is an illicit discharmer	ses gal/min OR 🗆 Low tions of baseline dry weathe arge suspected at the outfall	] Surface scum □ Soapy 13. Biology □ Medium □ High ∞ <sub>Λ</sub> ₀ r flow? ? ≰ No □ Yes	suds 🗆 Debris 🗆 Oth	er (describe)
12. Vegetation         Part 3. Field Analys         14. Flow         15. Previous observa         16. Is an illicit discharge         If No, proceed to nex	ses gal/min OR 🗆 Low tions of baseline dry weathe	Surface scum □ Soapy 13. Biology □ Medium □ High d <sub>h</sub> o r flow? ? ∑ No □ Yes scribe any additional monit	suds 🗆 Debris 🗆 Oth ৸৻ oring recommendations in	er (describe)
12. Vegetation         Part 3. Field Analys         14. Flow         15. Previous observa         16. Is an illicit discharge         If No, proceed to nex	ses gal/min OR 🗆 Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des	Surface scum □ Soapy 13. Biology □ Medium □ High d <sub>h</sub> o r flow? ? ∑ No □ Yes scribe any additional monit	suds 🗆 Debris 🗆 Oth ৸৻ oring recommendations in	er (describe)
12. Vegetation         Part 3. Field Analys         14. Flow         15. Previous observa         16. Is an illicit dischart         If No, proceed to nex         17. Water Quality A	ses gal/min OR 🗆 Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dupl	C Surface scum □ Soapy 13. Biology □ Medium □ High dy r flow? ? ☆ No □ Yes scribe any additional monit icate sample collected? □	suds Debris Dth N ( oring recommendations in	er (describe)
12. Vegetation         Part 3. Field Analys         14. Flow         15. Previous observa         16. Is an illicit discharger         If No, proceed to nex         17. Water Quality A         Parameter	ses gal/min OR 🗆 Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dupl Primary Sample	Surface scum □ Soapy 13. Biology □ Medium □ High &// o r flow? ? ∑ No □ Yes scribe any additional monit icate sample collected? □ Duplicate Sample	suds Debris Oth	er (describe) comments. Program Threshold
<ul> <li>12. Vegetation</li> <li>Part 3. Field Analysis</li> <li>14. Flow</li> <li>15. Previous observation</li> <li>16. Is an illicit discharged to nexistant statements</li> <li>17. Water Quality A Parameter</li> <li>pH</li> </ul>	ses gal/min OR 🗆 Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dupl Primary Sample units	Surface scum □ Soapy 13. Biology □ Medium □ High @/\o r flow? ? ☑ No □ Yes scribe any additional monit icate sample collected? □ Duplicate Sample units	suds Debris Oth	er (describe) comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$
<ul> <li>12. Vegetation</li> <li>Part 3. Field Analysis</li> <li>14. Flow</li> <li>15. Previous observation</li> <li>16. Is an illicit discharged to nexistant in the second second</li></ul>	ses gal/min OR 🗆 Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dupl Primary Sample units mg/L	□ Surface scum       □ Soapy         13. Biology         □ Medium       □ High Øho         r flow?	suds Debris Dth N ( No Pres 과구 Equipment Blank units mg/L	er (describe) comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$
<ul> <li>12. Vegetation</li> <li>Part 3. Field Analys</li> <li>14. Flow</li> <li>15. Previous observa</li> <li>16. Is an illicit discharged to nex</li> <li>17. Water Quality A</li> <li>Parameter</li> <li>pH</li> <li>Total chlorine</li> <li>Detergents</li> </ul>	ses gal/min OR 🗆 Low tions of baseline dry weather arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dupl Primary Sample units mg/L mg/L	Surface scum □ Soapy 13. Biology Medium □ High	suds Debris Oth	er (describe) comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$

Part 4. Comments HDPE. 14 Full of sediment outkall directly for manh creek.

.

Part 1. General Information.         I. Date $(1/17/2022$ Time $1/17/2022$ P. Field Crew KG MA         Water quality analyses conducted by N/A         Water quality analyses conducted by N/A         B. Time since last rain event I More than 48 hours         I. Size of last rain event inches         5. Measured at weather station Ted Stevens tent!         Part 2. Visual Observations         S. End of pipe diameter $/12''$ T. Structural Condition: HDPE, Poor. $3/4$ burned
Field Crew KG MA       Water quality analyses conducted by N/A         Time since last rain event More than 48 hours       Less than 48 hours         Size of last rain event
Field Crew KG MA       Water quality analyses conducted by N/A         Time since last rain event More than 48 hours       Less than 48 hours         Size of last rain event
Time since last rain event $\square$ More than 48 hours $\square$ Less than 48 hours Size of last rain event <u>—</u> inches 5. Measured at weather station <u>Ted Skewens tents</u> . Aug Part 2. Visual Observations End of pipe diameter $\sim 12^{"}$ 7. Structural Condition: <u>HDPE</u> , <u>Puor</u> $^{3}/_{9}$ buried
. Size of last rain event inches 5. Measured at weather station <u>Ted Stevens Intl. Aug</u> art 2. Visual Observations . End of pipe diameter <u>~12"</u> 7. Structural Condition: <u>HDPE</u> , <u>Poor</u> <u>3/4</u> <u>buried</u>
eart 2. Visual Observations . End of pipe diameter ~12" 7. Structural Condition: HDPE, Pour 3/4 buried
End of pipe diameter ~12" 7. Structural Condition: HDPE, Pour 3/4 buried
Photographs (include camera name/#) Pad
9. Suitable for sampling under DWS Program? $\Box$ No $\Box$ Yes $\underline{Om}$ , $\frac{3}{4}$ buried
10. Water flowing from end of pipe? 🗹 No 🗆 Yes If yes, depth of water in end of pipe
f No, take photographs of outfall and record any pertinent observations in comments. If Yes, continue.
1. Does the discharging water exhibit any of the following (if yes, describe in comments):
Norma No. No. A/A Colora D Claure D Claure / A. Claure D Claure A/A
loatables? 🗹 None 🛛 Moving oily sheen 🖓 Surface scum 🖓 Soapy suds 🖓 Debris 🖓 Other (describe)
Odors?       No       Yes       V/A       Color?       Clear       Cloudy/Muddy       V/A       Clarity?       Clear       Colored       N/A         Floatables?       Ø None       Moving oily sheen       Surface scum       Soapy suds       Debris       Other (describe)         12.       Vegetation       Neme       13.       Biology       Neme         Part 3.       Field Analyses       Description       Description       Description
iloatables? DNone Doving oily sheen DSurface scum DSoapy suds Debris DOther (describe) 2. Vegetation <u>None</u> 13. Biology <u>None</u> Part 3. Field Analyses
Filoatables? Ø None Moving oily sheen Surface scum Soapy suds Debris Other (describe)   .2. Vegetation None 13. Biology None   Part 3. Field Analyses   .4. Flow None gal/min OR   Medium
Hoatables? Ø None Moving oily sheen Surface scum Soapy suds Debris Other (describe)   12. Vegetation None 13. Biology None   Part 3. Field Analyses   14. Flow None gal/min OR Medium   15. Previous observations of baseline dry weather flow? None
Ioatables? ØNone       Moving oily sheen       Surface scum       Soapy suds       Debris       Other (describe)         2. Vegetation       None       13. Biology       None         Part 3. Field Analyses       13. Field Analyses         4. Flow       None       gal/min       OR       Medium       High         5. Previous observations of baseline dry weather flow?       None       None       None
Hoatables? INone Moving oily sheen Surface scum Soapy suds Debris Other (describe)   2. Vegetation None 13. Biology None   Part 3. Field Analyses   4. Flow None gal/min OR High   5. Previous observations of baseline dry weather flow? Done
Hoatables? Ø None Moving oily sheen Surface scum Soapy suds Debris Other (describe)   2. Vegetation None 13. Biology None   Part 3. Field Analyses 4. Flow   4. Flow Mone gal/min OR Low Medium High   5. Previous observations of baseline dry weather flow? Done .   6. Is an illicit discharge suspected at the outfall? Ø No Yes
Ioatables? Image: None   Moving oily sheen Surface scum   Soapy suds Debris   Other (describe)   2. Vegetation Mone 13. Biology Mone art 3. Field Analyses 4. Flow Mone gal/min OR Low Medium High 5. Previous observations of baseline dry weather flow? Mone 6. Is an illicit discharge suspected at the outfall? Mone No Previous discharge suspected at the outfall? Mone Previous discharge suspected at the outfall? Mone No Previous discharge suspected at the outfall? Mone Previous discharge suspected at the outf
Ioatables? Image: None   Moving oily sheen Surface scum   Soapy suds Debris   Other (describe)   2. Vegetation Mone 13. Biology Mone art 3. Field Analyses 4. Flow Mone gal/min OR Low Medium High 5. Previous observations of baseline dry weather flow? Mone 6. Is an illicit discharge suspected at the outfall? Mone FNO, proceed to next outfall. If Yes, continue. Describe any additional monitoring recommendations in comments. 7. Water Quality Analyses Duplicate sample collected? No Yes
oatables? Image: None   Moving oily sheen Surface scum   Soapy suds Debris   Other (describe)   2. Vegetation   None None   13. Biology None   art 3. Field Analyses   4. Flow Mone   gal/min OR   Low Medium   High   5. Previous observations of baseline dry weather flow?   Image: No. proceed to next outfall. If Yes, continue. Describe any additional monitoring recommendations in comments.   7. Water Quality Analyses   Duplicate sample   Duplicate Sample   Equipment Blank Program Threst
oatables? ØNone       Moving oily sheen       Surface scum       Soapy suds       Debris       Other (describe)         2. Vegetation       None       13. Biology       None         art 3. Field Analyses         3. Flow       None       gal/min       OR       Low       Medium       High         5. Previous observations of baseline dry weather flow?       none       .       .         6. Is an illicit discharge suspected at the outfall?       Mon       Yes         No, proceed to next outfall. If Yes, continue. Describe any additional monitoring recommendations in comments.         7. Water Quality Analyses       Duplicate sample collected?       No       Yes         Parameter       Primary Sample       Duplicate Sample       Equipment Blank       Program Thresl         pH       units       units       units       ≤ 4.0 or ≥ 1
oatables? $\square$ None $\square$ Moving oily sheen $\square$ Surface scum $\square$ Soapy suds $\square$ Debris $\square$ Other (describe)         2.       Vegetation $\square$ None       13. $\square$ Biology $\square$ one         art 3. Field Analyses       .       .       . $\square$ one       .         3.       Flow $\square$ one       .       .       .         5.       Previous observations of baseline dry weather flow? $\square$ one       .         5.       Is an illicit discharge suspected at the outfall? $\square$ No $\square$ Yes         No, proceed to next outfall. If Yes, continue. Describe any additional monitoring recommendations in comments.         7.       Water Quality Analyses       Duplicate sample collected? $\square$ No $\square$ Yes $\square$ detergents $mg/L$ $mg/L$ $mg/L$ $24.0$ or $\geq$ $\square$ total chlorine $mg/L$ $mg/L$ $mg/L$ $\geq 1.0$ mg/L $\square$ detergents $mg/L$ $mg/L$ $mg/L$ $21.0$ mg/L
loatables?       ✓ None       Moving oily sheen       Surface scum       Soapy suds       Debris       Other (describe)         2.       Vegetation
loatables? $\not \square$ None $\Box$ Moving oily sheen $\Box$ Surface scum $\Box$ Soapy suds $\Box$ Debris $\Box$ Other (describe)         2. Vegetation $\_$ None       13. Biology $\_$ None <b>'art 3. Field Analyses</b> 4. Flow $\_$ One       gal/min OR $\Box$ Low $\Box$ Medium $\Box$ High         5. Previous observations of baseline dry weather flow? $\_$ Dent.       6. Is an illicit discharge suspected at the outfall? $\boxdot$ No $\Box$ Yes         7. Water Quality Analyses       Duplicate sample collected? $\Box$ No $\Box$ Yes         7. Water Quality Analyses       Duplicate sample collected? $\Box$ No $\Box$ Yes $\oiint$ N/A <b>Parameter Primary Sample Duplicate Sample Equipment Blank Program Thresi</b> PH       units         units       units         Mg/L       mg/L         Mark       mg/L         Mark       mg/L         Mark       mg/L

#### **Dry Weather Screening Field Data Form**

Municipality of Anchorage APDES Monitoring Program

Watershed: <u>FUR</u>	11 S.	Out	fall Number: <u>292 -</u>	192	
Part 1. General Info	rmation.		1995 - 1998 - 1997 -		
1. Date 6-17- 6	2022	Time	3		
	ma	Water qualit	y analyses conducted by	KG, MA	893) -
	n event 🗹 More than 48 h		48 hours		
4. Size of last rain eve	entinches	5. Measured at weather	station Ted steven	u Intl. Airport	
Part 2. Visual Obser					
6. End of pipe diame	ter48"	7. Structural Condition	n: Good amp	w/ collar	
			<u></u>		
o. Photographis (inclu	ude camera name/#)	<u> </u>			
	ing under DWS Program?				
10. Water flowing fro	om end of pipe? 🗆 No 🛛	Yes If yes, depth	of water in end of pipe <u>a</u>		
if No, take photograpi	hs of outfall and record any	pertinent observations in	comments. If Yes, continue	•	
	ng water exhibit any of the		•		
	es Color? ⊠Cle				
Floatables?   None	□ Moving oily sheen [	🗆 Surface scum 🛛 🗹 Soapy	suds $\square$ Debris $\square$ Oth	er (describe)	
12. Vegetation Bro	wn and green algore	13. Biology	None		
				n	_
Part 3. Field Analyse		/			
14. Flow	gal/min OR 🛙 Low	🖬 Medium 🛛 High			
15. Previous observati	ons of baseline dry weathe	erflow? none			
	5 × 31		12	LE I	
16. Is an illicit dischar	rge suspected at the outfall	l? 🖾 No 🗋 Yes			
If No, proceed to next	outfall. If Yes, continue. De	scribe any additional moni	toring recommendations in	n comments.	
17. Water Quality An	alyses Dup	licate sample collected?	no 🗆 Yes 🖾 🏹 🏠		
Parameter	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold	
рН	8.3 units	units	units	≤ 4.0 or ≥ 9.0	12.6
Total chlorine	O mg/L	mg/L	mg/L	≥ 1.0 mg/L	
Detergents	0 mg/L	mg/L	mg/L	2 ≥ 1.0 mg/L	_
Total copper	F:0 / T: 0 mg/L	mg/L	mg/L	≥ 1.0 mg/L	1.67
Total phenois	0 mg/L	mg/L	mg/L	≥ 0.5 mg/L	_
Turbidity	6,48 NTU	NTU	NTU	≥ 250 NTU	

#### Part 4. Comments

Than pipe Grate has fallen off suds collecting in DS pool

### **Dry Weather Screening Field Data Form**

Municipality of Anchorage APDES Monitoring Program

Part 1. General Inf	ormation.	5.00 C	
1. Date <u>(0-17-</u>	2022	Time 13:23	
2. Field Crew <u>KG</u>	. mA	Water quality analyses conducted by <u>N/A</u>	
	in event 🖸 More than 48 h		
		5. Measured at weather station Ted Sloven Intl. Apport	
Part 2. Visual Obse			
6. End of pipe diam	eter <u>36</u>	7. Structural Condition: Goud, CMP w/ concrete headu	R1(
8. Photographs (inc	lude camera name/#)P	Pad	500
		□ No II Yes	
10. Water flowing fi	rom end of pipe? 🗆 No 🛛	□ No ☑Yes ☑Yes If yes, depth of water in end of pipe <u>1/4</u> "	
		u partipant abcoructions in comments. If Ves. continue	
		y pertinent observations in comments. If Yes, continue.	
11. Does the dischar	ging water exhibit any of the	e following (if yes, describe in comments):	
11. Does the dischar	ging water exhibit any of the Yes Color? 단신	e following (if yes, describe in comments): lear	i A
11. Does the dischar Odors? 12 No 🗆 Floatables? 52 None	ging water exhibit any of the Yes Color? 모션 한 미 Moving oily sheen 대	e following (if yes, describe in comments): lear	jî J
11. Does the dischar Odors? I No I Floatables? D None 12. Vegetation	ging water exhibit any of the Yes Color? 回てle e ロ Moving oily sheen ロ しのル	e following (if yes, describe in comments): lear	i N
11. Does the dischar Odors? I No I Floatables? D None 12. Vegetation <u>1</u> Part 3. Field Analys	ging water exhibit any of the Yes Color? If Cle In Moving oily sheen I Norve	e following (if yes, describe in comments): lear ロ Cloudy/Muddy Clarity? I Clear ロ Colored I Surface scum ロ Soapy suds ロ Debris ロ Other (describe) 13. Biology <u>N ore</u>	e North North
11. Does the dischar Odors? I No I Floatables? D None 12. Vegetation <u>1</u> <b>Part 3. Field Analy</b>	ging water exhibit any of the Yes Color? 回てle e ロ Moving oily sheen ロ しのル	e following (if yes, describe in comments): lear ロ Cloudy/Muddy Clarity? I Clear ロ Colored I Surface scum ロ Soapy suds ロ Debris ロ Other (describe) 13. Biology <u>N ore</u>	
11. Does the dischard Odors? INO I Floatables? IO None 12. Vegetation <u>Part 3. Field Analy</u> 14. Flow	ging water exhibit any of the Yes Color? I Cle I Moving oily sheen I Vorue ses gal/min OR I Low	e following (if yes, describe in comments): lear ロ Cloudy/Muddy Clarity? I Clear ロ Colored I Surface scum ロ Soapy suds ロ Debris ロ Other (describe) 13. Biology <u>N ore</u>	
11. Does the dischard Odors? INO I Floatables? INO I 12. Vegetation <u>I</u> Part 3. Field Analys 14. Flow <u>15. Previous observa</u>	ging water exhibit any of the Yes Color? I Cle I Moving oily sheen Ses gal/min OR I Low tions of baseline dry weathe	e following (if yes, describe in comments): lear Cloudy/Muddy Clarity? I Clear Colored Surface scum Soapy suds Debris Other (describe) 13. Biology Nore Medium High er flow?	
11. Does the dischard Odors? INO I Floatables? INO I 12. Vegetation <u>I</u> Part 3. Field Analys 14. Flow <u>15. Previous observa</u> 16. Is an illicit discha	ging water exhibit any of the Yes Color? I'Cle I Moving oily sheen Ses gal/min OR II Low tions of baseline dry weathe arge suspected at the outfall	e following (if yes, describe in comments): lear Cloudy/Muddy Clarity? I Clear Colored Surface scum Soapy suds Debris Other (describe) 13. Biology Nore Medium High er flow? IY No Yes	2 2 10 10 10
11. Does the dischard Odors? INO I Floatables? INO I 12. Vegetation <u>I</u> Part 3. Field Analys 14. Flow <u>15. Previous observa</u> 16. Is an illicit discha	ging water exhibit any of the Yes Color? I'Cle I Moving oily sheen Ses gal/min OR II Low tions of baseline dry weathe arge suspected at the outfall	e following (if yes, describe in comments): lear Cloudy/Muddy Clarity? I Clear Colored Surface scum Soapy suds Debris Other (describe) 13. Biology Nore Medium High er flow?	
11. Does the dischard Odors? INO I Floatables? INO I 12. Vegetation <u>I</u> Part 3. Field Analys 14. Flow <u>15. Previous observa</u> 15. Previous observa 16. Is an illicit dischard	ging water exhibit any of the Yes Color? I'Cle I Moving oily sheen Ses gal/min OR I Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des	e following (if yes, describe in comments): lear Cloudy/Muddy Clarity? I Clear Colored Surface scum Soapy suds Debris Other (describe) 13. Biology Nore Medium High er flow? IY No Yes	10
11. Does the dischar Odors? INO I Floatables? INO 12. Vegetation <u>Part 3. Field Analys</u> 14. Flow <u>15. Previous observa</u> 15. Previous observa	ging water exhibit any of the Yes Color? I'Cle I Moving oily sheen Ses gal/min OR I Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des	e following (if yes, describe in comments): lear Cloudy/Muddy Clarity? Clear Colored Surface scum Soapy suds Debris Other (describe) 13. Biology Nore Medium High er flow? IP ONO Yes escribe any additional monitoring recommendations in comments.	
11. Does the dischar Odors? In No In Floatables? A None 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit dischar f No, proceed to nex 17. Water Quality A	ging water exhibit any of the Yes Color? I'Cle I Moving oily sheen gal/min OR I'Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dup	e following (if yes, describe in comments): lear Cloudy/Muddy Clarity? Clear Colored Surface scum Soapy suds Debris Other (describe) 13. Biology Nore Medium High er flow? <u>Nore</u> IP No Yes escribe any additional monitoring recommendations in comments. Dicate sample collected? No Yes	
11. Does the dischar Odors? In No In Floatables? In No In Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit dischar If No, proceed to nex 17. Water Quality A	ging water exhibit any of the Yes Color? I'Cle Moving oily sheen I Jone gal/min OR I Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dupl Primary Sample 7. (a units mg/L	e following (if yes, describe in comments): lear □ Cloudy/Muddy Clarity? ☑ Clear □ Colored ☑ Surface scum □ Soapy suds □ Debris □ Other (describe) 13. Biology Nore □ Medium □ High er flow? IP ☑ No □ Yes escribe any additional monitoring recommendations in comments. plicate sample collected? □ No □ Yes ☑NA <u>Duplicate Sample Equipment Blank Program Threshold</u> units units ≤ 4.0 or ≥ 9.0 mg/L mg/L ≥ 1.0 mg/L	
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<ul> <li>11. Does the discharged of the discharg</li></ul>	ging water exhibit any of the Yes Color? I'Cle Moving oily sheen I Vorue gal/min OR I'Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dupl Primary Sample 7. (@ units mg/L mg/L mg/L	e following (if yes, describe in comments): lear □ Cloudy/Muddy Clarity? ☑ Clear □ Colored ☑ Surface scum □ Soapy suds □ Debris □ Other (describe) 13. Biology <u>N Orve</u> □ Medium □ High er flow? II? ☑ No □ Yes escribe any additional monitoring recommendations in comments. Dicate sample collected? □ No □ Yes INA <u>Duplicate Sample Equipment Blank Program Threshold</u> units units ≤ 4.0 or ≥ 9.0 mg/L mg/L ≥ 1.0 mg/L mg/L ≥ 1.0 mg/L Medium 2 L 2 mg/L ≥ 1.0 mg/L	
11. Does the dischard Odors? No C Floatables? Onone 12. Vegetation Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit dischard If No, proceed to nex 17. Water Quality A Parameter pH Total chlorine Detergents	ging water exhibit any of the Yes Color? I'Cle I Moving oily sheen gal/min OR I'Low tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses Dupl Primary Sample 7. (e units mg/L mg/L	e following (if yes, describe in comments): lear □ Cloudy/Muddy Clarity? ☑ Clear □ Colored ☑ Surface scum □ Soapy suds □ Debris □ Other (describe) 13. Biology Nord □ Medium □ High er flow? IP INO □ Yes escribe any additional monitoring recommendations in comments. Dicate sample collected? □ No □ Yes INA <u>Duplicate Sample Equipment Blank Program Threshold</u> units units ≤ 4.0 or ≥ 9.0 mg/L mg/L ≥ 1.0 mg/L mg/L ≥ 1.0 mg/L	

Suds from water dropping off culvert perch. Downstream small organic scum/oily sheen.

	IR			Out	fall Number:	202		1	110.755
Part 1. General Info	ormation.	80			2	88 T			
1. Date <u>(2-17-</u> 2	2022		Tim	ne <u>10:9</u>	56				
2. Field Crew <u>KG</u>	ma	2	Wa	ter quality	y analyses conduc	ted by	KGI, M	A	
3. Time since last rai	in event 🗹 More	than 48 ho	ours 🗖 🗌	Less than 4	18 hours				
4. Size of last rain ev	/enti	inches	5. Measured a	at weather	station Ted	steren	s Date	A	-t-
Part 2. Visual Obse	rvations								
6. End of pipe diame	stor 110"		7 Structur	al Conditio	n Good		cm	e dial	AVEDRO
8. Photographs (incl		-							
9. Suitable for samp	ling under DWS Pr	ogram? E	] No 🖸 Yes _		T - 7 - 3				
LO. Water flowing fr	om end of pipe?		Yes If y	es, depth (	of water in end of	pipe	2"	55	0
f No, take photograp	hs of outfall and n	ecord any i	ertinent observ	ations in a	comments if Ves	continue			
j no, take photograp	no oj outjun ano n				ionninencai ij rea,	continue.			
11. Does the discharg							,		1 14
Odors? 전 No 디 Y	es Colo	or?  Clea	ar 🛛 Cloudy/l	Muddy	Clarity? 🛛 C	lear 🗹	Colored <u>S</u>	lightly	yellow
Odors? 전 No 디 Y	es Colo	or?  Clea	ar 🛛 Cloudy/l	Muddy	Clarity? 🛛 C	lear 🗹	Colored <u>S</u>	lightly	yellow
Odors?  No 미 N Floatables? 미 None	res Colo	or? 더 Clea sheen 더	ar 🗆 Cloudy/l Surface scum	Muddy	Clarity? □ C سرائی } suds ⊡ Debris	Other Other	er (describe	)	11.6
Odors?  No 미 N Floatables? 미 None	res Colo	or? 더 Clea sheen 더	ar 🗆 Cloudy/l Surface scum	Muddy	Clarity? □ C سرائی } suds ⊡ Debris	Other Other	er (describe	)	11.6
Ddors? 🗹 No 🗆 N Floatables? 🗆 None 12. Vegetation <u>Al</u>	es Colo D Moving oily s <u>وهد وروسا</u> ید	or? I Clea	ar Cloudy/l Surface scum 13.	Muddy	Clarity? □ C سرائی } suds ⊡ Debris	Other Other	er (describe	)	11.6
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Odors? 🗹 No 🗆 N Floatables? 🗆 None 12. Vegetation <u>Al</u> Part 3. Field Analys 14. Flow	fes Colo ☐ Moving oily s <u>وهد ورت سابلم</u> <b>es</b> gal/min OR	or? ⊡ Clea sheen ⊡ Very Lou □ Low	ar 🗌 Cloudy/l Surface scum 13. ఎ J Medium 🔲	Muddy D Soapy . Biology l High	Clarity? [] C suds [] Debris None	ovit Centor Otho	er (describe	)	177 C 605 177 2 177 2 17
Ddors? 🗹 No 🗆 N Floatables? 🗆 None 12. Vegetation <u>Al</u> Part 3. Field Analys 14. Flow	fes Colo ☐ Moving oily s <u>وهد ورت سابلم</u> <b>es</b> gal/min OR	or? ⊡ Clea sheen ⊡ Very Lou □ Low	ar 🗌 Cloudy/l Surface scum 13. ఎ J Medium 🔲	Muddy D Soapy . Biology l High	Clarity? [] C suds [] Debris None	ovit Centor Otho	er (describe	)	177 C 605 177 2 177 2 17
Ddors? In No In Floatables? In None 12. Vegetation Alg Part 3. Field Analys 14. Flow 15. Previous observat	es Cold المعالية الم المعالية المعالية الم المعالية المعالية الم المعالية المعالية الم المعالية المعالية المعالية المعالية المعالية المعالية معالية معالية المعالية الم معالية معالية المعالية المعالي معالية معالية المعالية المعا	Sheen Sheen Yery Lou Low ry weather	ar Cloudy/I Surface scum 13. J Medium flow? <u>2019</u>	Muddy Soapy Biology	Clarity? [] C suds [] Debris None	ovit Centor Otho	er (describe	)	177 C 605 177 2 177 2 17
Ddors? In No In Floatables? In None 12. Vegetation <u>Al</u> Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit discha	fes Cold D Moving oily : <u>معد متعالم</u> <b>Cold</b> Cold Co	or? I Clea sheen I Yery Lou Low I ry weather he outfall?	ar Cloudy/I Surface scum 13. Medium flow? <u>2019 1</u>	Muddy Soapy Biology	Clarity? [] C suds [] Debris None	r she	er (describe	) k water	177 C 605 177 2 177 2 17
11. Does the discharg Odors? In No In Floatables? In None 12. Vegetation All Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit discha	الافة Cold Moving oily : معد ورم الملح العن الملح العن الملح الملم الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملم ملمماح المماح ملم ملمماح ملمماح ملمما ملممام ملمما ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملمم ملممام ملمم ملممام ملممام ملممام ملممام ملمم ملممام ملمم ملممام ملمم ملممام ملمم ملممم ملمم ملممم ملمم مم	or? I Clea sheen I Yery Lou Low I ry weather he outfall?	ar Cloudy/I Surface scum 13. Medium flow? <u>2019 1</u> I No 1 V	Muddy Soapy Biology High	Clarity? [] C suds [] Debris <u>None</u>	nit can Oth Oth v Slug dations in	er (describe	) k water	177 C 605 177 2 177 2 17
Ddors? In No In Floatables? In None L2. Vegetation <u>Al</u> Part 3. Field Analys L4. Flow L5. Previous observat L6. Is an illicit discha f No, proceed to next	الافة Cold Moving oily : معد ورم الملح العن الملح العن الملح الملم الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملم ملمماح المماح ملم ملمماح ملمماح ملمما ملممام ملمما ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملمم ملممام ملمم ملممام ملممام ملممام ملممام ملمم ملممام ملمم ملممام ملمم ملممام ملمم ملممم ملمم ملممم ملمم مم	or? I Clea sheen I Yery Lou Low I ry weather he outfall?	ar Cloudy/I Surface scum 13. Medium flow? <u>2019 1</u> I No 1 V	Muddy Soapy Biology High	Clarity? [] C suds [] Debris None	nit can Oth Oth v Slug dations in	er (describe	) k water	
Ddors? In No In Floatables? In None L2. Vegetation <u>Al</u> Part 3. Field Analys L4. Flow L5. Previous observat L6. Is an illicit discha f No, proceed to next	الافة Cold Moving oily : معد ورم الملح العن الملح العن الملح الملم الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملح الملم ملمماح المماح ملم ملمماح ملمماح ملمما ملممام ملمما ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملممام ملمم ملممام ملمم ملممام ملممام ملممام ملممام ملمم ملممام ملمم ملممام ملمم ملممام ملمم ملممم ملمم ملممم ملمم مم	or? I Clea sheen I Yery Lou Low I ry weather he outfall? otinue. Desc Duplie	ar Cloudy/l Surface scum 13. Medium flow? <u>2019</u> Mo 11 cribe any addition cate sample coll <b>Duplicate Sam</b>	Muddy Soapy Biology High Kes onal monit	Clarity? [] C suds [] Debris <u>None</u>	dations in	er (describe	) <u>k toeken</u>	
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Ddors? In No In Sector 2015 No	Yes     Cold       Moving oily s       Mo	or? I Clea sheen I Very Lou Low I ry weather he outfall? otinue. Desc Duplic e units mg/L	ar Cloudy/l Surface scum 13. Medium 13. Medium 13. Medium 13. Solution 13. Medium 14. Medium 14. Me	Muddy Discrete Soapy High Soapy High Soapy High Soap Soap Soap Soap Soap Soap Soap Soap	Clarity? □ C suds I Debris <u>None</u> coring recommended No I Yes Equipment Blan	dations in units mg/L	er (describe	) <u>k</u> to elect <u>Threshold</u> 0 or ≥ 9.0 .0 mg/L	
Ddors? In No In Television Parameter Parameter Detergents	Yes     Cold       Moving oily s       Mov	or? I Clea sheen I Very Lou Low I ry weather he outfall? dtinue. Desc Duplic e units mg/L mg/L	ar Cloudy/l Surface scum 13. Medium 13. Medium 13. Medium 13. Supplicate sample coll Stribe any addition cate sample coll Duplicate Sam 8. 2 0	Muddy Muddy Soapy Biology High Kes Conal monit Rected? Units mg/L mg/L	Clarity? □ C suds I Debris <u>None</u> coring recommended No I Yes Equipment Blan O D	dations in mk units mg/L mg/L	$\frac{1}{2}$	) L to alc re Threshold D or ≥ 9.0 .0 mg/L .0 mg/L	
Odors?       Image: None of the second	Yes     Colo       □ Moving oily s       GRC growtts       gal/min OR       gal/min OR       tions of baseline dat       trige suspected at t       coutfall. If Yes, contralyses       Primary Sample       8,5       0       F: 0 / T: 0	or? I Clea sheen I Yery Lou Low I ry weather he outfall? otinue. Desc Duplic e units mg/L mg/L	ar Cloudy/l Surface scum 13. Medium 13. Medium 13. Medium 13. Supplicate scup Supplicate scup Supplicate Scup Supplicate Scup Supplicate Scup Supplicate Scup	Muddy Muddy Soapy Biology High Kes Cected? Cec	Clarity? □ C suds ☑ Debris None coring recommend No ☑ Yes Equipment Blan O F: 0/ T: 0	dations in 	$\frac{\mathbf{Program}}{\leq 4.0}$	) <b>L</b> Lo alere Threshold 0 or ≥ 9.0 .0 mg/L .0 mg/L .0 mg/L	
Odors? In No In Floatables? In None Floatables? In None 12. Vegetation And Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit dischang If No, proceed to next 17. Water Quality And Parameter pH Total chlorine Detergents	Yes     Cold       Moving oily s       Mov	or? I Clea sheen I Very Lou Low I ry weather he outfall? dtinue. Desc Duplic e units mg/L mg/L	ar Cloudy/l Surface scum 13. Medium 13. Medium 13. Medium 13. Supplicate sample coll Stribe any addition cate sample coll Duplicate Sam 8. 2 0	Muddy Muddy Soapy Biology High Kes Conal monit Rected? Units mg/L mg/L	Clarity? □ C suds I Debris <u>None</u> coring recommended No I Yes Equipment Blan O D	dations in mk units mg/L mg/L	$\frac{Program}{\leq 4.0}$	) L to alc re Threshold D or ≥ 9.0 .0 mg/L .0 mg/L	

Collar has regetation growing in it (Encetum), and is backwatered

Watershed: <u>FU</u>	R =	Out	fall Number: <u>395– )</u>				
Part 1. General Info	prmation.	3 Ø					
1. Date 6-17-	2022	Time <u>  4: </u>	0				
2. Field Crew KG	MA	Water quality	analyses conducted by	NIA			
	. Time since last rain event 🖾 More than 48 hours 🗆 Less than 48 hours						
. Size of last rain event inches 5. Measured at weather station Tcd Skyens Inthe Air port							
Part 2. Visual Obse	art 2. Visual Observations						
6. End of pipe diame	ter <u>/%</u> "	7. Structural Conditio	n: Good, cmp w	grate			
	ude camera name/#) <u>Pa</u>	,	2				
	ling under DWS Program?	105 =					
	om end of pipe? WNo	8.0					
If No, take photograp	hs of outfall and record any	v pertinent observations in c	comments. If Yes, continue				
	ing water exhibit any of the		1.5				
Odors? 🗆 No 👘 Y	'es_N A Color? □ Cle	ear 🗆 Cloudy/Muddy 📈	A Clarity? Clear	Colored NA			
	□ Moving oily sheen [						
				10.000			
	2. Vegetation None 13. Biology None						
Part 3. Field Analys	es						
14. Flow	gal/min OR 🖾 Low	□ Medium □ High N 0	ine				
5. Previous observations of baseline dry weather flow?							
15. Previous observat	ions of baseline ary weathe	6. Is an illicit discharge suspected at the outfall?					
		11 VS		11(2)			
16. Is an illicit discha	rge suspected at the outfall	I? ௴No □Yes		ing ing			
16. Is an illicit discha	rge suspected at the outfall outfall. If Yes, continue. De	I? ☑No □Yes scribe any additional monit		comments.			
16. Is an illicit discha If No, proceed to next	rge suspected at the outfall outfall. If Yes, continue. De	I? ௴No □Yes		comments.			
16. Is an illicit discha	rge suspected at the outfall outfall. If Yes, continue. De	I? ☑No □Yes scribe any additional monit		comments. Program Threshold			
<ul> <li>16. Is an illicit discha</li> <li><i>If No, proceed to next</i></li> <li>17. Water Quality Ar</li> <li>Parameter</li> <li>pH</li> </ul>	rge suspected at the outfall outfall. If Yes, continue. De nalyses Dupl Primary Sample units	I? INO IYes scribe any additional monit licate sample collected? I Duplicate Sample units	No □Yes   ₩ № ₩ Equipment Blank units	Program Threshold ≤ 4.0 or ≥ 9.0			
16. Is an illicit discha I <i>f No, proceed to next</i> 17. Water Quality Ar <b>Parameter</b>	rge suspected at the outfall outfall. If Yes, continue. De naiyses Dupl Primary Sample	I? INO IYes scribe any additional monit licate sample collected?	No □Yes  ₩ № /A Equipment Blank	Program Threshold			

mg/L

NTU

≥ 0.5 mg/L

≥ 250 NTU

mg/L

NTU

#### Part 4. Comments

Turbidity

**Total phenols** 

Cleaned out organic debris in grate. Accessible down steep embanement

mg/L

NTU

	3	Ou	tall Number: <u>378-</u>	<u> </u>	
Part 1. General Inf	ormation.		-		
. Date <u>(2-17-</u>	2022	Time <u>13</u> :	41		
Field Crew K.G.	MA	Water qualit	y analyses conducted by	N/A	. <u> </u>
Time since last ra	in event 🗹 More than 48 h	ours 🛛 Less than	48 hours		
Size of last rain ev	vent inches	5. Measured at weathe	rstation Ted stevens	Intl. Airport	ő.
art 2. Visual Obse	rvations	· · · · · · · · · · · · · · · · · · ·			
. End of pipe diame	eter_/2″	7. Structural Condition	on: Good, HDPE		
	ude camera name/#) <u> Pa</u>		/		
	ling under DWS Program?		10		
	om end of pipe? 🗆 No 🛛 🖻		of water in end of pipe <u>1</u>	10"	2
	hs of outfall and record any				
1. Does the discharg	ing water exhibit any of the		-		
dors? 🗹 No 🖼	les Color? ØCle	ear 🛛 Cloudy/Muddy	Clarity? 🛛 Clear 🛛 🛛	Colored <u>Sightly</u>	<u>clibw</u>
loatables? 🔲 None	Moving oily sheen	🗹 Surface scum 🛛 🖾 Soapy	/ suds 🛛 Debris 🗖 Oth	er (describe)	
2. Vegetation Nor	ne	13. Biology	None		
aut 3 Field Analys					25000
-				N. Na	jil ei
4. Flow	gal/min OR 🗹 Low	이 같은 것은 것이 같아.		li Na Martin	,III ra
4. Flow		이 같은 것은 것이 같아.			, II is
4. Flow	gal/min OR 🗹 Low	r flow? <u>hone</u>	а А. телі 407 170)		, III rs
4. Flow 5. Previous observat 6. Is an illicit discha	gal/min OR ⊡ Low tions of baseline dry weathe	r flow? <u>hone</u> ? DrNo DYes		comments.	
<ol> <li>Flow</li> <li>Previous observation</li> <li>Is an illicit discharged to next</li> </ol>	gal/min OR ☑ Low tions of baseline dry weathe arge suspected at the outfall toutfall. If Yes, continue. Des	r flow? <u>hone</u> ? DrNo DYes	toring recommendations in		
<ol> <li>Flow</li> <li>Previous observation</li> <li>Is an illicit discharmonic di discharmonic discharmonic discharmonic discharmonic di disc</li></ol>	gal/min OR ☑ Low tions of baseline dry weathe arge suspected at the outfall toutfall. If Yes, continue. Des	r flow? <u>hone</u> ? Di No D Yes scribe any additional moni icate sample collected? D	toring recommendations in	comments.	
<ol> <li>Flow</li> <li>Previous observation</li> <li>Is an illicit dischation</li> <li>No, proceed to next</li> <li>Water Quality And the second seco</li></ol>	gal/min OR ☑ Low tions of baseline dry weathe arge suspected at the outfall toutfall. If Yes, continue. Des nalyses Dupli	r flow? <u>hone</u> ? Di No D Yes scribe any additional moni	itoring recommendations in ] No □ Yes ダやル		
<ul> <li>4. Flow</li></ul>	gal/min OR 🗹 Low tions of baseline dry weathe trge suspected at the outfall toutfall. If Yes, continue. Des nalyses Dupli Primary Sample 7, 1 units mg/L	r flow? <u>hone</u> ? DrNo DYes scribe any additional moni- icate sample collected? D Duplicate Sample units mg/L	toring recommendations in No ロYes ダレハ Equipment Blank units mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L	<u>_</u> _
<ul> <li>4. Flow</li></ul>	gal/min OR ☑ Low tions of baseline dry weathe trge suspected at the outfall toutfall. If Yes, continue. Des nalyses Dupli Primary Sample 7, 1 units mg/L mg/L	r flow? <u>hone</u> ? Di No D Yes scribe any additional moni- icate sample collected? D Duplicate Sample units mg/L mg/L	itoring recommendations in No ロYes ダトハ Equipment Blank units mg/L mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L	<u>_</u> _
<ul> <li>4. Flow</li></ul>	gal/min OR 🗹 Low tions of baseline dry weathe trge suspected at the outfall coutfall. If Yes, continue. Des malyses Duple Primary Sample 7, 1 units mg/L mg/L	r flow? <u>hone</u> 7 Di No DYes 5 scribe any additional moni icate sample collected? Duplicate Sample units mg/L mg/L mg/L	toring recommendations in No ロYes ダルA Equipment Blank units mg/L mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L           ≥ 1.0 mg/L	<u>_</u> _
<ul> <li>4. Flow</li></ul>	gal/min OR 🗹 Low tions of baseline dry weathe trge suspected at the outfall toutfall. If Yes, continue. Des nalyses Dupli Primary Sample 7, 1 units mg/L mg/L mg/L	r flow? <u>hone</u> ? DrNo DYes scribe any additional moni- icate sample collected? D Duplicate Sample units mg/L mg/L mg/L	toring recommendations in No Pes KNA Equipment Blank units mg/L mg/L mg/L	Program Threshold         ≤ 4.0 or ≥ 9.0         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 0.5 mg/L	<u>_</u> _
<ul> <li>5. Previous observation</li> <li>6. Is an illicit dischation</li> <li>6. No, proceed to next</li> <li>7. Water Quality An</li> <li>7. Water Quality An</li> <li>Parameter</li> <li>pH</li> <li>Total chlorine</li> <li>Detergents</li> <li>Total copper</li> </ul>	gal/min OR 🗹 Low tions of baseline dry weathe trge suspected at the outfall coutfall. If Yes, continue. Des malyses Duple Primary Sample 7, 1 units mg/L mg/L	r flow? <u>hone</u> 7 Di No DYes 5 scribe any additional moni icate sample collected? Duplicate Sample units mg/L mg/L mg/L	toring recommendations in No ロYes ダルA Equipment Blank units mg/L mg/L	Program Threshold           ≤ 4.0 or ≥ 9.0           ≥ 1.0 mg/L           ≥ 1.0 mg/L           ≥ 1.0 mg/L	<u>_</u> _
<ul> <li>4. Flow</li></ul>	gal/min OR 🗹 Low tions of baseline dry weathe trge suspected at the outfall toutfall. If Yes, continue. Des nalyses Dupli Primary Sample 7, 1 units mg/L mg/L mg/L	r flow? <u>hone</u> ? DrNo DYes scribe any additional moni- icate sample collected? D Duplicate Sample units mg/L mg/L mg/L	toring recommendations in No Pes KNA Equipment Blank units mg/L mg/L mg/L	Program Threshold         ≤ 4.0 or ≥ 9.0         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 0.5 mg/L	<u>_</u> _
<ul> <li>4. Flow</li></ul>	gal/min       OR       ✓ Low         tions of baseline dry weather       the outfall         tions of baseline dry weather       Duplic         tions of baseline dry weather       Duplic         tions       Duplic         Primary Sample       mg/L         mg/L       mg/L         mg/L       NTU	r flow? <u>hone</u> 7 Di No DYes 5 scribe any additional moni icate sample collected? Duplicate Sample units mg/L mg/L mg/L mg/L NTU	toring recommendations in No ロYes ダル/A Equipment Blank units mg/L mg/L mg/L NTU	Program Threshold         ≤ 4.0 or ≥ 9.0         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 0.5 mg/L	<u>_</u> _
<ul> <li>4. Flow</li></ul>	gal/min       OR       ✓ Low         tions of baseline dry weather       the outfall         tions of baseline dry weather       Duplic         tions of baseline dry weather       Duplic         tions       Duplic         Primary Sample       mg/L         mg/L       mg/L         mg/L       NTU	r flow? <u>hone</u> 7 Di No DYes 5 scribe any additional moni icate sample collected? Duplicate Sample units mg/L mg/L mg/L mg/L NTU	toring recommendations in No ロYes ダル/A Equipment Blank units mg/L mg/L mg/L NTU	Program Threshold         ≤ 4.0 or ≥ 9.0         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 0.5 mg/L	<u>_</u> _
<ul> <li>4. Flow</li></ul>	gal/min OR 🗹 Low tions of baseline dry weathe trge suspected at the outfall toutfall. If Yes, continue. Des nalyses Dupli Primary Sample 7, 1 units mg/L mg/L mg/L	r flow? <u>hone</u> ? DNO Yes scribe any additional moni- icate sample collected? Deplicate Sample <u>units</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L</u> <u>mg/L}</u>	toring recommendations in No Yes SANA Equipment Blank units mg/L mg/L mg/L mg/L NTU NTU	Program Threshold         ≤ 4.0 or ≥ 9.0         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 1.0 mg/L         ≥ 0.5 mg/L	<u>_</u> _

Culvert is slightly backwatered. Flow into mainstream.

Cleaned out channel, hosur face sour how present.

PS

		, Ou	tfall Number: <u>[017</u> ]	1
art 1. General Info	rmation.		2	
Date <u>(11/20</u>	22	Time <u>15 :</u>	09	
	, mA		y analyses conducted by	NA 200 0
. Time since last rai	n event 🗹 More than 48	hours 🛛 🗆 Less than	48 hours	
Size of last rain even	ent <u> </u>	5. Measured at weathe	rstation Ted stevens	I ZAH! Airport
Part 2. Visual Obser	vations	<u> </u>		
. End of pipe diame	ter 24"	7 Structural Conditi	on: Good. Thick	DIA (+ic
			÷	•
	ıde camera name/#)}¥			
. Suitable for sample	ing under DWS Program?	🖸 No 🛛 Yes	04 54	99
0. Water flowing fro	om end of pipe? 🛂 No	☐ Yes If yes, depth	of water in end of pipe	
		y pertinent observations in	10	
				1 - 8
		e following (if yes, describe		
dors? 🗆 No 👘 Y	es N/A Color? □C	lear 🛛 Cloudy/Muddy 🗸	// Clarity? 🗆 Clear 🛛	Colored N/A
loatables? 😡 None	Moving oily sheen	Surface scum	y suds 🛛 🗆 Debris 👘 🗆 Ot	her (describe)
04.91 SOU		13. Biology		
		10: 5:0:087		
art 3. Field Analyse				
4. Flow None	gal/min OR 🛛 Low	🗆 Medium 🛛 High		
5. Previous observati	ons of baseline dry weath	er flow?	100	
	ge suspected at the outfa			
No, proceed to next	outfall. If Yes, continue. D	escribe any additional mon	itoring recommendations	in comments.
7. Water Quality An	alyses Dur	plicate sample collected?	No Yes J M/	<b>₩</b>
	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold
Parameter	units	units	units	≤ 4.0 or ≥ 9.0
			mg/L	≥ 1.0 mg/L
Parameter	mg/L	mg/L		≥ 1.0 mg/L
Parameter pH Total chlorine Detergents	mg/L	mg/L	mg/L	
Parameter pH Total chlorine Detergents Total copper	mg/L mg/L		mg/L mg/L	≥ 1.0 mg/L
Parameter pH Total chlorine Detergents Total copper Total phenols	mg/L mg/L mg/L	mg/L mg/L mg/L	mg/L mg/L	≥ 1.0 mg/L ≥ 0.5 mg/L
Parameter pH Total chlorine Detergents Total copper	mg/L mg/L	mg/L mg/L	mg/L	≥ 1.0 mg/L
Parameter pH Total chlorine Detergents Total copper Total phenols	mg/L mg/L mg/L	mg/L mg/L mg/L	mg/L mg/L	≥ 1.0 mg/L ≥ 0.5 mg/L
Parameter pH Total chlorine Detergents Total copper Total phenols	mg/L mg/L mg/L	mg/L mg/L mg/L	mg/L mg/L	≥ 1.0 mg/L ≥ 0.5 mg/L
Parameter pH Total chlorine Detergents Total copper Total phenols Turbidity art 4. Comments	mg/L mg/L mg/L	mg/L mg/L mg/L NTU	mg/L mg/L	≥ 1.0 mg/L ≥ 0.5 mg/L

Located at bottom of hill below mapping

'	Dry Weather Screening Field Data Form           Municipality of Anchorage APDES Monitoring Program						
Waters	hed: <u>F</u>	IR	. Out	all Number: <u>@34-</u>	-1		
Part 1.	General Inf	formation.	κ.				
1. Date	6/17/2	2022	Time	28			
	Field Crew <u>KG</u> , <u>MA</u> Water quality analyses conducted by <u>N/A</u>						
	B. Time since last rain event IV More than 48 hours I Less than 48 hours						
	. Size of last rain event inches 5. Measured at weather station <u>Ted stokens</u> A rpart						
Part 2.	art 2. Visual Observations						
6. End	. End of pipe diameter the 18" 7. Structural Condition: Coudd, CMP						
	. Photographs (include camera name/#) Pad						
	. Suitable for sampling under DWS Program? I No  Yes						
	. Suitable for sampling under DWS Program? ☑ No   □ Yes 0. Water flowing from end of pipe? ☑∕No   □ Yes         If yes, depth of water in end of pipe						
	-						
If No, ta	e photograj	phs of outfall and record an	y pertinent observations in c	omments. If Yes, continu	ue.		
11. Doe	the dischar	ging water exhibit any of th	e following (if yes, describe i	n comments):			
Odors?		Yes N /A Color? □ C	lear 🛛 Cloudy/Muddy ///	A Clarity? 🛛 Clear	Colored <u>N/A</u>		
Floatabl	s? □None	Moving oily sheen	Surface scum     Soapy	suds 🛛 Debris 🗆 Of	ther (describe) N/A		
			13. Biology _				
	art 3. Field Analyses						
14. Flo	4. Flow <u>None</u> gal/min OR □ Low □ Medium □ High						
15. Prev	5. Previous observations of baseline dry weather flow?						
16. Is a	illicit disch	arge suspected at the outfa	II? ☑ No 🗆 Yes				
If No. pr	ceed to nex	t outfall. If Yes. continue. D	escribe any additional monit	orina recommendations	in comments.		
If No, proceed to next outfall. If Yes, continue. Describe any additional monitoring recommended of the state							
17. Wa	er Quality A	nalyses Dut	Sincate sample collecteur				
	er Quality A	nalyses Dup	Duplicate Sample	Equipment Blank	Program Threshold		
Par pH		0 - 0	- IF Fr 64	10	Program Threshold ≤ 4.0 or ≥ 9.0		

mg/L

mg/L

NTU

mg/L

mg/L

NTU

≥ 1.0 mg/L

≥ 0.5 mg/L

≥ 250 NTU

#### Part 4. Comments

Turbidity

**Total copper** 

**Total phenols** 

1/2 CMP pipe flume down hillside

mg/L

mg/L

NTU

Watershed: <u>FU</u>	8				
Part 1. General Inf	ormation.	110		a Maria	
1. Date 11-17-	2022	Time 12:	48		
2. Field Crew <u> </u>	, ma	Water quality	y analyses conducted by	N/A. MI	
3. Time since last ra	in event 🛛 More than 48 h	ours 🛛 Less than 4	48 hours		
4. Size of last rain e	ventinches	5. Measured at weather	station Ted Stevens	Int Airport	
Part 2. Visual Obse		74			
				1 posto è alla	
	eter <u>16*</u>		n: <u>Fair, Unpu</u>	J grate ( Colla	
8. Photographs (incl	lude camera name/#) <u> Pa</u>	d	101		
9. Suitable for samp	ling under DWS Program?	□ No Id Yes			
10 Water flowing fr	rom end of pipe? 🗳 No 🛛	Ves If yes denth	of water in end of nine C+	andina water 1/2	17
ij No, tuke priotograf	ohs of outfall and record any	pertinent observations in t	comments. If res, continue.		
11. Does the discharg	ging water exhibit any of the	following (if yes, describe	in comments):		
			•		
Odors? 🗹 No 🗆 🗅	Yes Color? 🗹 Cle	ar 🔲 Cloudy/Muddy	-	Colored	
Odors? ☑No □`	Yes Color? I Cle	ar 🗆 Cloudy/Muddy	Clarity? 🗹 Clear 🛛	Colored	
Floatables? In None	Moving oily sheen	] Surface scum 🛛 Soapy	Clarity? 🗹 Clear 🗆 suds 🖾 Debris 🗖 Oth	Colored er (describe)	_
Floatables? In None	Yes Color? I Cle ghtly musty I Moving oily sheen C Celn MOSS	] Surface scum 🛛 Soapy	Clarity? 🗹 Clear 🗆 suds 🖾 Debris 🗖 Oth	Colored	_
Floatables? I None	e Di Moving oily sheen D	Surface scum 🛛 Soapy 13. Biology	Clarity? 🗹 Clear 🗆 suds 🖾 Debris 🗖 Oth	Colored er (describe)	
Floatables? IP None 12. Vegetation <u>G</u> Part 3. Field Analys	e Moving oily sheen C celn Moss ses Svery	] Surface scum 🛛 Soapy 13. Biology ຊາຍພ	Clarity? 🗹 Clear 🗆 suds 🖾 Debris 🗖 Oth	Colored	
Floatables? IP None 12. Vegetation <u>G</u> Part 3. Field Analys	e Di Moving oily sheen D	] Surface scum 🛛 Soapy 13. Biology ຊາຍພ	Clarity? 🗹 Clear 🗆 suds 🖾 Debris 🗖 Oth	Colored er (describe)	4
Floatables? I None 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow	e Moving oily sheen C celn Moss ses Svery	] Surface scum 🛛 Soapy 13. Biology ເງວເບ 🗆 Medium 🔲 High	Clarity? 🗹 Clear 🗆 suds 🖾 Debris 🗖 Oth	Colored	4
Floatables? IP None 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow 15. Previous observa	Bell Moving oily sheen C Celn MOSS Ses gal/min OR D Low tions of baseline dry weathe	] Surface scum 🗆 Soapy 13. Biology ເໄປເປ Medium 🗆 High r flow?	Clarity? 🗹 Clear 🗆 suds 🖾 Debris 🗖 Oth	Colored	4
Floatables? IP None 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit discha	Bell Moving oily sheen C Celn MOSS Ses gal/min OR Dow tions of baseline dry weathe arge suspected at the outfall	] Surface scum ロ Soapy 13. Biology こうしん Medium ロ High r flow? <u>トゥァー</u> ? 図 No ロ Yes	Clarity? Clear Clarity? Clear Clarity? Clear Cle	er (describe)	4
Floatables? IP None 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit discha	Bell Moving oily sheen C Celn MOSS Ses gal/min OR D Low tions of baseline dry weathe	] Surface scum ロ Soapy 13. Biology こうしん Medium ロ High r flow? <u>トゥァー</u> ? 図 No ロ Yes	Clarity? Clear Clarity? Clear Clarity? Clear Cle	er (describe)	1
Floatables? In None 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit discha If No, proceed to next	Bal/min OR Down and Descent for the outfall t outfall. If Yes, continue. Descent for the outfall	] Surface scum ロ Soapy 13. Biology こういい ロ Medium ロ High r flow? <u>トゥィー</u> ? 図 No ロ Yes scribe any additional monit	Clarity? I Clear	er (describe)	
Floatables? In None 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit discha If No, proceed to nex 17. Water Quality A	Big Moving oily sheen C Class Ses Ses Ses Ses Ses Ses Ses Ses	] Surface scum 🗌 Soapy 13. Biology ເໄປເປ Medium 🗌 High r flow? <u>No 🗌</u> Yes scribe any additional monit	Clarity? In Clear ロ suds ロ Debris ロ Othe <u>None</u> toring recommendations in No ロ Yes ビ ド/ A	er (describe)	
Floatables?  Provide the floatables?  Floatable?  Flo	Moving oily sheen      Moving oily sheen      Moss      Moss	Surface scum ロ Soapy 13. Biology Medium ロ High r flow? <u>トゥトニ</u> ? 図 No ロ Yes scribe any additional monit icate sample collected? ロ Duplicate Sample	Clarity? ビClear ロ suds ロDebris ロOthe <u>NONE</u> toring recommendations in No ロYes ビド/A Equipment Blank	er (describe) comments. Program Threshold	
Floatables?  Provide the floatables?  Floatable?  Float	Moving oily sheen     Moving oily sheen     Moss      gal/min OR     Low  tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses     Dupl     Primary Sample     7, 5 units	Surface scum ロ Soapy 13. Biology の Medium ロ High r flow? <u>No ロ</u> Yes Scribe any additional monit icate sample collected? ロ Duplicate Sample units	Clarity? 「Clear 」 suds 」 Debris 」 Othe <u>None</u> No 」 Yes ビドル Equipment Blank units	er (describe) comments. Program Threshold ≤ 4.0 or ≥ 9.0	
Floatables? ☑ None 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit discha 16. Is an illicit discha 17. Water Quality A Parameter pH Total chlorine	Moving oily sheen     Moving oily sheen     Moss      gal/min OR     Low  tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses     Dupl     Primary Sample     7, % units     mg/L	Surface scum ロ Soapy 13. Biology いろうい Medium ロ High r flow? <u>トゥホー</u> ? 図 No ロ Yes scribe any additional monit icate sample collected? ロ Duplicate Sample units mg/L	Clarity? 「Clear ロ suds ロ Debris ロ Othe <u>NONE</u> toring recommendations in No ロ Yes ビ N/A Equipment Blank units mg/L	er (describe) comments. Program Threshold ≤ 4.0 or ≥ 9.0 ≥ 1.0 mg/L	
Floatables? ☑ None 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit discha 16. Is an illicit discha 17. Water Quality A Parameter pH	Moving oily sheen     Moving oily sheen     Moss      gal/min OR     Low  tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses     Dupl     Primary Sample     7, 5 units	Surface scum ロ Soapy 13. Biology の Medium ロ High r flow? <u>No ロ</u> Yes Scribe any additional monit icate sample collected? ロ Duplicate Sample units	Clarity? 「Clear 」 suds 」 Debris 」 Othe <u>None</u> No 」 Yes ビドル Equipment Blank units	er (describe) comments. Program Threshold ≤ 4.0 or ≥ 9.0	
Floatables? Prone 12. Vegetation <u>G</u> Part 3. Field Analys 14. Flow 15. Previous observa 16. Is an illicit discha If No, proceed to nex 17. Water Quality A Parameter pH Total chlorine Detergents	Moving oily sheen     Moving oily sheen     Moss      gal/min OR D Low  tions of baseline dry weathe arge suspected at the outfall t outfall. If Yes, continue. Des nalyses     Dupl     Primary Sample     7.	Surface scum ロ Soapy 13. Biology いいいいいいいいいいいいいいいいいいいいいいいいいいいいいいいいいいいい	Clarity? 「Clear 」 suds 〕 Debris 〕 Othe <u>NONE</u> toring recommendations in No 〕 Yes ③ N/A Equipment Blank units mg/L mg/L	er (describe) comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$	

#### Part 4. Comments

Pipe has nust line

Culvert next to 16" culvert is 24" cmp w/ grate and cullar, dry, rust line "3 was a

ps 1ce

### **Dry Weather Screening Field Data Form**

Municipality of Anchorage APDES Monitoring Program

	1)	Natershed: <u>RAB</u> Outfall Number: <u>745-1</u>							
Part 1. General Info	ormation.			K					
1. Date (0/17/2	te (e/17/22) Time 9:50								
2. Field Crew KG, MA Water quality analyses conducted by N/A									
3. Time since last rain event ☑ More than 48 hours □ Less than 48 hours									
	rentinches			tat Arport					
Part 2. Visual Obse									
		7 <sup>-1</sup> Structural Conditio	- Good (mp	in concrete headwa					
	ude camera name/#) <u>  P</u> 。	,							
9. Suitable for sampl	ling under DWS Program?	□ No							
	om end of pipe? 🖸 No 🛛 🖾								
	hs of outfall and record any								
				32 II 01 I					
	ing water exhibit any of the								
Odors? 덴No 디Y	es Color? 🗹 Cle	ar 🛛 Cloudy/Muddy	Clarity? IV Clear	Colored					
	Moving oily shoon			small flag					
				colored er (describe) Organic Floa					
	Moving oily sheen								
12. Vegetation <u>Ni</u> Part 3. Field Analys	ond es	13. Biology							
12. Vegetation <u>Ni</u> Part 3. Field Analys	ond es	13. Biology							
12. Vegetation <u>N</u> í Part 3. Field Analys 14. Flow	esgal/min OR ⊡Low	13. Biology							
12. Vegetation <u>Ní</u> Part 3. Field Analys 14. Flow	ond es	13. Biology							
12. Vegetation <u>Ni</u> Part 3. Field Analys 14. Flow 15. Previous observat	esgal/min OR ⊠Low	13. Biology □ Medium □ High r flow? <u>non€ -</u>							
12. Vegetation <u>N</u> Part 3. Field Analys 14. Flow 15. Previous observat 16. Is an illicit discha	es gal/min OR I Low ions of baseline dry weather rge suspected at the outfall	13. Biology □ Medium □ High r flow? <u>none</u> . ? ☑ No □ Yes	None						
<ol> <li>Vegetation <u>Ni</u></li> <li>Part 3. Field Analys</li> <li>Flow</li> <li>Flow</li> <li>Previous observat</li> <li>Is an illicit dischard</li> <li>If No, proceed to next</li> </ol>	es gal/min OR I Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. Des	13. Biology □ Medium □ High r flow? <u>none</u> . ? ☑ No □ Yes	None						
<ol> <li>Vegetation <u>Ni</u></li> <li>Part 3. Field Analys</li> <li>Flow</li> <li>Flow</li> <li>Previous observat</li> <li>Is an illicit dischard</li> <li>If No, proceed to next</li> </ol>	es gal/min OR I Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. Des	13. Biology     13. Biology     14     15     1600	None						
12. Vegetation	es gal/min OR I Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. Des nalyses Dupli	13. Biology     13. Biology     14     15     15     16	None Foring recommendations in	comments.					
<ol> <li>Vegetation <u>N</u></li> <li>Part 3. Field Analyse</li> <li>Flow</li> <li>Flow</li> <li>Previous observat</li> <li>Is an illicit dischart</li> <li>Is an illicit dischart</li> <li>Is an illicit dischart</li> <li>Water Quality And Parameter</li> </ol>	es gal/min OR I Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. Des nalyses Dupli Primary Sample	13. Biology         □ Medium       □ High         flow?       none         ?       ☑ No       □ Yes         cate sample collected?       □         Duplicate Sample       □	AJon e Foring recommendations in No ロYes ズドル Equipment Blank	comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$					
<ul> <li>12. Vegetation <u>N</u>(</li> <li>Part 3. Field Analyse</li> <li>14. Flow</li> <li>15. Previous observat</li> <li>16. Is an illicit dischart</li> <li>16. Is an illicit dischart</li> <li>17. Water Quality An</li> <li>Parameter</li> <li>pH</li> </ul>	es gal/min OR 🗹 Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. Des nalyses Dupli Primary Sample units	I3. Biology         Image: B	None No 口Yes ビドル Equipment Blank units	comments. Program Threshold $\leq 4.0 \text{ or } \geq 9.0$					
<ul> <li>12. Vegetation <u>Ni</u></li> <li>Part 3. Field Analyse</li> <li>14. Flow</li> <li>15. Previous observat</li> <li>16. Is an illicit dischart</li> <li>17. Water Quality An</li> <li>Parameter pH</li> <li>Total chlorine</li> <li>Detergents</li> <li>Total copper</li> </ul>	es gal/min OR Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. Des halyses Dupli Primary Sample units mg/L mg/L	13. Biology         □ Medium       □ High         flow?       none         ?       ☑ No       □ Yes         cate sample collected?       □         Duplicate Sample       units         mg/L       mg/L	No □ Yes ☑ №/A Equipment Blank units mg/L mg/L	Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$					
<ul> <li>12. Vegetation <u>N</u>(</li> <li>Part 3. Field Analys</li> <li>14. Flow</li> <li>15. Previous observat</li> <li>16. Is an illicit dischait</li> <li>16. Is an illicit dischait</li> <li>17. Water Quality An</li> <li>Parameter pH</li> <li>Total chlorine Detergents</li> </ul>	es gal/min OR 🗹 Low ions of baseline dry weather rge suspected at the outfall outfall. If Yes, continue. Des halyses Dupli Primary Sample units mg/L mg/L	13. Biology         □ Medium       □ High         r flow?       none         ?       ☑ No       □ Yes         cribe any additional monit       cate sample collected?       □         Duplicate Sample       units       mg/L         mg/L       mg/L       mg/L	No □Yes ☑ N/A Equipment Blank units mg/L mg/L	comments.Program Threshold $\leq 4.0 \text{ or } \geq 9.0$ $\geq 1.0 \text{ mg/L}$ $\geq 1.0 \text{ mg/L}$					

#### Part 4. Comments

Slightly backwatered. Some sediment buildup Downstream channel full of tree branches / clippings

16	-	of Anchorage APDES		<b>m</b>		
Watershed: <u>RAB</u> Outfall Number: <u>745-86</u>						
Part 1. General Ir	formation.		5	-31-		
1. Date <u>0-17</u>	-2022	Time <u>/ () ; /</u>	7			
2. Field Crew 📉	G. MA	Water quality	analyses conducted by	N/A		
,	rain event Imore than 48 h	ours 🛛 Less than 4	8 hours			
4. Size of last rain	eventinches	5. Measured at weather	station <u>Ted</u> Stevens	I Intl. Airport		
Part 2. Visual Obs	servations		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
6. End of pipe diar	neter 12" w/ collar	7. Structural Conditio	n: Good HAPE	w/ collar		
	clude camera name/#)Pa		•	1		
	pling under DWS Program?		conventione, dry			
	from end of pipe? $\Box$ No					
	aphs of outfall and record any					
• • • •		-				
	rging water exhibit any of the			Colored		
Floatables?	ne 🗆 Moving oily sheen [	□ Surface scum  □ Soapy	suds 🗆 Debris 🗖 Oth	er (describe)		
	lone					
Part 3. Field Anal				18		
14. Flow NA	-					
11 11 11 11 11 11						
	rations of baseline dry weathe		(4)	n 0.		
16. Is an illicit disc	harge suspected at the outfall	l? 🛛 No 🗆 Yes				
If No, proceed to ne	ext outfall. If Yes, continue. De	scribe any additional monit	oring recommendations in	comments.		
17. Water Quality	Analyses Dup	licate sample collected?	No Yes & N/A			
Parameter	Primary Sample	Duplicate Sample	Equipment Blank	Program Threshold		
рН	units	units	units	≤ 4.0 or ≥ 9.0		
Total chlorine	mg/L	mg/L	mg/L	≥ 1.0 mg/L		
Detergents	mg/L	mg/L	mg/L	≥ 1.0 mg/L		
Total copper	mg/L	mg/L	mg/L	≥ 1.0 mg/L		

mg/L

NTU

≥ 0.5 mg/L

≥ 250 NTU

mg/L

NTU

#### Part 4. Comments

Turbidity

**Total phenols** 

Series of cross drainages. Multiple not mapped By Organic debns in culvert

mg/L

NTU

### Appendix D

### **Outfall Sampling Photographs**

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Eagle River 303-1. June 16, 2022.



Eagle River 1375-1. June 16, 2022.



Eagle River 1390-2. June 16, 2022.



Eagle River 1417-1. June 16, 2022.



Eagle River 1450-2. June 16, 2022.



Eagle River 1451-1. June 16, 2022.



Eagle River 1455-1. June 16, 2022.



Fire 1392-1. June 16, 2022.



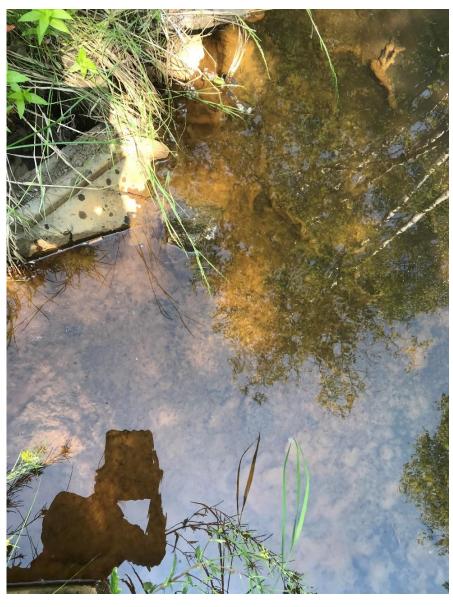
Fish Creek 7-1. June 22, 2022.



Fish Creek 79-353. June 22, 2022.



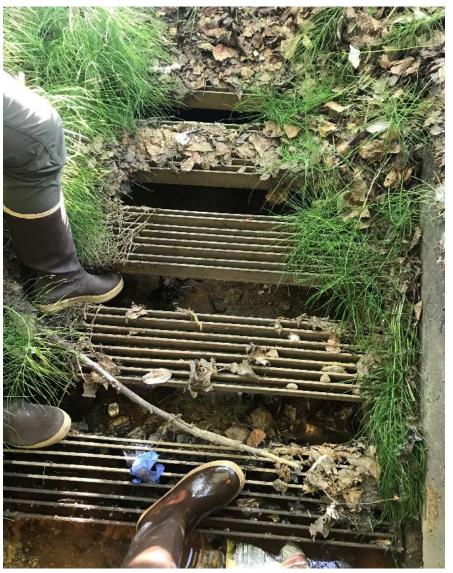




Fish Creek 264-1 June 22, 2022.



Fish Creek 555-1. June 22, 2022



Fish 573-48. June 16, 2022.



Fish Creek 684-1. June 22, 2022.



Fish Creek 610-1. June 22, 2022.





Fish Creek 686-167. June 22, 2022.

Fish Creek 686-1. June 22, 2022.



Fish Creek 1054-1. June 22, 2022.



Fish Creek 1277-1. No Safe Access. June 22, 2022.



Fish Creek 1278-1. June 22, 2022.



Fish Creek 1310-201. June 22, 2022.

Furrow 34-2. June 17, 20



Furrow 216-10. June 17, 2022.



Furrow 292-192. June 17, 2022.



Furrow 306-1. June 17, 2022.



Furrow 332-1. June 17, 2022.



Furrow 395-1. June 17, 2022.



Furrow 592-1. June 17, 2022.



Furrow 617-1. June 17, 2022.



Furrow 634-1. June 17, 2022.



Furrow 1344-8. June 17, 2022.



Rabbit Creek 745-1. June 17, 2022.

### Appendix E Laboratory Analysis Reports

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#### Laboratory Report of Analysis

To: HDR Alaska, Inc.

Report Number: 1223175

Client Project: Dry Weather Screening

Dear Alena Gerlek,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely, SGS North America Inc.

Alexandra Lambe Project Manager Alexandra.Lambe@sgs.com Date

Print Date: 06/23/2022 2:07:51PM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518 t 907.562.2343 f 907.561.5301 www.us.sgs.com Results via Engage



#### **Case Narrative**

SGS Client: HDR Alaska, Inc. SGS Project: 1223175 Project Name/Site: Dry Weather Screening Project Contact: Alena Gerlek

Refer to sample receipt form for information on sample condition.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 06/23/2022 2:07:52PM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518 t 907.562.2343 f 907.561.5301 www.us.sgs.com



#### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <<u>http://www.sgs.com/en/Terms-and-Conditions.aspx></u>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
В	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.
Sample summaries which in All DRO/RRO analyses are	nclude a result for "Total Solids" have already been adjusted for moisture content. integrated per SOP.

Print Date: 06/23/2022 2:07:53PM

Note:



	:	Sample Summary	,	
Client Sample ID	Lab Sample ID	Collected	Received	Matrix
ER 1451-1 ER 1451-1 Dup	1223175001 1223175002	06/16/2022 06/16/2022	06/16/2022 06/16/2022	Water (Surface, Eff., Ground) Water (Surface, Eff., Ground)
ER 1375-1	1223175003	06/16/2022	06/16/2022	Water (Surface, Eff., Ground)
<u>Method</u>	Method Des	<u>scription</u>		
SM21 9222D	Fecal Colifo	orm (MF)		

Print Date: 06/23/2022 2:07:55PM



	Detectable Results Summary			
Client Sample ID: ER 1451-1 Lab Sample ID: 1223175001 Microbiology Laboratory	<u>Parameter</u> Fecal Coliform	<u>Result</u> 1.7	<u>Units</u> col/100mL	
Client Sample ID: ER 1375-1 Lab Sample ID: 1223175003 Microbiology Laboratory	<u>Parameter</u> Fecal Coliform	<u>Result</u> 1.7	<u>Units</u> col/100mL	

Print Date: 06/23/2022 2:07:56PM

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SGS	

Client Sample ID: <b>ER 1451-1</b> Client Project ID: <b>Dry Weather Scree</b> Lab Sample ID: 1223175001 Lab Project ID: 1223175	C R M S La						
Results by <b>Microbiology Laboratory</b> Parameter Fecal Coliform	<u>Result Qual</u> 1.7	<u>LOQ/CL</u> 1.67	<u>DL</u> 1.67	<u>Units</u> col/100m	<u>DF</u> L 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 06/16/22 15:50
Batch Information         Analytical Batch: BTF19616         Analytical Method: SM21 9222D         Analyst: NRZ         Analytical Date/Time: 06/16/22 15:50         Container ID: 1223175001-A							

Print Date: 06/23/2022 2:07:57PM

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Results of ER 1451-1 Dup							
Client Sample ID: <b>ER 1451-1 Dup</b> Client Project ID: <b>Dry Weather Screen</b> Lab Sample ID: 1223175002 Lab Project ID: 1223175	R M Se	eceived D	ate: 06/16/2 ate: 06/16/2 er (Surface, E	2 15:2	1		
Results by Microbiology Laboratory			_				
<u>Parameter</u> Fecal Coliform	<u>Result Qual</u> 1.67 U	<u>LOQ/CL</u> 1.67	<u>DL</u> 1.67	<u>Units</u> col/100m	<u>DF</u> L 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 06/16/22 15:50
Batch Information Analytical Batch: BTF19616 Analytical Method: SM21 9222D Analyst: NRZ Analytical Date/Time: 06/16/22 15:50 Container ID: 1223175002-A							

Print Date: 06/23/2022 2:07:57PM

J flagging is activated

SGS	

Parameter       Result Qual       LOQ/CL       DL       Units       DF       Limits       Date Analyzed         Fecal Coliform       1.7       1.67       1.67       col/100mL 1       06/16/22 15:50         Batch Information       Analytical Batch: BTF19616       Analytical Method: SM21 9222D       Analytical Method: SM21 9222D       Analytical Date/Time: 06/16/22 15:50	Results of ER 1375-1 Client Sample ID: ER 1375-1 Client Project ID: Dry Weather Screer Lab Sample ID: 1223175003 Lab Project ID: 1223175 Results by Microbiology Laboratory	R M Se	Collection Date: 06/16/22 12:51 Received Date: 06/16/22 15:21 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:								
Container ID: 1223175003-A	Fecal Coliform Batch Information Analytical Batch: BTF19616 Analytical Method: SM21 9222D Analyst: NRZ Analytical Date/Time: 06/16/22 15:50					DF Limits	-				

Print Date: 06/23/2022 2:07:57PM

J flagging is activated

### SGS

- Method Blank		L			
Blank ID: MB for HBN 1838061 [BTF/19616] Blank Lab ID: 1668626		Matrix	x: Water (Surfa	ace, Eff., Ground)	
QC for Samples: 1223175001, 122317500	2, 1223175003				
Results by SM21 9222	D				
Parameter Fecal Coliform	<u>Results</u> 1.00U	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL	
Batch Information	19616				
Analytical Batch: BN Analytical Method: SN Instrument: Analyst: NRZ					
	6/16/2022 8:35:00PM				

Print Date: 06/23/2022 2:07:59PM

# SGS

lank ID: MB for HBN 1838061 [BTF/19616] lank Lab ID: 1668628	Matrix:	Water (Surf	ace, Eff., Ground)
C for Samples: 223175001, 1223175002, 1223175003			
esults by SM21 9222D			
arameterResultsecal Coliform1.00U	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL
tch Information Analytical Batch: BTF19616 Analytical Method: SM21 9222D Instrument: Analyst: NRZ Analytical Date/Time: 6/16/2022 5:21:00PM			

Print Date: 06/23/2022 2:07:59PM



#### SGS North America Inc. CHAIN OF CUSTODY RECORD



	CLIENT:						Ins	tructio	ns:	Section	ons 1	- 5 n	nust k	oe fille	d ou	•••••			
		DR Inc.					0	missio	ns n	nay de	elay t	he or	iset o	f analy	ysis.			Page	of
	CONTACT:	Cindy Helmericks	one #: 90	7-231-9;	3 <b>05</b>	Sec	tion 3					Pre	eservat	ive				Fage	_01
Section	PROJECT D	ry weather pws Screening PER	JECT/ ID/ MIT#:			# C O													
0)	REPORTS TO	D: E-N	AIL: cindy		1000	Ň	Comp					Anal	ysis*					NOTE:	
		D: E-N Cindy Helmericks Pro	file #: 370	369.H	2007	T	Grab											*The followin	g analyses
	INVOICE TO:	QU	OTE #:			Î	мі	£										require speci	
		HDR P.O	. #: pry u	leather si	creening	N E	(Multi- incre-	72										and/or compo BTEX, Metals	
	RESERVED	SAMPLE IDENTIFICATION	DATE		MATRIX	R	mental)	Fecal Colipu											
	for lab use		mm/dd/yy	HH:MM	CODE	S												REMARKS	S/LOC ID
	IA IA	ER 1451-1	00/10/22	10:40	H <sub>2</sub> O	1	G	X											
	QA	ER1451-1 DUP	00/10/22	10:45	H2O	1	G	X											
	37	ER 1315-1	00/10/22	12:51	H2D	1	G	X											
Section 2			,																
ecti																			
S																			
	Relinquishe	d By: (1)	Date	Time	Received By	/:	- <b>I</b>	<b>I</b> I		Sect	ion 4	DOI	) Proje	ct? Yes	₿.	Data	Delive	erable Requir	rements:
	Korgly		6/16/22				>				er ID:								
L.	Relinquished	l By: (2)	Date	Time	Received By					Reque	sted Tu	urnaro	und Tin	ne and/o	or Spe	cial Inst	tructio	ns:	Sec. Cl
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ecti	Relinquished	i By: (3)	Date	Time	Received By	/:				4.50	ut) a	U 30	່າກັບເ	pown	215	avail	ance	24 HRS	
Ň										Temp	Blank <sup>°</sup>	°c: _\	2.	DS	9	Cha	in of C	ustody Seal:	(Circle)
	Relinquished	d By: (4)	Date	Time	Received Fo	or Labo	ratory By					or Am	bient [	1	1				ABSENT
			6/16/22	15-1	1 ena	V Vũ C					Deli	ivery N	lethod:	Hand D	elivery	/[]@or	nmerio	al Delivery [	]
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http://www.sgs.com/terms-and-conditions

000	e-Sam <u>p</u>	le Receipt Form	
SGS	SGS Workorder #:	1223175	1223175
	eview Criteria	Condition (Yes, No, N/A	Exceptions Noted below
	dy / Temperature Requirements		d COC seal information is found on the chain of custody form
DOD only: Did all sa	mple coolers have a corresponding (		
	If <0°C, were sample containers ice	free? N/A	
	Note containers receive	ed with ice:	
Identify any con	tainers received at non-compliant ter (Use form FS-0029 if more space i		
			3 "Sample Guide" for specific holding times and sample containers.
	es received within analytical holding		
Do sample l	abels match COC? Record discrepa	ncies. Yes	
	containers differs from COC, default es differ <1hr, record details & login		
	Were analytical requests of	clear? Yes	
	r analyses with multiple option for me vs 8260, Metals 6020 vs 200.8)	ethod	
Were proper containe	ers (type/mass/volume/preservative)u	Ised? Yes	
Note: Exemption for	metals analysis by 200.8/6020 in wa	ater.	
Volatile Analysis Re	equirements (VOC, GRO, LL-Hg	ı, etc.)	
Vere all soil VOAs received	with a corresponding % solids conta	ainer? N/A	
Were Trip Blanks (e	.g., VOAs, LL-Hg) in cooler with sam	nples? N/A	
	free of headspace (e.g., bubbles $\leq 6$		
Were all soil	VOAs field extracted with Methanol+	BFB? N/A	
Note to Client: Any	/ "No", answer above indicates non-c	compliance with standard p	rocedures and may impact data quality.
	Additional I	notes (if applicable):	



#### **Sample Containers and Preservatives**

Container Id	<u>Preservative</u>	Container Condition	<u>Container Id</u>	<u>Preservative</u>	<u>Container</u> Condition
1223175001-A 1223175002-A 1223175003-A	Na2S2O3 for Chlorine Redu Na2S2O3 for Chlorine Redu Na2S2O3 for Chlorine Redu	ОК ОК ОК			

#### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis

requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added. QN - Insufficient sample quantity provided.



#### Laboratory Report of Analysis

To: HDR Alaska, Inc.

Report Number: 1223197

Client Project: Dry Weather Screening

Dear Alena Gerlek,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Alexandra at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely, SGS North America Inc.

Alexandra Lambe Project Manager Alexandra.Lambe@sgs.com Date

Print Date: 06/22/2022 8:40:57AM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518 t 907.562.2343 f 907.561.5301 www.us.sgs.com Results via Engage



#### **Case Narrative**

SGS Client: HDR Alaska, Inc. SGS Project: 1223197 Project Name/Site: Dry Weather Screening Project Contact: Alena Gerlek

Refer to sample receipt form for information on sample condition.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

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#### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <<u>http://www.sgs.com/en/Terms-and-Conditions.aspx></u>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/31/2022 for Fluoride by EPA 300.0 and Nitrate as N by SM 4500NO3-F) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
В	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.
Sample summaries which i All DRO/RRO analyses are	nclude a result for "Total Solids" have already been adjusted for moisture content. e integrated per SOP.

Print Date: 06/22/2022 8:41:01AM

Note:



Sample Summary										
<u>Client Sample ID</u> FVR 332-1	<u>Lab Sample ID</u> 1223197001	<u>Collected</u> 06/17/2022	<u>Received</u> 06/17/2022	<u>Matrix</u> Water (Surface, Eff., Ground)						
FVR 332-1 Dup	1223197002	06/17/2022	06/17/2022	Water (Surface, Eff., Ground)						
FVR 292-192	1223197003	06/17/2022	06/17/2022	Water (Surface, Eff., Ground)						
Method <u>Method Description</u>										
SM21 9222D	Fecal Colifo	rm (MF)								

Print Date: 06/22/2022 8:41:02AM



	Detectable Results Summary		
Client Sample ID: FVR 332-1 Dup Lab Sample ID: 1223197002 Microbiology Laboratory	<u>Parameter</u> Fecal Coliform	<u>Result</u> 1.7	<u>Units</u> col/100mL
Client Sample ID: FVR 292-192 Lab Sample ID: 1223197003 Microbiology Laboratory	<u>Parameter</u> Fecal Coliform	<u>Result</u> 6.7	<u>Units</u> col/100mL

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SGS	

Results of <b>FVR 332-1</b> Client Sample ID: <b>FVR 332-1</b> Client Project ID: <b>Dry Weather Screer</b> Lab Sample ID: 1223197001 Lab Project ID: 1223197	R M Se	eceived D	Date: 06/17/2 bate: 06/17/2 er (Surface,	22 15:42			
Results by Microbiology Laboratory          Parameter         Fecal Coliform         Batch Information	<u>Result Qual</u> 1.67 U	<u>LOQ/CL</u> 1.67	<u>DL</u> 1.67	<u>Units</u> col/100n	<u>DF</u> nL 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 06/17/22 17:43
Analytical Batch: BTF19618 Analytical Method: SM21 9222D Analyst: NRZ Analytical Date/Time: 06/17/22 17:43 Container ID: 1223197001-A							

Print Date: 06/22/2022 8:41:05AM

J flagging is activated



Results of FVR 332-1 Dup Client Sample ID: FVR 332-1 Dup Client Project ID: Dry Weather Screen Lab Sample ID: 1223197002 Lab Project ID: 1223197	C R M S						
Results by Microbiology Laboratory			)—				
<u>Parameter</u> Fecal Coliform	<u>Result Qual</u> 1.7	<u>LOQ/CL</u> 1.67	<u>DL</u> 1.67	<u>Units</u> col/100n	<u>DF</u> 1L 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 06/17/22 17:43
Batch Information Analytical Batch: BTF19618 Analytical Method: SM21 9222D Analyst: NRZ Analytical Date/Time: 06/17/22 17:43 Container ID: 1223197002-A							

Print Date: 06/22/2022 8:41:05AM

J flagging is activated



Results of FVR 292-192							
Client Sample ID: FVR 292-192 Client Project ID: Dry Weather Screen Lab Sample ID: 1223197003 Lab Project ID: 1223197	Ri M Se	Collection Date: 06/17/22 Received Date: 06/17/22 Matrix: Water (Surface, Eff Solids (%): Location:					
Results by Microbiology Laboratory			-				
<u>Parameter</u> Fecal Coliform	<u>Result Qual</u> 6.7	<u>LOQ/CL</u> 1.67	<u>DL</u> 1.67	<u>Units</u> col/100mL	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 06/17/22 17:43
Batch Information Analytical Batch: BTF19618 Analytical Method: SM21 9222D Analyst: NRZ Analytical Date/Time: 06/17/22 17:43 Container ID: 1223197003-A							

Print Date: 06/22/2022 8:41:05AM

J flagging is activated

# SGS

ank ID: MB for HBN	1838188 [BTF/19618]	Matrix	Matrix: Water (Surface, Eff., Ground)					
Blank Lab ID: 1668921		MatilA		ace, Ell., Ground)				
QC for Samples: 1223197001, 122319700	2, 1223197003							
Results by SM21 9222	D							
<u>Parameter</u> Fecal Coliform	<u>Results</u> 1.00U	<u>LOQ/CL</u> 1.00	<u>DL</u> 1.00	<u>Units</u> col/100mL				
atch Information Analytical Batch: BTF Analytical Method: SM Instrument:								
Analyst: NRZ Analytical Date/Time:	6/17/2022 5:43:00PM							

Print Date: 06/22/2022 8:41:06AM



#### SGS North America Inc. CHAIN OF CUSTODY RECORD

### 1223197

	client: HDR	Inc				a.		tructio missio								···· _···		Page of
	CONTACT:	Heimenicks	one #: 90	1-231-9	1305	Se	ction 3					Pre	eservat	ive				Fage01
Section		creening PER	MIT#:			# C 0												
	REPORTS TO Cindy INVOICE TO	0: E-N Helmenicks Pro : QU	AIL: hdy:heime file #: 370 OTE #: D. #: D. Y.		ine.com	N T A	Comp Grab MI	form				Analy	ysis*				1	NOTE: *The following analyses require specific method
	HD RESERVED for lab use	SAMPLE IDENTIFICATION	DATE	TIME HH:MM	MATRIX/ MATRIX	N E R S	(Multi- incre- mental)	Feal coli										and/or compound list: BTEX, Metals, PFAS REMARKS/LOC ID
		FUR 332-1	00/17/22			1	G	X										REMARKS/LOC ID
		FUR 332-1 DUP	04/17/22		H2O	I	G	X										
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on 5	Relinquished	Relinquished By: (2) Date Time Received By			y:	$\bigcirc$			Plea	equested Turnaround Time and/or Special Instructions: Dease contact Cindy Hermenicks by phone w.				sy phone w/				
Section 5	Relinquished By: (3) Date Time Receive		Received By	y:				preli	imin	ary	resu	Its a	as soo	in as	avai	lable (w/in 24 hrs)		
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			6/17/22	15:42	14		Ch		<u>55</u>		Deli	very M	ethod:	Hand	Deliver	y Com	nmeric	al Delivery [ ]

http://www.sgs.com/terms-and-conditions

000	e-Sam	ple Receipt Form	
SGS	SGS Workorder #:	1223197	1223197
R	eview Criteria	Condition (Yes, No, N/A	Exceptions Noted below
	dy / Temperature Requirements		e and COC seal information is found on the chain of custody form
DOD only: Did all sa	ample coolers have a corresponding		
	If <0°C, were sample containers ice		
	Note containers receiv	ed with ice:	
Identify any cor	ntainers received at non-compliant te (Use form FS-0029 if more space		
	ntation / Sample Condition Red les received within analytical holding	•	F-083 "Sample Guide" for specific holding times and sample containers.
	labels match COC? Record discrepa		
Note: If information on	containers differs from COC, default nes differ <1hr, record details & login	t to COC	
	Were analytical requests	clear? Yes	
	or analyses with multiple option for m vs 8260, Metals 6020 vs 200.8)	nethod	
Were proper containe	ers (type/mass/volume/preservative)	used? Yes	
Note: Exemption for	metals analysis by 200.8/6020 in w	ater.	
Volatile Analysis R	equirements (VOC, GRO, LL-H	g, etc.)	
ere all soil VOAs receive	d with a corresponding % solids cont	tainer? N/A	
	e.g., VOAs, LL-Hg) in cooler with sar		
	free of headspace (e.g., bubbles ≤ 6		
	VOAs field extracted with Methanol-	+BFB? N/A	
		P 141 7 1	
		compliance with standar notes (if applicable):	d procedures and may impact data quality.



#### **Sample Containers and Preservatives**

Container Id	<u>Preservative</u>	<u>Container</u> Condition	Container Id	<u>Preservative</u>	<u>Container</u> Condition
1223197001-A 1223197002-A 1223197003-A	Na2S2O3 for Chlorine Redu Na2S2O3 for Chlorine Redu Na2S2O3 for Chlorine Redu	ОК ОК ОК			

#### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis

requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added. QN - Insufficient sample quantity provided.