

STORM WATER MANAGEMENT PROGRAM
2019 ANNUAL REPORT



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City of Post Falls

2019 Annual Report on the Storm Water Program

MS4 Permit IDS-028231

1. INTRODUCTION

Pursuant to the referenced permit, Section IV.C. Reporting Requirements, this report summarizes the City’s storm water program activities from January 1, 2019 to December 31, 2019. The requirements of Section IV.C. are located in Appendix B.

This report is organized into sections each addressing the various reporting requirements.

The following table summarizes the status of each of the IV.C. reporting requirements and the location of documented data, analysis, and discussion that are included in this report.

Item #	Section IV.C. Element	Current Status	Document Location
1	1.a – e	Results of the last 12 months’ monitoring are included in this report	Section 2
6	2.a.	The assessment of program control measures is included in this report	Section 3
7	2.b.	Results of the last 12 months’ monitoring are included in this report	Section 2
8	2.c.	A summary of inspections and enforcement actions is included in this report	Section 4
9	2.d.	A summary of enforcement actions received is included in this report	Section 5
10	2.e.	Copies of permit-related products and materials produced during the reporting period are included in this report	Appendix - A
11	2.f.	An implementation schedule and a summary of planned activities during the next reporting cycle is included in this report	Section 6
12	2.g.	A schedule of implementation and description of additional BMPs that may be needed to comply with water quality standards are included in this report	Section 7
13	2.h.	The City of Post Falls did not rely on another entity for any of its permit obligations during this permit cycle.	None Required

2. MONITORING RESULTS FOR CURRENT PERMIT CYCLE

2010

Stormwater/Events Data Files/Water Quality Data

	PQL	Method
TSS, mg/L	0.17	SM2340
TP, mg/L	0.05	EPA365.3
Lead, mg/L	0.002	SM3113
TN, mg/L	0.05	SM 4500N B/4110
Zinc, mg/L	0.013	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	4th Avenue Outfall				
Sample Date	8/12/2009	3/17/2010	5/19/2010	8/11/2010	9/16/2010
TSS, mg/L	63	192	372.00	32	84
TP, mg/L	0.179	0.070	0.573	0.578	0.274
Lead, mg/L	0.006	0.018	0.02	ND	0.011
TN, mg/L	1.01	2.27	3.02	5.19	2.54
Zinc, mg/L	0.061	0.21	0.39	0.193	0.191
Hardness, mg/L	18.2	34.7	97.80	67.8	51.3
PCBs, ug/L	ND	ND	ND	ND	ND
Discharge Volume (cubic feet)	63,538	7,820	20,528	4,888	4,888
Discharge volume (gallons)	475,261	58,494	153,546	36,559	36,559

2010

Stormwater/Events Data Files/Water Quality Data

	PQL	Method
TSS, mg/L	0.17	SM2340
TP, mg/L	0.05	EPA365.3
Lead, mg/L	0.002	SM3113
TN, mg/L	0.05	SM 4500N B/4110
Zinc, mg/L	0.013	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	Centennial Trail Outfall				
Sample Date	8/12/2009	3/17/2010	5/19/2010	8/11/2010	9/16/2010
TSS, mg/L	80	545	328	960	76
TP, mg/L	0.202	0.930	0.448	1.11	0.2
Lead, mg/L	0.01	0.03	0.019	0.079	0.009
TN, mg/L	1.11	4.3	2.51	7.68	2.83
Zinc, mg/L	0.176	0.79	0.289	3.05	0.284
Hardness, mg/L	25.9	85.7	49.6	290	38.9
PCBs, ug/L	ND	ND	ND	ND	ND
Discharge Volume (cubic feet)	19,202	2,363	6,204	1,477	1,477
Discharge volume (gallons)	143,631	17,678	46,404	11,049	11,049

2010

Stormwater/Events Data Files/Water Quality Data

Event Pollutant Discharge (lbs)	4th Avenue Outfall				
Sample Date	8/12/2009	3/17/2010	5/19/2010	8/11/2010	9/16/2010
TSS	249.86	93.72	476.66	9.76	25.63
TP	0.71	0.03	0.73	0.18	0.08
Lead	0.024	0.009	0.028	ND	0.003
TN	4.01	1.11	3.87	1.58	0.77
Zinc	0.24	0.10	0.50	0.06	0.06
Hardness	72.18	16.94	125.32	20.68	15.65
PCBs	ND	ND	ND	ND	ND
Discharge Volume (gallons)	475,261	58,494	153,546	36,559	36,559
Event Precip (inches)	0.65	0.08	0.21	0.05	0.04
Inches per year =	30.26	Per USBR AgriMet Station RTHI for calendar year			

*Estimate only, subject to errors and assumptions.

2010

Stormwater/Events Data Files/Water Quality Data

Event Pollutant Discharge (lbs)					
	Centennial Trail Outfall				
Sample Date	8/12/2009	3/17/2010	5/19/2010	8/11/2010	9/16/2010
TSS	95.89	80.40	127.01	88.51	7.01
TP	0.24	0.14	0.17	0.10	0.02
Lead	0.012	0.004	0.007	0.007	ND
TN	1.33	0.63	0.97	0.71	0.26
Zinc	0.21	0.12	0.11	0.28	0.03
Hardness	31.04	12.64	19.21	26.74	3.59
PCBs	ND	ND	ND	ND	ND
Discharge Volume (gallons)	143,631	17,678	46,404	11,049	11,049
Event Precip (inches)	0.65	0.08	0.21	0.05	0.05
Inches per year =	30.26	Per USBR AgriMet Station RTHI for calendar year			

*Estimate only, subject to errors and assumptions.

Estimate of Pollutant Load/Inch Precip (lbs/inch)					
	4th Avenue Outfall				
Sample Date	8/12/2009	3/17/2010	5/19/2010	8/11/2010	9/16/2010
TSS	384.40	1171.51	2269.80	195.25	640.67
TP	1.09	0.43	3.50	3.53	2.09
Lead	0.04	0.11	0.13	ND	0.08
TN	6.16	13.85	18.43	31.67	19.37
Zinc	0.37	1.28	2.39	1.18	1.46
Hardness	111.05	211.73	596.74	413.69	391.27
PCBs	ND	ND	ND	ND	ND
Discharge Volume (gallons)	475,261	58,494	153,546	36,559	36,559

*Estimate only, subject to errors and assumptions.

Estimate of Pollutant Load/Inch Precip (lbs/inch)					
	Centennial Trail Outfall				
Sample Date	8/12/2009	3/17/2010	5/19/2010	8/11/2010	9/16/2010
TSS	147.52	1004.98	604.83	1770.24	140.14
TP	0.37	1.71	0.83	2.05	0.37
Lead	0.02	0.06	0.04	0.15	ND
TN	2.05	7.93	4.63	14.16	5.22
Zinc	0.32	1.46	0.53	5.62	0.52
Hardness	47.76	158.03	91.46	534.76	71.73
PCBs	ND	ND	ND	ND	ND
Discharge Volume (gallons)	143,631	17,678	46,404	11,049	11,049

*Estimate only, subject to errors and assumptions.

2010 Average Annual Load, lbs/day*

	4th	Centennial	Total
TSS	77.29	60.81	138
TP	0.18	0.09	0.26
Lead	ND	ND	ND
TN	1.48	0.56	2.05
Zinc	0.11	0.14	0.25
Hardness	28.59	14.98	43.58
PCBs	ND	ND	ND

*Estimate only, subject to errors and assumptions.

2010 Average Annual Load, lbs/year*

	4th	Centennial	Total
TSS	28,212	22,197	50,409
TP	64.35	32.25	96.60
Lead	ND	ND	ND
TN	541.53	205.68	747.21
Zinc	40.39	51.21	91.60
Hardness	10,436	5,469	15,906
PCBs	ND	ND	ND

*Estimate only, subject to errors and assumptions.

2011

Stormwater/Events Data Files/Water Quality Data

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.025	EPA365.3
Lead, mg/L	0.01	SM3120
TN, mg/L	0.08	SM 4500N B/4110
Zinc, mg/L	0.013	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	4th Avenue Outfall				
Sample Date	3/10/11	5/7/11	5/15/11	7/13/11	9/27/11
TSS, mg/L	135	14	142	173	60
TP, mg/L	0.159	0.052	1.11	0.29	0.354
Lead, mg/L	0.011	ND	0.011	0.014	ND
TN, mg/L	0.75	0.58	4.88	1.19	3.5
Zinc, mg/L	0.13	0.033	0.23	0.21	0.15
Hardness, mg/L	36.5	20.1	72.40	1.36	41.1
PCBs, ug/L	ND	ND	ND	ND	ND
Discharge Volume (cubic feet)	7,820	34,213	74,290	41,055	67,448
Discharge volume (gallons)	58,494	255,910	555,690	307,092	504,508

2011

Stormwater/Events Data Files/Water Quality Data

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.025	EPA365.3
Lead, mg/L	0.01	SM3120
TN, mg/L	0.08	SM 4500N B/4110
Zinc, mg/L	0.013	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	Centennial Trail Outfall				
Sample Date	3/10/11	5/7/11	5/15/11	7/13/11	9/27/11
TSS, mg/L	260	18	164.00	260	54
TP, mg/L	0.261	0.062	1.02	0.345	0.223
Lead, mg/L	0.018	ND	0.013	0.02	ND
TN, mg/L	1.05	0.76	3.40	1.64	2.8
Zinc, mg/L	0.29	0.11	0.37	0.37	0.33
Hardness, mg/L	55.2	24.6	90.50	2.55	45.2
PCBs, ug/L	ND	ND	ND	ND	ND
Discharge Volume (cubic feet)	2,363	10,340	22,452	12,407	20,384
Discharge volume (gallons)	17,678	77,340	167,938	92,808	152,470

2011

Stormwater/Events Data Files/Water Quality Data

Event Pollutant Discharge (lbs)					
	4th Avenue Outfall				
Sample Date	3/10/11	5/7/11	5/15/11	7/13/11	9/27/11
TSS	65.90	29.90	658.49	443.34	252.61
TP	0.08	0.11	5.15	0.74	1.49
Lead	0.005	ND	0.051	0.036	ND
TN	0.37	1.24	22.63	3.05	14.74
Zinc	0.06	0.07	1.07	0.54	0.63
Hardness	17.82	42.92	335.74	3.49	173.04
PCBs	ND	ND	ND	ND	ND
Discharge Volume (gallons)	58,494	255,910	555,690	307,092	504,508
Event Precip (inches)	0.08	0.35	0.76	0.42	0.69
Inches per year =	26.47	Per USBR AgriMet Station RTHI for calendar year			

Estimated Load/Inch Precip (lbs/inch)					
	4th Avenue Outfall				
Sample Date	3/10/11	5/7/11	5/15/11	7/13/11	9/27/11
TSS	823.72	85.42	866.43	1055.58	366.10
TP	0.97	0.32	6.77	1.77	2.16
Lead	0.07	ND	0.07	0.09	ND
TN	4.58	3.54	29.78	7.26	21.36
Zinc	0.79	0.20	1.40	1.28	0.92
Hardness	222.71	122.64	441.76	8.30	250.78
PCBs	ND	ND	ND	ND	ND
Disch Vol (gals.)	58,494	255,910	555,690	307,092	504,508

2011

Stormwater/Events Data Files/Water Quality Data

Event Pollutant Discharge (lbs)					
	Centennial Trail Outfall				
Sample Date	3/10/11	5/7/11	5/15/11	7/13/11	9/27/11
TSS	38.36	11.62	229.84	201.36	68.71
TP	0.04	0.04	1.43	0.27	0.28
Lead	0.003	ND	0.018	0.015	ND
TN	0.15	0.49	4.76	1.27	3.56
Zinc	0.04	0.07	0.52	0.29	0.42
Hardness	8.14	15.88	126.83	1.97	57.51
PCBs	ND	ND	ND	ND	ND
Discharge Volume (gallons)	17,678	77,340	167,938	92,808	152,470
Event Precip (inches)	0.08	0.35	0.76	0.42	0.69
Inches per year =	26.47	Per USBR AgriMet Station RTHI for calendar year			

Estimated Load/Inch Precip (lbs/inch)					
	Centennial Trail Outfall				
Sample Date	3/10/11	5/7/11	5/15/11	7/13/11	9/27/11
TSS	479.44	33.19	302.42	479.44	99.58
TP	0.48	0.11	1.88	0.64	0.41
Lead	0.03	ND	0.02	0.04	ND
TN	1.94	1.40	6.27	3.02	5.16
Zinc	0.53	0.20	0.68	0.68	0.61
Hardness	101.79	45.36	166.88	4.70	83.35
PCBs	ND	ND	ND	ND	ND
Disch Vol (gals.)	17,678	77,340	167,938	92,808	152,470

2011 Average Annual Load, lbs/day*			
	4th	Centennial	Total
TSS	46	19	65
TP	0.17	0.05	0.22
Lead	0.00319	0.00136	0.00
TN	0.96	0.18	1.15
Zinc	0.07	0.03	0.10
Hardness	15.17	4.62	19.80
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2011 Average Annual Load, lbs/year*			
	4th	Centennial	Total
TSS	16,926	6,853	23,779
TP	63.5	16.5	80.0
Lead	1.16	0.50	1.66
TN	352.09	66.87	418.96
Zinc	24.3	11.1	35.5
Hardness	5,538	1,687	7,226
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2012

Stormwater/Events Data Files/Water Quality Data

4th Avenue Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.025	EPA365.3
Lead, mg/L	0.01	SM3120
TN, mg/L	0.08	SM 4500N B/4110
Zinc, mg/L	0.013	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	4th Avenue Outfall				
Sample Date	3/12/12	4/4/12	5/2/12	7/15/12	10/15/12
TSS, mg/L	208	80	30	74	120
TP, mg/L	0.27	0.14	0.09	0.26	0.21
Lead, mg/L	0.016	ND	ND	ND	ND
TN, mg/L	1.25	2.90	2.80	1.19	0.98
Zinc, mg/L	0.23	0.13	0.05	0.08	0.34
Hardness, mg/L	65.60	36.60	19.80	15.70	18.80
PCBs, ug/L	ND	ND	ND	ND	ND
Discharge Volume (cubic feet)	31,280	33,235	16,618	90,908	49,853
Discharge Volume (gallons)	233,975	248,598	124,299	679,989	372,897
Event Precip (inches)	0.32	0.34	0.17	0.93	0.51
Inches per year =	33.2	Per USBR AgriMet Station RTHI for calendar year.			

2012

Stormwater/Events Data Files/Water Quality Data

Centennial Trail Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.025	EPA365.3
Lead, mg/L	0.01	SM3120
TN, mg/L	0.08	SM 4500N B/4110
Zinc, mg/L	0.013	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	Centennial Trail Outfall				
Sample Date	3/12/12	4/4/12	5/2/12	7/15/12	10/15/12
TSS, mg/L	304	75	134	378	120
TP, mg/L	0.33	0.13	0.16	0.65	0.21
Lead, mg/L	0.020	ND	ND	0.021	ND
TN, mg/L	1.66	2.80	3.80	1.86	0.98
Zinc, mg/L	0.56	0.15	0.25	1.23	0.34
Hardness, mg/L	135.00	26.00	20.20	34.20	18.80
PCBs, ug/L	ND	ND	ND	ND	ND
Discharge Volume (cubic feet)	9,453	10,044	5,022	27,474	15,066
Discharge Volume (gallons)	70,711	75,130	37,565	205,502	112,695
Event Precip (inches)	0.32	0.34	0.17	0.93	0.51
Inches per year =	33.2	Per USBR AgriMet Station RTHI for calendar year.			

2012

Event Pollutant Discharge (lbs)					
4th Avenue Outfall					
Sample Date	3/12/12	4/4/12	5/2/12	7/15/12	10/15/12
TSS	406.12	165.96	31.12	419.91	373.42
TP	0.52	0.28	0.09	1.48	0.66
Lead	0.03	ND	ND	ND	ND
TN	2.44	6.02	2.90	6.75	3.06
Zinc	0.45	0.27	0.05	0.44	1.06
Hardness	128.09	75.93	20.54	89.09	58.50
PCBs	ND	ND	ND	ND	ND
Discharge Volume (gallons)	233,975	248,598	124,299	679,989	372,897
Event Precip (inches)	0.32	0.34	0.17	0.93	0.51
Inches per year =	33.2	Per USBR AgriMet Station RTHI for calendar year			
Estimated Load/Inch Precip (lbs/inch)					
4th Avenue Outfall					
Sample Date	3/12/12	4/4/12	5/2/12	7/15/12	10/15/12
TSS	1269	488	183	452	732
TP	1.62	0.84	0.54	1.59	1.30
Lead	0.10	ND	ND	ND	ND
TN	7.63	17.69	17.08	7.26	6.00
Zinc	1.40	0.79	0.31	0.47	2.07
Hardness	400.3	223.3	120.8	95.8	114.7
PCBs	ND	ND	ND	ND	ND
Disch Vol (gals.)	233,975	248,598	124,299	679,989	372,897

2012

Event Pollutant Discharge (lbs)					
	Centennial Trail Outfall				
Sample Date	3/12/12	4/4/12	5/2/12	7/15/12	10/15/12
TSS	179.38	47.02	42.01	648.24	112.85
TP	0.19	0.08	0.05	1.12	0.20
Lead	0.01	ND	ND	0.00	ND
TN	0.98	1.76	1.19	3.19	0.93
Zinc	0.33	0.09	0.08	2.11	0.32
Hardness	79.66	16.30	6.33	58.65	17.68
PCBs	ND	ND	ND	ND	ND
Discharge Volume (gallons)	70,711	75,130	37,565	205,502	112,695
Event Precip (inches)	0.32	0.34	0.17	0.93	0.51
Inches per year =	33.2	Per USBR AgriMet Station RTHI for calendar year			

Estimated Load/Inch Precip (lbs/inch)					
	Centennial Trail Outfall				
Sample Date	3/12/12	4/4/12	5/2/12	7/15/12	10/15/12
TSS	561	138	247	697	221
TP	0.61	0.23	0.30	1.20	0.39
Lead	0.04	ND	ND	0.01	ND
TN	3.06	5.16	7.01	3.43	1.81
Zinc	1.03	0.28	0.46	2.27	0.63
Hardness	248.94	47.94	37.25	63.06	34.67
PCBs	ND	ND	ND	ND	ND
Disch Vol (gals.)	70,711	75,130	37,565	205,502	112,695

2012 Average Annual Load, lbs/day*			
	4th	Centennial	Total
TSS	56.83	29.89	86.72
TP	0.11	0.04	0.15
Lead	0.00	0.00	0.0025
TN	1.01	0.34	1.35
Zinc	0.09	0.07	0.17
Hardness	17.37	7.23	24.60
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2012 Average Annual Load, lbs/year*			
	4th	Centennial	Total
TSS	20,744	10,910	31,653
TP	39.1	15.6	54.7
Lead	0.65	0.28	0.93
TN	369.7	123.9	493.6
Zinc	33.5	26.8	60.3
Hardness	6341	2637	8978
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2013

Stormwater/Events Data Files/Water Quality Data

4th Avenue Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.025	EPA365.3
Lead, mg/L	0.01	SM3120
TN, mg/L	0.08	SM 4500N B/4110
Zinc, mg/L	0.013	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	4th Avenue Outfall				
Sample Date	3/12/13	5/13/2013	7/8/2013	9/4/2013	
TSS, mg/L	208	407	550	100	
TP, mg/L	0.27	0.79	0.89	0.18	
Lead, mg/L	0.016	0.029	0.049	0.009	
TN, mg/L	1.25	5.23	3.61	1.95	
Zinc, mg/L	0.23	0.55	0.05	0.12	
Hardness, mg/L	66	82	54	24	
PCBs, ug/L	ND	ND	ND	ND	
Discharge Volume (cubic feet)	31,280	33,235	16,618	90,908	
Discharge Volume (gallons)	233,975	248,598	124,299	679,989	
Event Precip (inches)	0.08	0.60	0.28	0.15	
Inches per year =	22.51	Per USBR AgriMet Station RTHI for calendar year.			

2013

Stormwater/Events Data Files/Water Quality Data

Centennial Trail Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.025	EPA365.3
Lead, mg/L	0.01	SM3120
TN, mg/L	0.08	SM 4500N B/4110
Zinc, mg/L	0.013	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	Centennial Trail Outfall				
Sample Date	3/12/13	5/13/2013	7/8/2013	9/4/2013	
TSS, mg/L	304	550	840	353	
TP, mg/L	0.33	1.18	1.58	0.52	
Lead, mg/L	0.020	0.037	0.070	0.023	
TN, mg/L	1.66	9.81	5.92	2.55	
Zinc, mg/L	0.56	1.04	2.20	0.49	
Hardness, mg/L	135	190	122	71	
PCBs, ug/L	ND	ND	ND	ND	
Discharge Volume (cubic feet)	9,453	10,044	5,022	27,474	
Discharge Volume (gallons)	70,711	75,130	37,565	205,502	
Event Precip (inches)	0.08	0.60	0.28	0.15	
Inches per year =	22.51	Per USBR AgriMet Station RTHI for calendar year.			

2013

Event Pollutant Discharge (lbs)*					
	4th Avenue Outfall				
Sample Date	3/12/13	5/13/13	7/8/13	9/4/13	
TSS	406.12	844.34	570.50	567.45	
TP	0.52	1.63	0.92	1.01	
Lead	0.03	0.01	0.01	0.01	
TN	2.44	10.85	3.74	11.07	
Zinc	0.45	1.15	0.05	0.68	
Hardness	128.09	169.28	55.81	135.62	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	233,975	248,598	124,299	679,989	
Event Precip (inches)	0.08	0.60	0.28	0.15	
Inches per year =	22.51	Per USBR AgriMet Station RTHI for calendar year			

*Estimate only, subject to errors and assumptions.

Estimated Load/Inch Precip (lbs/inch)*					
	4th Avenue Outfall				
Sample Date	3/12/13	5/13/13	7/8/13	9/4/13	
TSS	5,077	1,407	2,038	3,783	
TP	6.49	2.72	3.28	6.73	
Lead	0.39	0.01	0.02	0.05	
TN	30.51	18.08	13.37	73.77	
Zinc	5.61	1.92	0.18	4.54	
Hardness	1601.1	282.1	199.3	904.1	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	233,975	248,598	124,299	679,989	0

*Estimate only, subject to errors and assumptions.

2013

Event Pollutant Discharge (lbs)*					
	Centennial Trail Outfall				
Sample Date	3/12/13	5/13/13	7/8/13	9/4/13	
TSS	179.38	344.83	263.32	605.37	
TP	0.19	0.74	0.50	0.88	
Lead	0.01	0.00	0.00	0.01	
TN	0.98	6.15	1.86	4.37	
Zinc	0.33	0.65	0.69	0.84	
Hardness	79.66	119.12	38.24	121.24	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	70,711	75,130	37,565	205,502	
Event Precip (inches)	0.08	0.60	0.28	0.15	
Inches per year =	22.51	Per USBR AgriMet Station RTHI for calendar year			
*Estimate only, subject to errors and assumptions.					

Estimated Load/Inch Precip (lbs/inch)*					
	Centennial Trail Outfall				
Sample Date	3/12/13	5/13/13	7/8/13	9/4/13	
TSS	2,242	575	940	4,036	
TP	2.43	1.23	1.77	5.90	
Lead	0.15	0.01	0.01	0.03	
TN	12.24	10.25	6.63	29.15	
Zinc	4.13	1.09	2.46	5.61	
Hardness	995.7590	198.5371	136.5876	808.2982	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	70,711	75,130	37,565	205,502	0
*Estimate only, subject to errors and assumptions.					

2013 Average Annual Load, lbs/day*			
	4th	Centennial	Total
TSS	151.8	96.1	247.9
TP	0.24	0.14	0.38
Lead	0.01	0.00	0.0083
TN	1.67	0.72	2.39
Zinc	0.15	0.16	0.32
Hardness	36.84	26.39	63.22
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2013 Average Annual Load, lbs/year*			
	4th	Centennial	Total
TSS	55,394	35,085	90,479
TP	86.6	51.0	137.6
Lead	2.13	0.89	3.02
TN	611.1	262.4	873.4
Zinc	55.1	59.8	115.0
Hardness	13,446	9,631	23,076
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2014

Stormwater/Events Data Files/Water Quality Data

4th Avenue Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.007	EPA365.3
Lead, mg/L	0.01	SM3120
TN, mg/L	0.04	SM 4500N B/4110
Zinc, mg/L	0.01	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	4th Avenue Outfall				
Sample Date	3/8/14	5/4/2014	7/22/2014	9/3/2014	
TSS, mg/L	143	145	133	90	
TP, mg/L	0.21	0.27	0.45	0.23	
Lead, mg/L	0.009	0.019	0.010	0.008	
TN, mg/L	0.97	2.46	5.34	2.40	
Zinc, mg/L	0.17	0.24	0.33	0.18	
Hardness, mg/L	60	41	93	43	
PCBs, ug/L	ND	ND	ND	ND	
Discharge Volume (cubic feet)	29,325	3,910	6,843	25,415	
Discharge Volume (gallons)	219,351	29,247	51,182	190,104	
Event Precip (inches)	0.30	0.04	0.07	0.26	
Inches per year =	27.58	Per USBR AgriMet Station RTHI for calendar year.			

2014

Stormwater/Events Data Files/Water Quality Data

Centennial Trail Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.007	EPA365.3
Lead, mg/L	0.01	SM3120
TN, mg/L	0.04	SM 4500N B/4110
Zinc, mg/L	0.01	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	Centennial Trail Outfall				
Sample Date	3/8/14	5/4/2014	7/22/2014	9/3/2014	
TSS, mg/L	282	88	107	26	
TP, mg/L	0.30	0.18	0.50	0.01	
Lead, mg/L	0.031	0.014	0.010	0.004	
TN, mg/L	1.32	1.92	9.82	2.31	
Zinc, mg/L	0.38	0.25	0.82	0.35	
Hardness, mg/L	66	43	129	66	
PCBs, ug/L	ND	ND	ND	ND	
Discharge Volume (cubic feet)	8,862	1,182	2,068	7,681	
Discharge Volume (gallons)	66,291	8,839	15,468	57,452	
Event Precip (inches)	0.30	0.04	0.07	0.26	
Inches per year =	27.58	Per USBR AgriMet Station RTHI for calendar year.			

2014

Event Pollutant Discharge (lbs)*					
	4th Avenue Outfall				
Sample Date	3/8/14	5/4/14	7/22/14	9/3/14	
TSS	261.76	35.39	56.81	142.78	
TP	0.38	0.07	0.19	0.37	
Lead	0.02	0.00	0.00	0.00	
TN	1.78	0.60	2.28	3.81	
Zinc	0.31	0.06	0.14	0.28	
Hardness	110.01	9.93	39.76	68.53	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	219,351	29,247	51,182	190,104	
Event Precip (inches)	0.30	0.04	0.07	0.26	
Inches per year =	27.58	Per USBR AgriMet Station RTHI for calendar year			
*Estimate only, subject to errors and assumptions.					

Estimated Load/Inch Precip (lbs/inch)*					
	4th Avenue Outfall				
Sample Date	3/8/14	5/4/14	7/22/14	9/3/14	
TSS	873	885	812	549	
TP	1.27	1.63	2.76	1.42	
Lead	0.06	0.02	0.01	0.01	
TN	5.94	15.01	32.58	14.64	
Zinc	1.02	1.46	2.01	1.07	
Hardness	366.7	248.3	568.1	263.6	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	219,351	29,247	51,182	190,104	0
*Estimate only, subject to errors and assumptions.					

2014

Event Pollutant Discharge (lbs)*					
	Centennial Trail Outfall				
Sample Date	3/8/14	5/4/14	7/22/14	9/3/14	
TSS	156.00	6.49	13.81	12.47	
TP	0.17	0.01	0.06	0.01	
Lead	0.02	0.00	0.00	0.00	
TN	0.73	0.14	1.27	1.11	
Zinc	0.21	0.02	0.11	0.17	
Hardness	36.62	3.14	16.65	31.45	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	66,291	8,839	15,468	57,452	
Event Precip (inches)	0.30	0.04	0.07	0.26	
Inches per year =	27.58	Per USBR AgriMet Station RTHI for calendar year			
*Estimate only, subject to errors and assumptions.					

Estimated Load/Inch Precip (lbs/inch)*					
	Centennial Trail Outfall				
Sample Date	3/8/14	5/4/14	7/22/14	9/3/14	
TSS	520	162	197	48	
TP	0.55	0.33	0.91	0.02	
Lead	0.06	0.00	0.00	0.00	
TN	2.43	3.54	18.11	4.26	
Zinc	0.71	0.46	1.52	0.65	
Hardness	122.0727	78.5543	237.8758	120.9663	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	66,291	8,839	15,468	57,452	0
*Estimate only, subject to errors and assumptions.					

2014 Average Annual Load, lbs/day*			
	4th	Centennial	Total
TSS	47.1	14.0	61.1
TP	0.11	0.03	0.13
Lead	0.00	0.00	0.0023
TN	1.03	0.43	1.46
Zinc	0.08	0.05	0.13
Hardness	21.86	8.45	30.32
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2014 Average Annual Load, lbs/year*			
	4th	Centennial	Total
TSS	17,198	5,116	22,315
TP	39.1	10.1	49.1
Lead	0.49	0.35	0.84
TN	376.0	156.3	532.4
Zinc	30.7	18.4	49.1
Hardness	7,980	3,086	11,066
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2015

Stormwater/Events Data Files/Water Quality Data

4th Avenue Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.007	EPA365.1
Lead, mg/L	0.01	SM3120
TN, mg/L	0.04	SM 4500N B/4110
Zinc, mg/L	0.01	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	4th Avenue Outfall				
Sample Date	3/14/15	5/13/2015	7/11/2015	9/5/2015	
TSS, mg/L	254	75	26	5	
TP, mg/L	0.31	0.29	0.55	0.08	
Lead, mg/L	0.014	0.005	0.005	0.001	
TN, mg/L	1.38	2.00	13.00	0.57	
Zinc, mg/L	0.25	0.12	0.27	0.03	
Hardness, mg/L	46	33	88	26	
PCBs, ug/L	ND	ND	ND	ND	
Discharge Volume (cubic feet)	19,550	25,415	8,798	11,730	
Discharge Volume (gallons)	146,234	190,104	65,805	87,740	
Event Precip (inches)	0.20	0.26	0.09	0.12	
Inches per year =	Per USBR AgriMet Station PSFI for calendar year.				

2015

Stormwater/Events Data Files/Water Quality Data

Centennial Trail Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.007	EPA365.1
Lead, mg/L	0.01	SM3120
TN, mg/L	0.04	SM 4500N B/4110
Zinc, mg/L	0.01	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration					
	Centennial Trail Outfall				
Sample Date	3/14/15	5/13/2015	7/11/2015	9/5/2015	
TSS, mg/L	350	111	34	6	
TP, mg/L	0.42	0.34	0.69	0.08	
Lead, mg/L	0.016	0.007	0.006	0.001	
TN, mg/L	2.02	2.58	17.90	0.65	
Zinc, mg/L	0.52	0.40	0.98	0.28	
Hardness, mg/L	60	41	112	21	
PCBs, ug/L	ND	ND	ND	ND	
Discharge Volume (cubic feet)	5,908	7,681	2,659	3,545	
Discharge Volume (gallons)	44,194	57,452	19,887	26,516	
Event Precip (inches)	0.20	0.26	0.09	0.12	
Inches per year =	0	Per USBR AgriMet Station PSFI for calendar year.			

2015

Event Pollutant Discharge (lbs)*					
	4th Avenue Outfall				
Sample Date	3/14/15	5/13/15	7/11/15	9/5/15	
TSS	309.96	118.98	14.28	3.66	
TP	0.38	0.45	0.30	0.06	
Lead	0.02	0.00	0.00	0.00	
TN	1.68	3.17	7.14	0.42	
Zinc	0.30	0.18	0.15	0.02	
Hardness	55.89	52.03	48.21	19.26	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	146,234	190,104	65,805	87,740	
Event Precip (inches)	0.20	0.26	0.09	0.12	
Inches per year =	20.15	Per USBR AgriMet Station PSFI for calendar year			
*Estimate only, subject to errors and assumptions.					

Estimated Load/Inch Precip (lbs/inch)*					
	4th Avenue Outfall				
Sample Date	3/14/15	5/13/15	7/11/15	9/5/15	
TSS	1,550	458	159	31	
TP	1.92	1.75	3.33	0.51	
Lead	0.09	0.00	0.00	0.00	
TN	8.42	12.20	79.32	3.46	
Zinc	1.51	0.71	1.62	0.19	
Hardness	279.5	200.1	535.7	160.5	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	146,234	190,104	65,805	87,740	0
*Estimate only, subject to errors and assumptions.					

2015

Event Pollutant Discharge (lbs)*					
	Centennial Trail Outfall				
Sample Date	3/14/15	5/13/15	7/11/15	9/5/15	
TSS	129.08	53.22	5.64	1.33	
TP	0.15	0.16	0.12	0.02	
Lead	0.01	0.00	0.00	0.00	
TN	0.74	1.24	2.97	0.14	
Zinc	0.19	0.19	0.16	0.06	
Hardness	22.28	19.47	18.59	4.67	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	44,194	57,452	19,887	26,516	
Event Precip (inches)	0.20	0.26	0.09	0.12	
Inches per year =	20.15	Per USBR AgriMet Station PSFI for calendar year			
*Estimate only, subject to errors and assumptions.					

Estimated Load/Inch Precip (lbs/inch)*					
	Centennial Trail Outfall				
Sample Date	3/14/15	5/13/15	7/11/15	9/5/15	
TSS	645	205	63	11	
TP	0.77	0.63	1.28	0.14	
Lead	0.03	0.00	0.00	0.00	
TN	3.72	4.76	33.01	1.19	
Zinc	0.97	0.73	1.80	0.51	
Hardness	111.3775	74.8663	206.5278	38.9084	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	44,194	57,452	19,887	26,516	0
*Estimate only, subject to errors and assumptions.					

2015 Average Annual Load, lbs/day*			
	4th	Centennial	Total
TSS	30.3	12.8	43.1
TP	0.1	0.0	0.14
Lead	0.0	0.0	0.0018
TN	1.4	0.6	2.02
Zinc	0.1	0.1	0.11
Hardness	16.2	6.0	22.19
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2015 Average Annual Load, lbs/year*			
	4th	Centennial	Total
TSS	11,065	4,654	15,719
TP	37.8	14.2	52.0
Lead	0.48	0.16	0.65
TN	520.9	215.0	735.9
Zinc	20.3	20.2	40.5
Hardness	5,923	2,175	8,098
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2016

Stormwater/Events Data Files/Water Quality Data 4th Avenue Outfall

	Units	PQL	Method
TSS	mg/L	1	SM2540D
TP	mg/L	0.01	EPA365.1
Lead	µg/L	0.03	SM3120B
TN	mg/L	0.09	SM 4500NORG B
Zinc	µg/L	0.03	SM3120B
Hardness	mg/L	0.2	SM2340
PCBs	µg/L	0.2	EPA 8082

Concentration						
	4th Avenue Outfall					
Analyte	Unit	3/3/2016	5/9/2016	7/8/2016	9/2/2016	
Temperature	°C	4	14	18	18	
TSS	mg/L	62	147	72	69	
TP	mg/L	0.14	0.47	0.29	0.32	
Lead	mg/L	0.004	0.008	0.006	0.007	
TN	mg/L	0.56	4.01	2.54	3.24	
Zinc	mg/L	0.06	0.19	0.17	0.18	
Hardness	mg/L	26	64	34	47	
PCBs	µg/L	ND	ND	ND	ND	
Discharge Volume	cubic feet	9,775	21,505	13,685	32,258	
Discharge Volume	gallons	73,117	160,858	102,364	241,286	
Event Precip	inches	0.10	0.22	0.14	0.33	
Inches per year =		23.49	Per USBR AgriMet Station PSFI for calendar year.			

2016

Stormwater/Events Data Files/Water Quality Data Centennial Trail Outfall

	Units	PQL	Method
TSS	mg/L	1	SM2540D
TP	mg/L	0.01	EPA365.1
Lead	µg/L	0.03	SM3120B
TN	mg/L	0.09	SM 4500NORG B
Zinc	µg/L	0.03	SM3120B
Hardness	mg/L	0.2	SM2340
PCBs	µg/L	0.2	EPA 8082

Concentration						
Centennial Trail Outfall						
Analyte	Unit	3/3/2016	5/9/2016	7/8/2016	9/2/2016	
Temperature	°C	5	11	17	16	
TSS	mg/L	125	180	188	143	
TP	mg/L	0.18	0.58	0.47	0.51	
Lead	mg/L	0.006	0.011	0.012	0.011	
TN	mg/L	0.90	4.58	4.08	5.33	
Zinc	mg/L	0.21	0.41	0.71	0.83	
Hardness	mg/L	28	102	42	63	
PCBs	µg/L	ND	ND	ND	ND	
Discharge Volume	cubic feet	2,954	6,499	4,136	9,749	
Discharge Volume	gallons	22,097	48,613	30,936	72,920	
Event Precip	inches	0.10	0.22	0.14	0.33	
Inches per year =		23.49	Per USBR AgriMet Station PSFI for calendar year.			

2016

Event Pollutant Discharge (lbs)*					
		4th Avenue Outfall			
Sample Date	3/3/2016	5/9/2016	7/8/2016	9/2/2016	
TSS	37.83	197.33	61.50	138.53	
TP	0.08	0.62	0.25	0.64	
Lead	0.00	0.01	0.01	0.01	
TN	0.34	5.38	2.17	6.52	
Zinc	0.04	0.26	0.14	0.37	
Hardness	15.74	85.64	29.13	94.43	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	73,117	160,858	102,364	241,286	
Event Precip (inches)	0.10	0.22	0.14	0.33	
Inches per year =	23.49	Per USBR AgriMet Station PSFI for calendar year			
*Estimate only, subject to errors and assumptions.					

Estimated Load/Inch Precip (lbs/inch)*					
		4th Avenue Outfall			
Sample Date	3/3/2016	5/9/2016	7/8/2016	9/2/2016	
TSS	378	897	439	420	
TP	1	3	2	2	
Lead	0	0	0	0	
TN	3	24	15	20	
Zinc	0	1	1	1	
Hardness	157	389	208	286	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	73,117	160,858	102,364	241,286	0
*Estimate only, subject to errors and assumptions.					

2016

Event Pollutant Discharge (lbs)*					
	Centennial Trail Outfall				
Sample Date	3/3/2016	5/9/2016	7/8/2016	9/2/2016	
TSS	23.05	73.02	48.53	87.02	
TP	0.03	0.24	0.12	0.31	
Lead	0.00	0.00	0.00	0.01	
TN	0.17	1.86	1.05	3.24	
Zinc	0.04	0.17	0.18	0.51	
Hardness	0.69	41.38	10.84	38.46	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	22,097	48,613	30,936	72,920	
Event Precip (inches)	0.10	0.22	0.14	0.33	
Inches per year =	23.49	Per USBR AgriMet Station PSFI for calendar year			
*Estimate only, subject to errors and assumptions.					

Estimated Load/Inch Precip (lbs/inch)*					
	Centennial Trail Outfall				
Sample Date	3/3/2016	5/9/2016	7/8/2016	9/2/2016	
TSS	230	332	347	264	
TP	0	1	1	1	
Lead	0	0	0	0	
TN	2	8	8	10	
Zinc	0	1	1	2	
Hardness	7	188	77	117	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	22,097	48,613	30,936	72,920	
*Estimate only, subject to errors and assumptions.					

2016 Average Annual Load, lbs/day*			
	4th	Centennial	Total
TSS	34.3	18.9	53.2
TP	0.1	0.1	0.17
Lead	0.0	0.0	0.0035
TN	1.0	0.4	1.46
Zinc	0.1	0.1	0.12
Hardness	16.7	6.3	23.01
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2016 Average Annual Load, lbs/year*			
	4th	Centennial	Total
TSS	12,534	6,887	19,421
TP	43.4	18.8	62.2
Lead	0.85	0.43	1.28
TN	371.0	161.3	532.3
Zinc	21.7	23.4	45.0
Hardness	6,113	2,284	8,397
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2017

Stormwater/Events Data Files/Water Quality Data 4th Avenue Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.007	EPA365.1
Lead, mg/L	0.01	SM3120
TN, mg/L	0.04	SM 4500N B/4110
Zinc, mg/L	0.01	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration			
	4th Avenue Outfall		
Sample Date	3/2/17	5/5/2017	9/18/2017
Temperature, C°	44	58	59
TSS, mg/L	250	193	71
TP, mg/L	0.48	0.28	0.30
Lead, mg/L	0.013	0.011	0.006
TN, mg/L	1.84	2.82	1.03
Zinc, mg/L	0.25	0.18	0.10
Hardness, mg/L	178	43	29
PCBs, ug/L	ND	ND	ND
Discharge Volume (cubic feet)	23,460	7,820	43,010
Discharge Volume (gallons)	175,481	58,494	321,715
Event Precip (inches)	0.24	0.08	0.44
Inches per year =	26.84	Per USBR AgriMet Station PSFI for calendar year.	

*No significant precipitation event occurred during the months of July and August so no sample was analyzed for that period, per City's SWMP, pg. 69.

2017

Stormwater/Events Data Files/Water Quality Data Centennial Trail Outfall

	PQL	Method
TSS, mg/L	1	SM2540
TP, mg/L	0.007	EPA365.1
Lead, mg/L	0.01	SM3120
TN, mg/L	0.04	SM 4500N B/4110
Zinc, mg/L	0.01	SM3120
Hardness, mg/L	0.2	SM2340
PCBs, ug/L	0.2	EPA 8082

Concentration			
	Centennial Trail Outfall		
Sample Date	3/2/17	5/5/2017	9/18/2017
Temperature, C°	38	59	58
TSS, mg/L	453	735	113
TP, mg/L	1.04	1.65	0.39
Lead, mg/L	0.016	0.019	0.006
TN, mg/L	3.79	6.05	1.39
Zinc, mg/L	1.02	0.66	0.33
Hardness, mg/L	465	77	21
PCBs, ug/L	ND	ND	ND
Discharge Volume (cubic feet)	7,090	2,363	12,994
Discharge Volume (gallons)	53,033	17,675	97,195
Event Precip (inches)	0.24	0.08	0.44
Inches per year =	26.84	Per USBR AgriMet Station PSFI for calendar year.	

*No significant precipitation event occurred during the months of July and August so no sample was analyzed for that period, per City's SWMP, pg. 69.

2017

Event Pollutant Discharge (lbs)*			
	4th Avenue Outfall		
Sample Date	3/2/17	5/5/17	9/18/17
TSS	366.10	94.21	191.15
TP	0.70	0.14	0.81
Lead	0.02	0.01	0.02
TN	2.69	1.38	2.77
Zinc	0.37	0.09	0.28
Hardness	260.66	20.84	77.86
PCBs	ND	ND	ND
Discharge Volume (gallons)	175,481	58,494	321,715
Event Precip (inches)	0.24	0.08	0.44
Inches per year =	26.84	Per USBR AgriMet Station PSFI for calendar year	

*Estimate only, subject to errors and assumptions.

Estimated Load/Inch Precip (lbs/inch)*			
	4th Avenue Outfall		
Sample Date	3/2/17	5/5/17	9/18/17
TSS	1,525	1,178	434
TP	2.93	1.72	1.85
Lead	0.08	0.07	0.04
TN	11.23	17.21	6.28
Zinc	1.53	1.12	0.63
Hardness	1086.1	260.5	176.9
PCBs	ND	ND	ND
Disch Vol (gals.)	175,481	58,494	321,715

*Estimate only, subject to errors and assumptions.

2017

Event Pollutant Discharge (lbs)*			
	Centennial Trail Outfall		
Sample Date	3/2/17	5/5/17	9/18/17
TSS	200.48	108.41	91.65
TP	0.46	0.24	0.31
Lead	0.01	0.00	0.00
TN	1.68	0.89	1.13
Zinc	0.45	0.10	0.26
Hardness	205.79	11.34	16.71
PCBs	ND	ND	ND
Discharge Volume (gallons)	53,033	17,675	97,195
Event Precip (inches)	0.24	0.08	0.44
Inches per year =	26.84	Per USBR AgriMet Station PSFI for calendar year	

*Estimate only, subject to errors and assumptions.

Estimated Load/Inch Precip (lbs/inch)*			
	Centennial Trail Outfall		
Sample Date	3/2/17	5/5/17	9/18/17
TSS	835	1,355	208
TP	1.92	3.04	0.71
Lead	0.03	0.04	0.01
TN	6.99	11.15	2.56
Zinc	1.88	1.21	0.60
Hardness	857.4640	141.7843	37.9739
PCBs	ND	ND	ND
Disch Vol (gals.)	53,033	17,675	97,195

*Estimate only, subject to errors and assumptions.

2017 Average Annual Load, lbs/day*			
	4th	Centennial	Total
TSS	76.9	58.8	135.7
TP	0.2	0.1	0.30
Lead	0.0	0.0	0.006 4
TN	0.9	0.5	1.36
Zinc	0.1	0.1	0.17
Hardness	37.3	25.4	62.77
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2017 Average Annual Load, lbs/year*			
	4th	Centennial	Total
TSS	28,070	21,461	49,531
TP	58.2	50.7	108.9
Lead	1.68	0.68	2.35
TN	310.6	185.2	495.9
Zinc	29.3	33.0	62.3
Hardness	13,631	9,280	22,911
PCBs	ND	ND	ND
*Estimate only, subject to errors and assumptions.			

2018						
Stormwater/Events Data Files/Water Quality Data						
4th Avenue Outfall						
	Units	PQL	Method			
TSS	mg/L	1	SM2540D			
TP	mg/L	0.016	EPA365.1			
Lead	µg/L	0.5	SM3120B			
TN	mg/L	0.09	SM 4500NOR G B			
Zinc	µg/L	1	SM3120B			
Hardness	mg/L	0.2	SM2340			
PCBs	µg/L	0.2	EPA 8082			
Concentration						
	4th Avenue Outfall					
Analyte	Unit	3/8/2018	6/9/2018	8/27/2018	9/16/2018	
Temperature	°F	42	61	62	62	
TSS	mg/L	563	100	24	7	
TP	mg/L	0.66	0.19	0.14	0.13	
Lead	mg/L	0.023	0.005	0.002	0.001	
TN	mg/L	2.94	1.23	0.79	2.35	
Zinc	mg/L	0.52	0.09	0.06	0.03	
Hardness	mg/L	241	24	23	113	
PCBs	µg/L	ND	ND	ND	ND	
Discharge Volume	cubic feet	13,685	51,808	45,943	3,910	
Discharge Volume	gallons	102,371	387,547	343,674	29,249	
Event Precip	inches	0.14	0.53	0.47	0.04	
Inches per year =		18.51	Per USBR AgriMet Station PSFI for calendar year.			

2018						
Stormwater/Events Data Files/Water Quality Data						
Centennial Trail Outfall						
	Units	PQL	Method			
TSS	mg/L	1	SM2540D			
TP	mg/L	0.016	EPA365.1			
Lead	µg/L	0.5	SM3120B			
TN	mg/L	0.09	SM 4500NOR G B			
Zinc	µg/L	1	SM3120B			
Hardness	mg/L	0.2	SM2340			
PCBs	µg/L	0.2	EPA 8082			
Concentration						
Centennial Trail Outfall						
Analyte	Unit	3/8/2018	6/9/2018	8/27/2018	9/16/2018	
Temperature	°F	42	60	60	54	
TSS	mg/L	543	97	28	16	
TP	mg/L	0.80	0.30	0.14	0.20	
Lead	mg/L	0.020	0.008	0.002	0.002	
TN	mg/L	3.18	1.47	1.22	2.83	
Zinc	mg/L	0.53	0.20	0.19	0.28	
Hardness	mg/L	403	20	18	122	
PCBs	µg/L	ND	ND	ND	ND	
Discharge Volume	cubic feet	4,136	15,657	13,885	1,182	
Discharge Volume	gallons	30,938	117,122	103,863	8,839	
Event Precip	inches	0.14	0.53	0.47	0.04	
Inches per year =		18.51	Per USBR AgriMet Station PSFI for calendar year.			

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2018					
Event Pollutant Discharge (lbs)*					
	4th Avenue Outfall				
Sample Date	3/8/2018	6/9/2018	8/27/2018	9/16/2018	
TSS	480.96	323.41	68.83	1.71	
TP	0.56	0.60	0.39	0.03	
Lead	0.02	0.02	0.01	0.00	
TN	2.51	3.98	2.26	0.57	
Zinc	0.45	0.30	0.17	0.01	
Hardness	205.88	78.26	64.82	27.58	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	102,371	387,547	343,674	29,249	
Event Precip (inches)	0.14	0.53	0.47	0.04	
Inches per year =	18.51	Per USBR AgriMet Station PSFI for calendar year			

*Estimate only, subject to errors and assumptions.

Estimated Load/Inch Precip (lbs/inch)*					
	4th Avenue Outfall				
Sample Date	3/8/2018	6/9/2018	8/27/2018	9/16/2018	
TSS	3,435	610	146	43	
TP	4	1	1	1	
Lead	0	0	0	0	
TN	18	8	5	14	
Zinc	3	1	0	0	
Hardness	1,471	148	138	690	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	102,371	387,547	343,674	29,249	0

*Estimate only, subject to errors and assumptions.

2018					
Event Pollutant Discharge (lbs)*					
	Centennial Trail Outfall				
Sample Date	3/8/2018	6/9/2018	8/27/2018	9/16/2018	
TSS	140.19	94.81	24.27	1.18	
TP	0.21	0.29	0.12	0.01	
Lead	0.01	0.01	0.00	0.00	
TN	0.82	1.44	1.06	0.21	
Zinc	0.14	0.20	0.16	0.02	
Hardness	13.91	19.25	15.77	9.00	
PCBs	ND	ND	ND	ND	
Discharge Volume (gallons)	30,938	117,122	103,863	8,839	
Event Precip (inches)	0.14	0.53	0.47	0.04	
Inches per year =	18.51	Per USBR AgriMet Station PSFI for calendar year			
*Estimate only, subject to errors and assumptions.					
Estimated Load/Inch Precip (lbs/inch)*					
	Centennial Trail Outfall				
Sample Date	3/8/2018	6/9/2018	8/27/2018	9/16/2018	
TSS	1,001	179	52	30	
TP	1	1	0	0	
Lead	0	0	0	0	
TN	6	3	2	5	
Zinc	1	0	0	1	
Hardness	99	36	34	225	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	30,938	117,122	103,863	8,839	
*Estimate only, subject to errors and assumptions.					

2018 Average Annual Load, lbs/day*			
	4th	Centennia	Total
TSS	53.7	16.0	69.7
TP	0.1	0.0	0.12
Lead	0.0	0.0	0.0032
TN	0.6	0.2	0.77
Zinc	0.1	0.0	0.08
Hardness	31.0	5.0	36.00
PCBs	ND	ND	ND

*Estimate only, subject to errors and assumptions.

2018 Average Annual Load, lbs/year*			
	4th	Centennia	Total
TSS	19,597	5,837	25,434
TP	31.4	12.3	43.7
Lead	0.91	0.26	1.17
TN	206.4	74.2	280.6
Zinc	19.9	10.3	30.1
Hardness	11,317	1,824	13,142
PCBs	ND	ND	ND

*Estimate only, subject to errors and assumptions.

2019						
Stormwater/Events Data Files/Water Quality Data						
4th Avenue Outfall						
	Units	PQL	Method			
TSS	mg/L	1	SM2540D			
TP	mg/L	0.016	EPA365.1			
Lead	µg/L	0.5	SM3120B			
TN	mg/L	0.09	SM 4500NORG B			
Zinc	µg/L	1	SM3120B			
Hardness	mg/L	0.2	SM2340			
PCBs	µg/L	0.2	EPA 8082			
Concentration						
4th Avenue Outfall						
Analyte	Unit	3/7/2019	5/16/2019	8/10/2019	9/6/2019	
Temperature	°F	38	62	66	67	
TSS	mg/L	990	298	281	9	
TP	mg/L	0.95	0.454	0.558	0.124	
Lead	mg/L	0.031	0.0188	0.0224	0.0168	
TN	mg/L	5.16	1.51	2.15	0.489	
Zinc	mg/L	0.839	0.206	0.249	0.026	
Hardness	mg/L	1,460	39.3	39.9	103	
PCBs	µg/L	ND	ND	ND	ND	
Discharge Volume	cubic feet	12,708	85,043	48,875	4,888	
Discharge Volume	gallons	95,059	636,163	365,611	36,561	
Event Precip	inches	0.13	0.87	0.50	0.05	
Inches per year =		19.88	Per USBR AgriMet Station PSFI for calendar year.			

2019						
Stormwater/Events Data Files/Water Quality Data						
Centennial Trail Outfall						
	Units	PQL	Method			
TSS	mg/L	1	SM2540D			
TP	mg/L	0.016	EPA365.1			
Lead	µg/L	0.5	SM3120B			
TN	mg/L	0.09	SM 4500NOR G B			
Zinc	µg/L	1	SM3120B			
Hardness	mg/L	0.2	SM2340			
PCBs	µg/L	0.2	EPA 8082			
Concentration						
Centennial Trail Outfall						
Analyte	Unit	3/7/2019	5/16/2019	8/10/2019	9/6/2019	
Temperature	°F	38	62	68	67	
TSS	mg/L	900	1510	120	52	
TP	mg/L	1.48	4.71	0.25	0.34	
Lead	mg/L	0.0236	0.0748	0.0068	0.00312	
TN	mg/L	5.06	11.5	1.39	3.59	
Zinc	mg/L	1.067	3.015	0.248	0.272	
Hardness	mg/L	1,900	212	16.7	128	
PCBs	µg/L	ND	ND	ND	ND	
Discharge Volume	cubic feet	3,840	25,701	14,771	1,477	
Discharge Volume	gallons	28,728	192,258	110,493	11,049	
Event Precip	inches	0.13	0.87	0.50	0.05	
Inches per year =		19.88	Per USBR AgriMet Station PSFI for calendar year.			

2019				
Event Pollutant Discharge (lbs)*				
	4th Avenue Outfall			
Sample Date	3/7/2019	5/16/2019	8/10/2019	9/6/2019
TSS	785.33	1582.02	857.34	2.75
TP	0.76	2.41	1.70	0.04
Lead	0.02	0.10	0.07	0.01
TN	4.09	8.02	6.56	0.15
Zinc	0.67	1.09	0.76	0.01
Hardness	1158.17	208.63	121.74	31.43
PCBs	ND	ND	ND	ND
Discharge Volume (gallons)	95,059	636,163	365,611	36,561
Event Precip (inches)	0.13	0.87	0.50	0.05
Inches per year =	19.88	Per USBR AgriMet Station PSFI for calendar year		

*Estimate only, subject to errors and assumptions.

Estimated Load/Inch Precip (lbs/inch)*					
	4th Avenue Outfall				
Sample Date	3/7/2019	5/16/2019	8/10/2019	9/6/2019	
TSS	6,041	1,818	1,715	55	
TP	6	3	3	1	
Lead	0	0	0	0	
TN	31	9	13	3	
Zinc	5	1	2	0	
Hardness	8,909	240	243	629	
PCBs	ND	ND	ND	ND	
Disch Vol (gals.)	95,059	636,163	365,611	36,561	0

2019				
Event Pollutant Discharge (lbs)*				
	Centennial Trail Outfall			
Sample Date	3/7/2019	5/16/2019	8/10/2019	9/6/2019
TSS	215.76	2422.63	110.65	4.79
TP	0.35	7.56	0.23	0.03
Lead	0.01	0.12	0.01	0.00
TN	1.21	18.45	1.28	0.33
Zinc	0.26	4.84	0.23	0.03
Hardness	60.89	340.13	15.40	11.80
PCBs	ND	ND	ND	ND
Discharge Volume (gallons)	28,728	192,258	110,493	11,049
Event Precip (inches)	0.13	0.87	0.50	0.05
Inches per year =	19.88	Per USBR AgriMet Station PSFI for calendar year		

*Estimate only, subject to errors and assumptions.

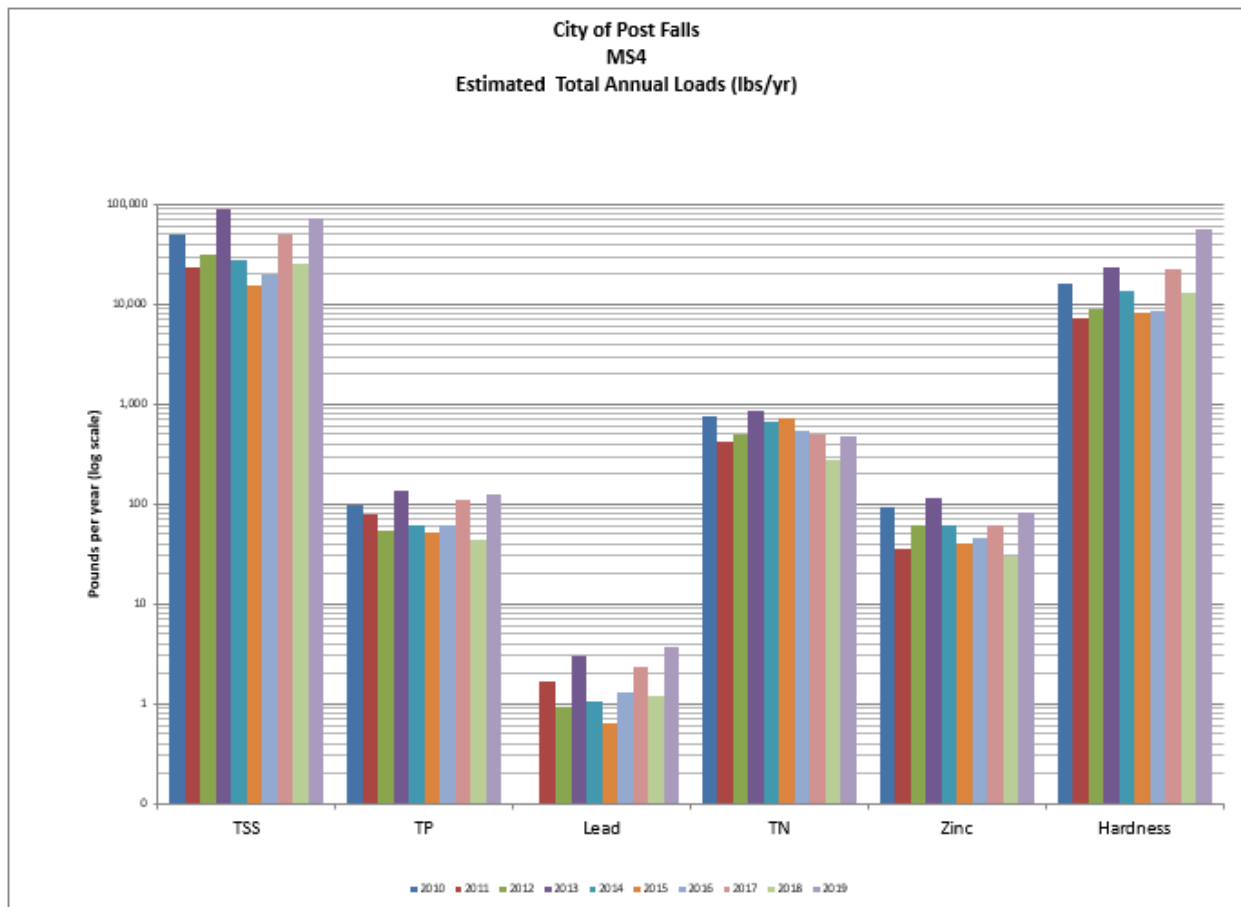
Estimated Load/Inch Precip (lbs/inch)*				
	Centennial Trail Outfall			
Sample Date	3/7/2019	5/16/2019	8/10/2019	9/6/2019
TSS	1,660	2,785	221	96
TP	3	9	0	1
Lead	0	0	0	0
TN	9	21	3	7
Zinc	2	6	0	1
Hardness	468	391	31	236
PCBs	ND	ND	ND	ND
Disch Vol (gals.)	28,728	192,258	110,493	11,049

2019 Average Annual Load, lbs/day*			
	4th	Centennial	Total
TSS	131.1	64.8	195.9
TP	0.2	0.2	0.34
Lead	0.0	0.0	0.0101
TN	0.8	0.5	1.31
Zinc	0.1	0.1	0.23
Hardness	136.4	15.3	151.78
PCBs	ND	ND	ND

*Estimate only, subject to errors and assumptions.

2019 Average Annual Load, lbs/year*			
	4th	Centennial	Total
TSS	47,856	23,665	71,521
TP	63.4	62.1	125.5
Lead	2.70	0.99	3.69
TN	282.3	197.4	479.7
Zinc	40.0	42.2	82.2
Hardness	49,803	5,597	55,400
PCBs	ND	ND	ND

*Estimate only, subject to errors and assumptions.



As shown in the above data tables, PCB tests have consistently shown non-detect levels and are therefore not included in this graph.

3. ASSESSMENT OF CONTROL MEASURES

This section of the Annual Storm Water Report summarizes the progress and status of complying with Sections II.B. and II.C. of the MS4 discharge permit. In the following account, the permit requirement is highlighted in bold and the status is in regular font.

Section II. B. Minimum Control Measures

1. Public Education and Outreach

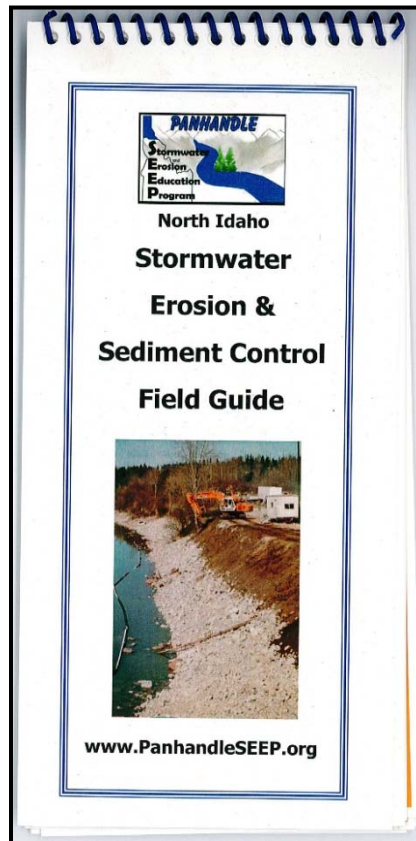
- a.) Within two years of the effective date of the permit, permittee must develop and implement a public education program about the impacts of storm water on the local water bodies.**

This requirement has been met with the deployment and implementation of the Storm Water Management Plan that is posted on the City's website and detailed in this and prior annual reports (also posted on the City's website). Public education efforts have been conducted since January 2010 via provision of brochures, internet postings, outreach events, article submissions to the local paper, public service announcements on the City's TV channel, facility tours and direct mailings to the public.

- b.) At least once per year, the permittee must distribute appropriate storm water educational materials to the target audiences.**

During the winter of 2019, an informational mailer was distributed to all residential addresses and businesses located in the MS4 area. The goal of the mailer was to provide recommendations for best management practices related to snow removal and deicer, and the connection to storm water drains and protecting our environment. A copy of the pamphlet is included in Appendix A.

At the building permit service counter, the City continues to make available to the contractors, builders, and the public, useful information about the Construction General Permit as well as the Stormwater Erosion & Sediment Control Field Guide.



c) At least once per year, the permittee will prepare and distribute appropriate information relevant to the SWMP to the local newspaper and at least one media outlet.

A public service announcement (PSA), professionally produced on behalf of Panhandle Area Council <http://www.pacni.org/>, is repeatedly broadcast on City Cable TV 13, running seven times per week at 7:30 a.m. The PSA runs for eight minutes and provides a good overview of erosion, causes, water quality impacts and best management practices for controlling or preventing erosion on construction sites and developments. Panhandle Area Council sponsors the Stormwater and Erosion Education Program which provides classroom and hands-on training to area contractors and government representatives.

On December 16, 2019, a legal notice providing information and further resources on information relevant to the SWMP was submitted by the City to the local media, and published in the local newspaper, The Press. A copy is included in Appendix A.

Public Involvement Participation

- a) **The permittee must comply with applicable State and local public notice requirements when implementing a public involvement/participation program.**

The City abides by the Idaho Open Meeting Law in the performance of its duties, including adoption of rules and regulations.

- b) **The permittee must make all relevant SWMP documents and all Annual Reports required by this permit available to the public. Within two years of the effective date of this permit, all SWMP documentation and Annual Reports must be posted online through its regularly maintained website (or a website sponsored by the permittee).**

All relevant SWMP documents and all Annual Reports required by this permit are available to the public and posted online at the City's official website:

<http://www.postfallsidaho.org/>

2. Illicit Discharge Detection and Elimination

- a) **Within two years from the effective date of this permit, the permittee must develop and implement a program to detect and eliminate illicit discharges from the MS4 including roadways and associated drainage facilities, ditches, pipes, culverts, catch basins and retention ponds in its jurisdiction. This program must include written spill response procedures to ensure protection of the permittee's MS4. The program must include procedures for detection, identification of the source, and removal of non-storm water discharges from the MS4. This program must address illegal dumping into the MS4, and include training for City staff on how to respond to reports of illicit discharges. The permittee must develop an information management database system to track the activities and actions of the program.**

Procedures for implementing the Illicit Discharge Detection and Elimination Program were completed in 2010 and are included in the City's Storm Water Management Plan which is posted on the City's website.

- b) **Within two years from the effective date of this permit, the permittee must effectively prohibit non-storm water discharges into the MS4 through an ordinance or other regulatory mechanism to the extent allowable under state or local law. The permittee must implement appropriate enforcement procedures and actions, including a written policy for enforcement escalation procedures for recalcitrant or repeat offenders.**

In 2010, the City updated its Storm Water, ordinance, Chapter 13.44, to define and prohibit illicit discharge, and developed and implemented enforcement procedures which are documented in the Storm Water Management Plan and posted on the City's website.

- c) Through the ordinance or other regulatory mechanism set forth in Section II.B.3.b, the permittee must prohibit any of the non-storm water flows listed in Part I.C.1.c only if such flows are identified (by EPA or the permittee) as a source of pollutants to the MS4. The permittee must document to EPA in the Annual Report any existing local controls or conditions placed on the non-storm water discharges.**

In 2010, the City updated its Storm Water Ordinance, Chapter 13.44, to define and prohibit illicit discharge, and developed and implemented enforcement procedures which are documented in the Storm Water Management Plan and posted on the City's website.

The City's ordinances are available to the public on the City's website:

<http://www.postfallsidaho.org/> Allowable non-storm water discharges from potable water sources include fire-fighting activities, water distribution system maintenance, street wash water, overspray and small amounts of runoff from irrigation of vegetation that comply with the City's prohibition of water wasting, Chapter 13.12.060.

- d) Within two years from the effective date of this permit, the permittee must update and complete its comprehensive MS4 map. At a minimum, the map(s) must show jurisdictional boundaries, the location of all City-owned or operated storm sewers, culverts, ditches, and other conveyances, the location of all inlets and outfalls, points at which the permittee's MS4 is interconnected with other MS4's, names and locations of all waters that receive discharges from those outfalls, and locations of all municipally-owned or operated facilities, including all maintenance/storage facilities and public or private snow disposal sites. Locations of all outfalls must also be provided in latitude and longitude, and the diameter of all outfalls must be provided with the map. The maps must be available in electronic or digital format as appropriate. A copy of the completed maps(s); as both a report and as an electronic file via Arc GIS format, must be submitted to EPA and IDEQ as part of the corresponding Annual Report.**

The City completed a comprehensive MS4 map in 2009 and posted it in PDF format on the City's website. In 2012, the MS4 map was converted to Arc GIS format and replaced the PDF formatted map on the City's website. Copies of these maps have been submitted electronically and in hard copy to EPA and IDEQ in 2010, 2011, and 2012.

- e) Within two years from the effective date of this permit, the permittee must begin an ongoing education program to inform users of the system, especially public employees, businesses, and the general public, of hazards associated with illegal discharges and improper disposal of waste. This program must be conducted in concert with the public education requirements outlined in Part II.B.1.**

The City initiated its ongoing education program in 2010. The program includes informing the public, users of the MS4 and public employees of the City of Post Falls of the hazards associated with illegal discharges and improper disposal of waste. Further

documentation of the public outreach component of Section II. B. 1. is provided earlier in this section. City employees associated with the MS4 facilities, development services and field staff have been provided annual storm water education since 2010. Topics have included proper storage of materials, street maintenance, parks maintenance and illicit discharges.

- f) Within three years from the effective date of this permit, the permittee must begin dry weather field screening for non-storm water flows from all stormwater outfalls. By the expiration date of the permit, 100% of the permittee's outfalls within the Coeur d'Alene Urbanized Area must be screened for dry weather flows. The screening should include field tests of selected parameters as indicators of discharge sources. Screening level tests may utilize less expensive "field test kits" using test methods not approved by EPA under 40 CFR Part 136, provided the manufacturer's published detection ranges are adequate for the illicit discharge detection purposes. The permittee must investigate any illicit discharge within fifteen (15) days of its detection, and must take action to eliminate the source of the discharge within 45 days of its detection.**

The City initiated dry weather field screening of the MS4 system in 2011. The results of the screening were posted with the 2011 annual report. The City has only two (2) outfalls, and 100% of those outfalls were screened for dry weather flows in 2011. The only source of dry weather flows was from irrigation runoff. No industrial discharges were found. In 2012, the City conducted dye testing of a dry cleaner business on Spokane Street and found that there was not an illicit discharge to the MS4 system. In November and December 2012, the City conducted a survey of jurisdictional roads and properties adjacent to the Spokane River and did not detect any illicit discharges to the MS4 or storm water discharges or industrial discharges to the river.

- g) Within three years from the effective date of this permit, the permittee must inventory all industrial facilities that discharge into the permittee's MS4 and/or directly to waters of the United States located within the Coeur d'Alene Urbanized Area and submit this inventory as part of the corresponding Annual Report. The types of industrial facilities that must be inventories are set forth in 40 CFR § 122.26(b)(14)(i-x) through (xi). This inventory must include the location of the facility, the location of its outfall, and the NPDES permit status for its storm water discharges.**

In December 2012, the City conducted a visual survey of industrial properties adjacent to the river in the Riverbend Industrial Park and did not detect any industrial or storm water discharges to the river. The 2011 Survey did not detect any existing industrial discharges to the City's MS4 system. There have been no new industries which discharge to the MS4 system. Developments within the City are required to provide on-site storm water management. The City's nearly universal system of curbs, gutters and bio-filtration swales helps prevent storm water discharges outside of the MS4 facilities. Soils in the City are typically sand and gravel and are highly suited to on-site disposal of

storm water via bio-filtration swales and drywells. An end-to-end survey of perimeter roads adjacent to the river in November and December 2012 did not detect any storm water discharges to the river.

3. Construction Site Storm Water Runoff Control

- a) Within two years from the effective date of this permit, the permittee must implement and enforce a program to reduce pollutants in any storm water runoff to the MS4 from construction activities resulting in land disturbance of greater than or equal to one acre. This program must also include controls for pollutants in such storm water discharges from activity disturbing less than one acre, if that construction activity is part of a larger common plan of development or sale that disturbs one acre or more.**

In 2010, the City adopted ordinances regarding construction sites, as Chapter 13.44.050, General Requirements, Section E., which requires developers to verify applicability of the Construction General Permit by either providing a copy of their Notice of Intent (NOI) for coverage under the CGP, or a design professional's certification that the project is exempt from the CGP. Projects that are subject to the CGP must maintain a copy of their Storm Water Pollution Prevention Plan (SWPPP) at the project site. CGP-covered projects with the potential to discharge storm water to the MS4 system are inspected during the construction project. In 2010, the City developed a procedure for such inspections which is included in the Storm Water Management Plan posted on the City's website.

- b) The permittee must provide appropriate information and direction to representatives of proposed new development and redevelopment construction projects concerning the NPDES General Permit for Storm Water Discharges for Construction Activity in Idaho, #IDR10-0000 (Construction General Permit).**

When developers and contractors come in to City hall for a building permit, they are informed of the CGP requirement stated above. The Stormwater Erosion & Sediment Control Field Guide is also available to the developers and contractors on the City's website and at the building permit service counter in City Hall.

- c) Within two years from the effective date of this permit, the permittee must adopt an ordinance or other regulatory mechanism to the extent allowable under state and local law that requires construction site operators to practice appropriate erosion, sediment and waste control. This ordinance or regulatory mechanism must include sanctions to ensure compliance. The permittee may evaluate any existing procedures, policies, and authorities pertaining to activities occurring on their property that may be used to assist in the development of the required regulatory mechanism.**

The City's existing ordinance, Title 8 - Health and Safety, Chapter 8.24, Refuse and Stagnant Water, prohibits the accumulation of any stagnant water or impure water, refuse, vegetable decay or decaying substance, garbage or filth of any kind, nor suffer such yard, lot, place, building or premises to be or to remain in such condition as to cause or create a nuisance or offensive smell or to pollute or render unhealthful the atmosphere or the premises or create a rodent harborage, or thereby to be, become, cause or create a public nuisance. More importantly, all development projects requiring a storm water management system shall provide grass infiltration areas or acceptable alternatives (Chapter 13.44.060), thus prohibiting new discharges of storm water to the MS4. Further, Chapter 13.44.100, Prohibited Conduct, prohibits any person from damaging or impairing any of the grass infiltration areas or any portion of the stormwater management system:

13.44.100: PROHIBITED CONDUCT:

- A. No person shall cause, permit or contribute to illicit discharges to the MS4.
- B. No person shall damage, harm, fail to install or complete, or otherwise impair the grass infiltration areas, approved methods of transmission of stormwater to grass infiltration areas or any portion of the stormwater management system required to be installed pursuant to this chapter. Unless other provisions are made in the process of development review and approval, responsibility for maintenance of stormwater system elements remains with the property owner and violation of these maintenance requirements shall also constitute a violation of this chapter. Occupancy of a dwelling or building without having first obtained a certificate of occupancy, when compliance of this chapter is a condition precedent to issuance of the certificate of occupancy, is a violation of this chapter, in addition to any building and zoning ordinance from which the occupancy requirement derives. (Ord. 1188 § 2, 2010)

- d) **Within two years from the effective date of this permit, the permittee must publish and distribute local requirements for construction site operators to implement appropriate erosion and sediment control BMPs and to control waste (such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site) that may cause adverse impacts to water quality.**

At the building permit service counter, the City continues to make available to the Public the Stormwater Erosion & Sediment Control Field Guide. The Field Guide is also available on the City's website. A public service announcement (PSA), professionally produced on behalf of Panhandle Area Council <http://www.pacni.org/>, continues to run seven times per week at 7:30 AM. The PSA runs for eight minutes and provides a good overview of erosion, causes, water quality impacts and best management practices for

controlling or preventing erosion on construction sites and developments. Panhandle Area Council sponsors the Stormwater and Erosion Education Program which provides classroom and hands-on training to area contractors and government representatives.

- e) **Within two years from the effective date of this permit, the permittee must develop procedures for reviewing all pre-construction site plans for potential water quality impacts, including erosion and sediment control, control of other wastes, and any other impacts according to the requirements of the law, ordinance, or other enforceable mechanism created to comply with Part II.B.4.c. These procedures must include provisions for receipt and consideration of information submitted by the public.**

The City reviews all new development/construction plans prior to issuing construction permits. Every new development plan is reviewed for compliance with the City's ordinances, including the Storm Water Management ordinance. Further details of storm water controls for new projects are provided in the Construction Improvement Agreement required of all new developments. These agreements are posted at www.postfallsidaho.org/documentcenterlong.html under "Engineering"

The City allows plat recordation once all approvals and agreements are in place and the public improvements are bonded for at 150% of the engineers estimate. Prior to the City accepting the constructed improvements, storm water facilities are to be at the following stages – grassy swales are to be roughed in, top soil placed and hydro-seeded and additional storm water facilities, such as drywells, scuppers, catch basins and piping need to be completed. As the majority of our grassy swales are continual swales that run parallel to the roadways, when the lots are developed, the swales will receive final grading, final hydro-seeding or top soil. Those facilities are inspected in accordance with the City's "Engineering Project Certification and Quality Control Standards" prior to issuing a certificate of occupancy for those developing lots.

- f) **Within three years from the effective date of this permit, the permittee must implement a program to receive, track, and review information submitted by the public regarding construction site erosion and sediment control complaints.**

The City provides several avenues for citizens to register complaints or inquire about the storm water program. Complaints or concerns may be delivered to the City via email, telephone, letter or in person at City Hall. In 2019, the Storm Water Program received no complaints about runoff or sediment from construction sites in the City of Post Falls that disturbed one or more acres or less than one acre that was a part of larger project that disturbed one or more acres and had the potential to discharge to the MS4 system.

- g) Within three years from the effective date of this permit, the permittee must develop and implement procedures for site inspection and enforcement of control measures established as required in Parts II.B.4.c and d, including a written policy of enforcement escalation procedures for recalcitrant or repeat offenders. As part of these procedures, the permittee shall inspect all construction sites in their jurisdiction for appropriate erosion/sediment/waste control at least once per construction season.**

In 2010, the City developed and implemented procedures for site inspection and enforcement of control measures, which is posted on the City's website as part of the Storm Water Management Plan. There were no new construction projects which disturbed an area greater than 1 acre located inside the MS4 in 2019.

- h) The permittee must comply with the Construction General Permit and all relevant local requirements for erosion, sediment and onsite materials control on public construction projects. The permittee must ensure that all contractors working on behalf of the permittee are complying with the Construction General Permit and all relevant local requirements for erosion, sediment, and onsite materials control on construction projects. The permittee must incorporate specific language in all contracts ensuring appropriate storm water management on all public construction projects.**

Major construction project within the City comply with the Construction General Permit requirements for stormwater management and runoff controls. Construction specifications include specific language ensuring appropriate storm water management. The requirements are monitored on a regular basis as part of, and in addition to, construction observation associated with projects.

4. Post-Construction Storm Water Management in New Development and Redevelopment

- a) Within three years from the effective date of this permit, the permittee must implement a program to address post-construction storm water runoff from new development projects that disturb greater than or equal to one acres (including projects less than one acre that are part of a larger common plan of development or sale) and that result in discharge into the permittee's MS4. The program must ensure that controls are enacted that will prevent or minimize water quality impacts from newly developed or redeveloped areas.**

In 2010, the City developed and implemented procedures for site inspection and enforcement of control measures, which is posted on the City's website as part of the Storm Water Management Plan. There were no new construction projects which disturbed an area greater than one acre located inside the MS4 in 2019 and post construction storm water runoff controls for prior year's construction were complete.

- b) Within three years from the effective date of this permit, the permittee must adopt an ordinance or other regulatory mechanism to the extent allowable under State or local law to address post-construction runoff from new development and redevelopment projects. If such requirements do not currently exist, development and adoption of an ordinance is required. The permittee may evaluate and update existing procedures, policies, and authorities (e.g., Post Falls City Ordinance #716) to assist in the development of the required regulatory mechanism.**

The City has had a Storm Water Management Ordinance since 2007, updated in 2010. The SWM Ordinance, Chapter 13.44, requires the installation of storm water management facilities for all new developments and the protection and maintenance of all such facilities such that storm water is not discharged off site. See: http://www.sterlingcodifiers.com/codebook/index.php?book_id=350

- c) Within three years from the effective date of this permit, the permittee must ensure proper long term operation and maintenance of permanent storm water management controls located within its jurisdiction.**

The City has in place appropriate regulatory controls to ensure long term operation and maintenance of permanent storm water controls. SWM Ordinance, Chapter 13.44, requires the landowner to maintain storm water facilities such that storm water is not discharged off site, and prohibits any person from damaging, harming, failing to install or complete or otherwise impair the storm water management systems. See: http://www.sterlingcodifiers.com/codebook/index.php?book_id=350

- d) Within four years from the effective date of this permit, the permittee must develop and implement a process for pre-construction plan review of permanent storm water management controls and inspection of such controls to ensure proper installation and appropriate long term maintenance and operation.**

The City reviews all new development/construction plans prior to issuing construction permits. Every new development plan is reviewed for compliance with the City's ordinances, including the Storm Water Management Ordinance. Further details of storm water controls for new projects are provided in the Construction Improvement Agreement required of all new developments. See: <http://www.postfallsidaho.org/PZDept/pzforms/ResidentialConstImprovementAgreement.pdf>

The City allows plat recordation once all approvals and agreements are in place and the public improvements are bonded for at 150% of the engineers estimate. Prior to the City accepting the constructed improvements, storm water facilities are to be at the following stages – grassy swales are to be roughed in, top soil placed and hydro-seeded and additional storm water facilities, such as drywells, scuppers, catch basins and piping need to be completed. As the majority of our grassy swales are continual swales that run parallel to the roadways, when the lots are developed, the swales will receive final grading, final hydro-seeding or top soil. Those facilities are inspected in accordance with the City’s “Engineering Project Certification and Quality Control Standards” prior to issuing a certificate of occupancy for those developing lots.

5. Pollution Prevention and Good Housekeeping for Municipal Operations

- a) Within two years from the effective date of this permit, the permittee must develop and implement an operation and maintenance program intended to prevent or reduce pollutant runoff from municipal operations. This program must address municipal activities occurring within the permittee’s jurisdiction with potential for negative storm water related water quality impacts, including the use of sand and road deicers; fleet maintenance and vehicle washing operations; street cleaning and maintenance; grounds/park and open space maintenance operations; building maintenance; solid waste transfer activities; water treatment plant operations; storm water system maintenance; and snow disposal site operation and maintenance. Examples of other municipal activities which may also be evaluated as relevant to the jurisdiction include, but are not limited to: materials storage; hazardous materials storage; used oil recycling; spill control and prevention measures for municipal refueling facilities; municipal golf course maintenance; municipal new construction and land disturbances; and snow removal practices.**

The City developed a Storm Water Pollution Prevention Plan for the wastewater and streets/fleet maintenance site in 2010, even though these facilities cannot discharge to the MS4 system. The plan is posted on the City’s website. The City does not have maintenance facilities that are proximate to the MS4 system. The City does not have a municipal golf course, nor operate solid waste transfer facilities, nor have water treatment plant operations, nor have municipal refueling facilities. The City does not store on site sand or de-icer chemicals. The use of sand and road de-icer is in accordance with conventional practices for highway safety. The City conducts street sweeping on a regular basis; a total of 269 cubic yards of dirt and debris were removed from City streets in 2019.

In 2019, the City inspected the two storm water outfalls and performed water quality monitoring as required by the permit, cleaned 83 catch basins with a vacuum truck, and

direct mailed stormwater pollution prevention information to all MS4 users. There were no stormwater complaints related to construction projects pertinent to the MS4 in 2019.

b) Within two years from the effective date of this permit and annually thereafter, the permittee must develop and conduct appropriate training for municipal employees related to optimum maintenance practices for protection of water quality. This training must be conducted at least once annually and address the activities specified in Part II.B.6.a.

In 2011, City employees received storm water training in the areas of fleet maintenance, material storage, parks and grounds maintenance, solid waste disposal and/or streets and drainage maintenance. The training materials were provided by the Texas Council on Environmental Quality and USEPA.

In 2012, City employees selected storm water training from a number of sources, including Storm Water Pollution Awareness and Prevention Training (University of Colorado at Denver) which covered illicit discharge, sources of pollution, allowable non-storm water discharges, vehicle washing and fueling, outdoor storage, waste containers and drum management, vehicle parking lots, grounds maintenance, good housekeeping, preventive maintenance, and spill prevention and response. Other training materials provided were Storm Water: Why Take It Personally? (North Central Texas Council of Governments), Stormwater video (City of Sandy Springs), and Stormwater Runoff 101 video (National Resource Defense Council). The City's storm water technician completed a two day course in construction site erosion control and the Construction General Permit.

In 2013 and 2014, City employees selected storm water training from the Texas Council of Environmental Quality employee training videos covering the following topics:

1. Introduction: What We Can Do.
2. Construction Activities and Land Disturbances.
3. Fleet Maintenance and Materials Handling.
4. Streets and Drainage Maintenance
5. Parks and Grounds Maintenance
6. Solid Waste Management

In 2015, City employees watched the video "Stormwater Pollution Prevention for Restaurants" produced by the City of Chapel Hill for the WEF StormTV channel on YouTube. This video was selected as many food service industries had inquired about stormwater practices throughout the year.

In 2016, City employees were provided a stormwater training video titled "How to Spot and Report Stormwater Pollution" produced by the North Central Texas Council of Governments: Environment and Development Division. Because City employees, such as Street Maintenance and Water, are driving around the City daily, education of noticeable

illegal discharges can help to reduce stormwater pollution. Documentation of training from the appropriate departments is contained in Appendix A.

In 2017, City employees were provided a stormwater training video titled “Inspecting and Maintaining your Catch Basin” produced by the Washington Department of Ecology for the City of Bellingham. The video educates on how catch basins are inspected, cleaned, and maintained in order to understand that pollution prevention is a key component of maintaining water quality. Documentation of training from the appropriate departments is contained in Appendix A.

Training in 2018, relative to streets, parks, building maintenance, storm water system maintenance, and other related areas of operation which may have the potential for negative storm water related water quality impacts, was provided on-the-job by employees knowledgeable about the City’s policies and procedures. Continuing education focuses on optimum maintenance practices for the protection of water quality.

In 2019, City employees were provided a stormwater training video titled “Home Snow Removal Tips” produced by the Stormwater Education Program, City of Columbia Missouri. The video educates on snow removal tips and proper use of salt and deicer for removing snow and ice. Employees then took an online quiz to test and reinforce concepts learned from the video. Documentation of training is contained in Appendix A.

c) Within two years from the effective date of this permit, the permittee must prepare and implement storm water pollution prevention plans for the permittee’s fleet maintenance/street department site and waste water treatment plant.

The City developed and implemented a storm water pollution plan for the fleet maintenance/street division site and wastewater treatment plant in 2010. The SWPP is posted on the City’s website as part of the Storm Water Management Program document. It should be noted that none of these facilities has the potential to discharge to the MS4 because of their physical separation from the MS4.

C. Discharges to Water Quality-Impaired Receiving Waters.

1. The permittee must conduct storm water discharge and receiving water monitoring as required in Part IV.

Since 2009, the City has conducted storm water discharge and receiving water monitoring as required in Part IV. The results are found in Section 2 of this report.

2. The permittee must determine whether storm water discharges from any part of the MS4 contribute pollutants of concern, either directly or indirectly, to any Clean Water Act (“CWA” or “Act”) Section 303(d) listed water bodies. For the purposes of this

permit, the Section 303 (d) listed water bodies according to the IDEQ 2002 Integrated Report and the 2004 Washington Water Quality Assessment Report include but are not limited to, the Spokane River and associated tributaries. “Pollutant(s) of concern” refer to the pollutant(s) identified as causing or contributing to the water quality impairment. Pollutants of concern for the purposes of this permit are metals, (specifically, lead and zinc), nutrients (specifically phosphorus and nitrogen), sediment, dissolved oxygen, total polychlorinated biphenyls, and temperature.

The City of Post Falls’ MS4 contributes pollutants of concern indirectly to the Spokane River, including lead, zinc, phosphorus, nitrogen, suspended solids and temperature. Previous reviews of data have concluded the following assessment of the contribution of pollutants to the river:

CONCLUSIONS OF DATA REVIEW

1. The volume of water discharged by the Post Falls MS4 is on the order of one-ten thousandth (1/10,000) of the annual flow of the Spokane River.
2. The Post Falls MS4 contributes less than one one-thousandth (1/1,000) of the pollutant loads in the Spokane River.
3. Pollutant loads from the Post Falls MS4 are less than the detectable pollutant loads existing in the Spokane River upstream of the MS4 outfalls.
4. The variability of MS4 pollutant load estimates is most related to variations in weather, localized precipitation patterns, and temporal monitoring patterns. These variations preclude a BMP effectiveness determination over the course of the monitoring period. In any event, the MS4 flows and loads are insignificant relative to the existing flows and loads in the Spokane River.

CONCLUSION: MS4 loading is insignificant relative to the loading in the upstream river.

As shown in Section 2, loading of pollutants to the Spokane River was similar in the reporting period to prior years in this permit cycle. As a result, the same conclusion is supported.

3. **Within one year from the effective date of this permit, the permittee’s Annual Report must include a description of how the activities in each of the minimum control measures in Part II.B will be targeted by the permittee to control the discharge of pollutants of concern, and ensure to the maximum extent practicable that the MS4 discharges will not cause an in-stream violation of the applicable water quality**

standards. This discussion must specifically identify how the permittee will evaluate and measure the effectiveness of the SWMP to control the discharge of the pollutants(s) of concern. The permittee must submit this section of the SWMP to EPA and IDEQ as part of the first Annual Report required in Part IV.C, and update it as necessary in subsequent Annual Reports.

In a letter to EPA and copy to IDEQ dated August 15, 2011, the City of Post Falls provided its first description of how the activities in each of the minimum control measures in Part II.B will be targeted by the permittee to control the discharge of pollutants of concern, and ensure to the maximum extent practicable that the MS4 discharges will not cause an in-stream violation of the applicable water quality standards. In essence, the measure of control measure effectiveness is the impact the MS4 discharges have on water quality of the river.

With nine years of data available, trending analysis could be conducted. The results of this analysis have been included in this report (see above Conclusion of Data Review). These data indicate that although the concentrations of some parameters of concern in discharges from the MS4 are higher than the concentration of the same parameters in the river, the resultant impact on in-stream concentrations and loads is so low as to not be measurable. A mathematical analysis of mass loading indicated that the miniscule volume of the MS4 discharge relative to river flow has no measurable effect on pollutant concentrations in the river. We therefore conclude that discharges from the Post Falls MS4 do not cause Idaho in-stream water quality standards to be exceeded.

4. SUMMARY OF INSPECTIONS AND ENFORCEMENT ACTIONS

There were no active projects larger than one acre or part of a project larger than one acre within the MS4 in the year 2019.

5. SUMMARY OF ENFORCEMENT ACTIONS RECEIVED

The City of Post Falls MS4 did not receive any enforcement actions from a designated storm water regulatory agency in 2019. An on-site audit of the program was completed by EPA on September 19, 2017. The City received a copy of the inspection report on January 10, 2018. The inspector did not observe any deficiencies and the report indicated there were not any areas of concern found during the inspection. A copy of the inspection report is included in Appendix A.

6. SCHEDULE OF PLANNED IMPLEMENTATION ACTIVITIES FOR 2020

The activities planned for the 2020 reporting period include the following:

1. Implement a public outreach and education program that includes:
 - a. Submit information relevant to the program to the local newspaper.
 - b. Storm water public service announcement broadcast on City's cable TV channel.
 - c. Direct mail or hand delivered brochure as needed.
 - d. Educational booth with stormwater materials at local events
2. City staff education: provide training materials related to City job functions as they relate to storm water.
3. Storm water monitoring: collect required samples during the required monitoring season.
4. Storm water system maintenance: inspect and clean catch basins.
5. Assess the adequacy of BMPs.
6. Complete the 2020 annual report.
7. Post on-line all annual reports and the storm water management plan
8. Conduct pre-construction plan reviews, construction site inspections and enforcement as needed.
9. Continue expansion of the biofiltration system where feasible.

7. SCHEDULE OF PLANNED BMPs NEEDED TO COMPLY WITH WATER QUALITY STANDARDS

The City conducts routine street sweeping and maintenance of storm drains every year. Street and storm drain maintenance is conducted from February through September. In 2019, approximately 269 cubic yards of debris and grit were removed from City streets and 83 catch basins were cleaned and inspected. As demonstrated by the monitoring data, the Post Falls MS4 does not cause violations of Idaho in-stream water quality standards for the Spokane River. Therefore no additional BMPs are needed for the Post Falls MS4.

In 2013, the City investigated the potential for eliminating all discharge from the MS4 system by increasing the use of bio-filtration swales and other improvements in the drainage areas served by the two MS4 outfalls. The study (see Appendix A) concluded that it would be possible to eliminate all discharge from the MS4 outfalls, but at considerable expense. However, where feasible and as part of re-development activities, expansion of the biofiltration system will continue with the effect of incrementally reducing discharge to the MS4.

APPENDIX A: COPIES OF PERMIT RELATED PRODUCTS

- A1: Winter 2019 Utilities Flyer
- A2: Staff Training Logs
- A3: Newspaper Legal Posting
- A4: Sweeping Inventory
- A5: Monitoring Results
- A6: E.P.A. Inspection Report
- A7: 2013 Discharge Elimination Technical Memorandum

Prevent Surface Water Pollution



This information is provided as part of the City's annual public information program regarding storm water pollution prevention. This is for your information only and you do not need to reply. You are receiving this information because our records indicate you have or use property served by the portion of the City's storm sewer system (MS4) which sends stormwater to the Spokane River.

If you would like to report a spill or obtain more information about the City of Post Falls surface water protection program, please contact us at the info below:

Contact Us:

City of Post Falls
Surface Water Division
2002 W Seltice Way
Post Falls, ID 83854
208-777-9857
www.postfallsidaho.org
surfacewater@postfallsidaho.org

City of Post Falls
Surface Water Division
408 N Spokane St
Post Falls, ID 83854



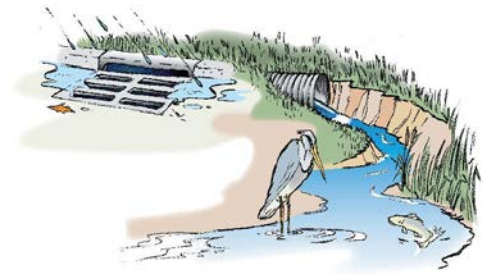
Public Service Department
Surface Water Division

Stormwater Best Management Practices: Snow Removal and Deicer

Recommendations for winter maintenance, including snow removal and deicer information to promote safe environmental habits and methods to protect our local stormwater and the surrounding environment.



Stormwater drains connect to water bodies.



How is it all connected?

Storm drains and underground pipes in the centralized part of the City feed to the Spokane River. These are not disposal pipes and are intended only for rainwater, including snowmelt, because the water is not treated before it reaches the river.

In the winter months, applying salt or winter deicer to driveways and sidewalks is a common practice used to assist in snow and ice removal from these surfaces.

However, if applied incorrectly, excess salt can easily be transported into our stormwater drains.

Remember, anything on the ground will potentially drain right to the stormwater drains which outlet into our local streams and lakes. The City's storm sewer system (MS4) has two stormwater outfalls that outlet directly to the Spokane River.

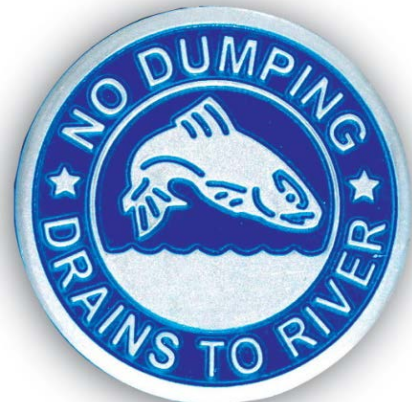
Snow Removal

The most environmentally friendly way to manage snow and ice is to physically remove as much snow as possible. Shovel the snow before it turns to ice.

Permeable surfaces with gentle slopes and/or level landscapes are the best places to deposit shoveled snow so it can soak into the ground and not flow into a nearby storm drain.

Kitty litter, wood ash, sand, or bird seed can be applied for traction but will not melt the ice. Sweep up excess material after the ice melts due to temperature to prevent this material from being transported into storm drains.

After snow storm events, snow and/or ice may pile up and potentially block storm drains. To prevent flooding, inspect storm drains regularly and clear any debris and/or snow and ice from the drain to allow for melted snow and surface water runoff to easily flow into the drain.



Just one teaspoon of salt is enough to pollute five gallons of water, forever!

Salt and the Environment

Salts and deicers contain chloride which is very harmful to the environment. They kill plants, ruin natural soil composition, and are toxic to many species in the water. Salts and deicers are also quite destructive to roads and sidewalks causing deterioration over time. You should avoid using them as much as possible.

If you must use salt or deicer, do so after the storm is finished. Remove as much snow and ice as possible first. Look for eco-friendly deicers such as calcium magnesium acetate.

Chemical ice melters work by depressing the freezing point of snow and ice and turning the mixture into a liquid or slush. They only work in certain temperature ranges. For example, rock salt doesn't work below 15°F. Before using, check the label on the product to make sure it will work before you apply it. Only apply salt at the correct temperatures.

It is important to remember that more salt does not equal more or faster melting! A general rule a thumb is to shoot for a 3-inch spread between salt granules. Check labels to ensure the proper amount is being used for the given area. Sweep up any excess salt.

Stormwater Training 10/16/19

Public Works

Name

Signature

John Beacham
Wayne Johnson
Justin Hernandez
Doris Oscarson
Sherril Wright
Naomi Tierney
Amy Rainville
Gary Bright
Adam Tate
Keith Hardy
Donell's
Doug Patterson
Glen Boren
Ken Johnson
Tommy Lynn
Tim Dewitt
Richard Clark
Matthew Powell
MATTHEW POWELL
Raddlee Turcotte
Casey Gossen
Deldie Davis
ANDREW ARBINI
Josh Galbach
Jason Wells
Chad Worley
JASON CHAVEZ
Morgan Devita
Rob Gross
Rod Byrd
CRAIG BORRENPOHL

John Beacham
Wayne Johnson
Justin Hernandez
Doris Oscarson
Sherril Wright
Naomi Tierney
Amy Rainville
Gary Bright
Adam Tate
Keith Hardy
Donell's
Doug Patterson
Glen Boren
Ken Johnson
Tommy Lynn
Tim Dewitt
Matthew Powell
Raddlee Turcotte
Casey Gossen
Deldie Davis
Andrew Arbin
Josh Galbach
Jason Wells
Chad Worley
Jason Chavez
Morgan Devita
Rob Gross
Rod Byrd
Craig Borrenpohl

Supervisor: Please return completed form to Water Reclamation Facility or email to alyssag@postfallsidaho.org
Deadline: December 13, 2019

SURFACE WATER MANAGEMENT PROGRAM 2019 EMPLOYEE TRAINING RECORD

Department/Division: Boilding

"I certify that the following employees have completed the training indicated below."

Supervisor's Signature: [Signature] Date: 10/21/19

Employee Name
[Signature]
[Signature]
[Signature]
[Signature]
[Signature]
[Signature]
[Signature]

Training: Home Snow Removal Tips
<https://www.youtube.com/watch?v=hbvcYnrA3TU>

Online Quiz:
<https://www.surveymonkey.com/r/G8Y72K9>

Supervisor: Please return completed form to Water Reclamation Facility or email to alyssag@postfallsidaho.org
Deadline: December 13, 2019

**SURFACE WATER MANAGEMENT PROGRAM
2019 EMPLOYEE TRAINING RECORD**

Department/Division: Engineering

"I certify that the following employees have completed the training indicated below."

Supervisor's Signature: [Signature] Date: 11/16/19

Employee Name
Bill Melvin
Rob Plus
Tim Mulochy
Darrin Hibbs
James Spelsbury
Ten Poindexter
Bob Szele

Training: Home Snow Removal Tips
<https://www.youtube.com/watch?v=hbvcYnrA3TU>

Online Quiz:
<https://www.surveymonkey.com/r/G8Y72K9>

Supervisor: Please return completed form to Water Reclamation Facility or email to alyssag@postfallsidaho.org
Deadline: December 13, 2019

**SURFACE WATER MANAGEMENT PROGRAM
2019 EMPLOYEE TRAINING RECORD**

Department/Division: Parks & Urban Forestry Divisions

"I certify that the following employees have completed the training indicated below."

Supervisor's Signature:  Date: OCT 30, 2019

Employee Name	Employee Name
Heather Tucker	
Jason Snowden	
Mike Wood	
James Baerlocher	
Preston Hill	
Scott Tapp	
Randy Hill	
Russ Bowser	
Joe Barber	
Scott MAYALL (725)	
X 710	
Paul Fink	
Danny Heiderman	
Michay Beyanni	
DRYAN MYERS	
Steve Brassat	

Training: Home Snow Removal Tips
<https://www.youtube.com/watch?v=hbvcYnrA3TU>

Online Quiz:
<https://www.surveymonkey.com/r/G8Y72K9>

Supervisor: Please return completed form to Water Reclamation Facility or email to alyssag@postfallsidaho.org
Deadline: December 13, 2019

**SURFACE WATER MANAGEMENT PROGRAM
2019 EMPLOYEE TRAINING RECORD**

Department/Division: Planning & Zoning

"I certify that the following employees have completed the training indicated below."

Supervisor's Signature: Jonathan Manley Date: 10/28/19

Employee Name
Amber Blanchette
Ethan Porter
Jami Hayes
Jon Manley

Training: Home Snow Removal Tips
<https://www.youtube.com/watch?v=hbvcYnrA3TU>


Online Quiz:
<https://www.surveymonkey.com/r/G8Y72K9>

Supervisor: Please return completed form to Water Reclamation Facility or email to alyssag@postfallsidaho.org
Deadline: December 13, 2019

**SURFACE WATER MANAGEMENT PROGRAM
2019 EMPLOYEE TRAINING RECORD**

Department/Division: Post Falls' Street Department.

"I certify that the following employees have completed the training indicated below."

Supervisor's Signature:  Date: 10-28-2019

Employee Name
Stephen Reichart
Danny GOAD
Kyle Keyhauer

Training: Home Snow Removal Tips
<https://www.youtube.com/watch?v=hbvcYnrA3TU>

Online Quiz:
<https://www.surveymonkey.com/r/G8Y72K9>

Public works

Name

Signature

Aaron Benjamin



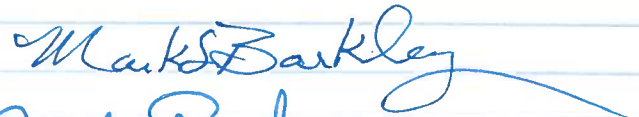
TIMM ORR



Ryan Lawrence



Mark S. Barkley



Carlos Betancourt



Bob Hatcher



Coeur d Alene Press

DEC 23 2019
LE

ADVERTISING INVOICE

START	STOP	NEWSPAPER REFERENCE	DESCRIPTION	PRODUCT	SAU SIZE	BILLED UNITS	TIMES RUN	RATE	AMOUNT
12/16	12/16	I00350114-12162019	CDA#2868 - 2019 TMP & SWMP - DECEM		1.00 x 32 Li	32	2	0.56	\$35.65

TOTAL AMOUNT DUE
\$35.65

ADVERTISER INFORMATION	
ADVERTISER/CLIENT NUMBER	ADVERTISER/CLIENT NAME
25366	CITY OF POST FALLS

MAKE CHECKS PAYABLE TO
 Coeur d Alene Press
 PO Box 7000
 Coeur d Alene, ID 83816

Past due accounts are subject to finance charges of 1-1/2% per month, which is an annual percentage of 18%, applied to the previous balance

PLEASE DETACH AND RETURN LOWER PORTION WITH YOUR REMITTANCE

Coeur d Alene Press
 215 N 2nd ST
 Coeur d Alene, ID 83814
 (208) 664-8176

BILLING PERIOD	ADVERTISER/CLIENT NAME
	CITY OF POST FALLS
TOTAL AMOUNT DUE	TERMS OF PAYMENT
\$35.65	Due Upon Receipt

ADVERTISING INVOICE

BILLING ACCOUNT NAME AND ADDRESS	REMITTANCE ADDRESS	PAGE #	BILLING DATE
CITY OF POST FALLS 408 SPOKANE STREET POST FALLS, ID 83854	Coeur d Alene Press PO Box 7000 Coeur d Alene, ID 83816	1	12/16/2019
		BILLED ACCOUNT NUMBER	
		25366	
		ADVERTISER/CLIENT NUMBER	
		25366	

Order Confirmation

Ad Order Number
0000350114

Sales Rep.
cdahouse

Order Taker
mmooore

Order Source

Customer
CITY OF POST FALLS

Customer Account
25366

Customer Address
408 SPOKANE STREET
POST FALLS ID 83854 USA

Customer Phone
2087733511

Pavor Customer
CITY OF POST FALLS

Pavor Account
25366

Pavor Address
408 SPOKANE STREET
POST FALLS ID 83854 USA

Pavor Phone
2087733511

PO Number

Ordered By
MM

Customer Fax

Customer EMail
acctpay@postfallsidahoho.org

Special Pricing

<u>Tear Sheets</u>	<u>Proofs</u>	<u>Affidavits</u>	<u>Blind Box</u>	<u>Promo Type</u>	<u>Materials</u>
0	0	1			

Invoice Text

CDA#2868 - 2019 TMP & SWMP - DECEMBER 2019

Ad Order Notes

RUN DATE DECEMBER 16, 2019

<u>Tax Amount</u>	<u>Total Amount</u>	<u>Payment Method</u>	<u>Payment Amount</u>	<u>Amount Due</u>
\$0.00	\$35.65	Invoice	\$0.00	\$35.65

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO)
) ss.
County of Kootenai)

Ashley Kinzer, being first duly sworn upon oath, deposes and states:

1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press", a newspaper printed and published daily in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The Legal Notice of which the annexed is a printed copy, was published in the regular Monday issue of said newspaper for 1 consecutive week commencing on the 16 day of December, 2019, and ending on the 16 day of December, 2019, and such publication was made as often during said period as said daily newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice

Ashley Kinzer

On this 16 day of December in the year of 2019 before me, a Notary Public, personally appeared Ashley Kinzer, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Public Outreach -Newspaper Notice

The City of Post Falls must provide annual notice of our Toxics Management Plan (TMP) activities. The TMP and most recent Annual Report are posted on the City's website under the Water Reclamation Division. To access this information, please go to <https://www.postfallsidaho.org/departments/public-works/pcbs/> or contact the Utilities Division at 208-777-9857.

The City of Post Falls must provide annual notice of our Stormwater Management Plan (SWMP) activities. The SWMP and Annual Reports are posted on the City's website under the Surface Water Division. To access this information, please go to www.postfallsidaho.org/departments/public-services-water/ or contact the Utilities Division at 208-777-9857.
CDA LEGAL 2868
AD#350114
DECEMBER 16, 2019



Katrina George
Notary Public for the State of Idaho
Residing in Coeur d'Alene, Idaho

My Commission Expires 8/29/23

SWEEPING INVENTORY BY MONTH

MONTH	Sand/Silt	Gravel/Chips	Light Debris	TOTAL
JANUARY	0	0	0	0
FEBRUARY	0	0	0	0
MARCH	29	0	0	29
APRIL	97	0	6	103
MAY	90	7	3	100
JUNE	0	0	16	16
JULY	0	0	5	5
AUGUST	0	0	11	11
SEPTEMBER	0	0	5	5
OCTOBER	0	0	0	0
NOVEMBER	0	0	0	0
DECEMBER	0	0	0	0
YARDS OF DEBRIS	216	7	46	269

**CITY OF POST FALLS STORM WATER PROGRAM
MS4 PERMIT #IDS-028231
FIELD SAMPLE LOG**

SAMPLE DATE: 3/7/19

SAMPLER: (Signature) Rob Gross | Rod Byrd

SAMPLE COLLECTION INFORMATION:

	CENTENNIAL TRAIL	FOURTH AVENUE
Type of Sample	Grab	Grab
Time of Sample Collection (hhmm)	10:33	10:44
Preservative Added (Yes/No)	Yes	- Yes
Samples Transported on Ice (Yes/No)	Yes	- Yes
Water Temp. (°F)	39°	38°
Depth of Flow (inches)	1.5	3
Appearance of Flow (color, oil, odor, trash, turbid, sediment, etc.)	Dark Brown	- Dark Brown
Other Remarks	Snow Melt	- Snow Melt

Instructions to Laboratory

Parameters to be tested for these samples are:

PARAMETER	PQL	METHOD
Total Suspended Solids	1 mg/L	SM2540D
Total Phosphorus	0.06 mg/L	EPA 365.3
Total Lead	0.02 mg/L	SM3210
Total Nitrogen	0.05 mg/L	SM4500/4110
Total Zinc	0.013 mg/L	SM3210
Hardness	0.2 mg/L	SM2340B
Total Polychlorinated Biphenyls	0.1 mg/L	SM8082

Accurate Testing Labs, LLC

7950 Meadowlark Way
Coeur d'Alene, ID 83815
Phone (208) 762 8378 Fax (208) 762 9082
www.accuratetesting.com
info@accuratetesting.com

Certificate of Analysis

Order No.:

2019030113

Page: 1 of 2

City of Post Falls Treatment

2002 W. Seltice Way
Post Falls, ID 83854

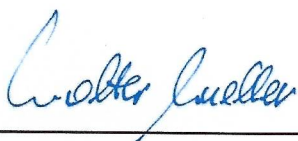
Project: Storm Water Monitoring

Date Received: 03/07/2019 13:30

Sample: 1 Matrix: Non-Potable Water
Location: Centennial Trail Outfall D/T Collected: 03/07/2019 10:33
Sample Type: Grabs Collected by: Rod Byrd

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Calcium	35.1	mg/L	EPA 200.7	0.03	03/14/19	WM
Cadmium	1.41	ug/L	SM 3120B	0.5	03/15/19	WM
Hardness, Total (as CaCO3)	1900	mg/L	SM 2340	0.2	03/14/19	WM
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Magnesium	440	mg/L	EPA 200.7	0.02	03/14/19	WM
Phosphorus, Total	1.48	mg/L	EPA 365.1	0.016	03/14/19	WM
Nitrite-N	ND	mg/L	EPA 300.0	0.1	03/07/19	WM
Nitrate-N	0.32	mg/L	EPA 300.0	0.1	03/07/19	WM
Lead	23.6	ug/L	SM 3120B	0.5	03/15/19	WM
Aroclor 1016	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1221	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1254	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Total Kjeldahl Nitrogen (N)	5.06	mg/L	SM 4500NORG B	0.09	03/15/19	GL
Total Nitrogen (NO2+NO3+TKN as N)	5.38	mg/L	Calculation		03/26/19	WM
Total Suspended Solids	900	mg/L	SM 2540D	1	03/15/19	GL
Zinc	1067	ug/L	SM 3120B	1.0	03/15/19	WM

Comments:



Accurate Testing Labs, LLC

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 www.accuratetesting.com
 info@accuratetesting.com

Certificate of Analysis

Order No.:

2019030113

Page: 2 of 2

Sample: **2**
 Location: Fourth Avenue Outfall
 Sample Type: Grabs

Matrix: Non-Potable Water
 D/T Collected: 03/07/2019 10:44
 Collected by: Rod Byrd

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 03/27/19

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Calcium	38.3	mg/L	EPA 200.7	0.03	03/14/19	WM
Aroclor 1016	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1221	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1254	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	03/18/19	ANA
Magnesium	332	mg/L	EPA 200.7	0.02	03/14/19	WM
Hardness, Total (as CaCO3)	1460	mg/L	SM 2340	0.2	03/14/19	WM
Total Kjeldahl Nitrogen (N)	5.16	mg/L	SM 4500NORG B	0.09	03/15/19	GL
Total Nitrogen (NO2+NO3+TKN as N)	5.72	mg/L	Calculation		03/26/19	WM
Phosphorus, Total	0.954	mg/L	EPA 365.1	0.016	03/14/19	WM
Total Suspended Solids	990	mg/L	SM 2540D	1	03/15/19	GL
Nitrite-N	0.23	mg/L	EPA 300.0	0.1	03/07/19	WM
Nitrate-N	0.33	mg/L	EPA 300.0	0.1	03/07/19	WM
Cadmium	1.32	ug/L	SM 3120B	0.5	03/15/19	WM
Lead	31.0	ug/L	SM 3120B	0.5	03/15/19	WM
Zinc	839	ug/L	SM 3120B	1.0	03/15/19	WM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

Chain of Custody

Accurate Testing Labs

7950 Meadowlark Way | Coeur d'Alene, ID 83815 | Phone: (208) 762-8378 | Fax: (208) 762-9082
 E-mail: mueller@accuratetesting.com | Internet: <http://www.accuratetesting.com>

Results & Invoice to:

Name: City of Post Falls - Water Reclamation Facility
 Address: 2002 W Selfice Way
Post Falls, ID 83854
 Phone: 208-773-1438 Fax: _____
 E-mail: _____

Project Information:

Project Name: Storm Water Monitoring
 Project Number: _____
 Purchase Order Number: _____

Reporting Requirements:

Preliminary: FAX Verbal by: / /
 Final Report: FAX Verbal by: / /
 Rushes: 48 hrs. Other:

Name of Sampler:

Rod Byrd

ANALYSIS REQUEST

Lab #	Sample ID	Date	Time	Matrix	NO. OF CONTAINERS								Remarks/Sample Conditions
					Total Suspended Solids	Total Phosphorus	Total Lead	Total Nitrogen	Total Zinc	Hardness	Total Polychlorinated Biphenyls		
		3/7/19	10:33	Water	4	X	X	X	X	X	X	X	
		3/7/19	10:44	Water	4	X	X	X	X	X	X	X	

Relinquished by:

Mark S. Barkley

Date Time: 3-7-19 1:30 PM

Date Time: 3-7-19 1:30

Chain of Custody Seals

Yes No N/A
 UPS FedEx
 Bus Hand

**USBR Pacific Northwest Region
Hydromet/AgriMet Data Access**

Although the US Bureau of Reclamation makes efforts to maintain the accuracy of data found in the Hydromet system databases, the data is largely unverified and should be considered preliminary and subject to change. Data and services are provided with the express understanding that the United States Government makes no warranties, expressed or implied, concerning the accuracy, completeness, usability or suitability for any particular purpose of the information or data obtained by access to this computer system, and the United States shall be under no liability whatsoever to any individual or group entity by reason of any use made thereof.

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03/08/2019,      17.04,      0.01
END DATA
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CITY OF POST FALLS STORM WATER PROGRAM
MS4 PERMIT #IDS-028231
FIELD SAMPLE LOG

SAMPLE DATE: 5-16-19

SAMPLER: (Signature) Kevin S. Gandy

SAMPLE COLLECTION INFORMATION:

	CENTENNIAL TRAIL	FOURTH AVENUE
Type of Sample	Grab	Grab
Time of Sample Collection (hhmm)	6:00 PM	6:20 PM
Preservative Added (Yes/No)	NO	NO
Samples Transported on Ice (Yes/No)	YES	YES
Water Temp. (°F)	62°F	62°F
Depth of Flow (inches)	9"	10"
Appearance of Flow (color, oil, odor, trash, turbid, sediment, etc.)	Grey / Black Slight odor	tan (NO odor)
Other Remarks		

Instructions to Laboratory

Parameters to be tested for these samples are:

PARAMETER	PQL	METHOD
Total Suspended Solids	1 mg/L	SM2540D
Total Phosphorus	0.06 mg/L	EPA 365.3
Total Lead	0.02 mg/L	SM3210
Total Nitrogen	0.05 mg/L	SM4500/4110
Total Zinc	0.013 mg/L	SM3210
Hardness	0.2 mg/L	SM2340B
Total Polychlorinated Biphenyls	0.1 mg/L	SM8082

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Certificate of Analysis

Order No.: 2019050344

Page: 1 of 2

City of Post Falls Treatment
2002 W. Seltice Way
Post Falls, ID 83854

Project: Storm Water Monitoring

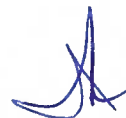
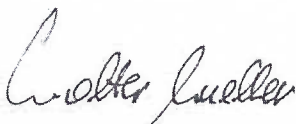
Date Received: 05/17/2019 08:20

Sample: 1
Location: Centennial Trail Outfall
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 05/16/2019 18:00
Collected by: Keith Hardy

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Calcium	38.4	mg/L	EPA 200.7	0.03	05/23/19	WM
Cadmium	2.89	ug/L	SM 3120B	0.5	05/21/19	WM
Magnesium	28.1	mg/L	EPA 200.7	0.02	05/23/19	WM
Hardness, Total (as CaCO3)	212	mg/L	SM 2340	0.2	05/23/19	WM
Nitrite-N	ND	mg/L	EPA 300.0	0.1	05/17/19	WM
Nitrate-N	0.20	mg/L	EPA 300.0	0.1	05/17/19	WM
Aroclor 1016	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1221	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Phosphorus, Total	4.71	mg/L	EPA 365.1	0.013	05/23/19	WM
Lead	74.8	ug/L	SM 3120B	0.5	05/21/19	WM
Aroclor 1254	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Total Kjeldahl Nitrogen (N)	11.5	mg/L	SM 4500NORG B	0.09	05/24/19	GL
Total Nitrogen (NO2+NO3+TKN as N)	11.7	mg/L	Calculation		05/24/19	GL
Total Suspended Solids	1510	mg/L	SM 2540D	1	05/24/19	GL
Zinc	3015	ug/L	SM 3120B	1.0	06/11/19	WM

Comments:



Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 06/12/19

Accurate Testing Labs, LLC

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Certificate of Analysis

Order No.:

2019050344

Page: 2 of 2

Sample: **2** Matrix: Non-Potable Water
Location: 4th Street Outfall D/T Collected: 05/16/2019 18:20
Sample Type: Grabs Collected by: Keith Hardy

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Aroclor 1016	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Calcium	7.17	mg/L	EPA 200.7	0.03	05/23/19	WM
Magnesium	5.20	mg/L	EPA 200.7	0.02	05/23/19	WM
Hardness, Total (as CaCO3)	39.3	mg/L	SM 2340	0.2	05/23/19	WM
Phosphorus, Total	0.454	mg/L	EPA 365.1	0.013	05/23/19	WM
Nitrite-N	ND	mg/L	EPA 300.0	0.1	05/17/19	WM
Nitrate-N	0.22	mg/L	EPA 300.0	0.1	05/17/19	WM
Cadmium	ND	ug/L	SM 3120B	0.5	05/21/19	WM
Lead	18.8	ug/L	SM 3120B	0.5	05/21/19	WM
Aroclor 1221	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1254	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	06/06/19	ANA
Total Kjeldahl Nitrogen (N)	1.51	mg/L	SM 4500NORG B	0.09	05/24/19	GL
Total Nitrogen (NO2+NO3+TKN as N)	1.73	mg/L	Calculation		05/24/19	GL
Total Suspended Solids	298	mg/L	SM 2540D	1	05/24/19	GL
Zinc	206	ug/L	SM 3120B	1.0	05/21/19	WM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:



Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 06/12/19

**USBR Pacific Northwest Region
Hydromet/AgriMet Data Access**

Although the US Bureau of Reclamation makes efforts to maintain the accuracy of data found in the Hydromet system databases, the data is largely unverified and should be considered preliminary and subject to change. Data and services are provided with the express understanding that the United States Government makes no warranties, expressed or implied, concerning the accuracy, completeness, usability or suitability for any particular purpose of the information or data obtained by access to this computer system, and the United States shall be under no liability whatsoever to any individual or group entity by reason of any use made thereof.

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BEGIN DATA
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05/14/2019,      19.61,      0.02
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05/16/2019,      20.46,      0.84
END DATA
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**CITY OF POST FALLS STORM WATER PROGRAM
MS4 PERMIT #IDS-028231
FIELD SAMPLE LOG**

SAMPLE DATE: 8/10/19

SAMPLER: (Signature) Ryan Lawrence

SAMPLE COLLECTION INFORMATION:

	CENTENNIAL TRAIL	FOURTH AVENUE
Type of Sample	Grab	Grab
Time of Sample Collection (hhmm)	11:24 PM	11:34 PM
Preservative Added (Yes/No)	y	y
Samples Transported on Ice (Yes/No)	y	y
Water Temp. (°F)	68°	66°
Depth of Flow (inches)	3"	2"
Appearance of Flow (color, oil, odor, trash, turbid, sediment, etc.)	oily smell, med Brown	outfall covered in debris oily smell, dark Brown
Other Remarks		

Instructions to Laboratory

Parameters to be tested for these samples are:

PARAMETER	PQL	METHOD
Total Suspended Solids	1 mg/L	SM2540D
Total Phosphorus	0.06 mg/L	EPA 365.3
Total Lead	0.02 mg/L	SM3210
Total Nitrogen	0.05 mg/L	SM4500/4110
Total Zinc	0.013 mg/L	SM3210
Hardness	0.2 mg/L	SM2340B
Total Polychlorinated Biphenyls	0.1 mg/L	SM8082

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Certificate of Analysis

Order No.: **2019080215**

Page: 1 of 2

City of Post Falls Treatment
2002 W. Seltice Way
Post Falls, ID 83854

Project: Storm Water Monitoring

Date Received: 08/12/2019 07:45

Sample: **1**
Location: Centennial Trail Outfall
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 08/10/2019 11:24
Collected by: Ryan Lawrence

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Calcium	3.48	mg/L	EPA 200.7	0.03	08/15/19	WM
Cadmium	ND	ug/L	SM 3120B	0.5	08/16/19	WM
Magnesium	1.95	mg/L	EPA 200.7	0.02	08/15/19	WM
Hardness, Total (as CaCO3)	16.7	mg/L	SM 2340	0.2	08/15/19	WM
Nitrite-N	ND	mg/L	EPA 300.0	0.1	08/13/19	WM
Nitrate-N	0.318	mg/L	EPA 300.0	0.1	08/13/19	WM
Aroclor 1016	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1221	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Phosphorus, Total	0.246	mg/L	EPA 365.1	0.013	08/15/19	WM
Lead	6.77	ug/L	SM 3120B	0.5	08/16/19	WM
Aroclor 1254	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Total Kjeldahl Nitrogen (N)	1.39	mg/L	SM 4500NORG B	0.09	08/16/19	WM
Total Nitrogen (NO2+NO3+TKN as N)	1.71	mg/L	Calculation		08/16/19	WM
Total Suspended Solids	120	mg/L	SM 2540D	1	08/16/19	JD
Zinc	248	ug/L	SM 3120B	1.0	08/16/19	WM

Comments:



Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 09/13/19

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Certificate of Analysis

Order No.: **2019080215**

Page: 2 of 2

Sample: **2** Matrix: Non-Potable Water
Location: Fourth Avenue Outfall D/T Collected: 08/10/2019 11:34
Sample Type: Grabs Collected by: Ryan Lawrence

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Aroclor 1016	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Calcium	6.70	mg/L	EPA 200.7	0.03	08/15/19	WM
Magnesium	5.63	mg/L	EPA 200.7	0.02	08/15/19	WM
Hardness, Total (as CaCO3)	39.9	mg/L	SM 2340	0.2	08/15/19	WM
Phosphorus, Total	0.558	mg/L	EPA 365.1	0.013	08/15/19	WM
Nitrite-N	ND	mg/L	EPA 300.0	0.1	08/13/19	WM
Nitrate-N	0.499	mg/L	EPA 300.0	0.1	08/13/19	WM
Cadmium	0.54	ug/L	SM 3120B	0.5	08/16/19	WM
Lead	22.4	ug/L	SM 3120B	0.5	08/16/19	WM
Aroclor 1221	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1254	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	09/10/19	ANA
Total Kjeldahl Nitrogen (N)	2.15	mg/L	SM 4500NORG B	0.09	08/16/19	JD
Total Nitrogen (NO2+NO3+TKN as N)	2.65	mg/L	Calculation		08/16/19	WM
Total Suspended Solids	281	mg/L	SM 2540D	1	08/16/19	JD
Zinc	249	ug/L	SM 3120B	1.0	08/16/19	WM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:



Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 09/13/19

Chain of Custody

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E-mail: mueller@accuratetesting.com | Internet: <http://www.accuratetesting.com>

Results & Invoice to:					Reporting Requirements:								Name of Sampler: <u style="font-size: 1.2em;">Ryan Lawrence</u>		
Name: <u>City of Post Falls - Water Reclamation Facility</u> Address: <u>2002 W Seltice Way</u> <u>Post Falls, ID 83854</u> Phone: <u>208-773-1438</u> Fax: _____ E-mail: _____					Preliminary: FAX <input type="checkbox"/> Verbal <input type="checkbox"/> by: ___/___/___ Final Report: FAX <input type="checkbox"/> Verbal <input type="checkbox"/> by: ___/___/___ Rushes: 48 hrs. <input type="checkbox"/> Other: <input type="checkbox"/>										
Project Information:					ANALYSIS REQUEST								Remarks/Sample Conditions		
Project Name: <u>Storm Water Monitoring</u> Project Number: _____ Purchase Order Number: _____					NO. OF CONTAINERS	Total Suspended Solids	Total Phosphorus	Total Lead	Total Nitrogen	Total Zinc	Hardness	Total Polychlorinated Biphenyls			
Lab #	Sample ID	Date	Time	Matrix	NO. OF CONTAINERS	Total Suspended Solids	Total Phosphorus	Total Lead	Total Nitrogen	Total Zinc	Hardness	Total Polychlorinated Biphenyls			
080	215-1	8/10	11:24 AM	water	4	X	X	X	X	X	X	X			
	-2	8/10	11:24 PM	water	4	X	X	X	X	X	X	X			
Relinquished by:					Date Time		Received by:					Date Time		Chain of Custody Seals	
					8-12-19 7:45							8-12-19 7:45		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Bus <input checked="" type="checkbox"/> Hand	


**USBR Pacific Northwest Region
Hydromet/AgriMet Data Access**

Although the US Bureau of Reclamation makes efforts to maintain the accuracy of data found in the Hydromet system databases, the data is largely unverified and should be considered preliminary and subject to change. Data and services are provided with the express understanding that the United States Government makes no warranties, expressed or implied, concerning the accuracy, completeness, usability or suitability for any particular purpose of the information or data obtained by access to this computer system, and the United States shall be under no liability whatsoever to any individual or group entity by reason of any use made thereof.

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08/11/2019,      5.76,      0.34
END DATA
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**CITY OF POST FALLS STORM WATER PROGRAM
MS4 PERMIT #IDS-028231
FIELD SAMPLE LOG**

SAMPLE DATE: 9/6/19

SAMPLER: (Signature) 

SAMPLE COLLECTION INFORMATION:

	CENTENNIAL TRAIL	FOURTH AVENUE
Type of Sample	Grab	Grab
Time of Sample Collection (hhmm)	6:58 Am	6:47 Am
Preservative Added (Yes/No)	Yes	Yes
Samples Transported on Ice (Yes/No)	Yes	Yes
Water Temp. (°F)	67°	67°
Depth of Flow (inches)	.75'	.75"
Appearance of Flow (color, oil, odor, trash, turbid, sediment, etc.)	Very light Brown	Clear
Other Remarks		

Instructions to Laboratory

Parameters to be tested for these samples are:

PARAMETER	PQL	METHOD
Total Suspended Solids	1 mg/L	SM2540D
Total Phosphorus	0.06 mg/L	EPA 365.3
Total Lead	0.02 mg/L	SM3210
Total Nitrogen	0.05 mg/L	SM4500/4110
Total Zinc	0.013 mg/L	SM3210
Hardness	0.2 mg/L	SM2340B
Total Polychlorinated Biphenyls	0.1 mg/L	SM8082

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Certificate of Analysis

Order No.: **2019090105**

Page: 1 of 2

City of Post Falls Treatment
2002 W. Seltice Way
Post Falls, ID 83854

Project: Storm Water Monitoring

Date Received: 09/06/2019 07:50

Sample: **1**
Location: Centennial Trail
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 09/06/2019 06:58
Collected by: Adam Tate

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Calcium	30.6	mg/L	EPA 200.7	0.03	09/12/19	WM
Cadmium	ND	ug/L	SM 3120B	0.5	09/17/19	WM
Magnesium	12.6	mg/L	EPA 200.7	0.02	09/12/19	WM
Hardness, Total (as CaCO3)	128	mg/L	SM 2340	0.2	09/12/19	WM
Nitrite-N	0.140	mg/L	EPA 300.0	0.1	09/06/19	WM
Nitrate-N	1.30	mg/L	EPA 300.0	0.1	09/06/19	WM
Aroclor 1016	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1221	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Phosphorus, Total	0.344	mg/L	EPA 365.1	0.013	09/12/19	WM
Lead	3.12	ug/L	SM 3120B	0.5	09/17/19	WM
Aroclor 1254	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Total Kjeldahl Nitrogen (N)	3.59	mg/L	SM 4500NORG B	0.09	09/13/19	JD
Total Nitrogen (NO2+NO3+TKN as N)	5.03	mg/L	Calculation		09/17/19	WM
Total Suspended Solids	52	mg/L	SM 2540D	1	09/12/19	JD
Zinc	272	ug/L	SM 3120B	1.0	09/17/19	WM

Comments:



Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 10/09/19

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Certificate of Analysis

Order No.: **2019090105**

Page: 2 of 2

Sample: **2** Matrix: Non-Potable Water
Location: Fourth Avenue Outfall D/T Collected: 09/06/2019 06:47
Sample Type: Grabs Collected by: Adam Tate

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Aroclor 1016	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Calcium	24.4	mg/L	EPA 200.7	0.03	09/12/19	WM
Magnesium	10.1	mg/L	EPA 200.7	0.02	09/12/19	WM
Hardness, Total (as CaCO3)	103	mg/L	SM 2340	0.2	09/12/19	WM
Phosphorus, Total	0.124	mg/L	EPA 365.1	0.013	09/12/19	WM
Nitrite-N	ND	mg/L	EPA 300.0	0.1	09/06/19	WM
Nitrate-N	0.678	mg/L	EPA 300.0	0.1	09/06/19	WM
Cadmium	ND	ug/L	SM 3120B	0.5	09/17/19	WM
Lead	1.68	ug/L	SM 3120B	0.5	09/17/19	WM
Aroclor 1221	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1254	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	09/24/19	ANA
Total Kjeldahl Nitrogen (N)	0.489	mg/L	SM 4500NORG B	0.09	09/13/19	JD
Total Nitrogen (NO2+NO3+TKN as N)	1.17	mg/L	Calculation		09/17/19	WM
Total Suspended Solids	9	mg/L	SM 2540D	1	09/12/19	JD
Zinc	26.0	ug/L	SM 3120B	1.0	09/17/19	WM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:



Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 10/09/19

Chain of Custody

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Results & Invoice to:
Name: City of Post Falls - Water Reclamation Facility
Address: 2002 W Seltice Way
Post Falls, ID 83854
Phone: 208-773-1438 Fax: _____
E-mail: _____

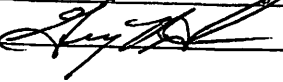
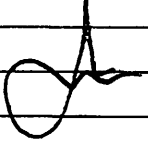
Reporting Requirements:
Preliminary: FAX Verbal by: / /
Final Report: FAX Verbal by: / /
Rushes: 48 hrs. Other:

Name of Sampler:
Adam Tate

Project Information:
Project Name: Storm Water Monitoring
Project Number: _____
Purchase Order Number: _____

ANALYSIS REQUEST

Lab #	Sample ID	Date	Time	Matrix	NO. OF CONTAINERS	ANALYSIS REQUEST								Remarks/Sample Conditions		
						Total Suspended Solids	Total Phosphorus	Total Lead	Total Nitrogen	Total Zinc	Hardness	Total Polychlorinated Biphenyls				
090 105-1	Centennial Trail Outfall	9/6/09	6:58pm	water	4	X	X	X	X	X	X	X				
1	-2 Fourth Avenue Outfall	9/6/09	6:47Am	water	4	X	X	X	X	X	X	X				

Relinquished by: 	Date	Time	Received by: 	Date	Time	Chain of Custody Seals <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Bus <input checked="" type="checkbox"/> Hand
	9/6/09	7:50		9-6-09	7:10	

**USBR Pacific Northwest Region
Hydromet/AgriMet Data Access**

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```
BEGIN DATA
DATE      ,      PSFI PC      ,      PSFI PP
09/05/2019,      5.93,      0.00
09/06/2019,      5.99,      0.05
09/07/2019,      5.99,      0.00
END DATA
```



Water Compliance Inspection Report

Section A: National Data System Coding (i.e. PCS)

Transaction Code 1 N 2 NPDES 3 I D S 0 2 8 2 3 1 11 yr/mo/day 12 1 7 0 9 1 9 17 Inspection Type 18 - Inspector 19 R Fac Type 20 1

Remarks 21 _____ 66

Inspection Work Days 67 4 0 69 Facility Self-Monitoring Evaluation Rating 70 BI 71 QA 72 Reserved 73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) City of Post Falls 408 N. Spokane Street Post Falls, Idaho 83854	Entry Time/Date 8:30 AM 9/19/2017	Permit Effective Date January 1, 2009
	Exit Time/Date 11:00 AM 9/19/2017	Permit Expiration Date 12/31/2014

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Numbers John Beacham, Utilities Manager, 208-777-9857 408 N. Spokane Street Post Falls, Idaho 83854	Other Facility Data (e.g., SIC, NAICS, and other descriptive information) SIC = 9199 NAICS = 921190
Name, Address of Responsible Official/Title/Phone and Fax Number John Beacham, Utilities Manager, 208-777-9857 408 N. Spokane Street Post Falls, Idaho 83854 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Contacted	

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

<input checked="" type="checkbox"/> Permit	<input type="checkbox"/> Self-Monitoring Program	<input type="checkbox"/> Pretreatment	<input checked="" type="checkbox"/> MS4
<input type="checkbox"/> Records/Reports	<input type="checkbox"/> Compliance Schedule	<input type="checkbox"/> Pollution Prevention	
<input type="checkbox"/> Facility Site Review	<input type="checkbox"/> Laboratory	<input type="checkbox"/> Storm Water	
<input checked="" type="checkbox"/> Effluent/Receiving Waters	<input type="checkbox"/> Operations & Maintenance	<input type="checkbox"/> Combined Sewer Overflow	
<input type="checkbox"/> Flow Measurement	<input type="checkbox"/> Sludge Handling/Disposal	<input type="checkbox"/> Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments

(Attach additional sheets of narrative and checklists, including Single Event Violation codes, as necessary)

SEV Codes	SEV Description
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	_____

Name(s) and Signature(s) of Inspector(s) Robert Grandinetti	Agency/Office/Phone and Fax Numbers EPA/Region 10/509-376-3748	Date 9/28/2017
Signature of Management QA Reviewer	Agency/Office/Phone and Fax Numbers	Date

I. Overview

The purpose of this inspection was to determine compliance with municipal separate storm sewer system (MS4) permit issued to the City of Post Falls (City) under the Clean Water Act. This compliance inspection consisted of an opening conference to conduct initial introductions and discuss the purpose and expectations of the inspection. This inspection also included a file review, a facility tour to inspect stormwater related activities for the facility, and a closing conference with facility representatives. Specifically, the file review and field inspection included an evaluation of the following program areas or elements, which are described in the Permit:

- Section II.B.4 – Construction Site Stormwater Runoff Control
- Section II.B.3 – Illicit Discharge Detection and Elimination

II. Inspection Entry

Specifics regarding entry to this facility are as follows:

- The inspection of this facility was announced.
- This was an EPA led inspection.
- I presented credentials to Mr. John Beecham upon arriving at the facility.
- I explained to Mr. Beecham that this visit was a compliance inspection to determine compliance with the City's NPDES Inspection.
- Mr. Beecham did not deny us access to the facility.

III. Inspection Information

Facility Name	City of Post Falls
Inspection Date	September 19, 2017
Time Arrived	8:30 AM
Time Departed	11:00 AM
Weather Condition	Rainy and cloudy
Facility Representatives Present	John Beecham, Utilities Manager was present throughout the inspection.
Inspection Team	Rob Grandinetti, EPA
Inspection Type	Compliance evaluation inspection, without sample collection

IV. Facility Information

A. General Information

Owner and Operator	City of Post Falls MS4 John Beecham, Utilities Manager
Contact Information	(208) 777-9857 (office) Jbeacham@postfallsidaho.org
Type of Operation	Municipal Separate Storm Sewer System (MS4)
Standard Industrial Classification (SIC) Code	9199 (General Government)
North American Industrial Classification System (NAICS) Code	921190 (Other General Government Support)
Physical Address	408 N. Spokane Street Post Falls, Idaho 83854
GPS Coordinates	+47.711796°/-116.947379°
Permit Status	Permit IDS028231 This permit is currently administratively extended.
Receiving Water	There are 2 outfalls associated with this MS4 and they both discharge to the Spokane River

B. Background

The City system covers an area a little over 11 square miles. The vast majority of the stormwater is collected and discharged to ground through the use of onsite grassy swales and injection wells. The remaining stormwater is routed through two outfall pipes that discharge to the Spokane River.

C. Construction Site Runoff Control

Section II.B.4. of the permit requires the following items to occur within two years of the effective date of the permit (by January 1, 2011), the City must: 1) implement and enforce a program to reduce pollutants from runoff from construction activities that may get into the MS4 system; 2) adopt an ordinance or other regulatory mechanism to require construction site operators to practice appropriate erosion, sediment and waste control; 3) publish and distribute local requirements for construction site operators to implement appropriate erosion and sediment control BMPs; and 4) develop procedures for reviewing all pre-construction site plans. For items one and two above in 2010 the City adopted ordinances regarding construction sites. For item number three above the City has information available at the building service counter, the City's website and there is a public service announcement that runs three times a week at 8AM on Sunday, 10:30 AM on Tuesday and 6:44 PM on Friday. For item four above the City has been reviewing all of their pre-construction site plans since 2010.

Section II.B.4. of the permit requires the following items to occur within three years of the effective date of the permit (by January 1, 2011), the City must: 1) implement a program to receive, track and review information submitted by the public regarding

construction site erosion and sediment control complaints; and 2) develop and implement procedures for site inspection and enforcement of control measures established as required in Parts II.B.4.c and d. For item number one above the City provides several ways to submit complaints, via email, telephone, letter or in person at City Hall. The City received no complaints in 2016. For item number two above in 2010 the City developed procedures for sites inspection and enforcement, which is detailed in their Stormwater Management Plan.

D. Illicit Discharge Detection and Elimination Program

Section II.B.3 of the permit requires the following items to occur within two years of the effective date of the permit (by January 1, 2011), the City must: 1) develop and implement a program to detect and eliminate illicit discharges from the MS4; 2) prohibit non stormwater discharges; 3) update and complete its comprehensive MS4 map; and 4) begin an ongoing education program for the public. The City passed applicable ordinances in 2010 for items one and two. The City updated its MS4 map in 2009, and posted on the City's web site, and by 2010 began its public outreach and education program for items three and four.

Section II.B.3 of the permit requires the following items to occur within three years of the effective date of the permit, the City must: 1) begin dry weather field screening for non stormwater flows from all outfalls; and 2) inventory all industrial facilities that discharge into the MS4 system. In 2011 the City began its dry weather screening of its outfalls, and in 2012 the City inventoried all of its industrial facilities in the MS4 boundary.

To further monitor the outfalls for illicit discharges the City attempts to sample each of its outfalls four times a year. In 2016 the City sampled each outfall four times throughout the year. The purpose of sampling the outfalls is to ensure there are no discharges to the stormwater system not composed entirely of stormwater. The parameters sampled are: total suspended solids, total phosphorous, lead, total nitrogen, zinc, hardness, and PCBs.

V. Areas of Concern

There were no areas of concern found during this inspection.

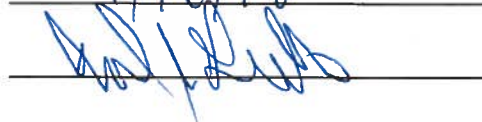
VI. Closing Conference

During the closing conference I thanked Mr. Beecham for his time and attention during the inspection.

Report Completion Date:

1/10/18

Lead Inspector Signature:





J-U-B ENGINEERS, INC.

J-U-B COMPANIES



THE LANGDON GROUP



GATEWAY MAPPING INC.

TECHNICAL MEMORANDUM

DATE: April 30, 2013

TO: Mike Neher, Environmental Coordinator, City of Post Falls

FROM: Robert B. Wright, P.E.

SUBJECT: Technical Memorandum—City of Post Falls Stormwater Discharge Elimination



This Technical Memorandum (TM) was prepared to explore planning level broad-based solutions for eliminating or reducing stormwater discharge at the Centennial Outfall and 4th Street Outfall to the Spokane River (locations shown on **Attachment #1**). In order to reduce or eliminate stormwater discharges, all or a portion of the stormwater in these basins must be treated and disposed of elsewhere. Two acceptable methods for treatment and disposal to protect the Rathdrum Prairie Sensitive Resource Aquifer include the use of grassed infiltration areas (GIAs) for treatment of the “first flush” and drywells for disposal of the 25-year storm event.

Method 1 - The first involves capturing the first one-half inch of runoff from impervious surfaces in a GIA. The volume of stormwater run-off (Impervious Area X 0.5-inches) is temporarily detained below the drywell rim elevation until it percolates through the root zone and soil column, which provides the treatment component. The maximum depth of the GIA is limited to 6 inches to prevent drowning the vegetation. Drywell rim elevations are set 6 inches above the bottom of the GIA and are used to dispose of stormwater runoff volumes exceeding the first one-half inch up to a 25-year storm event. One can estimate the required GIA bottom area to detain the first one-half inch volume below the drywell rim elevation by dividing the impervious area by 12. Of course, side slopes must be added to the total area needed to construct the GIAs and match surrounding ground elevations.

Method 2 - The second method was developed by the Storm Water Technical Advisory Committee in 2001 and was incorporated into the Department of Environmental Quality (DEQ) Best Management Practices (BMP 2). The GIA is sized by developing a percolation flow rate through the GIA that is greater than the flow rate from the design storm that produces 90 percent of the flows that carry contaminants. Percolation rates through the GIA range from 0.5 inches per hour to 3 inches per hour. A storm precipitation rate of 0.1 inches per hour is utilized, as it represents 90 percent of the annual rain events in the region (Dobler, 2000). The drywells are sized to dispose of the 25-year storm event, but the rim elevations are reduced to approximately 2 to 3 inches above the bottom of the GIA to reduce the amount of ponding in the GIAs. This method typically results in smaller required GIAs, as the infiltrative capacity of the region’s soils typically permits percolation rates in the upper end of the range and the side slopes can be minimized.

For the purpose of this report, required GIA sizes (infiltrative surface) are provided for both methods. Method 2 assumed a design GIA percolation rate of 2 inches per hour, which has been considered easily attainable in soils over the Rathdrum Prairie Aquifer based on single-ring infiltrometer testing.

City staff provided impervious areas for each drainage basin. To eliminate each outfall, the minimum GIA bottom areas for both Method 1 and Method 2 are estimated as follows:

Outfall	Impervious Area	Method 1 GIA Bottom Area (First ½ ")	Method 2 GIA Bottom Area (2"/HR)
4 th Street	26.9 Acres	2.24 Acres	1.26 Acres
Centennial	8.1 Acres	0.68 Acres	0.38 Acres

Outfall Flow Reduction or Elimination Alternatives:

- Install GIAs adjacent to streets similar to the City of Post Falls street standards.
 - Advantages
 - GIAs are relatively narrow
 - Eliminates the need for a storm drain system
 - Stormwater is treated and disposed of near the source
 - Disadvantages
 - Right-of-way is not available in all locations
 - The scope of work spans the entire drainage basin
 - More swales to maintain
- Install one GIA downstream of the last contributing catch basin to accommodate the entire basin
 - Advantages
 - The scope of work is confined to one location
 - Swale maintenance is limited to one location
 - Utilize existing storm drain system to convey stormwater
 - Disadvantages
 - May need to acquire property for large GIA

- Existing storm mains are relatively deep (12- to 15-feet deep at 4th Street; 20+ feet at Centennial Trail near Seltice crossing), requiring deep excavation for GIA
- Install one GIA downstream of the last contributing catch basin; install stormwater pumping station to convey to GIA at higher elevation
 - Advantages
 - The scope of work is confined to one location
 - Swale maintenance limited to one location
 - Utilize existing storm drain system to convey stormwater
 - Reduced excavation costs
 - Disadvantages
 - May need to acquire property for GIA and pumping station
 - Increased costs for construction of pumping station
 - Increased maintenance costs for pumping station
- Utilize Corbin Ditch as GIA
 - Advantages
 - Existing storm drain already conveys stormwater to this location
 - No pumping required
 - Disadvantages
 - The existing configuration is approximately 8 feet wide by 950 feet long. With approximately 7,600 sf (0.17 acres) available, the ditch would need to be widened or additional fill material would be required to produce a minimum 31-foot wide GIA bottom for Method 1 and a minimum 18-foot wide GIA bottom for Method 2 to treat all of the stormwater runoff in the Centennial Basin.
 - Concrete bottom would need to be removed.
 - Would need geotechnical investigation to determine stability.
 - Would require coordination with State Historic Preservation Society to determine feasibility.

Using a combination of aerial photo review with field reconnaissance, a combination of the above-listed alternatives is recommended to reduce stormwater discharge to the Spokane River. The City of Post Falls MS4 System Map was annotated to show opportunities for reducing stormwater discharges (see **Attachment #1**).

Preliminary Improvement Priorities

1st Tier Priorities

1st Tier Priorities were developed based on an assumed ease of incorporation, taking into account topography and available right-of-way. This analysis did not consider other utilities such as power, telephone, gas, and fiber optics that may be present in the right-of-way.

Centennial Trail Outfall

1. Construct a GIA on either side of Seltice Way between the Railroad Bridge and Chase Road where topography permits (approximately 300 lf west of Railroad Bridge). This could be accomplished with installation of drainage drop curbs.
2. Construct a GIA on the south side of Seltice Way between Catherine Street and the Railroad Bridge. There appears to be a narrow strip of land adjacent to the curb that may be wide enough for a GIA. Stormwater conveyance to the GIA could be accomplished with the installation of drainage drop curbs. A small segmental block wall may be required on the back side of the GIA.

4th Street Outfall

3. 4th Avenue between Idaho Street and Seltice Way – Construct a GIA on the north side of 4th Avenue. This GIA will likely need to treat the entire roadway, as the south side of the road is constrained by the mill site and lack of available right-of-way. Stormwater conveyance to the GIA could be accomplished via catch basins and stormwater piping, which will require a deepened GIA.
4. Idaho Street between 4th Avenue and 5th Avenue – Construct a GIA on both sides of Idaho Street. Stormwater conveyance to the GIA could be accomplished with the installation of drainage drop curbs.
5. 5th Avenue between William Street and Idaho Street – Construct a GIA on the north side of 5th Avenue. This GIA will likely need to treat the entire roadway, as the south side of the road is constrained with development and lack of available right-of-way. Stormwater conveyance to the GIA could be accomplished via catch basins and stormwater piping, which will require a deepened GIA. Please note this area also appears to be an arboretum.
6. 6th Avenue between William Street and Idaho Street – Construct a GIA on both sides of 6th Avenue. Stormwater conveyance to the GIA could be accomplished with the installation of drainage drop curbs. Please note the south side of 6th Avenue appears to be an arboretum.
7. 6th Avenue between Frederick and Alley to west – Construct a GIA on the north side of 6th Avenue. This GIA will likely need to treat the entire roadway, as the south side of the road is constrained by the I-90 off ramp. Stormwater conveyance to the GIA could be accomplished via catch basins and stormwater piping, which will require a deepened GIA.

8. Frederick Street between 6th Avenue and 7th Avenue – Construct a GIA on both sides of Frederick Street. This area is not curbed. Stormwater runoff could sheet drain to the GIA but would need to be protected from parking of vehicles in the GIA.
9. Incorporate stormwater treatment and disposal into Spokane Street project.

Implementation of all 1st Tier Priorities would result in an approximate 50 percent reduction of impervious area in the 4th Street Basin and 20 percent reduction in the Centennial Basin.

2nd Tier Priorities

2nd Tier Priorities are generally considered more costly to implement.

10. Further investigate the use of the Corbin Ditch as a GIA with drywells. With the elimination of some impervious area on Seltice Way, the existing Corbin Ditch configuration may have sufficient infiltrative surface to treat the remaining stormwater runoff in the Centennial Basin.
11. Consider purchasing additional right-of-way along Seltice Way and Spokane Street necessary to treat and dispose of stormwater runoff (Centennial Basin).
12. Consider installation of a stormwater pump station in tandem with additional property acquisition to treat and dispose of stormwater near outfalls (Centennial and 4th Avenue Basins).
13. Vacant land north of 4th Avenue in the proximity of the railroad tracks may be of sufficient size to serve as a GIA for the 4th Street Outfall.
14. There are undeveloped lots adjacent to Seltice Way of sufficient size to serve as a GIA for the Centennial Trail Outfall.
15. The City also owns land adjacent to the Centennial Trail south of I-90, which could serve as a community swale; however, due to its proximity to existing slopes to the Spokane River and existing homes down gradient, a geotechnical investigation would be warranted (see **Attachment #2**).

Assuming implementation of 1st Tier Priorities, the remaining GIA requirements for 2nd Tier Priorities are as follows:

Outfall	Remaining Impervious Area	Method 1 GIA Bottom Area (First ½ ")	Method 2 GIA Bottom Area (2"/HR)
4 th Street	13.45 Acres	1.12 Acres	0.63 Acres
Centennial	6.48 Acres	0.54 Acres	0.30 Acres

Budget Level Costs

The following budget level costs have been provided. These costs are presented without detailed analysis and are intended to provide a general guidance between the various alternatives. No engineering fees are included.

- GIA – Approximately \$10-\$16 per linear foot of roadway based on values obtained from Appendix F of the 2004 City of Post Falls Transportation Master Plan. Tier 1 Priorities include an estimated 9,000 LF of roadway. Using these values, construction costs to implement Tier 1 Priorities would range from \$90,000 to \$144,000. Keep in mind that these are 2004 planning numbers and do not account for site-specific issues such as potential utility conflicts, curb removal and replacement, asphalt patching, etc.
- Stormwater Pumping Station – \$500,000 each, exclusive of Operation and Maintenance costs.
- Large Community Swale – \$100,000-\$150,000, exclusive of property acquisition.

Conclusions

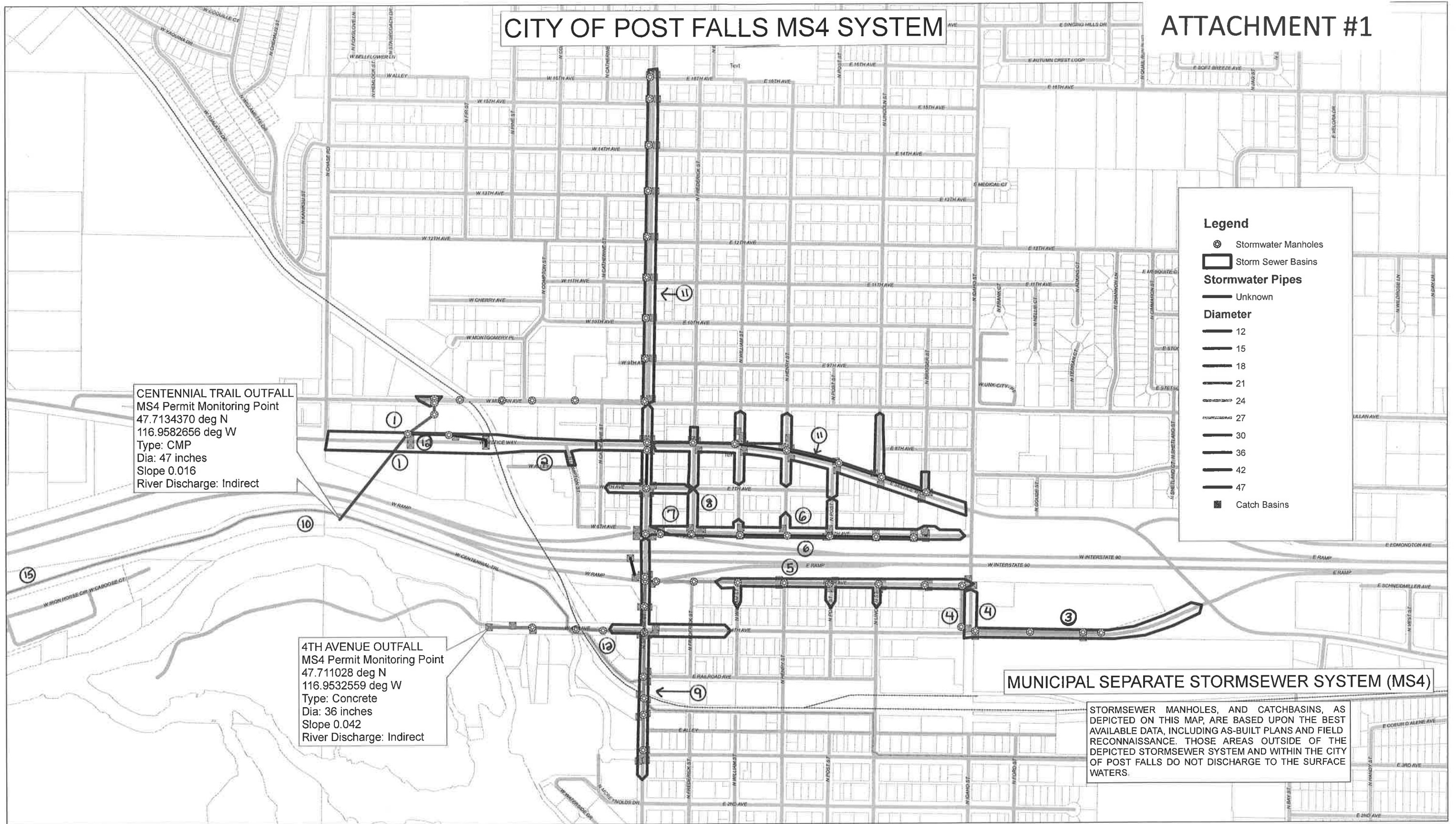
J-U-B recommends addressing 1st Tier Priorities first to reduce stormwater discharges to the Spokane River. If all of the 1st Tier Priorities are implemented, pumping of stormwater to a larger GIA will likely be required for both drainage basins.

The 4th Street Outfall would require a minimum of 0.63 acres of GIA Bottom Area (Method 2).

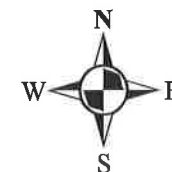
The Centennial Trail Outfall would require a minimum of 0.32 acres of GIA Bottom Area (Method 2). Utilizing the Corbin Ditch (estimated 0.17 acres) would result in a deficiency of 0.15 acres (Method 2). Increasing the assumed infiltration rate to the maximum allowed would reduce the required infiltrative area by one third to 0.20 acres. Further refinement of the available concept level information would be required to determine if this would be sufficient.

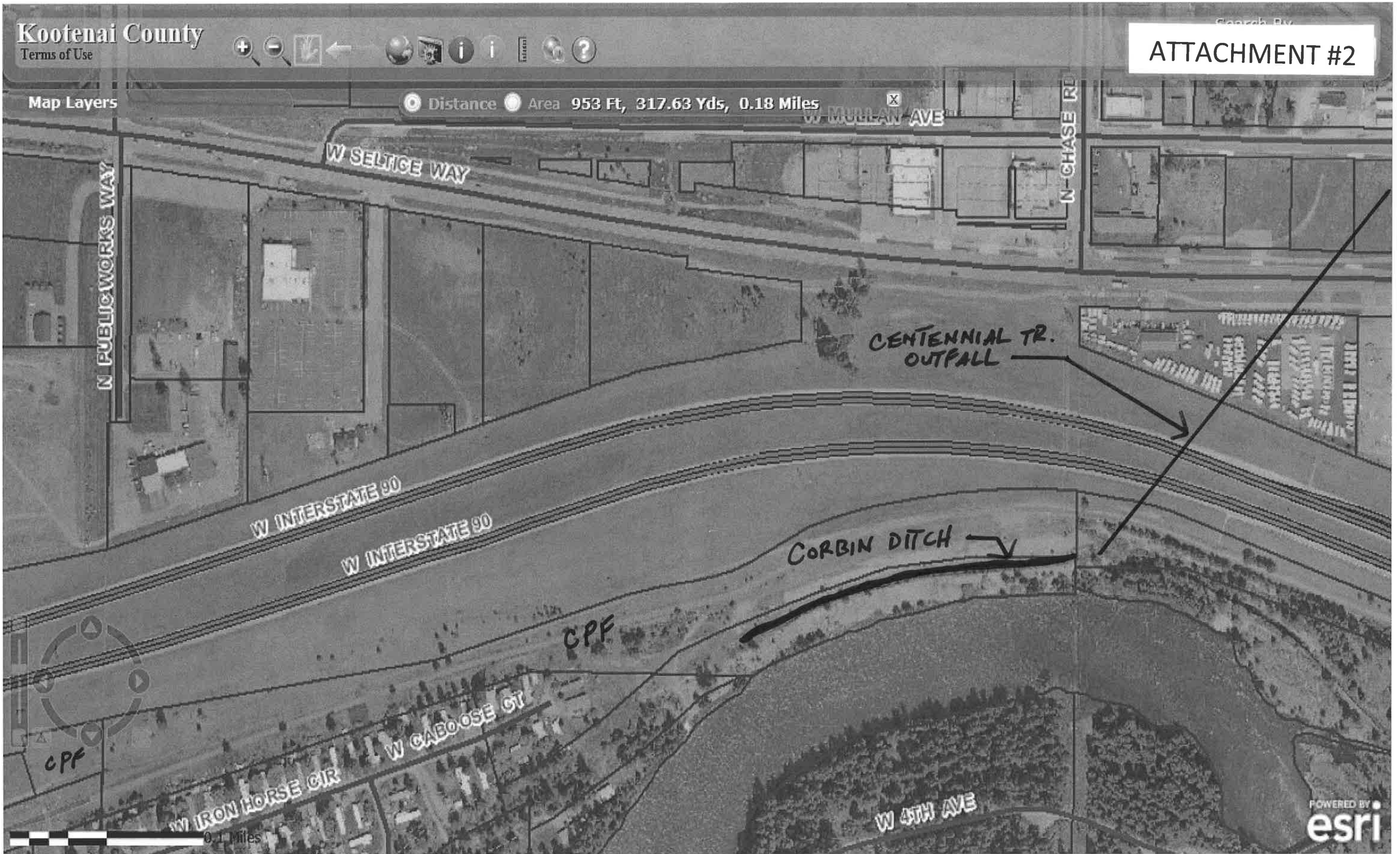
CITY OF POST FALLS MS4 SYSTEM

ATTACHMENT #1



Disclaimer:
 The information contained in this map is intended for reference purposes only, please check with the Engineering/Water Reclamation Departments to verify current status of the information contained herein.





APPENDIX B: REPORTING REQUIREMENTS LIST

Permit No. IDS-028231

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C. Reporting Requirements

1. **Storm Water Discharge Monitoring Report.** Within two years from the effective date of this permit, and annually thereafter, all available storm water discharge monitoring data must be submitted as part of the Annual Report. At a minimum, this Storm Water Discharge Monitoring Report must include:
 - a) Dates of sample collection and analyses;
 - b) Results of analytical samples collected;
 - c) Location of sample collection;
 - d) Estimates of the daily and/or monthly average pollutant loads for each pollutant at each sample location; and
 - e) A cumulative annual estimate of pollutant loading for each parameter at each sample location, and an overall annual estimate of the contribution of pollutants from all storm water emanating from the Post Falls MS4.
2. **Annual Report.** No later than February 15 of each year beginning in year 2010, the permittee shall submit an Annual Report to EPA and IDEQ. The reporting period for the first annual report will be from the effective date of this permit through December 31, 2009. The reporting period for all subsequent annual reports shall be the previous calendar year. Copies of all Annual Reports must be made available to the public, at a minimum, through a permittee-maintained website. The following information must be contained in each Annual Report:
 - a) The report must assess compliance with this permit and progress towards achieving the identified actions and activities for each minimum control measure in Parts II.B and II.C. Status of each program area must be addressed, even if activity has previously been completed or has not yet been implemented;
 - b) Results of any information collected and analyzed during the previous 12 month period, including stormwater discharge analytical results of samples collected, estimates of cumulative daily and monthly average pollutant loads for each pollutant at each sample location, water quality monitoring as noted in this part and any other information used to assess the success of the program at improving water quality to the maximum extent practicable;
 - c) A summary of the number and nature of inspections, formal enforcement actions, and/or other similar activities performed;
 - d) A summary list of any water quality compliance-related enforcement actions received from regulatory agencies other than EPA. Such actions include, but are not limited to, formal or informal warning letters, notices of violation, field citations, or similar actions. This summary should include dates, project synopsis, and actions taken to address the compliance issue(s);

- e) Copies of education materials, ordinances (or other regulatory mechanisms), inventories, guidance materials, or other products produced as a result of actions or activities required by this permit;
- f) A general summary of the activities the permittee plans to undertake during the next reporting cycle (including an implementation schedule) for each minimum control measure;
- g) A description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable water quality standards;
- h) Notice if the permittee is relying on another entity to satisfy any of the permit obligations, if applicable.

D. Addresses. Reports and other documents required by this permit must be signed in accordance with Part VI.E and submitted to each of the following addresses:

EPA: United States Environmental Protection Agency
Attention: Storm Water Program
NPDES Compliance Unit
1200 6th Avenue, Suite 900 (OCE-133)
Seattle, WA 98101

IDEQ: Idaho Department of Environmental Quality
Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene, ID 83814