*Appendix H*

# *Monitoring*

# *Appendix H.1*

# *FY2019-20 Field Monitoring Notebook*

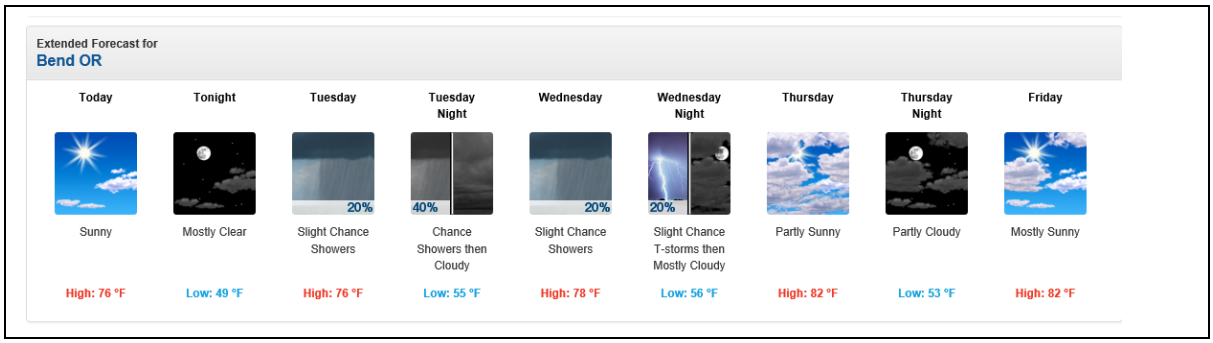
UTILITY DEPARTMENT

# FY2019-2020
# City of Bend, Stormwater Field Monitoring Notebook

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 7/8/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .03”
**Qualifying rain event:** No

**% Chance of Precipitation:** 40
**Storm Duration:** 12hrs
**Storm Type:** Showers

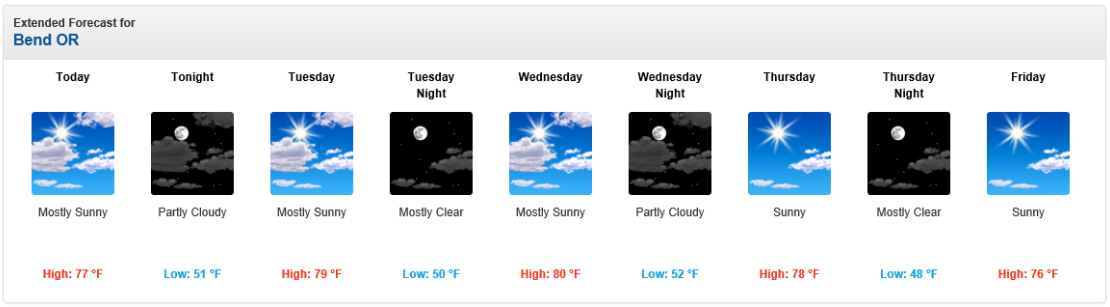
## Forecast (12 Hours Out)

## Forecast (8 Hours Out)

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 7/15/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** NA
**Qualifying rain event:** No

**% Chance of Precipitation:** NA
**Storm Duration:** NA
**Storm Type:** Sunny

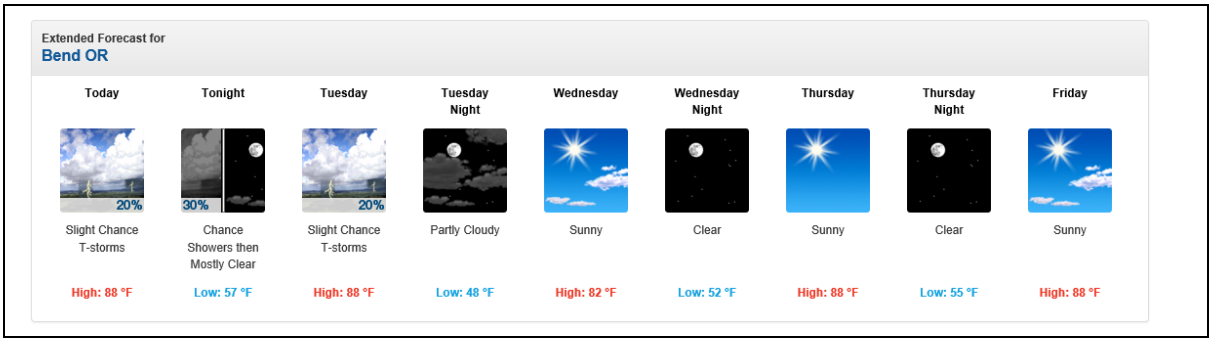
## Forecast (12 Hours Out)

## Forecast (8 Hours Out)

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 7/22/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .02”
**Qualifying rain event:** No

**% Chance of Precipitation:** 20
**Storm Duration:** 6 Hr
**Storm Type:** T-Storms

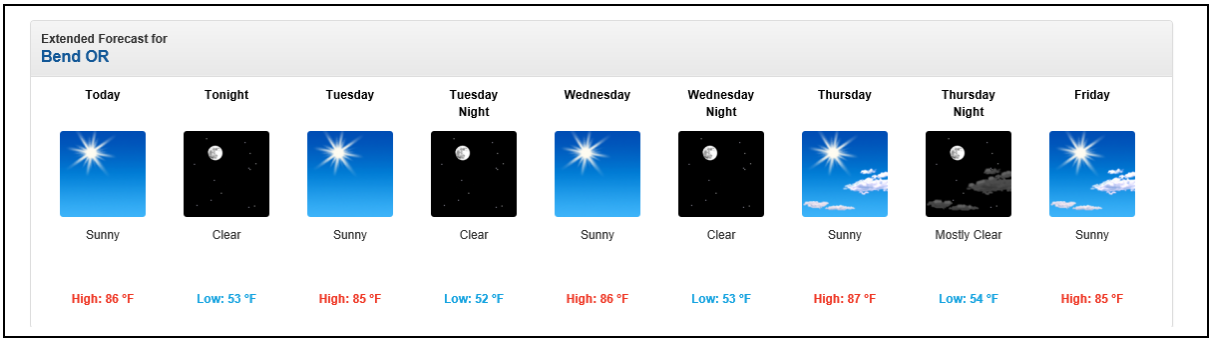
## Forecast (12 Hours Out)

## Forecast (8 Hours Out)

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 7/29/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** NA
**Qualifying rain event:** NO

**% Chance of Precipitation:** NA
**Storm Duration:** NA
**Storm Type:** Sunny

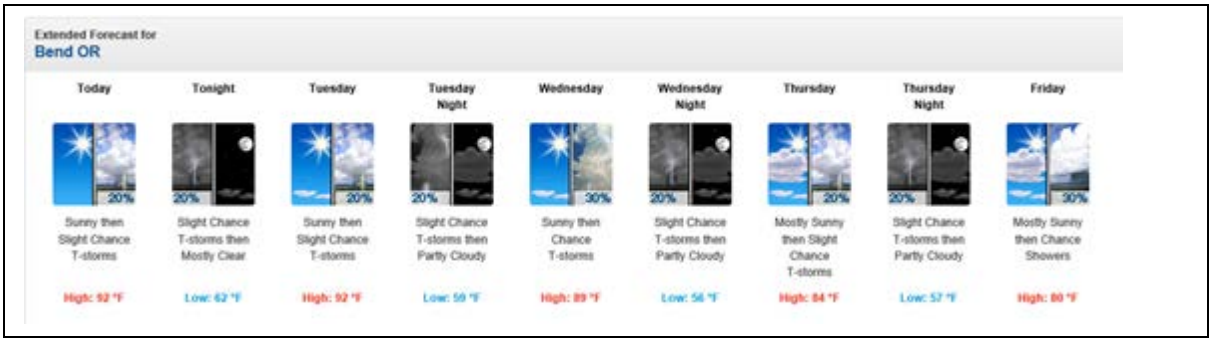
## Forecast (12 Hours Out)

## Forecast (8 Hours Out)

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 8/5/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .03
**Qualifying rain event:** No

**% Chance of Precipitation:** 30%
**Storm Duration:** 8 Hrs.
**Storm Type:** T-Storms

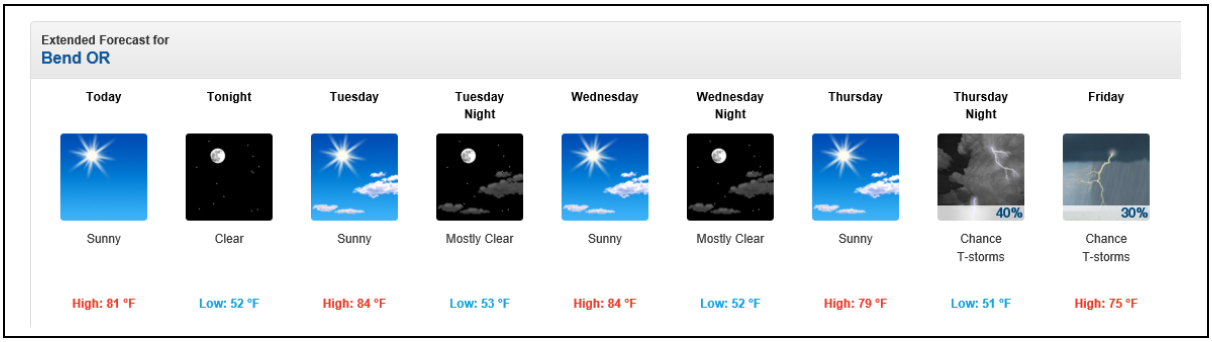
**Forecast (12 Hours Out)**

**Forecast (8 Hours Out)**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 8/12/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .03”
**Qualifying rain event:** No

**% Chance of Precipitation:** 40
**Storm Duration:** 11 hrs.
**Storm Type:** T-Storms

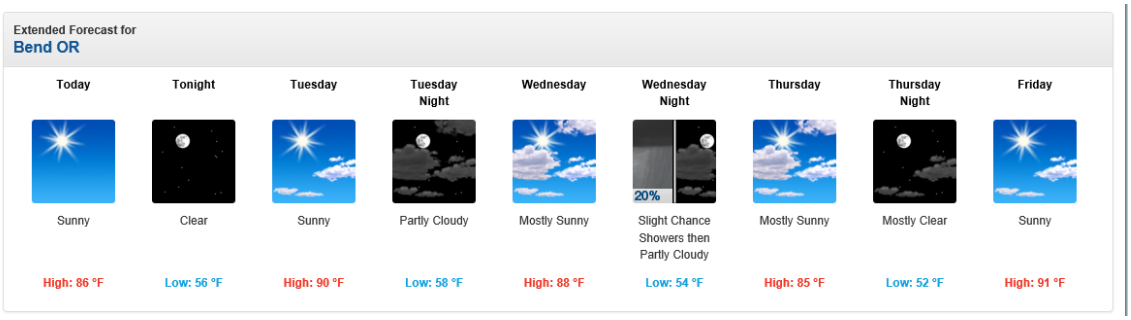
## Forecast (12 Hours Out)

## Forecast (8 Hours Out)

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 8/19/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .01”
**Qualifying rain event:** No

**% Chance of Precipitation:** 20%
**Storm Duration:** 6 Hrs.
**Storm Type:** Rain

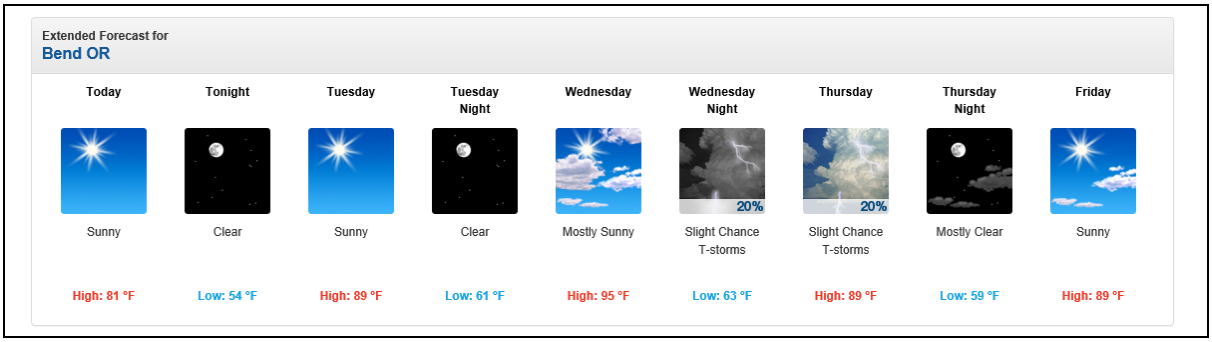
## Forecast (12 Hours Out)

## Forecast (8 Hours Out)

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 8/26/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .06”
**Qualifying rain event:** No

**% Chance of Precipitation:** 20%
**Storm Duration:** 11 Hrs.
**Storm Type:** T Storms

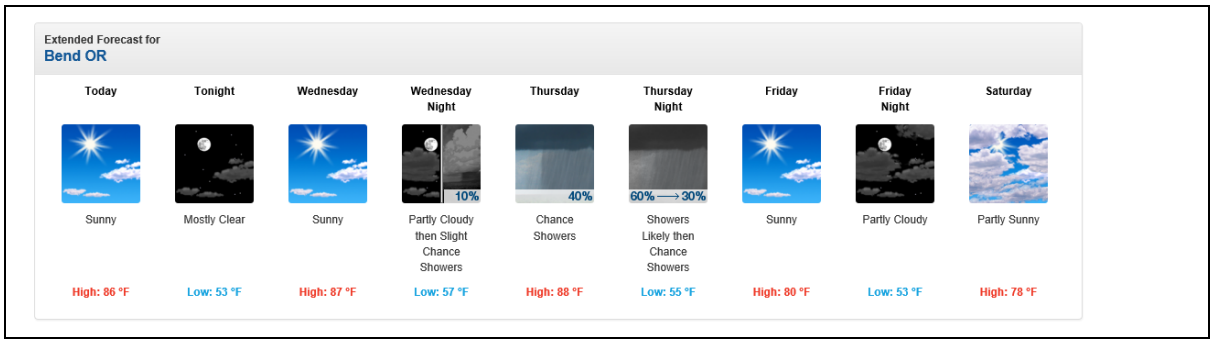
## Forecast (12 Hours Out)

## Forecast (8 Hours Out)

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

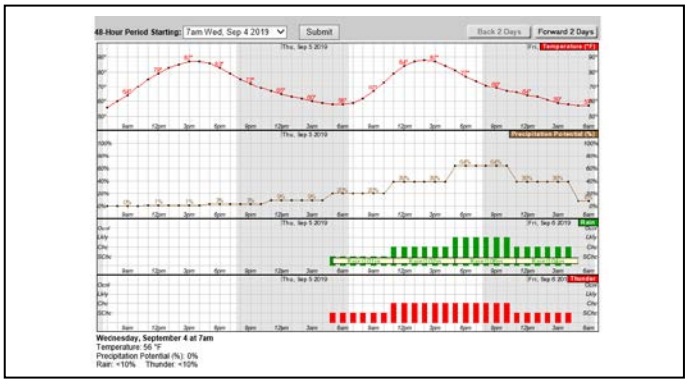
**Weekly Forecast Source**: NOAA **Forecast Read Date**: 9/3/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .08”
**Qualifying rain event:** No

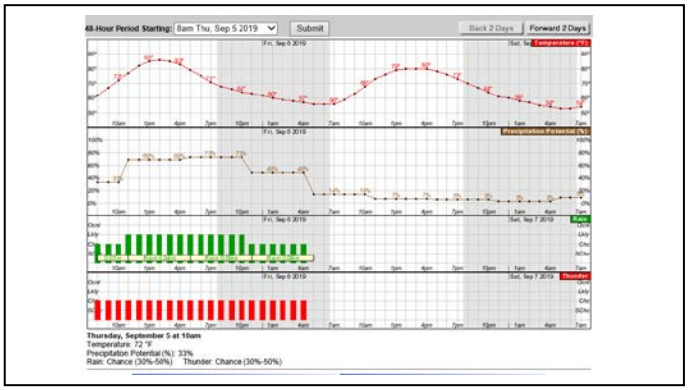
**% Chance of Precipitation:** 60%
**Storm Duration:** 6 hrs.
**Storm Type:** Rain

## Forecast (20 Hours Out)



**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .06
**% Chance of Precipitation:** 64%
**Storm Duration:** 6 Hrs.
**Storm Type:** T-Storms

## Forecast (3 Hours Out)

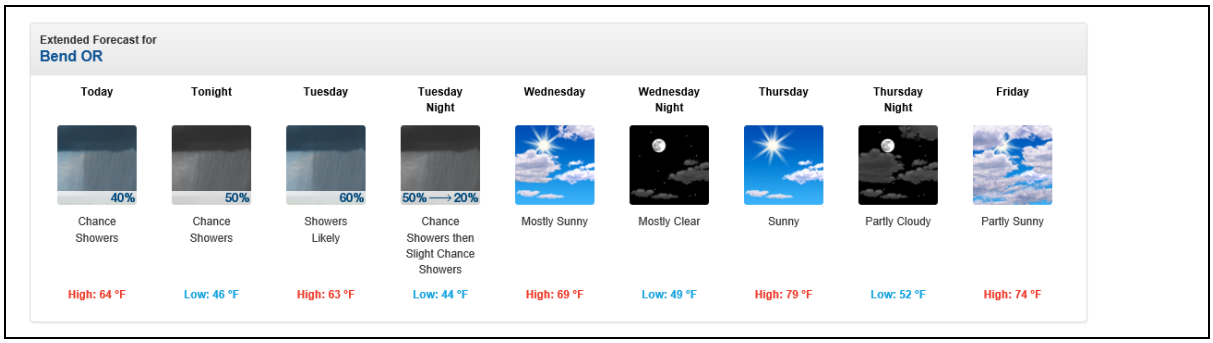


**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .13
**% Chance of Precipitation:** 73%
**Storm Duration:** 12 Hrs.
**Storm Type:** T-Storms
**Qualifying rain event:** **No**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

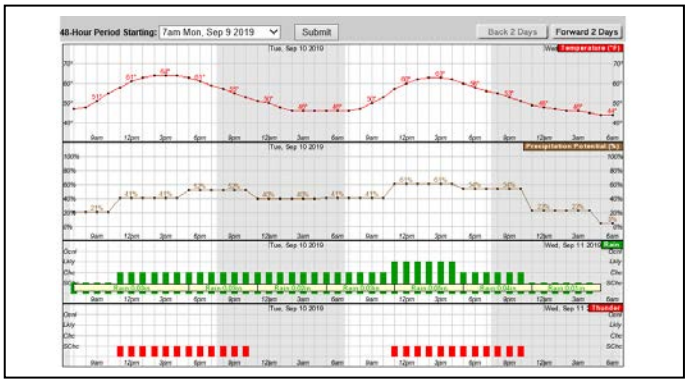
**Weekly Forecast Source**: NOAA **Forecast Read Date**: 9/9/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .05”
**Qualifying rain event:** No

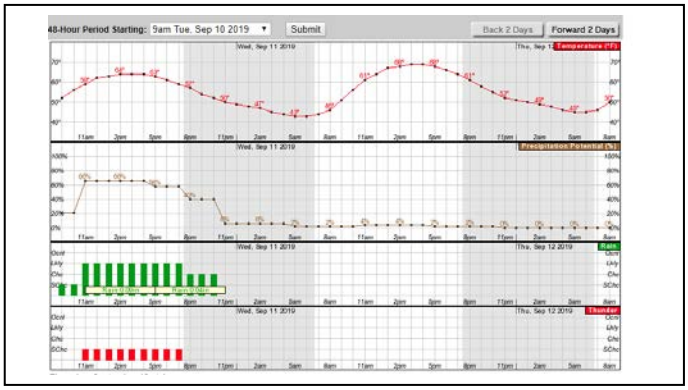
**% Chance of Precipitation:** 61%
**Storm Duration:** 6 Hrs.
**Storm Type:** Rain/T Storms

## Forecast (6 Hours Out)




**Date** 9/9/2019
**Antecedent Dry Period:** See
**Estimated Rainfall Total:** Above
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

## Forecast (2 Hours Out)

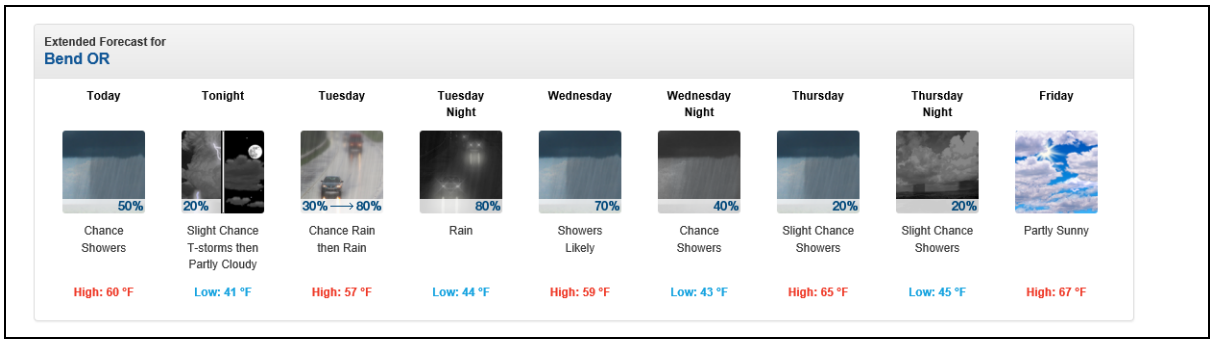



**Date** 9/10/2019
**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** 0.09”
**% Chance of Precipitation:** 66%
**Storm Duration:** 8 Hrs.
**Storm Type:** Rain T Storms
**Qualifying rain event:** **No**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

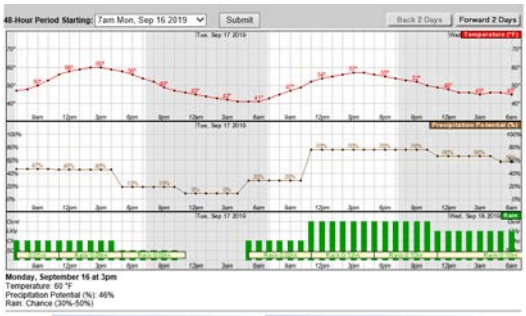
**Weekly Forecast Source**: NOAA **Forecast Read Date**: 9/16/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .25”
**Qualifying rain event:** Yes

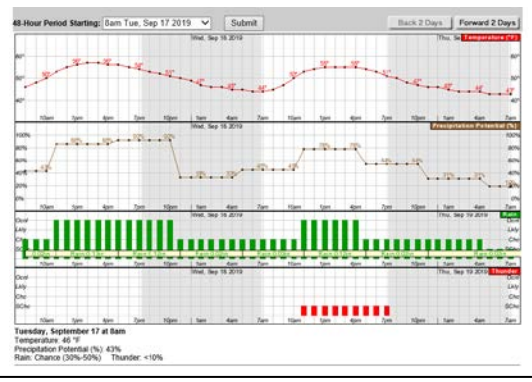
**% Chance of Precipitation:** 80%
**Storm Duration:** 12 hrs.
**Storm Type:** Rain

## Forecast (6 Hours Out)




**Date** See
**Antecedent Dry Period:** Above
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

## Forecast (2 Hours Out)




**Date** 9/17/2019
**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .25
**% Chance of Precipitation:** 86%
**Storm Duration:** 12 Hrs.
**Storm Type:** Rain
**Qualifying rain event:** **Yes**

UTILITY DEPARTMENT

# COB UIC Sampler Deployment #1

Sampler Deployed By: David & Sean
Sampler Deployment Date: 9/17/2019

| Sites Deployed: | ☒ Airport | ☒ Boyd | ☒ Brooks | ☒ Empire | ☒ Ladera | ☒ Century | ☒ Blank |
|---|---|---|---|---|---|---|---|
| Time: | 7:21 | 8:40 | 8:00 FD | 7:07 | 7:38 | 8:12 | NA |

FD = Indicates Field Duplicate Location

Sample Deployment Notes:

Attempted to deploy samplers on 8/16/2019 but there was active stormwater flow at some of the monitoring location, so Staff called off monitoring for lack of an antecedent dry period. The rain subsided overnight and samplers where deployed on 9/17/2019. One sampler was deployed at Ladera location, that sampler was replaced with a clean sampler.

# COB UIC Sampler Collection

Sampler Collected by: David/Doug
Sample Bucket Collection Date: 9/17/2019

| Sites Collected: | ☒ Airport | ☒ Boyd | ☒ Brooks | ☒ Empire | ☒ Ladera | ☒ Century | ☒ Blank |
|---|---|---|---|---|---|---|---|
| Time: | 8:29 | 7:30 | 9:07 | 7:45 | 8:45 | 9:28 | 9:47 |

NS = No sample/sample container did not fill.

Sample Collection Notes:

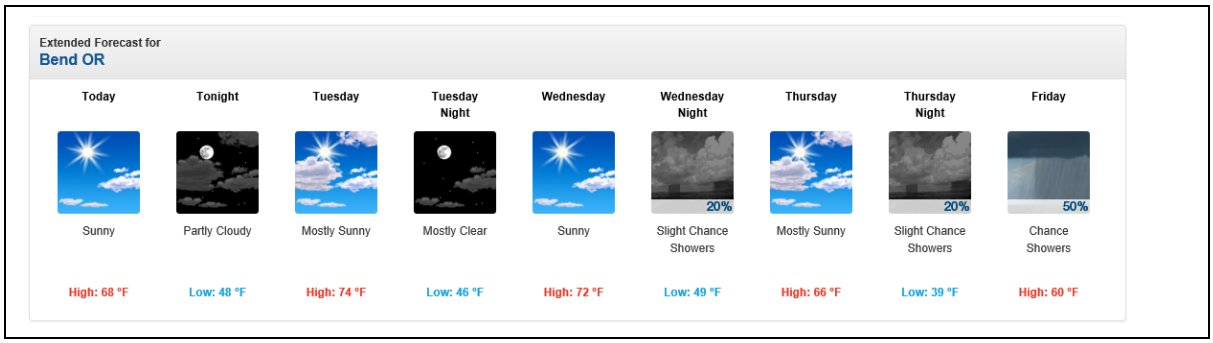
Checked samples into fridge #2 overnight. The ladder samples where accidently left on the counter overnight, samples where packed and shipped to ESC on 9/18/2019.

Sample Aliquot ☒ Field ☐ Lab

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 9/23/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** NA
**Qualifying rain event:** No

**% Chance of Precipitation:** 50%
**Storm Duration:** TBD
**Storm Type:** Showers

## Forecast (6 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

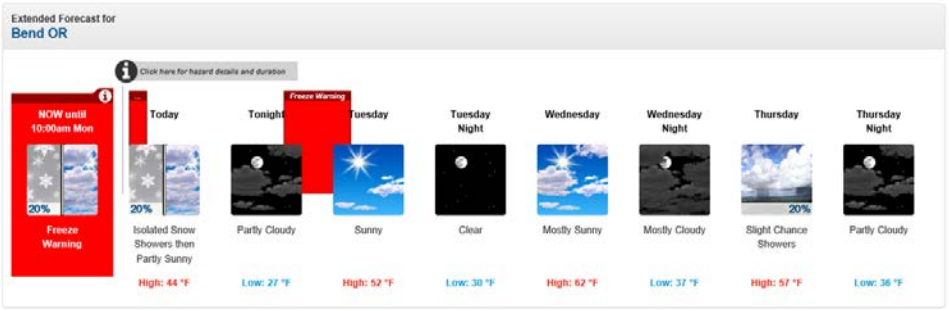
## Forecast (2 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**
**Qualifying rain event:**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 9/30/2019




**Antecedent Dry Period:** No
**Estimated Rainfall Total:** .01”
**Qualifying rain event:** No

**% Chance of Precipitation:** 20%
**Storm Duration:** 2hrs
**Storm Type:** Rain/Snow

## Forecast (6 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

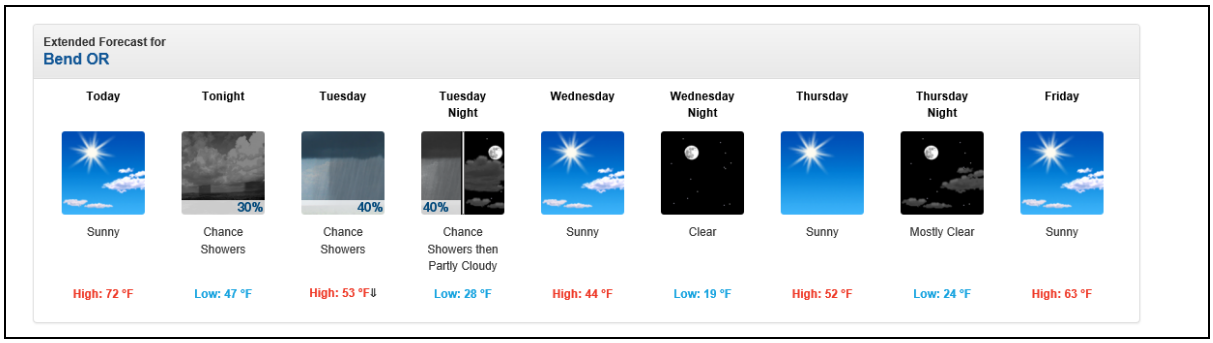
## Forecast (2 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**
**Qualifying rain event:**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 10/7/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .05
**Qualifying rain event:** No

**% Chance of Precipitation:** 40%
**Storm Duration:** 24 hrs.
**Storm Type:** Rain

## Forecast (6 Hours Out)

**Date** _____
**Antecedent Dry Period:** _____
**Estimated Rainfall Total:** _____
**% Chance of Precipitation:** _____
**Storm Duration:** _____
**Storm Type:** _____

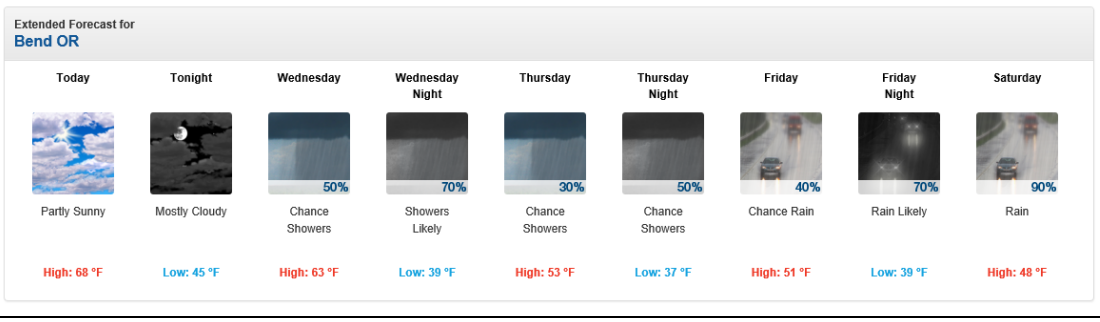
## Forecast (2 Hours Out)

**Date** _____
**Antecedent Dry Period:** _____
**Estimated Rainfall Total:** _____
**% Chance of Precipitation:** _____
**Storm Duration:** _____
**Storm Type:** _____
**Qualifying rain event:** _____

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

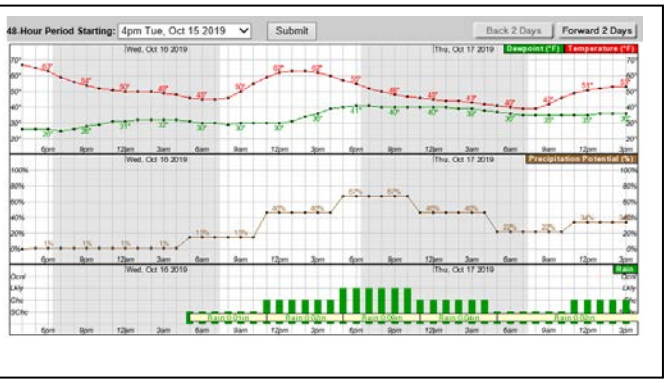
**Weekly Forecast Source**: NOAA **Forecast Read Date**: 10/15/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .09
**Qualifying rain event:** No

**% Chance of Precipitation:** 67%
**Storm Duration:** 6 hrs.
**Storm Type:** Rain

## Forecast (1 Hours Out)




**Date** 10/15/2019
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

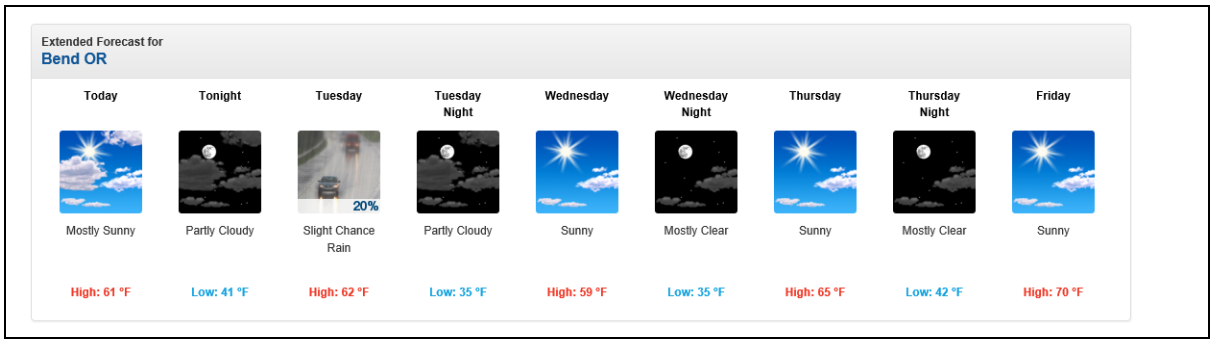
## Forecast (2 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**
**Qualifying rain event:**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

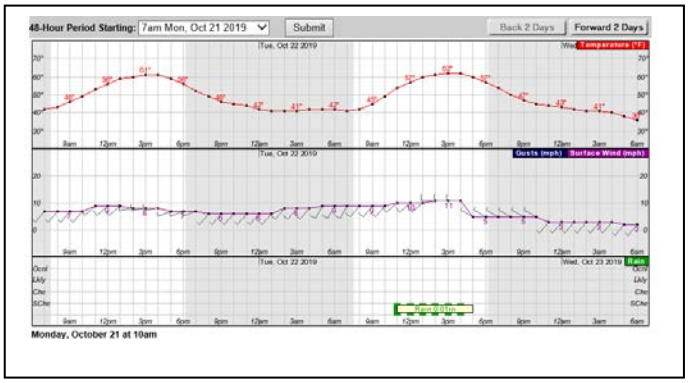
**Weekly Forecast Source**: NOAA **Forecast Read Date**: 10/21/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** 0.01”
**Qualifying rain event:** No

**% Chance of Precipitation:** 20%
**Storm Duration:** 6 hrs.
**Storm Type:** Slight Chance Rain

## Forecast (24 Hours Out)




**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

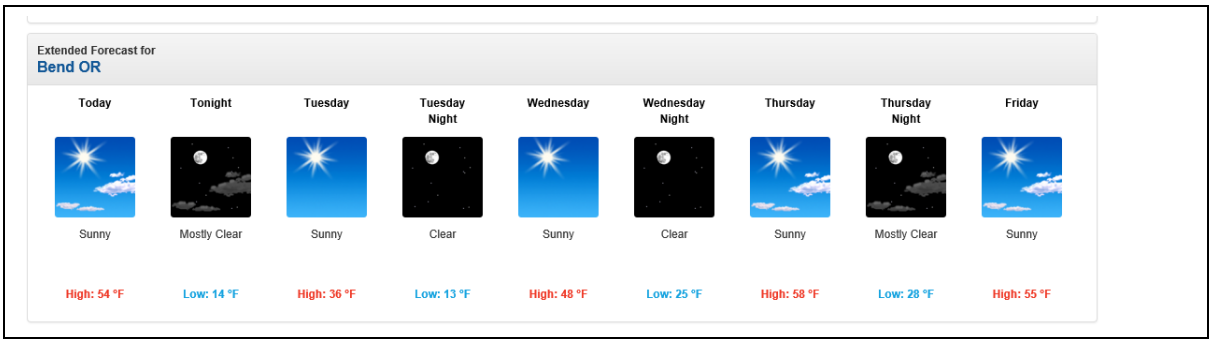
## Forecast (2 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**
**Qualifying rain event:**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 10/28/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** NA
**Qualifying rain event:** No

**% Chance of Precipitation:** NA
**Storm Duration:** NA
**Storm Type:** Sunny/Cold

## Forecast (24 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

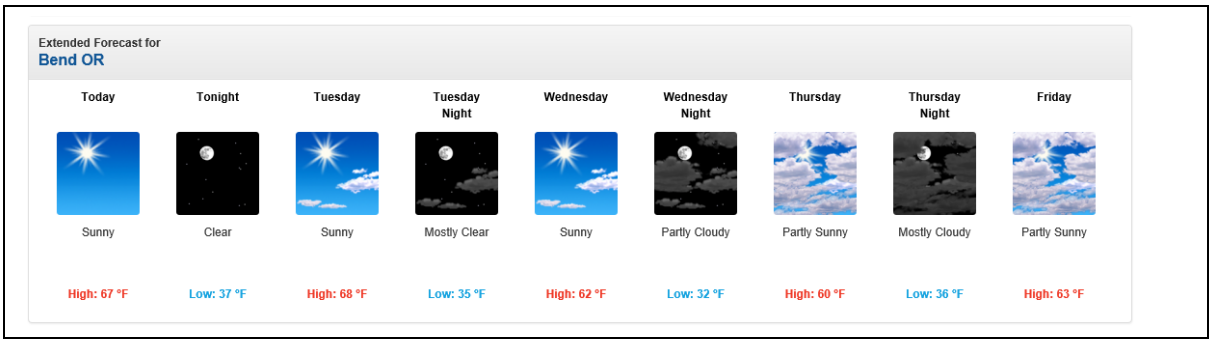
## Forecast (2 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**
**Qualifying rain event:**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 11/4/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** Na
**Qualifying rain event:** No

**% Chance of Precipitation:** Na
**Storm Duration:** Na
**Storm Type:** Sunny

## Forecast (24 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

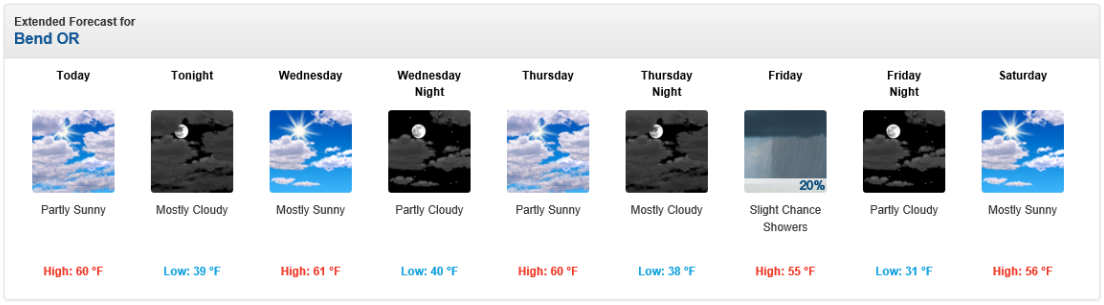
## Forecast (2 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**
**Qualifying rain event:**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 11/12/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .02”
**Qualifying rain event:** No

**% Chance of Precipitation:** 20%
**Storm Duration:** 12hrs
**Storm Type:** Showers

## Forecast (24 Hours Out)

**Date** _____
**Antecedent Dry Period:** _____
**Estimated Rainfall Total:** _____
**% Chance of Precipitation:** _____
**Storm Duration:** _____
**Storm Type:** _____

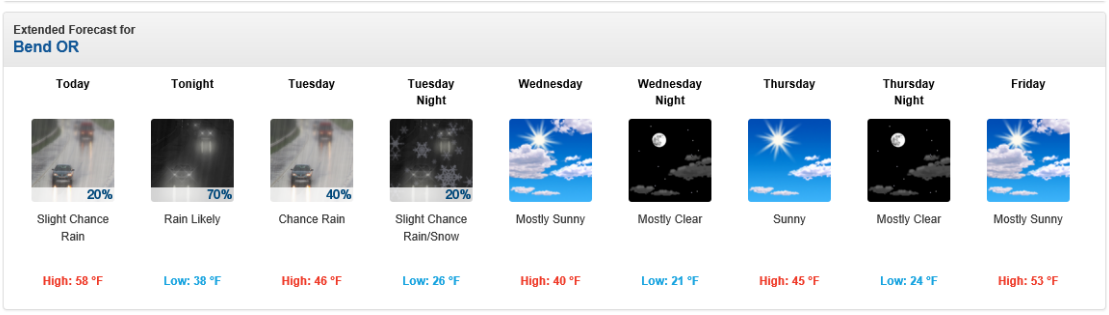
## Forecast (2 Hours Out)

**Date** _____
**Antecedent Dry Period:** _____
**Estimated Rainfall Total:** _____
**% Chance of Precipitation:** _____
**Storm Duration:** _____
**Storm Type:** _____
**Qualifying rain event:** _____

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

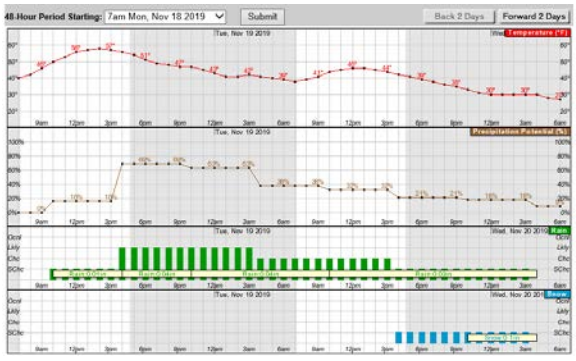
**Weekly Forecast Source**: NOAA **Forecast Read Date**: 11/18/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .08”
**Qualifying rain event:** No

**% Chance of Precipitation:** 70%
**Storm Duration:** 23 Hrs.
**Storm Type:** Rain

## Forecast (24 Hours Out)




**Date** 11/18/2019
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

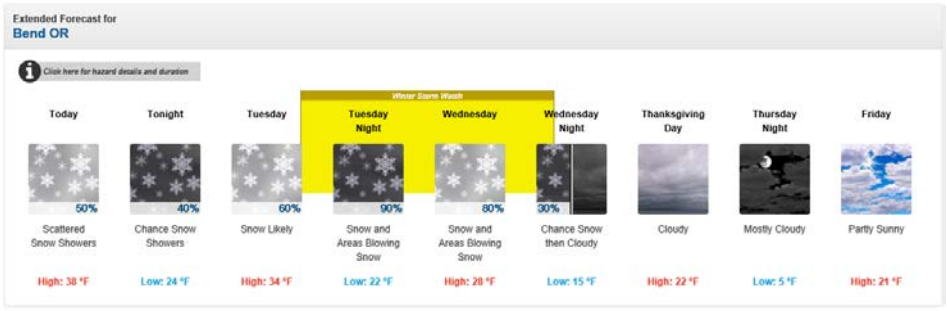
## Forecast (2 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**
**Qualifying rain event:**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

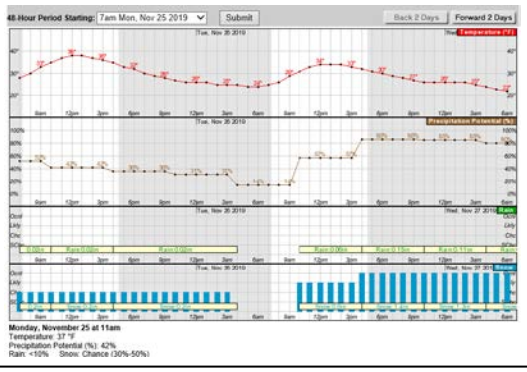
**Weekly Forecast Source**: NOAA **Forecast Read Date**: 11/25/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** NA
**Qualifying rain event:** No

**% Chance of Precipitation:** 90%
**Storm Duration:** 48 Hrs.
**Storm Type:** Snow

## Forecast (24 Hours Out)




**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

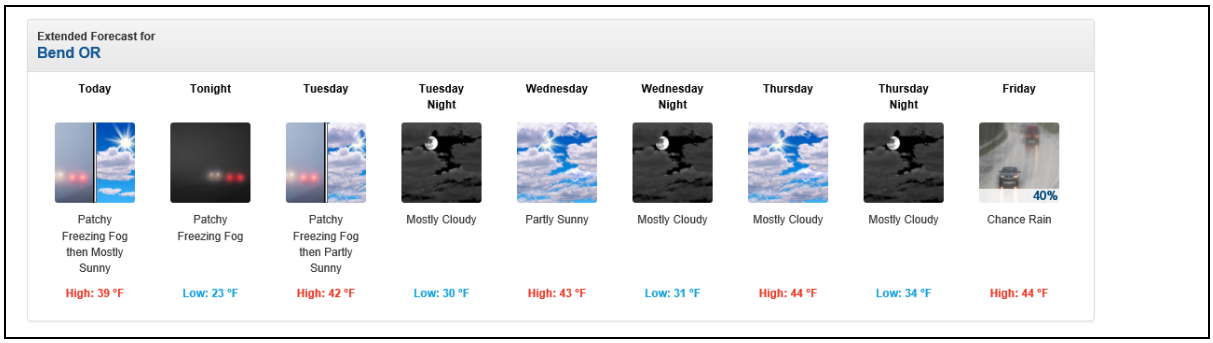
## Forecast (2 Hours Out)

**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**
**Qualifying rain event:**

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 12/2/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** TBD
**Qualifying rain event:** No

**% Chance of Precipitation:** 40%
**Storm Duration:** Na
**Storm Type:** Rain

## Forecast (24 Hours Out)

**Date** _____
**Antecedent Dry Period:** _____
**Estimated Rainfall Total:** _____
**% Chance of Precipitation:** _____
**Storm Duration:** _____
**Storm Type:** _____

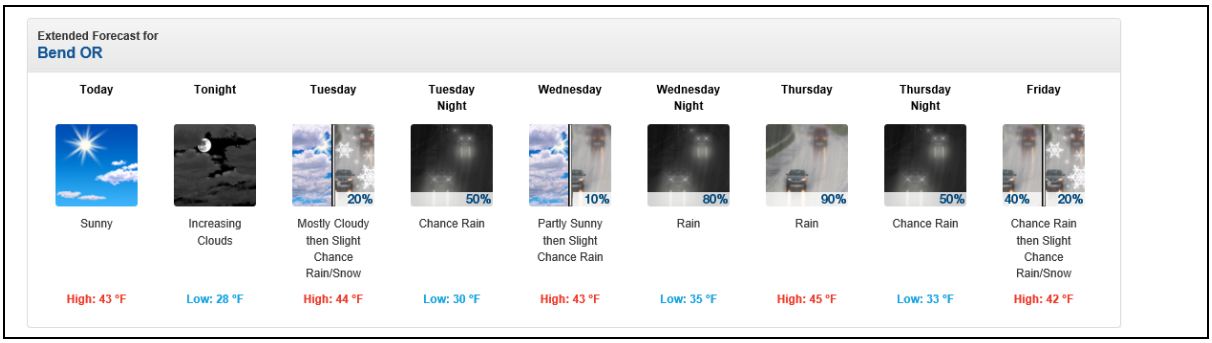
## Forecast (2 Hours Out)

**Date** _____
**Antecedent Dry Period:** _____
**Estimated Rainfall Total:** _____
**% Chance of Precipitation:** _____
**Storm Duration:** _____
**Storm Type:** _____
**Qualifying rain event:** _____

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

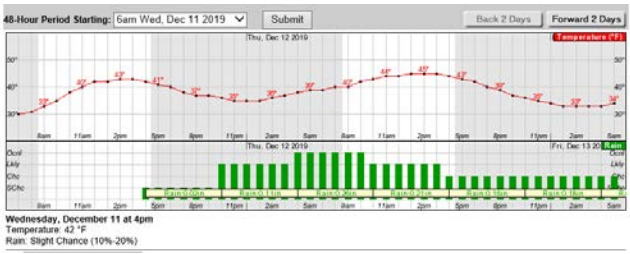
**Weekly Forecast Source**: NOAA **Forecast Read Date**: 12/9/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .57”
**Qualifying rain event:** Yes

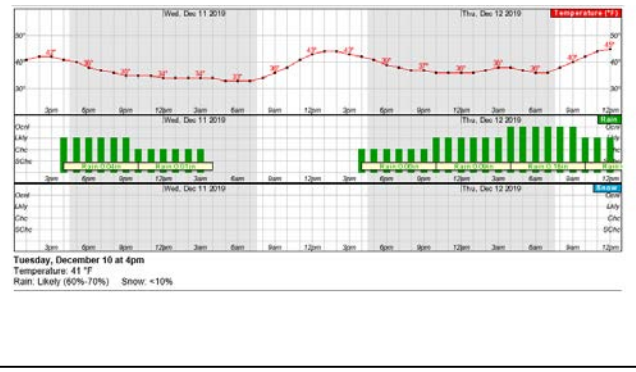
**% Chance of Precipitation:** 90%
**Storm Duration:** 20 Hrs.
**Storm Type:** Rain

## Forecast (24 Hours Out)




**Date**
**Antecedent Dry Period:**
**Estimated Rainfall Total:**
**% Chance of Precipitation:**
**Storm Duration:**
**Storm Type:**

## Forecast (12 Hours Out)




**Date** 12/10/2019
**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** 0.5”
**% Chance of Precipitation:** 80%
**Storm Duration:** 48 Hrs.
**Storm Type:** Rain
**Qualifying rain event:** **Yes**

UTILITY DEPARTMENT

# COB UIC Sampler Deployment #2

Sampler Deployed By: David / Nick
Sampler Deployment Date: 12/11/2019

| Sites Deployed: | ☒ Airport | ☒ Boyd | ☒ Brooks | ☒ Empire | ☐ Ladera | ☒ Century | ☐ Blank |
|---|---|---|---|---|---|---|---|
| Time: | 11:29 | 11:00 | 12:10 | 11:30 FD | 13:54 | 14:49 | |

FD = Indicates Field Duplicate Location

Sample Deployment Notes:

There was a small amount runoff at Simpson/Century due to snow melt at the time of deployment.

The Ladera drywell had a strong sewage smell, staff collected an additional sample for fecal testing.

# COB UIC Sampler Collection

Sampler Collected by: David / Nick
Sample Bucket Collection Date: 12/12/2019

| Sites Collected: | ☒ Airport | ☒ Boyd | ☒ Brooks | ☒ Empire | ☒ Ladera | ☒ Century | ☒ Blank |
|---|---|---|---|---|---|---|---|
| Time: | | | | | | | |

NS = No sample/sample container did not fill.

Sample Collection Notes:

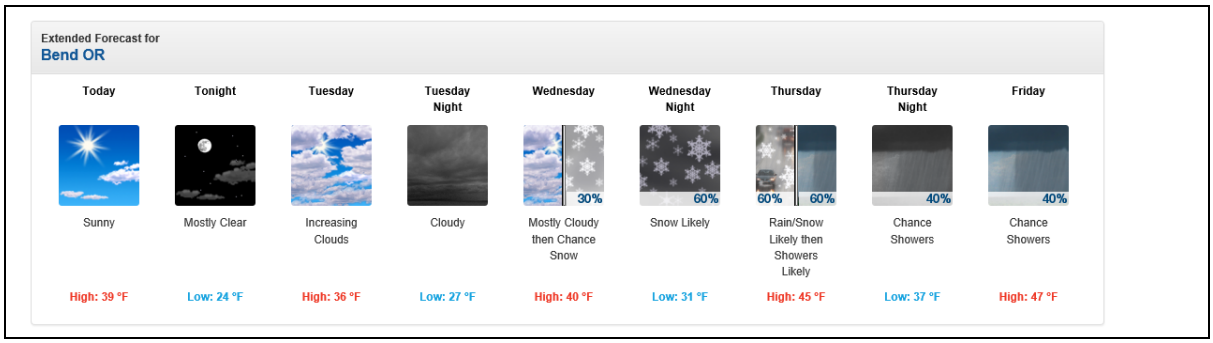
The fecal sample was outside the hold time, so city staff collected a new sample from the catch basin.

Sample Aliquot ☐ Field ☒ Lab

UTILITY DEPARTMENT

**Forecast Reviewed By:** Buchanan

**Weekly Forecast Source**: NOAA **Forecast Read Date**: 12/19/2019




**Antecedent Dry Period:** Yes
**Estimated Rainfall Total:** .28
**Qualifying rain event:** No

**% Chance of Precipitation:** 60
**Storm Duration:** 72 Hrs.
**Storm Type:** Rain/Snow

## Forecast (24 Hours Out)

**Date** _____
**Antecedent Dry Period:** _____
**Estimated Rainfall Total:** _____
**% Chance of Precipitation:** _____
**Storm Duration:** _____
**Storm Type:** _____

## Forecast (12 Hours Out)

**Date** _____
**Antecedent Dry Period:** _____
**Estimated Rainfall Total:** _____
**% Chance of Precipitation:** _____
**Storm Duration:** _____
**Storm Type:** _____
**Qualifying rain event:** _____

# *Appendix H.2*

# *Monitoring Results and Lab Reports*

# Stormwater/UIC Monitoring Data for 7/1/2019 to 6/30/2020

| TABLE 1 – Action Levels for Pollutants | |
|---|---|
| **Monitoring Parameter** | **Action Level at Injection Point (µg/L)** |
| Benzo(a)pyrene | 2 |
| Pentachlorophenol | 10 |
| Di(2-ethylhexyl)phthalate | 300 |
| Lead (Total) | 500 |
| Zinc (Total) | 50,000 |
| Copper (Total) | 1,300 |

## Sample Event Summary

| Sample Location | 1. 09/18/2019 Lab # C9I1802 | 2. 12/12/2019 Lab # C9L1205 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. Airport | x | x | | | | | | |
| 2. Century Drive | x | x | | | | | | |
| 3. Boyd Acres | x | x | | | | | | |
| 4. Empire Ave | x | x | | | | | | |
| 5. Brookswood | x | x | | | | | | |
| 6. Ladera Rd | x | x | | | | | | |
| 7. Dup | x(Brookswood) | x(Empire) | | | | | | |
| 8. Field Blank | x | x | | | | | | |

## Analytical Data For Each Sample Event

| Date Sampled | Sample Location | UIC Number | COB Sample # | *Benzo(a)pyrene | *Pentachlorophenol | *Bis2-(ethylhexyl)phthalate | *Lead | *Zinc | *Copper |
|---|---|---|---|---|---|---|---|---|---|
| Units | | | | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Analytical Method | | | | 8270C | 8270C | 8270C | SM 3125 | SM 3125 | SM 3125 |
| Reporting Limit (RDL) | | | | 1.00 | 10.0 | 3.00 | 0.200 | 20.0 | 0.200 |
| Method Detection Limit Limit (MDL) | | | | 0.340 | 0.313 | 0.709 | 0.008 | 0.060 | 0.012 |
| Effluent Discharge Action Level at Injection Point (ug/l) | | | | 2.00 | 10.0 | 300 | 500 | 50,000 | 1300 |
| 1. C9I1802-09/18/2019 | 1. Airport | DDW009628 | C9I1802-01 | ND | ND | ND | 0.808 | 1130 | 8.40 |
| Samplers: | 2. Century Drive | DDW003323 | C9I1802-02 | ND | ND | ND | 0.811 | 191 | 11.9 |
| Dave Buchanan | 3. Boyd Acres | DDW003354 | C9I1802-03 | ND | ND | ND | 0.686 | 151 | 5.02 |
| Nick Jenness | 4. Empire Ave | DDW008884 | C9I1802-04 | ND | ND | ND | 0.993 | 247 | 20.4 |
| | **5. Brookswood** | **DDW003312** | **C9I1802-05** | **ND** | **ND** | **ND** | **0.754** | **203** | **20.0** |
| | 6. Ladera Rd | DDW003252 | C9I1803-06 | ND | ND | ND | 0.435 | 197 | 4.68 |
| | **7. Duplicate (Brookswood)** | **DDW009628** | C9I1802-07 | **ND** | **ND** | **ND** | **0.646** | **187** | **20.20** |
| | 8. Field Blank | - | C9I1802-08 | ND | ND | ND | ND | 75.1 | ND |

*Analysis performed by ESC/Pace Analytical (8270D) and City of Bend Water Quality Laboratory(SM3125)
**ND = Not Detected to RDL

| Date Sampled | Sample Location | UIC Number | COB Sample # | *Benzo(a)pyrene | *Pentachlorophenol | *Bis2-(ethylhexyl)phthalate | *Lead | *Zinc | *Copper |
|---|---|---|---|---|---|---|---|---|---|
| Units | | | | ug/l | ug/l | ug/l | ug/l | ug/l | ug/l |
| Analytical Method | | | | EPA 8270C | EPA 8270C | EPA 8270C | SM 3125 | SM 3125 | SM 3125 |
| Reporting Limit (RDL) | | | | 1.00 | 10.0 | 3.00 | 0.200 | 20.0 | 0.200 |
| Method Detection Limit Limit (MDL) | | | | 0.340 | 0.313 | 0.709 | 0.008 | 3.00 | 0.012 |
| Effluent Discharge Action Level at Injection Point (ug/l) | | | | 2.00 | 10.0 | 300 | 500 | 50,000 | 1300 |
| 1. C9L1205-12/12/2019 | 1. Airport | DDW009628 | C9L1205-01 | ND | ND | ND | 1.07 | 2930 | 10.6 |
| Samplers: | 2. Century Drive | DDW003323 | C9L1205-02 | ND | ND | ND | 1.14 | 222 | 14.5 |
| Jeff Buystedt | 3. Boyd Acres | DDW003354 | C9L1205-03 | ND | ND | ND | 0.620 | 286 | 5.79 |
| Nick Jenness | **4. Empire Ave** | **DDW008884** | **C9L1205-04** | **ND** | **ND** | **ND** | **0.779** | **299** | **19.3** |
| | 5. Brookswood | DDW003312 | C9L1205-05 | ND | ND | ND | 1.07 | 400 | 26.0 |
| | 6. Ladera Rd | DDW003252 | C9L1205-06 | ND | ND | ND | 9.49 | 289 | 11.8 |
| | **7. Duplicate (Empire)** | **DDW008884** | **C9L1205-07** | **ND** | **ND** | **ND** | **1.13** | **346** | **23.5** |
| | 8. Field Blank | - | C9L1205-08 | ND | ND | ND | ND | 191 | ND |

*Analysis performed by ESC/Pace Analytical (8270D) and City of Bend Water Quality Laboratory(SM3125)
Pace Analytical Reported a 10x dilution for Ladera
**ND = Not Detected to RDL

CITY OF BEND

**City of Bend Water Quality Lab**
**22395 McGrath Road**
**Mailing: 62975 Boyd Acres Road**
**Bend, OR 97701**
**541.317.3017 Phone**
**541.322.6345 Fax**

# ANALYTICAL DATA REPORT

October 25, 2019

## City of Bend - Stormwater Division

| | |
|---|---|
| Project: | Stormwater Monitoring 2019-20 |
| Samples Received: | September 19, 2019 |
| Work Order: | C9I1802 |
| Contact: | Dave Buchanan |
| | 62975 NE Boyd Acres Rd. |
| | Bend, OR 97701 |

The results in this report apply to the samples analyzed in accordance with the chain of custody document and are reported as rounded values. This analytical data report shall not be reproduced, except in its entirety, without written approval of the laboratory. If you have any questions concerning this report, please feel free to contact me at (541) 388-5585.

Report reviewed by,

Stefan D'Angona

Analytical Chemist

Company Name/Address:
**City of Bend- WRF**
**62975 Boyd Acres Rd.**
**Bend, OR 97701**

Billing Information:
**City of Bend**
**62975 Boyd Acres Rd**
**Bend, OR 97701**

Report to: **Jeff Buystedt**

Email To: **jbuystedt@bendoregon.gov**

Project Description: Stormwater Analysis

City/State Collected: **Bend OR**

Phone: **541-420-6892**
Fax:

Client Project #

Lab Project #
C9I1802

Collected by (print): Dave Buchanan

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

***Rush?*** (Lab MUST Be Notified)
____ Same Day .....200%
____ Next Day .....100%
____ Two Day .....50%
____ Three Day .....25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

UTILITY DEPARTMENT
Water Quality Laboratory
22395 McGrath Rd Bend, Or 97701
Phone: 541-317-3017

L #

Table #

Acctnum:
Template:
Prelogin:
TSR:
PB:

Shipped Via:

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | SM 3125 Pb, Cu, Zn | SM 3125 Optional Parameters | | | | | | | | Rem./Contaminant | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Century-C9I1802-02 | Grab | | | 9/18/19 | 9:28 | 1 | X | X | | | | | | | | | |
| Brookswood-C9I1802-05 | Grab | | | 9/18/19 | 9:07 | 1 | X | X | | | | | | | | | |
| Boyd Acres-C9I1802-03 | Grab | | | 9/18/19 | 7:30 | 1 | X | X | | | | | | | | | |
| Ladera-C9I1802-06 | Grab | | | 9/18/19 | 8:45 | 1 | X | X | * | Sample was left at room temperature overnight. | | | | | | | |
| Dup. Brooks-C9I1802-07 | Grab | | | 9/18/19 | 9:07 | 1 | X | X | | | | | | | | | |
| Field Blank-C9I1802-08 | Grab | | | 9/18/19 | 9:47 | 1 | X | X | | | | | | | | | |
| Empire-C9I1802-04 | Grab | | | 9/18/19 | 7:45 | 1 | X | X | | | | | | | | | |
| Airport-C9I1802-01 | Grab | | | 9/18/19 | 8:24 | 1 | X | X | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

* Matrix: **BS** - Biosolids **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water
**SW** - Stormwater

~~Stormwater~~ Remarks:

pH _____ Temp _____

Flow _____ Other _____

Hold #

| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____ | Condition: (lab use only) |
|---|---|---|---|---|---|
| Fridge #2 | 9/18/19 | 10:23 | Fridge #2 | | |
| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Temp: °C Bottles Received: | COC Seal Intact: ___Y ___N ___NA |
| Fridge #2 | 9/19/19 | 09:45 | | | |
| Relinquished by : (Signature) | Date: | Time: | Received for lab by: (Signature) | Date: Time: | pH Checked: NCF: |

CITY OF BEND

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**Mailing: 62975 Boyd Acres Road**
**Bend, OR 97701**
**541.317.3017 Phone**
**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Case Narrative

All samples were received within the correct temperature range, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all method detection limit (MDL) and reporting limit values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed below in this case narrative, a non-conformance form, or properly qualified within the sample results and defined in the Flags and Definitions section of this report.

Sample C9I1802-06 (Ladera) was noted on the COC as being left at room temperature overnight. Sample analyzed per client request.

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| DDW009618-Airport UIC | C9I1802-01 | Water | Aluminum Total SM 3125 | 18-Sep-19 08:24 | 19-Sep-19 09:49 |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW003323-Century | C9I1802-02 | Water | Aluminum Total SM 3125 | 18-Sep-19 09:28 | 19-Sep-19 09:49 |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW003355-Boyd Acres Complex | C9I1802-03 | Water | Aluminum Total SM 3125 | 18-Sep-19 07:30 | 19-Sep-19 09:49 |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW008884-Empire | C9I1802-04 | Water | Aluminum Total SM 3125 | 18-Sep-19 07:45 | 19-Sep-19 09:49 |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW003312-Brookswood | C9I1802-05 | Water | Aluminum Total SM 3125 | 18-Sep-19 09:07 | 19-Sep-19 09:49 |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW003238-Ladera | C9I1802-06 | Water | Aluminum Total SM 3125 | 18-Sep-19 08:45 | 19-Sep-19 09:49 |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |

CITY OF BEND

City of Bend Water Quality Lab
22395 McGrath Road
Mailing: 62975 Boyd Acres Road
Bend, OR 97701
541.317.3017 Phone
541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| (Field Duplicate) Brookswood | C9I1802-07 | Water | Aluminum Total SM 3125 | 18-Sep-19 09:07 | 19-Sep-19 09:49 |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |

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541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| Field Blank | C9I1802-08 | Water | Aluminum Total SM 3125 | 18-Sep-19 09:47 | 19-Sep-19 09:49 |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |

CITY OF BEND

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**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## DDW009618-Airport UIC

### C9I1802-01 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **108** | 10.0 | 1.69 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Antimony** | **0.717** | 0.100 | 0.0104 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Arsenic** | **1.18** | 0.100 | 0.0571 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Barium** | **9.24** | 0.200 | 0.117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Beryllium | ND | 0.100 | 0.0136 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Cadmium | 0.0830 J | 0.100 | 0.0111 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Calcium** | **4580** | 100 | 5.61 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Chromium** | **1.74** | 0.200 | 0.0976 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Cobalt** | **0.231** | 0.200 | 0.0132 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Copper** | **8.40** | 0.200 | 0.0750 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Iron** | **111** | 10.0 | 0.876 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Lead** | **0.808** | 0.200 | 0.0117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Magnesium** | **2710** | 100 | 5.21 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Manganese** | **7.13** | 0.200 | 0.0204 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Molybdenum** | **0.612** | 0.500 | 0.116 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Nickel** | **0.532** | 0.200 | 0.0214 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Phosphorus** | **111** | 100 | 6.59 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Potassium** | **1350** | 100 | 6.13 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Selenium | 0.0437 J | 0.100 | 0.0315 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Sodium** | **5880** | 100 | 22.2 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Thallium | ND | 0.100 | 0.00680 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Tin | ND | 1.00 | 0.259 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Titanium** | **5.68** | 0.200 | 0.0848 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Vanadium** | **6.77** | 0.500 | 0.156 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Zinc** | **1130** | 20.0 | 7.80 | ug/L | 20 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |

CITY OF BEND

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541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## DDW003323-Century

### C9I1802-02 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **297** | 10.0 | 1.69 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Antimony** | **0.959** | 0.100 | 0.0104 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Arsenic** | **0.766** | 0.100 | 0.0571 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Barium** | **19.1** | 0.200 | 0.117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Beryllium | 0.0203 J | 0.100 | 0.0136 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Cadmium | 0.0380 J | 0.100 | 0.0111 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Calcium** | **9210** | 100 | 5.61 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Chromium** | **7.08** | 0.200 | 0.0976 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Cobalt** | **0.603** | 0.200 | 0.0132 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Copper** | **11.9** | 0.200 | 0.0750 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Iron** | **382** | 10.0 | 0.876 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Lead** | **0.811** | 0.200 | 0.0117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Magnesium** | **2410** | 100 | 5.21 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Manganese** | **43.4** | 0.200 | 0.0204 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Molybdenum** | **1.90** | 0.500 | 0.116 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Nickel** | **2.31** | 0.200 | 0.0214 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Phosphorus | 60.8 J | 100 | 6.59 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Potassium** | **3020** | 100 | 6.13 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Selenium | 0.0344 J | 0.100 | 0.0315 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Sodium** | **2640** | 100 | 22.2 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Thallium | 0.0187 J | 0.100 | 0.00680 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Tin | ND | 1.00 | 0.259 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Titanium** | **13.6** | 0.200 | 0.0848 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Vanadium** | **2.78** | 0.500 | 0.156 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Zinc** | **191** | 1.00 | 0.390 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |

CITY OF BEND

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## DDW003355-Boyd Acres Complex

### C9I1802-03 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **318** | 10.0 | 1.69 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Antimony** | **0.240** | 0.100 | 0.0104 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Arsenic** | **0.271** | 0.100 | 0.0571 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Barium** | **8.74** | 0.200 | 0.117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Beryllium | ND | 0.100 | 0.0136 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Cadmium | 0.0220 J | 0.100 | 0.0111 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Calcium** | **3150** | 100 | 5.61 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Chromium** | **1.75** | 0.200 | 0.0976 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Cobalt** | **0.721** | 0.200 | 0.0132 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Copper** | **5.02** | 0.200 | 0.0750 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Iron** | **875** | 10.0 | 0.876 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Lead** | **0.686** | 0.200 | 0.0117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Magnesium** | **634** | 100 | 5.21 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Manganese** | **34.6** | 0.200 | 0.0204 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Molybdenum** | **0.666** | 0.500 | 0.116 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Nickel** | **1.36** | 0.200 | 0.0214 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Phosphorus | 66.3 J | 100 | 6.59 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Potassium** | **669** | 100 | 6.13 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Selenium | ND | 0.100 | 0.0315 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Sodium** | **2530** | 100 | 22.2 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Thallium | 0.00740 J | 0.100 | 0.00680 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Tin | ND | 1.00 | 0.259 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Titanium** | **10.2** | 0.200 | 0.0848 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Vanadium** | **2.78** | 0.500 | 0.156 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Zinc** | **151** | 1.00 | 0.390 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |

CITY OF BEND

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541.317.3017 Phone
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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## DDW008884-Empire

### C9I1802-04 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **518** | 10.0 | 1.69 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Antimony** | **1.63** | 0.100 | 0.0104 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Arsenic** | **0.656** | 0.100 | 0.0571 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Barium** | **26.1** | 0.200 | 0.117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Beryllium | 0.0448 J | 0.100 | 0.0136 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Cadmium | 0.0837 J | 0.100 | 0.0111 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Calcium** | **7410** | 100 | 5.61 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Chromium** | **2.61** | 0.200 | 0.0976 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Cobalt** | **1.96** | 0.200 | 0.0132 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Copper** | **20.4** | 0.200 | 0.0750 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Iron** | **903** | 10.0 | 0.876 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Lead** | **0.993** | 0.200 | 0.0117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Magnesium** | **3940** | 100 | 5.21 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Manganese** | **114** | 0.200 | 0.0204 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Molybdenum** | **3.98** | 0.500 | 0.116 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Nickel** | **6.36** | 0.200 | 0.0214 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Phosphorus** | **169** | 100 | 6.59 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Potassium** | **2800** | 100 | 6.13 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Selenium** | **0.109** | 0.100 | 0.0315 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Sodium** | **3870** | 100 | 22.2 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Thallium | 0.00910 J | 0.100 | 0.00680 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Tin | 0.329 J | 1.00 | 0.259 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Titanium** | **22.6** | 0.200 | 0.0848 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Vanadium** | **8.31** | 0.500 | 0.156 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Zinc** | **247** | 20.0 | 7.80 | ug/L | 20 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |

CITY OF BEND

**City of Bend Water Quality Lab**
**22395 McGrath Road**
**Mailing: 62975 Boyd Acres Road**
**Bend, OR 97701**
**541.317.3017 Phone**
**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## DDW003312-Brookswood

### C9I1802-05 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **271** | 10.0 | 1.69 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Antimony** | **1.32** | 0.100 | 0.0104 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Arsenic** | **0.664** | 0.100 | 0.0571 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Barium** | **24.1** | 0.200 | 0.117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Beryllium | 0.0173 J | 0.100 | 0.0136 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Cadmium | 0.0520 J | 0.100 | 0.0111 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Calcium** | **9770** | 100 | 5.61 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Chromium** | **2.46** | 0.200 | 0.0976 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Cobalt** | **1.23** | 0.200 | 0.0132 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Copper** | **20.0** | 0.200 | 0.0750 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Iron** | **656** | 10.0 | 0.876 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Lead** | **0.754** | 0.200 | 0.0117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Magnesium** | **7400** | 100 | 5.21 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Manganese** | **115** | 0.200 | 0.0204 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Molybdenum** | **4.05** | 0.500 | 0.116 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Nickel** | **5.04** | 0.200 | 0.0214 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Phosphorus** | **153** | 100 | 6.59 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Potassium** | **2350** | 100 | 6.13 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Selenium | 0.0577 J | 0.100 | 0.0315 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Sodium** | **3810** | 100 | 22.2 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Thallium | 0.00720 J | 0.100 | 0.00680 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Tin | ND | 1.00 | 0.259 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Titanium** | **12.0** | 0.200 | 0.0848 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Vanadium** | **4.26** | 0.500 | 0.156 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Zinc** | **203** | 20.0 | 7.80 | ug/L | 20 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |

CITY OF BEND

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**Mailing: 62975 Boyd Acres Road**
**Bend, OR 97701**
**541.317.3017 Phone**
**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## DDW003238-Ladera

### C9I1802-06 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **94.3** | 10.0 | 1.69 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Antimony** | **0.362** | 0.100 | 0.0104 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Arsenic** | **0.882** | 0.100 | 0.0571 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Barium** | **20.5** | 0.200 | 0.117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Beryllium | ND | 0.100 | 0.0136 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Cadmium | 0.0361 J | 0.100 | 0.0111 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Calcium** | **11000** | 100 | 5.61 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Chromium** | **2.32** | 0.200 | 0.0976 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Cobalt** | **0.532** | 0.200 | 0.0132 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Copper** | **4.68** | 0.200 | 0.0750 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Iron** | **868** | 10.0 | 0.876 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Lead** | **0.435** | 0.200 | 0.0117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Magnesium** | **1890** | 100 | 5.21 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Manganese** | **89.5** | 0.200 | 0.0204 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Molybdenum** | **0.603** | 0.500 | 0.116 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Nickel** | **1.46** | 0.200 | 0.0214 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Phosphorus** | **221** | 100 | 6.59 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Potassium** | **2360** | 100 | 6.13 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Selenium | 0.0422 J | 0.100 | 0.0315 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Sodium** | **3950** | 100 | 22.2 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Thallium | ND | 0.100 | 0.00680 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Tin | ND | 1.00 | 0.259 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Titanium** | **5.14** | 0.200 | 0.0848 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Vanadium** | **3.33** | 0.500 | 0.156 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Zinc** | **197** | 1.00 | 0.390 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |

CITY OF BEND

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541.317.3017 Phone
541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## (Field Duplicate) Brookswood

### C9I1802-07 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **352** | 10.0 | 1.69 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Antimony** | **1.32** | 0.100 | 0.0104 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Arsenic** | **0.630** | 0.100 | 0.0571 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Barium** | **24.0** | 0.200 | 0.117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Beryllium | 0.0191 J | 0.100 | 0.0136 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Cadmium | 0.0523 J | 0.100 | 0.0111 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Calcium** | **9470** | 100 | 5.61 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Chromium** | **2.25** | 0.200 | 0.0976 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Cobalt** | **1.20** | 0.200 | 0.0132 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Copper** | **20.2** | 0.200 | 0.0750 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Iron** | **751** | 10.0 | 0.876 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Lead** | **0.646** | 0.200 | 0.0117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Magnesium** | **7270** | 100 | 5.21 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Manganese** | **115** | 0.200 | 0.0204 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Molybdenum** | **4.15** | 0.500 | 0.116 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Nickel** | **5.02** | 0.200 | 0.0214 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Phosphorus** | **158** | 100 | 6.59 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Potassium** | **2270** | 100 | 6.13 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Selenium | 0.0821 J | 0.100 | 0.0315 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Sodium** | **3760** | 100 | 22.2 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Thallium | 0.00680 J | 0.100 | 0.00680 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Tin | 0.312 J | 1.00 | 0.259 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Titanium** | **17.3** | 0.200 | 0.0848 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Vanadium** | **4.52** | 0.500 | 0.156 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Zinc** | **187** | 1.00 | 0.390 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |

CITY OF BEND

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**541.317.3017 Phone**
**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Field Blank

### C9I1802-08 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **29.0** | 10.0 | 1.69 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Antimony | ND | 0.100 | 0.0104 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Arsenic | ND | 0.100 | 0.0571 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Barium** | **0.203** | 0.200 | 0.117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Beryllium | ND | 0.100 | 0.0136 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Cadmium | ND | 0.100 | 0.0111 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Calcium | 41.2 J | 100 | 5.61 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| **Chromium** | **2.33** | 0.200 | 0.0976 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Cobalt | 0.0419 J | 0.200 | 0.0132 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Copper | 0.121 J | 0.200 | 0.0750 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Iron | 4.65 J | 10.0 | 0.876 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Lead | 0.0408 J | 0.200 | 0.0117 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Magnesium | 6.94 J | 100 | 5.21 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Manganese | 0.0526 J | 0.200 | 0.0204 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Molybdenum | 0.155 J | 0.500 | 0.116 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Nickel | 0.0402 J | 0.200 | 0.0214 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Phosphorus | ND | 100 | 6.59 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Potassium | 13.5 J | 100 | 6.13 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Selenium | ND | 0.100 | 0.0315 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Sodium** | **338** | 100 | 22.2 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Thallium | ND | 0.100 | 0.00680 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Tin | ND | 1.00 | 0.259 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| Titanium | 0.153 J | 0.200 | 0.0848 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | J |
| Vanadium | ND | 0.500 | 0.156 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |
| **Zinc** | **75.1** | 1.00 | 0.390 | ug/L | 1 | 19I3009 | 09-Oct-19 | 14-Oct-19 | SM 3125 | |

CITY OF BEND

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Mailing: 62975 Boyd Acres Road
Bend, OR 97701
541.317.3017 Phone
541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Metals by Method SM 3125 - Quality Control

## City of Bend Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 19I3009 - EPA 200.8** | | | | | | | | | | |
| **Blank (19I3009-BLK1)** | | | | Prepared: 09-Oct-19 Analyzed: 14-Oct-19 | | | | | | |
| Aluminum | ND | 10.0 | ug/L | | | | | | | |
| Antimony | ND | 0.100 | " | | | | | | | |
| Arsenic | ND | 0.100 | " | | | | | | | |
| Barium | ND | 0.200 | " | | | | | | | |
| Beryllium | ND | 0.100 | " | | | | | | | |
| Cadmium | ND | 0.100 | " | | | | | | | |
| Calcium | ND | 100 | " | | | | | | | |
| Chromium | ND | 0.200 | " | | | | | | | |
| Cobalt | ND | 0.200 | " | | | | | | | |
| Copper | ND | 0.200 | " | | | | | | | |
| Iron | ND | 10.0 | " | | | | | | | |
| Lead | ND | 0.200 | " | | | | | | | |
| Magnesium | ND | 100 | " | | | | | | | |
| Manganese | ND | 0.200 | " | | | | | | | |
| Mercury | ND | 0.0200 | " | | | | | | | |
| Molybdenum | ND | 0.500 | " | | | | | | | |
| Nickel | ND | 0.200 | " | | | | | | | |
| Phosphorus | ND | 100 | " | | | | | | | |
| Potassium | ND | 100 | " | | | | | | | |
| Selenium | ND | 0.100 | " | | | | | | | |
| Silver | ND | 0.200 | " | | | | | | | |
| Sodium | ND | 100 | " | | | | | | | |
| Thallium | ND | 0.100 | " | | | | | | | |
| Tin | ND | 1.00 | " | | | | | | | |
| Titanium | ND | 0.200 | " | | | | | | | |
| Vanadium | ND | 0.500 | " | | | | | | | |
| Zinc | 0.571 | 1.00 | " | | | | | | | J |

CITY OF BEND

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541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Metals by Method SM 3125 - Quality Control

## City of Bend Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 19I3009 - EPA 200.8** | | | | | | | | | | |
| **LCS (19I3009-BS1)** | | | | Prepared: 09-Oct-19 Analyzed: 14-Oct-19 | | | | | | |
| Aluminum | 95.0 | 10.0 | ug/L | 100 | | 95.0 | 70-130 | | | |
| Antimony | 4.94 | 0.100 | " | 5.00 | | 98.7 | 70-130 | | | |
| Arsenic | 4.96 | 0.100 | " | 5.00 | | 99.2 | 70-130 | | | |
| Barium | 9.99 | 0.200 | " | 10.0 | | 99.9 | 70-130 | | | |
| Beryllium | 4.86 | 0.100 | " | 5.00 | | 97.1 | 70-130 | | | |
| Cadmium | 5.03 | 0.100 | " | 5.00 | | 101 | 70-130 | | | |
| Calcium | 962 | 100 | " | 1000 | | 96.2 | 70-130 | | | |
| Chromium | 9.87 | 0.200 | " | 10.0 | | 98.7 | 70-130 | | | |
| Cobalt | 9.99 | 0.200 | " | 10.0 | | 99.9 | 70-130 | | | |
| Copper | 9.82 | 0.200 | " | 10.0 | | 98.2 | 70-130 | | | |
| Iron | 103 | 10.0 | " | 100 | | 103 | 70-130 | | | |
| Lead | 9.79 | 0.200 | " | 10.0 | | 97.9 | 70-130 | | | |
| Magnesium | 1020 | 100 | " | 1000 | | 102 | 70-130 | | | |
| Manganese | 9.73 | 0.200 | " | 10.0 | | 97.3 | 70-130 | | | |
| Mercury | 0.103 | 0.0200 | " | 0.100 | | 103 | 70-130 | | | |
| Molybdenum | 9.56 | 0.500 | " | 10.0 | | 95.6 | 70-130 | | | |
| Nickel | 9.93 | 0.200 | " | 10.0 | | 99.3 | 70-130 | | | |
| Phosphorus | 940 | 100 | " | 1000 | | 94.0 | 70-130 | | | |
| Potassium | 1020 | 100 | " | 1000 | | 102 | 70-130 | | | |
| Selenium | 5.05 | 0.100 | " | 5.00 | | 101 | 70-130 | | | |
| Silver | 10.3 | 0.200 | " | 10.0 | | 103 | 70-130 | | | |
| Sodium | 1010 | 100 | " | 1000 | | 101 | 70-130 | | | |
| Thallium | 4.76 | 0.100 | " | 5.00 | | 95.2 | 70-130 | | | |
| Tin | 9.92 | 1.00 | " | 10.0 | | 99.2 | 70-130 | | | |
| Titanium | 9.93 | 0.200 | " | 10.0 | | 99.3 | 70-130 | | | |
| Vanadium | 9.70 | 0.500 | " | 10.0 | | 97.0 | 70-130 | | | |
| Zinc | 10.5 | 1.00 | " | 10.0 | | 105 | 70-130 | | | |

CITY OF BEND

City of Bend Water Quality Lab
22395 McGrath Road
Mailing: 62975 Boyd Acres Road
Bend, OR 97701
541.317.3017 Phone
541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Metals by Method SM 3125 - Quality Control

## City of Bend Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 19I3009 - EPA 200.8** | | | | | | | | | | |
| **Matrix Spike (19I3009-MS1)** | **Source: C9I1802-01** | | | Prepared: 09-Oct-19 Analyzed: 14-Oct-19 | | | | | | |
| Aluminum | 218 | 10.0 | ug/L | 100 | 108 | 110 | 75-125 | | | |
| Antimony | 5.59 | 0.100 | " | 5.00 | 0.717 | 97.4 | 75-125 | | | |
| Arsenic | 6.18 | 0.100 | " | 5.00 | 1.18 | 100 | 75-125 | | | |
| Barium | 19.6 | 0.200 | " | 10.0 | 9.24 | 103 | 75-125 | | | |
| Beryllium | 4.94 | 0.100 | " | 5.00 | ND | 98.8 | 75-125 | | | |
| Cadmium | 5.02 | 0.100 | " | 5.00 | 0.0830 | 98.8 | 75-125 | | | |
| Calcium | 5580 | 100 | " | 1000 | 4580 | 99.8 | 75-125 | | | |
| Chromium | 11.8 | 0.200 | " | 10.0 | 1.74 | 101 | 75-125 | | | |
| Cobalt | 10.1 | 0.200 | " | 10.0 | 0.231 | 99.0 | 75-125 | | | |
| Copper | 18.3 | 0.200 | " | 10.0 | 8.40 | 99.3 | 75-125 | | | |
| Iron | 229 | 10.0 | " | 100 | 111 | 117 | 75-125 | | | |
| Lead | 10.4 | 0.200 | " | 10.0 | 0.808 | 96.4 | 75-125 | | | |
| Magnesium | 3720 | 100 | " | 1000 | 2710 | 101 | 75-125 | | | |
| Manganese | 17.0 | 0.200 | " | 10.0 | 7.13 | 98.6 | 75-125 | | | |
| Mercury | 0.0194 | 0.0200 | " | 0.100 | ND | 19.4 | 75-125 | | | A-01, J |
| Molybdenum | 9.94 | 0.500 | " | 10.0 | 0.612 | 93.3 | 75-125 | | | |
| Nickel | 10.6 | 0.200 | " | 10.0 | 0.532 | 101 | 75-125 | | | |
| Phosphorus | 1040 | 100 | " | 1000 | 111 | 92.8 | 75-125 | | | |
| Potassium | 2340 | 100 | " | 1000 | 1350 | 98.5 | 75-125 | | | |
| Selenium | 5.02 | 0.100 | " | 5.00 | 0.0437 | 99.5 | 75-125 | | | |
| Silver | 10.2 | 0.200 | " | 10.0 | ND | 102 | 75-125 | | | |
| Sodium | 7000 | 100 | " | 1000 | 5880 | 112 | 75-125 | | | |
| Thallium | 4.72 | 0.100 | " | 5.00 | ND | 94.3 | 75-125 | | | |
| Tin | 9.88 | 1.00 | " | 10.0 | ND | 98.8 | 75-125 | | | |
| Titanium | 16.5 | 0.200 | " | 10.0 | 5.68 | 108 | 75-125 | | | |
| Vanadium | 16.7 | 0.500 | " | 10.0 | 6.77 | 99.4 | 75-125 | | | |
| Zinc | 1170 | 20.0 | " | 10.0 | 1130 | 368 | 75-125 | | | QM-4X |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Metals by Method SM 3125 - Quality Control

## City of Bend Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 19I3009 - EPA 200.8** | | | | | | | | | | |
| **Matrix Spike Dup (19I3009-MSD1)** | **Source: C9I1802-01** | | | Prepared: 09-Oct-19 Analyzed: 14-Oct-19 | | | | | | |
| Aluminum | 201 | 10.0 | ug/L | 100 | 108 | 93.0 | 75-125 | 8.19 | 20 | |
| Antimony | 5.58 | 0.100 | " | 5.00 | 0.717 | 97.2 | 75-125 | 0.206 | 20 | |
| Arsenic | 6.15 | 0.100 | " | 5.00 | 1.18 | 99.4 | 75-125 | 0.542 | 20 | |
| Barium | 19.3 | 0.200 | " | 10.0 | 9.24 | 101 | 75-125 | 1.38 | 20 | |
| Beryllium | 4.98 | 0.100 | " | 5.00 | ND | 99.5 | 75-125 | 0.706 | 20 | |
| Cadmium | 4.99 | 0.100 | " | 5.00 | 0.0830 | 98.2 | 75-125 | 0.603 | 20 | |
| Calcium | 5530 | 100 | " | 1000 | 4580 | 94.9 | 75-125 | 0.870 | 20 | |
| Chromium | 11.7 | 0.200 | " | 10.0 | 1.74 | 99.6 | 75-125 | 1.23 | 20 | |
| Cobalt | 10.0 | 0.200 | " | 10.0 | 0.231 | 97.8 | 75-125 | 1.16 | 20 | |
| Copper | 18.0 | 0.200 | " | 10.0 | 8.40 | 95.9 | 75-125 | 1.86 | 20 | |
| Iron | 215 | 10.0 | " | 100 | 111 | 104 | 75-125 | 6.13 | 20 | |
| Lead | 10.4 | 0.200 | " | 10.0 | 0.808 | 95.5 | 75-125 | 0.847 | 20 | |
| Magnesium | 3700 | 100 | " | 1000 | 2710 | 99.2 | 75-125 | 0.464 | 20 | |
| Manganese | 16.7 | 0.200 | " | 10.0 | 7.13 | 95.2 | 75-125 | 1.98 | 20 | |
| Mercury | 0.0145 | 0.0200 | " | 0.100 | ND | 14.5 | 75-125 | 28.9 | 20 | A-01, J |
| Molybdenum | 10.0 | 0.500 | " | 10.0 | 0.612 | 94.2 | 75-125 | 0.912 | 20 | |
| Nickel | 10.4 | 0.200 | " | 10.0 | 0.532 | 98.8 | 75-125 | 2.26 | 20 | |
| Phosphorus | 1040 | 100 | " | 1000 | 111 | 93.2 | 75-125 | 0.400 | 20 | |
| Potassium | 2320 | 100 | " | 1000 | 1350 | 97.0 | 75-125 | 0.634 | 20 | |
| Selenium | 4.94 | 0.100 | " | 5.00 | 0.0437 | 98.0 | 75-125 | 1.50 | 20 | |
| Silver | 10.2 | 0.200 | " | 10.0 | ND | 102 | 75-125 | 0.200 | 20 | |
| Sodium | 6890 | 100 | " | 1000 | 5880 | 101 | 75-125 | 1.59 | 20 | |
| Thallium | 4.74 | 0.100 | " | 5.00 | ND | 94.7 | 75-125 | 0.436 | 20 | |
| Tin | 9.80 | 1.00 | " | 10.0 | ND | 98.0 | 75-125 | 0.769 | 20 | |
| Titanium | 15.4 | 0.200 | " | 10.0 | 5.68 | 97.0 | 75-125 | 6.73 | 20 | |
| Vanadium | 16.6 | 0.500 | " | 10.0 | 6.77 | 97.9 | 75-125 | 0.916 | 20 | |
| Zinc | 1140 | 20.0 | " | 10.0 | 1130 | 118 | 75-125 | 2.16 | 20 | QM-4X |

CITY OF BEND

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**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

## Flags and Definitions

| | |
|---|---|
| QM-4X | The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits. |
| J | Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). |
| A-01a | LOD/LOQ runs. Ignore Spike Flags. |
| A-01 | Hg was mis-spiked in MS/MSD. Spiked correctly in LCS and passed QC limits. Hg is not a target compound. Report |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9I1802 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 25-Oct-19 11:40 |
| Project Number: | [none] | | |

# Sub-contract Data

National Center for Testing & Innovation

# ANALYTICAL REPORT

October 02, 2019



## City of Bend Water Department

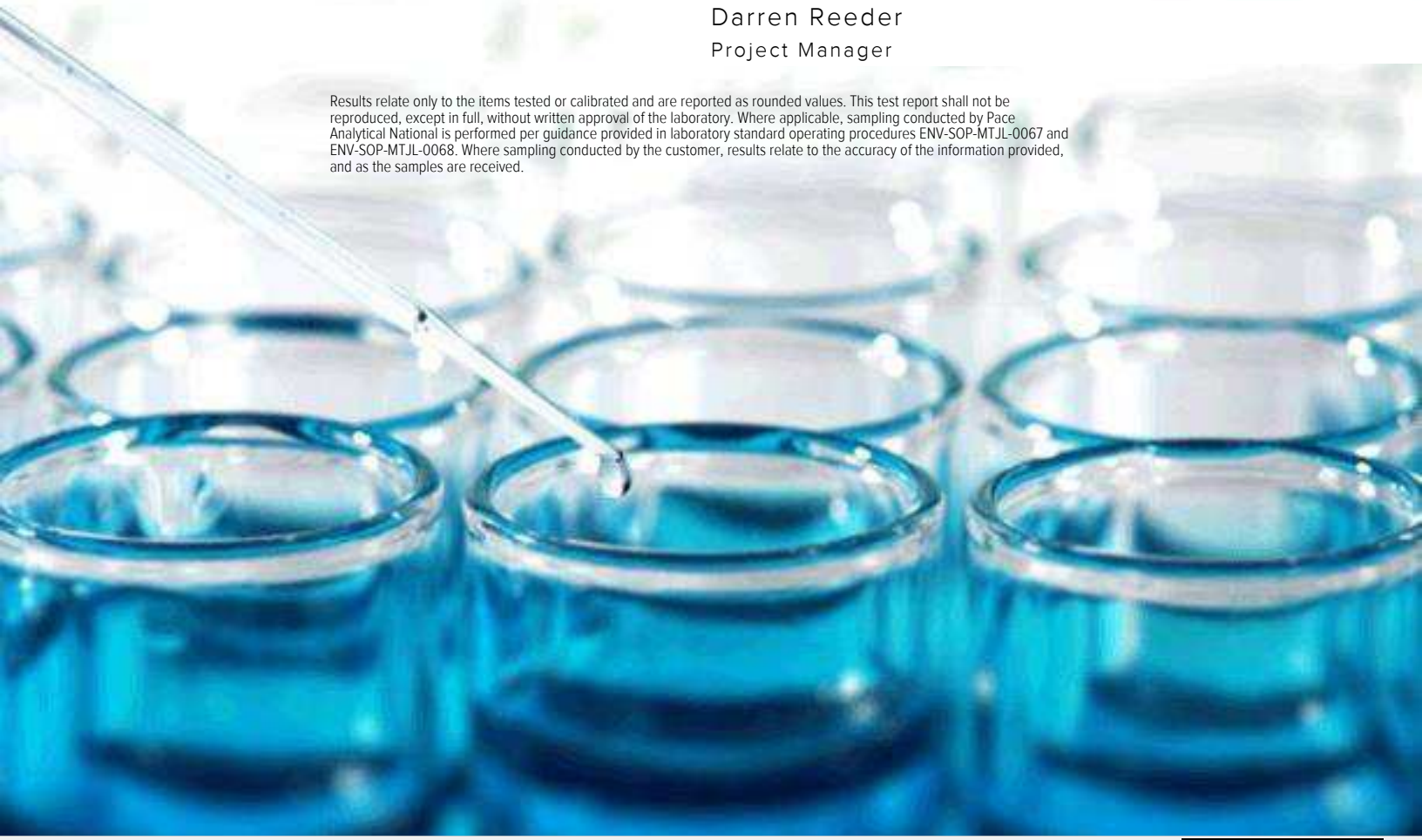
| | |
|---|---|
| Sample Delivery Group: | L1141732 |
| Samples Received: | 09/20/2019 |
| Project Number: | C9I1802 |
| Description: | Stormwater Analysis |

Report To: Jeff Buystedt
62975 Boyd Acres Rd
Bend, OR 97701

Entire Report Reviewed By:

Darren Reeder
Project Manager





## CENTURY-C9I1802-02 L1141732-01 GW

Collected by: Dave Buchanan | Collected date/time: 09/18/19 09:28 | Received date/time: 09/20/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270 D | WG1350632 | 1 | 09/24/19 15:41 | 09/26/19 01:29 | AO | Mt. Juliet, TN |

## BROOKSWOOD--C9I1802-05 L1141732-02 GW

Collected by: Dave Buchanan | Collected date/time: 09/18/19 09:07 | Received date/time: 09/20/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270 D | WG1350632 | 1 | 09/24/19 15:41 | 09/26/19 01:51 | AO | Mt. Juliet, TN |

## BOYD ACRES-C9I1802-03 L1141732-03 GW

Collected by: Dave Buchanan | Collected date/time: 09/18/19 07:30 | Received date/time: 09/20/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270 D | WG1350632 | 1 | 09/24/19 15:41 | 09/26/19 01:07 | AO | Mt. Juliet, TN |

## LADERA-C9I1802-06 L1141732-04 GW

Collected by: Dave Buchanan | Collected date/time: 09/18/19 08:45 | Received date/time: 09/20/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270 D | WG1350632 | 1 | 09/24/19 15:41 | 09/25/19 19:35 | AO | Mt. Juliet, TN |

## DUP. BROOKS-C9I1802-07 L1141732-05 GW

Collected by: Dave Buchanan | Collected date/time: 09/18/19 09:07 | Received date/time: 09/20/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270 D | WG1350632 | 1 | 09/24/19 15:41 | 09/26/19 16:02 | AO | Mt. Juliet, TN |

## FIELD BLANK-C9I1802-08 L1141732-06 GW

Collected by: Dave Buchanan | Collected date/time: 09/18/19 09:47 | Received date/time: 09/20/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270 D | WG1350632 | 1 | 09/24/19 15:41 | 09/25/19 19:57 | AO | Mt. Juliet, TN |

## EMPIRE-C9I1802-04 L1141732-07 GW

Collected by: Dave Buchanan | Collected date/time: 09/18/19 07:45 | Received date/time: 09/20/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270 D | WG1350632 | 1 | 09/24/19 15:41 | 09/26/19 16:24 | AO | Mt. Juliet, TN |

## AIRPORT-C9I1802-01 L1141732-08 GW

Collected by: Dave Buchanan | Collected date/time: 09/18/19 08:29 | Received date/time: 09/20/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270 D | WG1350632 | 1 | 09/24/19 15:41 | 09/25/19 20:19 | AO | Mt. Juliet, TN |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Darren Reeder
Project Manager

## Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Benzo(a)anthracene | U | | 0.0975 | 1.00 | 1 | 09/26/2019 01:29 | WG1350632 |
| Bis(2-ethylhexyl)phthalate | 1.80 | J | 0.709 | 3.00 | 1 | 09/26/2019 01:29 | WG1350632 |
| Pentachlorophenol | U | | 0.313 | 10.0 | 1 | 09/26/2019 01:29 | WG1350632 |
| *(S) 2-Fluorophenol* | *9.35* | J2 | | *10.0-120* | | *09/26/2019 01:29* | WG1350632 |
| *(S) Phenol-d5* | *10.3* | | | *10.0-120* | | *09/26/2019 01:29* | WG1350632 |
| *(S) Nitrobenzene-d5* | *16.8* | | | *10.0-127* | | *09/26/2019 01:29* | WG1350632 |
| *(S) 2-Fluorobiphenyl* | *41.3* | | | *10.0-130* | | *09/26/2019 01:29* | WG1350632 |
| *(S) 2,4,6-Tribromophenol* | *66.0* | | | *10.0-155* | | *09/26/2019 01:29* | WG1350632 |
| *(S) p-Terphenyl-d14* | *77.5* | | | *10.0-128* | | *09/26/2019 01:29* | WG1350632 |

Sample Narrative:

L1141732-01 WG1350632: Duplicate analysis was performed.

## Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Benzo(a)anthracene | U | | 0.0975 | 1.00 | 1 | 09/26/2019 01:51 | WG1350632 |
| Bis(2-ethylhexyl)phthalate | 1.58 | J | 0.709 | 3.00 | 1 | 09/26/2019 01:51 | WG1350632 |
| Pentachlorophenol | U | | 0.313 | 10.0 | 1 | 09/26/2019 01:51 | WG1350632 |
| *(S) 2-Fluorophenol* | *8.15* | J2 | | *10.0-120* | | *09/26/2019 01:51* | WG1350632 |
| *(S) Phenol-d5* | *9.05* | J2 | | *10.0-120* | | *09/26/2019 01:51* | WG1350632 |
| *(S) Nitrobenzene-d5* | *8.07* | J2 | | *10.0-127* | | *09/26/2019 01:51* | WG1350632 |
| *(S) 2-Fluorobiphenyl* | *20.4* | | | *10.0-130* | | *09/26/2019 01:51* | WG1350632 |
| *(S) 2,4,6-Tribromophenol* | *66.5* | | | *10.0-155* | | *09/26/2019 01:51* | WG1350632 |
| *(S) p-Terphenyl-d14* | *74.3* | | | *10.0-128* | | *09/26/2019 01:51* | WG1350632 |

Sample Narrative:

L1141732-02 WG1350632: Duplicate analysis was performed.

## Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Benzo(a)anthracene | U | | 0.0975 | 1.00 | 1 | 09/26/2019 01:07 | WG1350632 |
| Bis(2-ethylhexyl)phthalate | U | | 0.709 | 3.00 | 1 | 09/26/2019 01:07 | WG1350632 |
| Pentachlorophenol | U | | 0.313 | 10.0 | 1 | 09/26/2019 01:07 | WG1350632 |
| *(S) 2-Fluorophenol* | *9.55* | J2 | | *10.0-120* | | *09/26/2019 01:07* | WG1350632 |
| *(S) Phenol-d5* | *8.55* | J2 | | *10.0-120* | | *09/26/2019 01:07* | WG1350632 |
| *(S) Nitrobenzene-d5* | *31.0* | | | *10.0-127* | | *09/26/2019 01:07* | WG1350632 |
| *(S) 2-Fluorobiphenyl* | *46.5* | | | *10.0-130* | | *09/26/2019 01:07* | WG1350632 |
| *(S) 2,4,6-Tribromophenol* | *60.0* | | | *10.0-155* | | *09/26/2019 01:07* | WG1350632 |
| *(S) p-Terphenyl-d14* | *73.3* | | | *10.0-128* | | *09/26/2019 01:07* | WG1350632 |

Sample Narrative:

L1141732-03 WG1350632: Duplicate analysis was performed.

## Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

| Analyte | Result ug/l | Qualifier | MDL ug/l | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | U | | 0.0975 | 1.00 | 1 | 09/25/2019 19:35 | WG1350632 |
| Bis(2-ethylhexyl)phthalate | U | | 0.709 | 3.00 | 1 | 09/25/2019 19:35 | WG1350632 |
| Pentachlorophenol | U | | 0.313 | 10.0 | 1 | 09/25/2019 19:35 | WG1350632 |
| *(S) 2-Fluorophenol* | *3.91* | J2 | | *10.0-120* | | *09/25/2019 19:35* | WG1350632 |
| *(S) Phenol-d5* | *5.09* | J2 | | *10.0-120* | | *09/25/2019 19:35* | WG1350632 |
| *(S) Nitrobenzene-d5* | *8.47* | J2 | | *10.0-127* | | *09/25/2019 19:35* | WG1350632 |
| *(S) 2-Fluorobiphenyl* | *20.9* | | | *10.0-130* | | *09/25/2019 19:35* | WG1350632 |
| *(S) 2,4,6-Tribromophenol* | *44.3* | | | *10.0-155* | | *09/25/2019 19:35* | WG1350632 |
| *(S) p-Terphenyl-d14* | *75.6* | | | *10.0-128* | | *09/25/2019 19:35* | WG1350632 |

**Sample Narrative:**

L1141732-04 WG1350632: Duplicate analysis was performed.

## Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Benzo(a)anthracene | U | | 0.0975 | 1.00 | 1 | 09/26/2019 16:02 | WG1350632 |
| Bis(2-ethylhexyl)phthalate | 1.24 | J | 0.709 | 3.00 | 1 | 09/26/2019 16:02 | WG1350632 |
| Pentachlorophenol | U | | 0.313 | 10.0 | 1 | 09/26/2019 16:02 | WG1350632 |
| *(S) 2-Fluorophenol* | *7.64* | J2 | | *10.0-120* | | *09/26/2019 16:02* | WG1350632 |
| *(S) Phenol-d5* | *8.68* | J2 | | *10.0-120* | | *09/26/2019 16:02* | WG1350632 |
| *(S) Nitrobenzene-d5* | *9.62* | J2 | | *10.0-127* | | *09/26/2019 16:02* | WG1350632 |
| *(S) 2-Fluorobiphenyl* | *28.0* | | | *10.0-130* | | *09/26/2019 16:02* | WG1350632 |
| *(S) 2,4,6-Tribromophenol* | *63.7* | | | *10.0-155* | | *09/26/2019 16:02* | WG1350632 |
| *(S) p-Terphenyl-d14* | *68.7* | | | *10.0-128* | | *09/26/2019 16:02* | WG1350632 |

Sample Narrative:

L1141732-05 WG1350632: Duplicate analysis was performed.

## Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Benzo(a)anthracene | U | | 0.0975 | 1.00 | 1 | 09/25/2019 19:57 | WG1350632 |
| Bis(2-ethylhexyl)phthalate | U | | 0.709 | 3.00 | 1 | 09/25/2019 19:57 | WG1350632 |
| Pentachlorophenol | U | | 0.313 | 10.0 | 1 | 09/25/2019 19:57 | WG1350632 |
| *(S) 2-Fluorophenol* | *7.00* | J2 | | *10.0-120* | | *09/25/2019 19:57* | WG1350632 |
| *(S) Phenol-d5* | *5.95* | J2 | | *10.0-120* | | *09/25/2019 19:57* | WG1350632 |
| *(S) Nitrobenzene-d5* | *7.12* | J2 | | *10.0-127* | | *09/25/2019 19:57* | WG1350632 |
| *(S) 2-Fluorobiphenyl* | *6.51* | J2 | | *10.0-130* | | *09/25/2019 19:57* | WG1350632 |
| *(S) 2,4,6-Tribromophenol* | *16.7* | | | *10.0-155* | | *09/25/2019 19:57* | WG1350632 |
| *(S) p-Terphenyl-d14* | *68.1* | | | *10.0-128* | | *09/25/2019 19:57* | WG1350632 |

Sample Narrative:

L1141732-06 WG1350632: Duplicate analysis was performed.

## Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

| Analyte | Result ug/l | Qualifier | MDL ug/l | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | U | | 0.0975 | 1.00 | 1 | 09/26/2019 16:24 | WG1350632 |
| Bis(2-ethylhexyl)phthalate | 2.41 | J | 0.709 | 3.00 | 1 | 09/26/2019 16:24 | WG1350632 |
| Pentachlorophenol | U | | 0.313 | 10.0 | 1 | 09/26/2019 16:24 | WG1350632 |
| *(S) 2-Fluorophenol* | *3.91* | J2 | | *10.0-120* | | *09/26/2019 16:24* | WG1350632 |
| *(S) Phenol-d5* | *7.36* | J2 | | *10.0-120* | | *09/26/2019 16:24* | WG1350632 |
| *(S) Nitrobenzene-d5* | *5.53* | J2 | | *10.0-127* | | *09/26/2019 16:24* | WG1350632 |
| *(S) 2-Fluorobiphenyl* | *31.4* | | | *10.0-130* | | *09/26/2019 16:24* | WG1350632 |
| *(S) 2,4,6-Tribromophenol* | *69.2* | | | *10.0-155* | | *09/26/2019 16:24* | WG1350632 |
| *(S) p-Terphenyl-d14* | *77.5* | | | *10.0-128* | | *09/26/2019 16:24* | WG1350632 |

Sample Narrative:

L1141732-07 WG1350632: Insufficient sample volume for additional analysis

## Semi Volatile Organic Compounds (GC/MS) by Method 8270 D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Benzo(a)anthracene | U | | 0.0975 | 1.00 | 1 | 09/25/2019 20:19 | WG1350632 |
| Bis(2-ethylhexyl)phthalate | U | | 0.709 | 3.00 | 1 | 09/25/2019 20:19 | WG1350632 |
| Pentachlorophenol | U | | 0.313 | 10.0 | 1 | 09/25/2019 20:19 | WG1350632 |
| *(S) 2-Fluorophenol* | *8.08* | J2 | | *10.0-120* | | *09/25/2019 20:19* | WG1350632 |
| *(S) Phenol-d5* | *6.43* | J2 | | *10.0-120* | | *09/25/2019 20:19* | WG1350632 |
| *(S) Nitrobenzene-d5* | *16.0* | | | *10.0-127* | | *09/25/2019 20:19* | WG1350632 |
| *(S) 2-Fluorobiphenyl* | *23.4* | | | *10.0-130* | | *09/25/2019 20:19* | WG1350632 |
| *(S) 2,4,6-Tribromophenol* | *36.1* | | | *10.0-155* | | *09/25/2019 20:19* | WG1350632 |
| *(S) p-Terphenyl-d14* | *71.6* | | | *10.0-128* | | *09/25/2019 20:19* | WG1350632 |

**Sample Narrative:**

L1141732-08 WG1350632: Duplicate analysis was performed.

## Method Blank (MB)

(MB) R3454846-2 09/25/19 16:14

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Benzo(a)anthracene | U | | 0.0975 | 1.00 |
| Bis(2-ethylhexyl)phthalate | U | | 0.709 | 3.00 |
| Pentachlorophenol | U | | 0.313 | 10.0 |
| *(S) Nitrobenzene-d5* | *3.32* | J2 | | *10.0-127* |
| *(S) 2-Fluorobiphenyl* | *5.69* | J2 | | *10.0-130* |
| *(S) p-Terphenyl-d14* | *72.3* | | | *10.0-128* |
| *(S) Phenol-d5* | *4.33* | J2 | | *10.0-120* |
| *(S) 2-Fluorophenol* | *4.96* | J2 | | *10.0-120* |
| *(S) 2,4,6-Tribromophenol* | *11.5* | | | *10.0-155* |

## Laboratory Control Sample (LCS)

(LCS) R3454846-1 09/25/19 15:52

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Benzo(a)anthracene | 50.0 | 42.6 | 85.2 | 47.0-120 | |
| Bis(2-ethylhexyl)phthalate | 50.0 | 40.4 | 80.8 | 43.0-122 | |
| Pentachlorophenol | 50.0 | 24.6 | 49.2 | 23.0-120 | |
| *(S) Nitrobenzene-d5* | | | *10.6* | *10.0-127* | |
| *(S) 2-Fluorobiphenyl* | | | *39.5* | *10.0-130* | |
| *(S) p-Terphenyl-d14* | | | *78.7* | *10.0-128* | |
| *(S) Phenol-d5* | | | *9.85* | *10.0-120* | J2 |
| *(S) 2-Fluorophenol* | | | *10.1* | *10.0-120* | |
| *(S) 2,4,6-Tribromophenol* | | | *64.0* | *10.0-155* | |

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J2 | Surrogate recovery limits have been exceeded; values are outside lower control limits. |

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

Company Name/Address:
**City of Bend- Laboratory**
62975 Boyd Acres Rd.
Bend, OR 97701

Billing Information:
City of Bend Laboratory
62975 Boyd Acres Rd
Bend, OR 97701

Report to: **Jeff Buystedt**

Email To: **jbuystedt@bendoregon.gov**

Project Description: Stormwater Analysis

City/State Collected: **Bend OR**

Phone: **541-420-6892**
Fax:

Client Project # C9I1802

Lab Project # C9I1802

Collected by (print): Dave Buchanan

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

***Rush?*** (Lab MUST Be Notified)
____ Same Day .....200%
____ Next Day .....100%
____ Two Day .....50%
____ Three Day .....25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | EPA 8270AP2 Pentachlorophenol 100 ml thiosulfate | EPA 8270AP2 Benzo(A)pyrene 100 ml Thiosulfate | EPA 8270AP2 Diphthalate 100 ml Thiosulfate | Rem./Contaminant | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Century-C9I1802-02 | Grab | | | 9/18/19 | 9:28 | 2 | X | X | X | | 01 |
| Brookswood-C9I1802-05 | Grab | | | 9/18/19 | 9:07 | 2 | X | X | X | | 02 |
| Boyd Acres-C9I1802-03 | Grab | | | 9/18/19 | 7:30 | 2 | X | X | X | | 03 |
| Ladera-C9I1802-06 | Grab | | | 9/18/19 | 8:45 | 2 | X | X | X | * Sample was left out at Room temperature overnight, | 04 |
| Dup. Brooks-C9I1802-07 | Grab | | | 9/18/19 | 9:07 | 2 | X | X | X | | 05 |
| Field Blank-C9I1802-08 | Grab | | | 9/18/19 | 9:47 | 2 | X | X | X | | 06 |
| Empire-C9I1802-04 | Grab | | | 9/18/19 | 7:45 | 2 | X | X | X | | 07 |
| Airport-C9I1802-01 | Grab | | | 9/18/19 | 8:29 | 2 | X | X | X | | 08 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABORATORIES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 114132

Table #

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via: **Fedex**

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other Stormwater

Remarks: ***Lowest Levels of detectionis required**

pH _____ Temp _____

Flow _____ Other _____

Hold #

| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) |
|---|---|---|---|
| [signature] | 9/18/19 | 10:23 | Fridge #2 |
| Fridge #2 | 9/19/19 | 8:40 | FedEx |
| Relinquished by : (Signature) | Date: | Time: | Received for lab by: (Signature) |
| | | | [signature] |

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.6-2-2.4 °C Bottles Received: 16

Date: 9/20 Time: 0845

Condition: (lab use only) OK

RAD SCREEN: <0.5 mR/hr

COC Seal Intact: X Y ___N ___NA

pH Checked: NCF:

# Pace Analytical National Center for Testing & Innovation
## Cooler Receipt Form

| | | |
|---|---|---|
| Client: | Bendwatol | 1141732 |
| Cooler Received/Opened On: 9/20/19 Temperature: | 2.4 | |
| Received By: RAFAH ABDLRAHMAN | | |
| Signature: | | |

| Receipt Check List | NP | Yes | No |
|---|---|---|---|
| COC Seal Present / Intact? | | / | |
| COC Signed / Accurate? | | / | |
| Bottles arrive intact? | | / | |
| Correct bottles used? | | / | |
| Sufficient volume sent? | | / | |
| If Applicable | | | |
| VOA Zero headspace? | | . | |
| Preservation Correct / Checked? | | | |

CITY OF BEND

**City of Bend Water Quality Lab**
**22395 McGrath Road**
**Mailing: 62975 Boyd Acres Road**
**Bend, OR 97701**
**541.317.3017 Phone**
**541.322.6345 Fax**

# ANALYTICAL DATA REPORT

January 07, 2020

## City of Bend - Stormwater Division

| | |
|---|---|
| Project: | Stormwater Monitoring 2019-20 |
| Samples Received: | December 12, 2019 |
| Work Order: | C9L1205 |
| Contact: | Dave Buchanan |
| | 62975 NE Boyd Acres Rd. |
| | Bend, OR 97701 |

The results in this report apply to the samples analyzed in accordance with the chain of custody document and are reported as rounded values. This analytical data report shall not be reproduced, except in its entirety, without written approval of the laboratory. If you have any questions concerning this report, please feel free to contact me at (541) 388-5585.

Report reviewed by,

Stefan D'Angona

Analytical Chemist

Company Name/Address:
**City of Bend- WRF**
62975 Boyd Acres Rd.
Bend, OR 97701

Billing Information:
City of Bend
62975 Boyd Acres Rd
Bend, OR 97701

Report to: **Jeff Buystedt**

Email To: **jbuystedt@bendoregon.gov**

Project Description: Stormwater Analysis

City/State Collected: **Bend OR**

Phone: **541-420-6892**
Fax:

Client Project #

Lab Project # 19L1205

Collected by (print): Dave Buchanan

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N____ Y ✓

***Rush?*** (Lab MUST Be Notified)
____ Same Day .....200%
____ Next Day .....100%
____ Two Day .....50%
____ Three Day .....25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

UTILITY DEPARTMENT
Water Quality Laboratory
22395 McGrath Rd Bend, Or 97701
Phone: 541-317-3017

L# 19L1205
Table #
Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | SM 3125 Pb, Cu, Zn | SM 3125 Optional Parameters | EPA 625 PAH's Di(2-ethylhexyl), Benzo(A)pyrene 8270 PCB 12-12-19 | | | | | | | Rem./Contaminant | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Century- | Grab | SW | N/A | 12/12/19 | 9:05 | 3 | X | X | X | | | | | | | | 02 |
| Brookswood | Grab | | N/A | 12/12/19 | 9:10 | 3 | X | X | X | | | | | | | | 05 |
| Boyd Acres | Grab | | N/A | 12/12/19 | 9:14 | 3 | X | X | X | | | | | | | | 03 |
| Empire | Grab | | N/A | 12/12/19 | 9:24 | 3 | X | X | X | | | | | | | | 04 |
| DUP-Empire | Grab | | N/A | 12/12/19 | 9:24 | 3 | X | X | X | | | | | | | | 07 |
| Airport | Grab | | N/A | 12/12/19 | 9:30 | 3 | X | X | X | | | | | | | | 01 |
| Ladera | Grab | | N/A | 12/12/19 | 9:56 | 3 | X | X | X | | | | | | | | 06 |
| Field Blank | Grab | | N/A | 12/12/19 | 9:41 | 3 | X | X | X | | | | | | | | 08 |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

* Matrix: BS - Biosolids GW - Groundwater WW - WasteWater DW - Drinking Water
SW - Stormwater
**SW**

Remarks:

pH _____ Temp 4.8

Flow _____ Other _____

Hold #

| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) |
|---|---|---|---|
| | 12-12-19 | 1002 | |
| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) |
| Relinquished by : (Signature) | Date: | Time: | Received for lab by: (Signature) |

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: °C Bottles Received:

Date: Time:

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

CITY OF BEND

**City of Bend Water Quality Lab**
**22395 McGrath Road**
**Mailing: 62975 Boyd Acres Road**
**Bend, OR 97701**
**541.317.3017 Phone**
**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Case Narrative

All samples were received within the correct temperature range, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all method detection limit (MDL) and reporting limit values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed below in this case narrative, a non-conformance form, or properly qualified within the sample results and defined in the Flags and Definitions section of this report.

C9L1205-07RE1 is the same sample as C9L1205-07. This is due to the subcontract lab needing a second run in order to achieve valid results for the target compounds. Due to limitations with our LIMS system these results are listed separately in the report.

CITY OF BEND

City of Bend Water Quality Lab
22395 McGrath Road
Mailing: 62975 Boyd Acres Road
Bend, OR 97701
541.317.3017 Phone
541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| DDW009618-Airport UIC | C9L1205-01 | Water | Semi Volatile Organic Compounds (GC/MS) | 12-Dec-19 08:38 | 12-Dec-19 10:02 |
| | | | Aluminum Total SM 3125 | | |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW003323-Century | C9L1205-02 | Water | Semi Volatile Organic Compounds (GC/MS) | 12-Dec-19 09:25 | 12-Dec-19 10:02 |
| | | | Aluminum Total SM 3125 | | |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |

CITY OF BEND

City of Bend Water Quality Lab
22395 McGrath Road
Mailing: 62975 Boyd Acres Road
Bend, OR 97701
541.317.3017 Phone
541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW003355-Boyd Acres Complex | C9L1205-03 | Water | Semi Volatile Organic Compounds (GC/MS) | 12-Dec-19 08:14 | 12-Dec-19 10:02 |
| | | | Aluminum Total SM 3125 | | |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |

CITY OF BEND

City of Bend Water Quality Lab
22395 McGrath Road
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Bend, OR 97701
541.317.3017 Phone
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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW008884-Empire | C9L1205-04 | Water | Semi Volatile Organic Compounds (GC/MS) | 12-Dec-19 08:24 | 12-Dec-19 10:02 |
| | | | Aluminum Total SM 3125 | | |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW003312-Brookswood | C9L1205-05 | Water | Semi Volatile Organic Compounds (GC/MS) | 12-Dec-19 09:10 | 12-Dec-19 10:02 |
| | | | Aluminum Total SM 3125 | | |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |

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|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| DDW003238-Ladera | C9L1205-06 | Water | Semi Volatile Organic Compounds (GC/MS) | 12-Dec-19 08:56 | 12-Dec-19 10:02 |
| | | | Aluminum Total SM 3125 | | |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| (Field Duplicate) Empire | C9L1205-07 | Water | Semi Volatile Organic Compounds (GC/MS) | 12-Dec-19 08:24 | 12-Dec-19 10:02 |
| | | | Aluminum Total SM 3125 | | |
| | | | Antimony Total SM 3125 | | |

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**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |
| | C9L1205-07RE1 | | Semi Volatile Organic Compounds (GC/MS) | | |
| Field Blank | C9L1205-08 | Water | | 12-Dec-19 09:41 | 12-Dec-19 10:02 |
| | | | Aluminum Total SM 3125 | | |
| | | | Antimony Total SM 3125 | | |
| | | | Arsenic Total SM 3125 | | |
| | | | Barium Total SM 3125 | | |
| | | | Beryllium Total SM 3125 | | |
| | | | Cadmium Total SM 3125 | | |
| | | | Calcium Total SM 3125 | | |

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**541.322.6345 Fax**

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Sample Summary

| Sample ID | Laboratory ID | Matrix | Analysis | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|---|
| | | | Chromium Total SM 3125 | | |
| | | | Cobalt Total SM 3125 | | |
| | | | Copper Total SM 3125 | | |
| | | | Iron Total SM 3125 | | |
| | | | Lead Total SM 3125 | | |
| | | | Magnesium Total SM 3125 | | |
| | | | Manganese Total SM 3125 | | |
| | | | Mercury Total SM 3125 | | |
| | | | Molybdenum Total SM 3125 | | |
| | | | Nickel Total SM 3125 | | |
| | | | Phosphorus Total SM 3125 | | |
| | | | Potassium Total SM 3125 | | |
| | | | Selenium Total SM 3125 | | |
| | | | Silver Total SM 3125 | | |
| | | | Sodium Total SM 3125 | | |
| | | | Thallium Total SM 3125 | | |
| | | | Tin Total SM 3125 | | |
| | | | Titanium Total SM 3125 | | |
| | | | Vanadium Total SM 3125 | | |
| | | | Zinc Total SM 3125 | | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW009618-Airport UIC

### C9L1205-01 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **199** | 10.0 | 1.69 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Antimony** | **1.05** | 0.100 | 0.0104 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Arsenic** | **0.470** | 0.100 | 0.0571 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Barium** | **19.6** | 0.200 | 0.117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Beryllium | ND | 0.100 | 0.0136 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Cadmium** | **0.123** | 0.100 | 0.0111 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Calcium** | **5170** | 100 | 5.61 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Chromium** | **2.12** | 0.200 | 0.0976 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Cobalt** | **0.203** | 0.200 | 0.0132 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Copper** | **10.6** | 0.200 | 0.0750 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Iron** | **184** | 10.0 | 0.876 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Lead** | **1.07** | 0.200 | 0.0117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Magnesium** | **1980** | 100 | 5.21 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Manganese** | **16.1** | 0.200 | 0.0204 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Molybdenum** | **0.524** | 0.500 | 0.116 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Nickel** | **1.08** | 0.200 | 0.0214 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Phosphorus | 88.9 J | 100 | 6.59 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Potassium** | **1520** | 100 | 6.13 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Selenium | 0.0860 J | 0.100 | 0.0315 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Sodium** | **3030** | 100 | 22.2 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Thallium | 0.0142 J | 0.100 | 0.00680 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Tin | 0.284 J | 1.00 | 0.259 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Titanium** | **11.5** | 0.200 | 0.0848 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Vanadium** | **2.18** | 0.500 | 0.156 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Zinc** | **2930** | 20.0 | 7.80 | ug/L | 20 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |

CITY OF BEND

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW009618-Airport UIC

### C9L1205-01 (Water)

### ESC LAB SCIENCES

**8270 D**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | ND | 1.00 | 0.0975 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Bis(2-ethylhexyl)phthalate | ND | 3.00 | 0.709 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Pentachlorophenol | ND | 10.0 | 0.313 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *64.5 %* | | | *10-155* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *67.3 %* | | | *10-130* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *45.6 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *61.7 %* | | | *10-127* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *28.2 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *68.8 %* | | | *10-128* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW003323-Century

### C9L1205-02 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **2430** | 50.0 | 8.47 | ug/L | 5 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Antimony** | **1.52** | 0.100 | 0.0104 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Arsenic** | **1.25** | 0.100 | 0.0571 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Barium** | **39.2** | 0.200 | 0.117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Beryllium | 0.0555 J | 0.100 | 0.0136 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Cadmium | 0.0340 J | 0.100 | 0.0111 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Calcium** | **18100** | 100 | 5.61 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Chromium** | **2.67** | 0.200 | 0.0976 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Cobalt** | **1.16** | 0.200 | 0.0132 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Copper** | **14.5** | 0.200 | 0.0750 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Iron** | **1640** | 10.0 | 0.876 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Lead** | **1.14** | 0.200 | 0.0117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Magnesium** | **9150** | 100 | 5.21 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Manganese** | **58.0** | 0.200 | 0.0204 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Molybdenum** | **2.34** | 0.500 | 0.116 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Nickel** | **3.49** | 0.200 | 0.0214 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Phosphorus** | **200** | 100 | 6.59 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Potassium** | **1960** | 100 | 6.13 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Selenium | 0.0341 J | 0.100 | 0.0315 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Sodium** | **4930** | 100 | 22.2 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Thallium | 0.0111 J | 0.100 | 0.00680 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Tin | 0.614 J | 1.00 | 0.259 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Titanium** | **109** | 0.200 | 0.0848 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Vanadium** | **4.33** | 0.500 | 0.156 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Zinc** | **222** | 5.00 | 1.95 | ug/L | 5 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW003323-Century

### C9L1205-02 (Water)

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **ESC LAB SCIENCES** | | | | | | | | | | |
| **8270 D** | | | | | | | | | | |
| Benzo(a)anthracene | ND | 1.11 | 0.108 | ug/l | 1.11 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Bis(2-ethylhexyl)phthalate | ND | 3.33 | 0.787 | ug/l | 1.11 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Pentachlorophenol | ND | 11.1 | 0.347 | ug/l | 1.11 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *71.6 %* | | | *10-155* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *65.3 %* | | | *10-130* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *45 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *63.1 %* | | | *10-127* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *28.3 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *68.4 %* | | | *10-128* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |

CITY OF BEND

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Bend, OR 97701
541.317.3017 Phone
541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW003355-Boyd Acres Complex

### C9L1205-03 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **781** | 10.0 | 1.69 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Antimony** | **0.234** | 0.100 | 0.0104 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Arsenic** | **0.601** | 0.100 | 0.0571 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Barium** | **14.6** | 0.200 | 0.117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Beryllium | 0.0184 J | 0.100 | 0.0136 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Cadmium | 0.0421 J | 0.100 | 0.0111 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Calcium** | **5670** | 100 | 5.61 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Chromium** | **1.97** | 0.200 | 0.0976 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Cobalt** | **0.897** | 0.200 | 0.0132 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Copper** | **5.79** | 0.200 | 0.0750 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Iron** | **1090** | 10.0 | 0.876 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Lead** | **0.620** | 0.200 | 0.0117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Magnesium** | **2520** | 100 | 5.21 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Manganese** | **48.0** | 0.200 | 0.0204 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Molybdenum | 0.477 J | 0.500 | 0.116 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Nickel** | **1.83** | 0.200 | 0.0214 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Phosphorus** | **139** | 100 | 6.59 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Potassium** | **1240** | 100 | 6.13 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Selenium | ND | 0.100 | 0.0315 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Sodium** | **6430** | 100 | 22.2 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Thallium | ND | 0.100 | 0.00680 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Tin | 0.326 J | 1.00 | 0.259 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Titanium** | **39.9** | 0.200 | 0.0848 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Vanadium** | **4.46** | 0.500 | 0.156 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Zinc** | **286** | 5.00 | 1.95 | ug/L | 5 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW003355-Boyd Acres Complex

### C9L1205-03 (Water)

### ESC LAB SCIENCES

**8270 D**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | ND | 1.00 | 0.0975 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Bis(2-ethylhexyl)phthalate | 1.21 J | 3.00 | 0.709 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | Ja |
| Pentachlorophenol | ND | 10.0 | 0.313 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *73.7 %* | | *10-155* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *70.4 %* | | *10-130* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *46.1 %* | | *10-120* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *63.4 %* | | *10-127* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *30.4 %* | | *10-120* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *74.9 %* | | *10-128* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW008884-Empire

### C9L1205-04 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **1690** | 10.0 | 1.69 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Antimony** | **1.77** | 0.100 | 0.0104 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Arsenic** | **6.17** | 0.100 | 0.0571 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Barium** | **152** | 0.200 | 0.117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Beryllium | 0.0488 J | 0.100 | 0.0136 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Cadmium** | **0.246** | 0.100 | 0.0111 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Calcium** | **62000** | 20000 | 1120 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Chromium** | **2.92** | 0.200 | 0.0976 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Cobalt** | **7.03** | 0.200 | 0.0132 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Copper** | **19.3** | 0.200 | 0.0750 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Iron** | **3820** | 2000 | 175 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Lead** | **0.779** | 0.200 | 0.0117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Magnesium** | **227000** | 20000 | 1040 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Manganese** | **511** | 40.0 | 4.08 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Molybdenum** | **10.6** | 0.500 | 0.116 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Nickel** | **14.4** | 0.200 | 0.0214 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Phosphorus** | **541** | 100 | 6.59 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Potassium** | **8310** | 100 | 6.13 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Selenium** | **0.151** | 0.100 | 0.0315 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Sodium** | **18700** | 100 | 22.2 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Thallium | 0.00980 J | 0.100 | 0.00680 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Tin | 0.471 J | 1.00 | 0.259 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Titanium** | **114** | 0.200 | 0.0848 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Vanadium** | **5.21** | 0.500 | 0.156 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Zinc** | **299** | 200 | 78.0 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW008884-Empire

### C9L1205-04 (Water)

### ESC LAB SCIENCES

**8270 D**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | ND | 1.00 | 0.0975 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Bis(2-ethylhexyl)phthalate | 1.21 J | 3.00 | 0.709 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | Ja |
| Pentachlorophenol | ND | 10.0 | 0.313 | ug/l | 1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *78.4 %* | | *10-155* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *60.4 %* | | *10-130* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *31.6 %* | | *10-120* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *54.1 %* | | *10-127* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *22.3 %* | | *10-120* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *77.1 %* | | *10-128* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW003312-Brookswood

### C9L1205-05 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **2490** | 10.0 | 1.69 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Antimony** | **2.06** | 0.100 | 0.0104 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Arsenic** | **3.70** | 0.100 | 0.0571 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Barium** | **147** | 0.200 | 0.117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Beryllium | 0.0684 J | 0.100 | 0.0136 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Cadmium** | **0.228** | 0.100 | 0.0111 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Calcium** | **52400** | 10000 | 561 | ug/L | 100 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Chromium** | **3.33** | 0.200 | 0.0976 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Cobalt** | **5.88** | 0.200 | 0.0132 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Copper** | **26.0** | 0.200 | 0.0750 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Iron** | **2480** | 1000 | 87.6 | ug/L | 100 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Lead** | **1.07** | 0.200 | 0.0117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Magnesium** | **146000** | 10000 | 521 | ug/L | 100 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Manganese** | **482** | 20.0 | 2.04 | ug/L | 100 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Molybdenum** | **4.18** | 0.500 | 0.116 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Nickel** | **11.4** | 0.200 | 0.0214 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Phosphorus** | **694** | 100 | 6.59 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Potassium** | **5500** | 100 | 6.13 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Selenium** | **0.115** | 0.100 | 0.0315 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Sodium** | **12100** | 100 | 22.2 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Thallium | 0.0140 J | 0.100 | 0.00680 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Tin | 0.708 J | 1.00 | 0.259 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Titanium** | **124** | 0.200 | 0.0848 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Vanadium** | **4.99** | 0.500 | 0.156 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Zinc** | **400** | 100 | 39.0 | ug/L | 100 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW003312-Brookswood

### C9L1205-05 (Water)

### ESC LAB SCIENCES

**8270 D**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | ND | 1.25 | 0.122 | ug/l | 1.25 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Bis(2-ethylhexyl)phthalate | ND | 3.75 | 0.886 | ug/l | 1.25 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Pentachlorophenol | ND | 12.5 | 0.391 | ug/l | 1.25 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *75.6 %* | | | *10-155* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *69.9 %* | | | *10-130* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *43.2 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *62.2 %* | | | *10-127* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *27.2 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *80.8 %* | | | *10-128* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW003238-Ladera

### C9L1205-06 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **1840** | 10.0 | 1.69 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Antimony** | **1.22** | 0.100 | 0.0104 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Arsenic** | **1.23** | 0.100 | 0.0571 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Barium** | **114** | 0.200 | 0.117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Beryllium | 0.0912 J | 0.100 | 0.0136 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Cadmium** | **0.118** | 0.100 | 0.0111 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Calcium** | **43600** | 500 | 28.1 | ug/L | 5 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Chromium** | **4.46** | 0.200 | 0.0976 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Cobalt** | **2.58** | 0.200 | 0.0132 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Copper** | **11.8** | 0.200 | 0.0750 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Iron** | **4280** | 50.0 | 4.38 | ug/L | 5 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Lead** | **9.49** | 0.200 | 0.0117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Magnesium** | **14400** | 100 | 5.21 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Manganese** | **330** | 1.00 | 0.102 | ug/L | 5 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Molybdenum** | **1.21** | 0.500 | 0.116 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Nickel** | **10.4** | 0.200 | 0.0214 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Phosphorus** | **1550** | 100 | 6.59 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Potassium** | **10100** | 100 | 6.13 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Selenium** | **0.109** | 0.100 | 0.0315 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Sodium** | **28500** | 100 | 22.2 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Thallium | 0.00850 J | 0.100 | 0.00680 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Tin | 0.542 J | 1.00 | 0.259 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Titanium** | **90.3** | 0.200 | 0.0848 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Vanadium** | **5.47** | 0.500 | 0.156 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Zinc** | **289** | 5.00 | 1.95 | ug/L | 5 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |

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|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## DDW003238-Ladera

### C9L1205-06 (Water)

### ESC LAB SCIENCES

**8270 D**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | ND | 10.0 | 0.975 | ug/l | 10 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Bis(2-ethylhexyl)phthalate | ND | 30.0 | 7.09 | ug/l | 10 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Pentachlorophenol | ND | 100 | 3.13 | ug/l | 10 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *74 %* | | *10-155* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *71.5 %* | | *10-130* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *47.1 %* | | *10-120* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *78.2 %* | | *10-127* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *34.9 %* | | *10-120* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *69 %* | | *10-128* | | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |

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|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## (Field Duplicate) Empire

### C9L1205-07 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **1960** | 10.0 | 1.69 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Antimony** | **1.80** | 0.100 | 0.0104 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Arsenic** | **6.06** | 0.100 | 0.0571 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Barium** | **158** | 0.200 | 0.117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Beryllium | 0.0609 J | 0.100 | 0.0136 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Cadmium** | **0.245** | 0.100 | 0.0111 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Calcium** | **62000** | 20000 | 1120 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Chromium** | **3.96** | 0.200 | 0.0976 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Cobalt** | **7.23** | 0.200 | 0.0132 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Copper** | **23.5** | 0.200 | 0.0750 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Iron** | **4290** | 2000 | 175 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Lead** | **1.13** | 0.200 | 0.0117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Magnesium** | **226000** | 20000 | 1040 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Manganese** | **523** | 40.0 | 4.08 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Molybdenum** | **10.4** | 0.500 | 0.116 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Nickel** | **14.2** | 0.200 | 0.0214 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Phosphorus** | **646** | 100 | 6.59 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Potassium** | **8210** | 100 | 6.13 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Selenium** | **0.156** | 0.100 | 0.0315 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Sodium** | **18300** | 100 | 22.2 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Thallium | 0.00880 J | 0.100 | 0.00680 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Tin | 0.553 J | 1.00 | 0.259 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Titanium** | **147** | 0.200 | 0.0848 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Vanadium** | **6.41** | 0.500 | 0.156 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Zinc** | **346** | 200 | 78.0 | ug/L | 200 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |

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| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## (Field Duplicate) Empire

### C9L1205-07 (Water)

### ESC LAB SCIENCES

**8270 D**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| Pentachlorophenol | ND | 11.1 | 0.347 | ug/l | 1.11 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *73.4 %* | | | *10-155* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *71.9 %* | | | *10-130* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *43.2 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *69.5 %* | | | *10-127* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *27.9 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *81.6 %* | | | *10-128* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |

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|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## (Field Duplicate) Empire

### C9L1205-07RE1 (Water)

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **ESC LAB SCIENCES** | | | | | | | | | | |
| **8270 D** | | | | | | | | | | |
| Benzo(a)anthracene | ND | 11.1 | 1.08 | ug/l | 11.1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| Bis(2-ethylhexyl)phthalate | ND | 33.3 | 7.87 | ug/l | 11.1 | WG139700 | 16-Dec-19 | 16-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *83.3 %* | | | *10-155* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *74.2 %* | | | *10-130* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *42 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *73.4 %* | | | *10-127* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *27.3 %* | | | *10-120* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *78.1 %* | | | *10-128* | *WG139703* | *16-Dec-19* | *16-Dec-19* | *8270 D* | |

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|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Field Blank

### C9L1205-08 (Water)

### City of Bend Water Quality Laboratory

**Metals by Method SM 3125**

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Aluminum** | **25.5** | 10.0 | 1.69 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Antimony | 0.0114 J | 0.100 | 0.0104 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Arsenic | ND | 0.100 | 0.0571 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Barium** | **0.230** | 0.200 | 0.117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Beryllium | ND | 0.100 | 0.0136 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Cadmium | ND | 0.100 | 0.0111 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Calcium | 54.6 J | 100 | 5.61 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| **Chromium** | **2.14** | 0.200 | 0.0976 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Cobalt | ND | 0.200 | 0.0132 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Copper | 0.161 J | 0.200 | 0.0750 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Iron | 7.39 J | 10.0 | 0.876 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Lead | 0.0207 J | 0.200 | 0.0117 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Magnesium | 8.42 J | 100 | 5.21 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Manganese | 0.0939 J | 0.200 | 0.0204 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Mercury | ND | 0.0200 | 0.00960 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Molybdenum | 0.215 J | 0.500 | 0.116 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Nickel | 0.0812 J | 0.200 | 0.0214 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Phosphorus | ND | 100 | 6.59 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Potassium | 15.6 J | 100 | 6.13 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Selenium | ND | 0.100 | 0.0315 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Silver | ND | 0.200 | 0.0544 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Sodium** | **351** | 100 | 22.2 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Thallium | 0.0170 J | 0.100 | 0.00680 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | J |
| Tin | ND | 1.00 | 0.259 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Titanium** | **0.223** | 0.200 | 0.0848 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| Vanadium | ND | 0.500 | 0.156 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |
| **Zinc** | **191** | 1.00 | 0.390 | ug/L | 1 | 19L1607 | 16-Dec-19 | 26-Dec-19 | SM 3125 | |

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|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Field Blank

### C9L1205-08 (Water)

| Analyte | Result | Reporting Limit | MDL | Units | Dilution | Batch | Prepared | Analyzed | Method | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **ESC LAB SCIENCES** | | | | | | | | | | |
| **8270 D** | | | | | | | | | | |
| Benzo(a)anthracene | ND | 1.00 | 0.0975 | ug/l | 1 | WG139744 | 17-Dec-19 | 18-Dec-19 | 8270 D | U |
| Bis(2-ethylhexyl)phthalate | ND | 3.00 | 0.709 | ug/l | 1 | WG139744 | 17-Dec-19 | 18-Dec-19 | 8270 D | U |
| Pentachlorophenol | ND | 10.0 | 0.313 | ug/l | 1 | WG139744 | 17-Dec-19 | 18-Dec-19 | 8270 D | U |
| *Surrogate: 2,4,6-Tribromophenol* | | *65.4 %* | | | *10-155* | *WG139744* | *17-Dec-19* | *18-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorobiphenyl* | | *62.7 %* | | | *10-130* | *WG139744* | *17-Dec-19* | *18-Dec-19* | *8270 D* | |
| *Surrogate: 2-Fluorophenol* | | *30.4 %* | | | *10-120* | *WG139744* | *17-Dec-19* | *18-Dec-19* | *8270 D* | |
| *Surrogate: Nitrobenzene-d5* | | *56.5 %* | | | *10-127* | *WG139744* | *17-Dec-19* | *18-Dec-19* | *8270 D* | |
| *Surrogate: Phenol-d5* | | *19 %* | | | *10-120* | *WG139744* | *17-Dec-19* | *18-Dec-19* | *8270 D* | |
| *Surrogate: p-Terphenyl-d14* | | *63.5 %* | | | *10-128* | *WG139744* | *17-Dec-19* | *18-Dec-19* | *8270 D* | |

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| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Metals by Method SM 3125 - Quality Control

## City of Bend Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 19L1607 - EPA 200.8** | | | | | | | | | | |
| **Blank (19L1607-BLK1)** | | | | Prepared: 16-Dec-19 Analyzed: 26-Dec-19 | | | | | | |
| Aluminum | ND | 10.0 | ug/L | | | | | | | |
| Antimony | ND | 0.100 | " | | | | | | | |
| Arsenic | ND | 0.100 | " | | | | | | | |
| Barium | ND | 0.200 | " | | | | | | | |
| Beryllium | ND | 0.100 | " | | | | | | | |
| Cadmium | ND | 0.100 | " | | | | | | | |
| Calcium | ND | 100 | " | | | | | | | |
| Chromium | ND | 0.200 | " | | | | | | | |
| Cobalt | ND | 0.200 | " | | | | | | | |
| Copper | ND | 0.200 | " | | | | | | | |
| Iron | ND | 10.0 | " | | | | | | | |
| Lead | ND | 0.200 | " | | | | | | | |
| Magnesium | ND | 100 | " | | | | | | | |
| Manganese | ND | 0.200 | " | | | | | | | |
| Mercury | ND | 0.0200 | " | | | | | | | |
| Molybdenum | ND | 0.500 | " | | | | | | | |
| Nickel | ND | 0.200 | " | | | | | | | |
| Phosphorus | ND | 100 | " | | | | | | | |
| Potassium | ND | 100 | " | | | | | | | |
| Selenium | ND | 0.100 | " | | | | | | | |
| Silver | ND | 0.200 | " | | | | | | | |
| Sodium | ND | 100 | " | | | | | | | |
| Thallium | ND | 0.100 | " | | | | | | | |
| Tin | ND | 1.00 | " | | | | | | | |
| Titanium | ND | 0.200 | " | | | | | | | |
| Vanadium | ND | 0.500 | " | | | | | | | |
| Zinc | 0.622 | 1.00 | " | | | | | | | J |

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|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Metals by Method SM 3125 - Quality Control

## City of Bend Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 19L1607 - EPA 200.8** | | | | | | | | | | |
| **LCS (19L1607-BS1)** | | | | Prepared: 16-Dec-19 Analyzed: 26-Dec-19 | | | | | | |
| Aluminum | 95.3 | 10.0 | ug/L | 100 | | 95.3 | 70-130 | | | |
| Antimony | 4.95 | 0.100 | " | 5.00 | | 99.0 | 70-130 | | | |
| Arsenic | 4.90 | 0.100 | " | 5.00 | | 98.1 | 70-130 | | | |
| Barium | 9.85 | 0.200 | " | 10.0 | | 98.5 | 70-130 | | | |
| Beryllium | 4.97 | 0.100 | " | 5.00 | | 99.4 | 70-130 | | | |
| Cadmium | 4.94 | 0.100 | " | 5.00 | | 98.7 | 70-130 | | | |
| Calcium | 938 | 100 | " | 1000 | | 93.8 | 70-130 | | | |
| Chromium | 9.72 | 0.200 | " | 10.0 | | 97.2 | 70-130 | | | |
| Cobalt | 9.79 | 0.200 | " | 10.0 | | 97.9 | 70-130 | | | |
| Copper | 9.85 | 0.200 | " | 10.0 | | 98.5 | 70-130 | | | |
| Iron | 104 | 10.0 | " | 100 | | 104 | 70-130 | | | |
| Lead | 9.63 | 0.200 | " | 10.0 | | 96.3 | 70-130 | | | |
| Magnesium | 1020 | 100 | " | 1000 | | 102 | 70-130 | | | |
| Manganese | 9.59 | 0.200 | " | 10.0 | | 95.9 | 70-130 | | | |
| Mercury | 0.0710 | 0.0200 | " | 0.100 | | 71.0 | 70-130 | | | |
| Molybdenum | 9.80 | 0.500 | " | 10.0 | | 98.0 | 70-130 | | | |
| Nickel | 9.91 | 0.200 | " | 10.0 | | 99.1 | 70-130 | | | |
| Phosphorus | 957 | 100 | " | 1000 | | 95.7 | 70-130 | | | |
| Potassium | 1000 | 100 | " | 1000 | | 100 | 70-130 | | | |
| Selenium | 4.94 | 0.100 | " | 5.00 | | 98.8 | 70-130 | | | |
| Silver | 10.4 | 0.200 | " | 10.0 | | 104 | 70-130 | | | |
| Sodium | 1030 | 100 | " | 1000 | | 103 | 70-130 | | | |
| Thallium | 4.75 | 0.100 | " | 5.00 | | 94.9 | 70-130 | | | |
| Tin | 9.74 | 1.00 | " | 10.0 | | 97.4 | 70-130 | | | |
| Titanium | 9.89 | 0.200 | " | 10.0 | | 98.9 | 70-130 | | | |
| Vanadium | 9.58 | 0.500 | " | 10.0 | | 95.8 | 70-130 | | | |
| Zinc | 10.3 | 1.00 | " | 10.0 | | 103 | 70-130 | | | |

CITY OF BEND

City of Bend Water Quality Lab
22395 McGrath Road
Mailing: 62975 Boyd Acres Road
Bend, OR 97701
541.317.3017 Phone
541.322.6345 Fax

| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Metals by Method SM 3125 - Quality Control

## City of Bend Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 19L1607 - EPA 200.8** | | | | | | | | | | |
| **Matrix Spike (19L1607-MS1)** | | **Source: C9L1205-04** | | Prepared: 16-Dec-19 Analyzed: 26-Dec-19 | | | | | | |
| Aluminum | 1960 | 10.0 | ug/L | 100 | 1690 | 277 | 75-125 | | | QM-4X |
| Antimony | 6.61 | 0.100 | " | 5.00 | 1.77 | 96.9 | 75-125 | | | |
| Arsenic | 11.1 | 0.100 | " | 5.00 | 6.17 | 98.4 | 75-125 | | | |
| Barium | 165 | 0.200 | " | 10.0 | 152 | 134 | 75-125 | | | QM-4X |
| Beryllium | 6.53 | 0.100 | " | 5.00 | 0.0488 | 130 | 75-125 | | | QM-05 |
| Cadmium | 5.18 | 0.100 | " | 5.00 | 0.246 | 98.7 | 75-125 | | | |
| Calcium | 61500 | 20000 | " | 1000 | 62000 | NR | 75-125 | | | QM-4X |
| Chromium | 12.7 | 0.200 | " | 10.0 | 2.92 | 97.3 | 75-125 | | | |
| Cobalt | 16.4 | 0.200 | " | 10.0 | 7.03 | 93.9 | 75-125 | | | |
| Copper | 28.7 | 0.200 | " | 10.0 | 19.3 | 93.8 | 75-125 | | | |
| Iron | 4020 | 2000 | " | 100 | 3820 | 201 | 75-125 | | | QM-4X |
| Lead | 9.48 | 0.200 | " | 10.0 | 0.779 | 87.0 | 75-125 | | | |
| Magnesium | 226000 | 20000 | " | 1000 | 227000 | NR | 75-125 | | | QM-4X |
| Manganese | 507 | 40.0 | " | 10.0 | 511 | NR | 75-125 | | | QM-4X |
| Mercury | 0.0677 | 0.0200 | " | 0.100 | ND | 67.7 | 75-125 | | | QM-05 |
| Molybdenum | 21.3 | 0.500 | " | 10.0 | 10.6 | 107 | 75-125 | | | |
| Nickel | 23.0 | 0.200 | " | 10.0 | 14.4 | 86.1 | 75-125 | | | |
| Phosphorus | 1580 | 100 | " | 1000 | 541 | 104 | 75-125 | | | |
| Potassium | 9350 | 100 | " | 1000 | 8310 | 105 | 75-125 | | | |
| Selenium | 4.97 | 0.100 | " | 5.00 | 0.151 | 96.4 | 75-125 | | | |
| Silver | 10.2 | 0.200 | " | 10.0 | ND | 102 | 75-125 | | | |
| Sodium | 19800 | 100 | " | 1000 | 18700 | 106 | 75-125 | | | |
| Thallium | 4.39 | 0.100 | " | 5.00 | 0.00980 | 87.5 | 75-125 | | | |
| Tin | 9.67 | 1.00 | " | 10.0 | 0.471 | 91.9 | 75-125 | | | |
| Titanium | 130 | 0.200 | " | 10.0 | 114 | 164 | 75-125 | | | QM-4X |
| Vanadium | 15.5 | 0.500 | " | 10.0 | 5.21 | 103 | 75-125 | | | |
| Zinc | 295 | 200 | " | 10.0 | 299 | NR | 75-125 | | | QM-4X |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Metals by Method SM 3125 - Quality Control

## City of Bend Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 19L1607 - EPA 200.8** | | | | | | | | | | |
| **Matrix Spike Dup (19L1607-MSD1)** | | **Source: C9L1205-04** | | Prepared: 16-Dec-19 Analyzed: 26-Dec-19 | | | | | | |
| Aluminum | 2050 | 10.0 | ug/L | 100 | 1690 | 367 | 75-125 | 4.51 | 20 | QM-4X |
| Antimony | 6.57 | 0.100 | " | 5.00 | 1.77 | 96.0 | 75-125 | 0.653 | 20 | |
| Arsenic | 11.1 | 0.100 | " | 5.00 | 6.17 | 98.6 | 75-125 | 0.103 | 20 | |
| Barium | 165 | 0.200 | " | 10.0 | 152 | 132 | 75-125 | 0.117 | 20 | QM-4X |
| Beryllium | 7.27 | 0.100 | " | 5.00 | 0.0488 | 144 | 75-125 | 10.7 | 20 | QM-05 |
| Cadmium | 5.15 | 0.100 | " | 5.00 | 0.246 | 98.0 | 75-125 | 0.624 | 20 | |
| Calcium | 67000 | 100 | " | 1000 | 62000 | 498 | 75-125 | 8.47 | 20 | QM-4X |
| Chromium | 12.8 | 0.200 | " | 10.0 | 2.92 | 99.1 | 75-125 | 1.37 | 20 | |
| Cobalt | 16.5 | 0.200 | " | 10.0 | 7.03 | 94.8 | 75-125 | 0.568 | 20 | |
| Copper | 28.8 | 0.200 | " | 10.0 | 19.3 | 94.9 | 75-125 | 0.377 | 20 | |
| Iron | 4100 | 2000 | " | 100 | 3820 | 279 | 75-125 | 1.92 | 20 | QM-4X |
| Lead | 9.48 | 0.200 | " | 10.0 | 0.779 | 87.0 | 75-125 | 0.0285 | 20 | |
| Magnesium | 227000 | 20000 | " | 1000 | 227000 | NR | 75-125 | 0.592 | 20 | QM-4X |
| Manganese | 525 | 40.0 | " | 10.0 | 511 | 143 | 75-125 | 3.52 | 20 | QM-4X |
| Mercury | 0.0643 | 0.0200 | " | 0.100 | ND | 64.3 | 75-125 | 5.15 | 20 | QM-05 |
| Molybdenum | 21.4 | 0.500 | " | 10.0 | 10.6 | 108 | 75-125 | 0.249 | 20 | |
| Nickel | 23.1 | 0.200 | " | 10.0 | 14.4 | 87.4 | 75-125 | 0.586 | 20 | |
| Phosphorus | 1590 | 100 | " | 1000 | 541 | 105 | 75-125 | 0.528 | 20 | |
| Potassium | 9370 | 100 | " | 1000 | 8310 | 107 | 75-125 | 0.203 | 20 | |
| Selenium | 5.05 | 0.100 | " | 5.00 | 0.151 | 98.0 | 75-125 | 1.60 | 20 | |
| Silver | 10.4 | 0.200 | " | 10.0 | ND | 104 | 75-125 | 1.34 | 20 | |
| Sodium | 19800 | 100 | " | 1000 | 18700 | 114 | 75-125 | 0.403 | 20 | |
| Thallium | 4.40 | 0.100 | " | 5.00 | 0.00980 | 87.9 | 75-125 | 0.387 | 20 | |
| Tin | 9.76 | 1.00 | " | 10.0 | 0.471 | 92.9 | 75-125 | 0.937 | 20 | |
| Titanium | 136 | 0.200 | " | 10.0 | 114 | 222 | 75-125 | 4.30 | 20 | QM-4X |
| Vanadium | 15.7 | 0.500 | " | 10.0 | 5.21 | 105 | 75-125 | 1.35 | 20 | |
| Zinc | 299 | 200 | " | 10.0 | 299 | NR | 75-125 | 1.38 | 20 | QM-4X |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## 8270 D - Quality Control

## ESC LAB SCIENCES

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch WG1397003 - 3510C** | | | | | | | | | | |
| **LCS (R3482942-1)** | | | | Prepared & Analyzed: 16-Dec-19 | | | | | | |
| Benzo(a)anthracene | 38.5 | 1.00 | ug/l | 50.0 | | 77.0 | 47.0-120 | | | |
| Bis(2-ethylhexyl)phthalate | 39.2 | 3.00 | " | 50.0 | | 78.4 | 43.0-122 | | | |
| Pentachlorophenol | 44.4 | 10.0 | " | 50.0 | | 88.8 | 23.0-120 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *15.3* | | " | *20.0* | | *76.5* | *10.0-155* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7.77* | | " | *10.0* | | *77.7* | *10.0-130* | | | |
| *Surrogate: 2-Fluorophenol* | *10.4* | | " | *20.0* | | *52.0* | *10.0-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.19* | | " | *10.0* | | *61.9* | *10.0-127* | | | |
| *Surrogate: Phenol-d5* | *6.51* | | " | *20.0* | | *32.6* | *10.0-120* | | | |
| *Surrogate: p-Terphenyl-d14* | *8.26* | | " | *10.0* | | *82.6* | *10.0-128* | | | |
| **LCSD (R3482942-2)** | | **Source: R3482942-1** | | Prepared & Analyzed: 16-Dec-19 | | | | | | |
| Benzo(a)anthracene | 37.8 | 1.00 | ug/l | 50.0 | | 75.6 | 47.0-120 | 1.83 | 20 | |
| Bis(2-ethylhexyl)phthalate | 40.5 | 3.00 | " | 50.0 | | 81.0 | 43.0-122 | 3.26 | 20 | |
| Pentachlorophenol | 43.4 | 10.0 | " | 50.0 | | 86.8 | 23.0-120 | 2.28 | 25 | |
| *Surrogate: 2,4,6-Tribromophenol* | *15.1* | | " | *20.0* | | *75.5* | *10.0-155* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7.50* | | " | *10.0* | | *75.0* | *10.0-130* | | | |
| *Surrogate: 2-Fluorophenol* | *10.1* | | " | *20.0* | | *50.5* | *10.0-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.01* | | " | *10.0* | | *60.1* | *10.0-127* | | | |
| *Surrogate: Phenol-d5* | *6.31* | | " | *20.0* | | *31.6* | *10.0-120* | | | |
| *Surrogate: p-Terphenyl-d14* | *7.87* | | " | *10.0* | | *78.7* | *10.0-128* | | | |
| **BLANK (R3482942-3)** | | | | Prepared & Analyzed: 16-Dec-19 | | | | | | |
| Benzo(a)anthracene | ND | 1.00 | ug/l | | | | - | | | U |
| Bis(2-ethylhexyl)phthalate | ND | 3.00 | " | | | | - | | | U |
| Pentachlorophenol | ND | 10.0 | " | | | | - | | | U |
| *Surrogate: 2,4,6-Tribromophenol* | *14.3* | | " | *20.0* | | *71.5* | *10.0-155* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *7.14* | | " | *10.0* | | *71.4* | *10.0-130* | | | |
| *Surrogate: 2-Fluorophenol* | *9.90* | | " | *20.0* | | *49.5* | *10.0-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *6.76* | | " | *10.0* | | *67.6* | *10.0-127* | | | |
| *Surrogate: Phenol-d5* | *6.45* | | " | *20.0* | | *32.3* | *10.0-120* | | | |
| *Surrogate: p-Terphenyl-d14* | *7.56* | | " | *10.0* | | *75.6* | *10.0-128* | | | |

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## 8270 D - Quality Control

## ESC LAB SCIENCES

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch WG1397442 - 3510C** | | | | | | | | | | |
| **LCS (R3483486-1)** | | | | Prepared & Analyzed: 17-Dec-19 | | | | | | |
| Benzo(a)anthracene | 31.3 | 1.00 | ug/l | 50.0 | | 62.6 | 47.0-120 | | | |
| Bis(2-ethylhexyl)phthalate | 31.9 | 3.00 | " | 50.0 | | 63.8 | 43.0-122 | | | |
| Pentachlorophenol | 35.4 | 10.0 | " | 50.0 | | 70.8 | 23.0-120 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *13.3* | | *"* | *20.0* | | *66.5* | *10.0-155* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.12* | | *"* | *10.0* | | *61.2* | *10.0-130* | | | |
| *Surrogate: 2-Fluorophenol* | *6.40* | | *"* | *20.0* | | *32.0* | *10.0-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *4.57* | | *"* | *10.0* | | *45.7* | *10.0-127* | | | |
| *Surrogate: Phenol-d5* | *3.86* | | *"* | *20.0* | | *19.3* | *10.0-120* | | | |
| *Surrogate: p-Terphenyl-d14* | *6.68* | | *"* | *10.0* | | *66.8* | *10.0-128* | | | |
| **LCSD (R3483486-2)** | | **Source: R3483486-1** | | Prepared & Analyzed: 17-Dec-19 | | | | | | |
| Benzo(a)anthracene | 31.8 | 1.00 | ug/l | 50.0 | | 63.6 | 47.0-120 | 1.58 | 20 | |
| Bis(2-ethylhexyl)phthalate | 31.5 | 3.00 | " | 50.0 | | 63.0 | 43.0-122 | 1.26 | 20 | |
| Pentachlorophenol | 35.5 | 10.0 | " | 50.0 | | 71.0 | 23.0-120 | 0.282 | 25 | |
| *Surrogate: 2,4,6-Tribromophenol* | *13.4* | | *"* | *20.0* | | *67.0* | *10.0-155* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.13* | | *"* | *10.0* | | *61.3* | *10.0-130* | | | |
| *Surrogate: 2-Fluorophenol* | *5.71* | | *"* | *20.0* | | *28.5* | *10.0-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *4.56* | | *"* | *10.0* | | *45.6* | *10.0-127* | | | |
| *Surrogate: Phenol-d5* | *3.52* | | *"* | *20.0* | | *17.6* | *10.0-120* | | | |
| *Surrogate: p-Terphenyl-d14* | *6.57* | | *"* | *10.0* | | *65.7* | *10.0-128* | | | |
| **BLANK (R3483486-3)** | | | | Prepared & Analyzed: 17-Dec-19 | | | | | | |
| Benzo(a)anthracene | ND | 1.00 | ug/l | | | | - | | | U |
| Bis(2-ethylhexyl)phthalate | ND | 3.00 | " | | | | - | | | U |
| Pentachlorophenol | ND | 10.0 | " | | | | - | | | U |
| *Surrogate: 2,4,6-Tribromophenol* | *12.6* | | *"* | *20.0* | | *63.0* | *10.0-155* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *6.35* | | *"* | *10.0* | | *63.5* | *10.0-130* | | | |
| *Surrogate: 2-Fluorophenol* | *6.24* | | *"* | *20.0* | | *31.2* | *10.0-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *5.84* | | *"* | *10.0* | | *58.4* | *10.0-127* | | | |
| *Surrogate: Phenol-d5* | *3.93* | | *"* | *20.0* | | *19.7* | *10.0-120* | | | |
| *Surrogate: p-Terphenyl-d14* | *6.59* | | *"* | *10.0* | | *65.9* | *10.0-128* | | | |

CITY OF BEND

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| | | | |
|---|---|---|---|
| Client: | City of Bend - Stormwater Division | Work Order: | C9L1205 |
| Project: | Stormwater Monitoring 2019-20 | Reported: | 07-Jan-20 13:37 |
| Project Number: | [none] | | |

## Flags and Definitions

| | |
|---|---|
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| QM-4X | The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits. |
| QM-05 | The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable. |
| Ja | The identification of the analyte is acceptable; the reported value is an estimate. |
| J | Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |