

# ***Appendices***

## APPENDIX H. MONITORING

### ***H.1. Field Monitoring Notebook***

### ***H.2. Sampling Results***





# *Appendices*

## APPENDIX H. MONITORING

### *H.1. Field Monitoring Notebook*







UTILITY DEPARTMENT

# FY2020-2021 City of Bend, Stormwater Field Monitoring Notebook

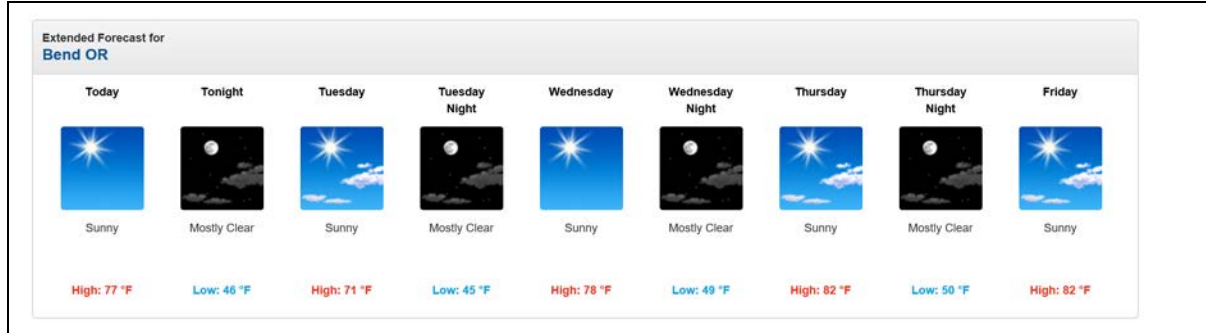




Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 7/6/2020



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

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

**Forecast (20 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**



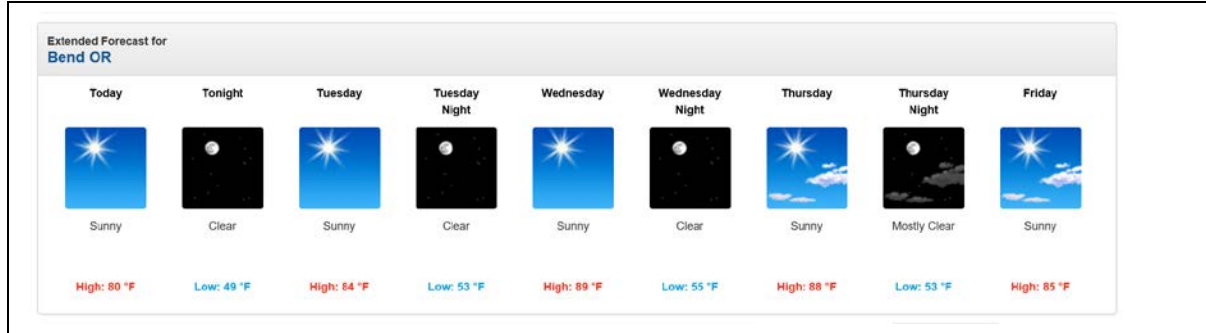
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 7/13/2020



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

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

**Forecast (20 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**



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



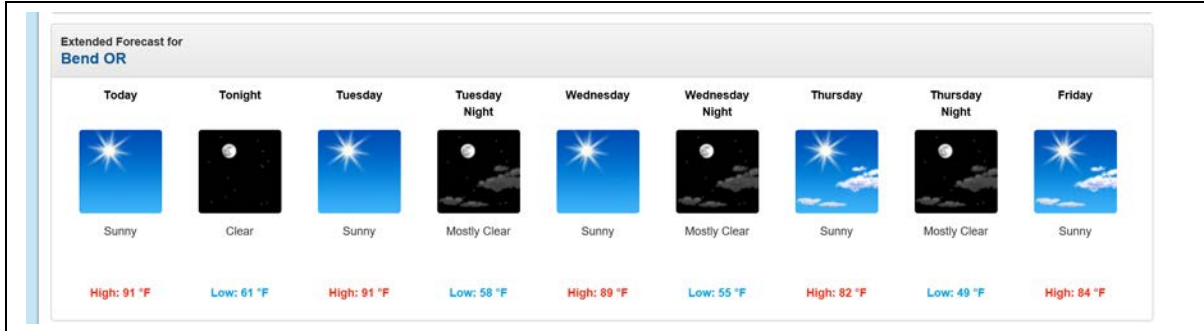


UTILITY DEPARTMENT

Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 7/20/2020



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

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

**Forecast (20 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**



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

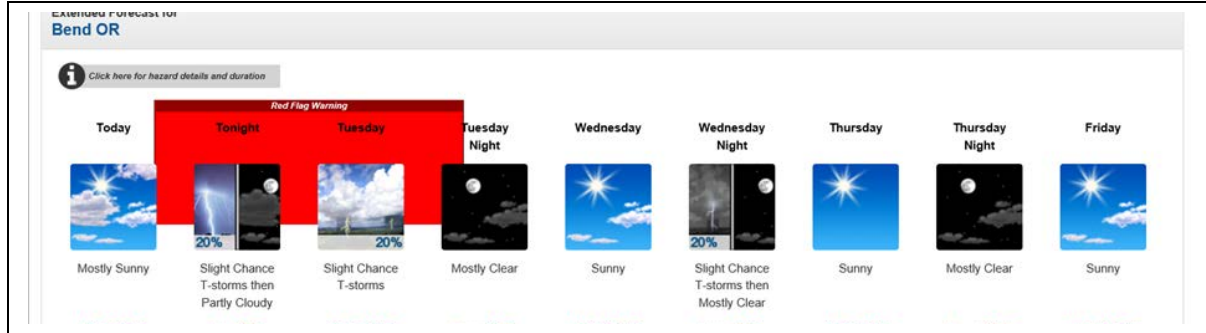


UTILITY DEPARTMENT

Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 7/27/2020



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

% Chance of Precipitation: 20%  
 Storm Duration: 2 Hrs.  
 Storm Type: T-Storms

**Forecast (20 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**



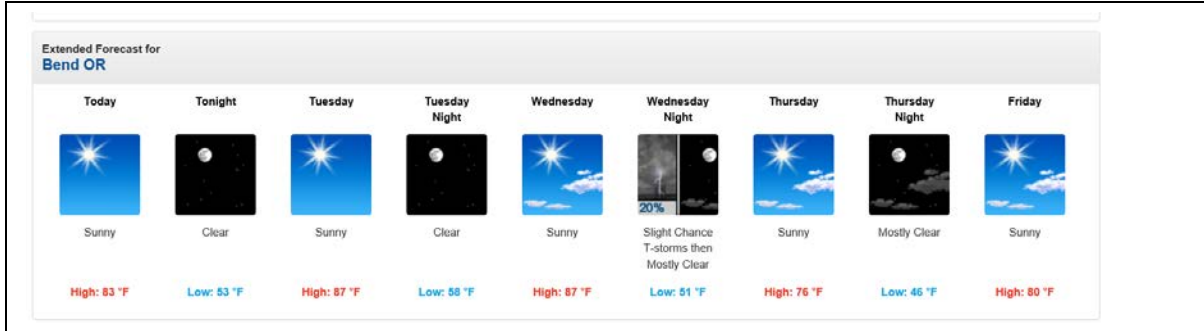
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

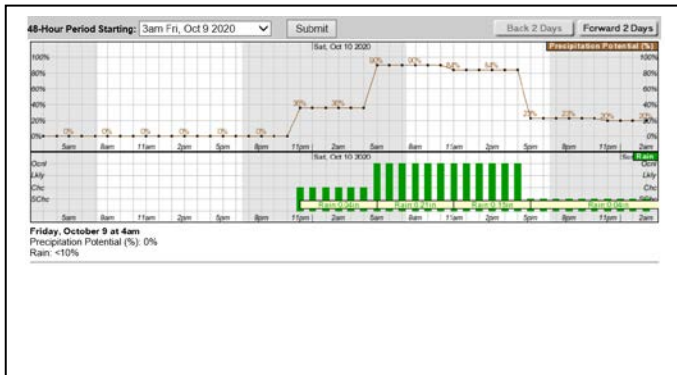
Forecast Read Date: 8/3/2020



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

% Chance of Precipitation: 20%  
 Storm Duration: Na  
 Storm Type: T-Storms

**Forecast (20 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**



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



Forecast Reviewed By: \_\_\_\_\_

Weekly Forecast Source: \_\_\_\_\_

Forecast Read Date: 8/10/2020

Missed Forecast (VA)

Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_

% Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (20 Hours Out)**

Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**

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

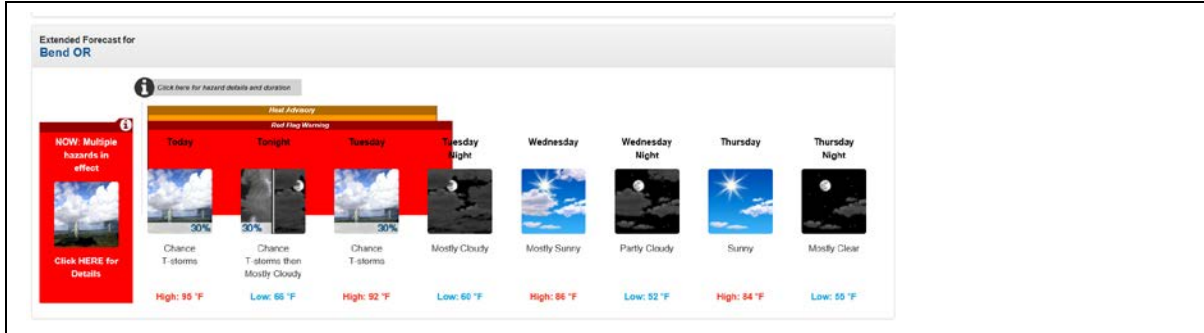


UTILITY DEPARTMENT

Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

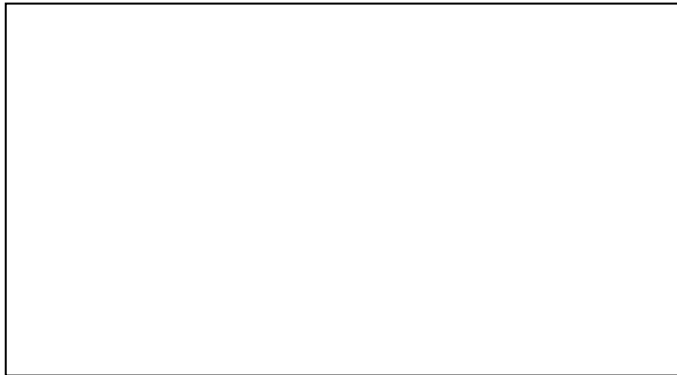
Forecast Read Date: 8/17/2020



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

% Chance of Precipitation: 30  
 Storm Duration: 10 hrs.  
 Storm Type: TStorm

**Forecast (20 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**



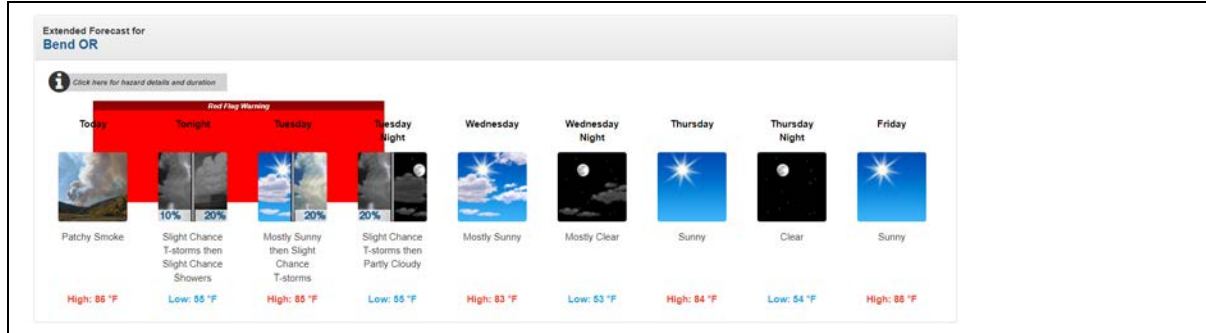
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 8/24/2020



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

% Chance of Precipitation: 20%  
 Storm Duration: 12 Hrs.  
 Storm Type: T-Storms

**Forecast (20 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**



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



Forecast Reviewed By: \_\_\_\_\_

Weekly Forecast Source: \_\_\_\_\_

Forecast Read Date: 8/31/2020

Missed Forecast (VA)

Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_

% Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (20 Hours Out)**

Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**

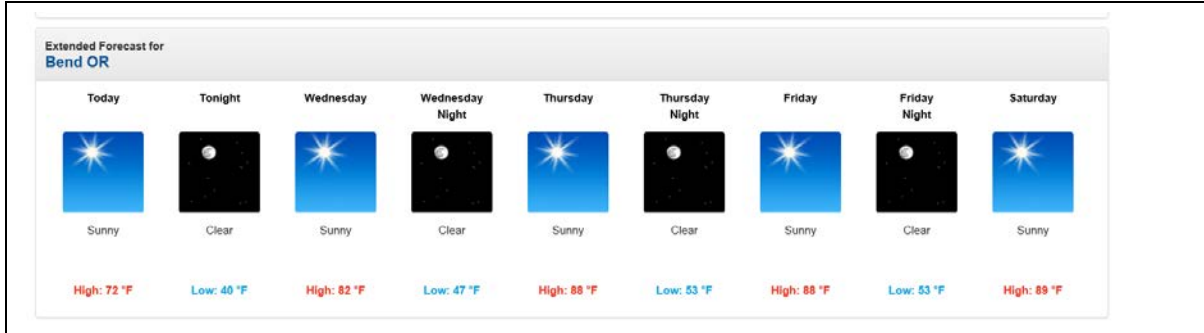
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

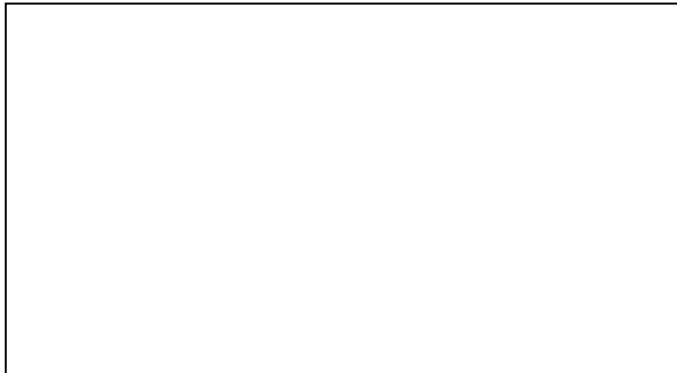
Forecast Read Date: 9/8/2020



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

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

**Forecast (20 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (3 Hours Out)**



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

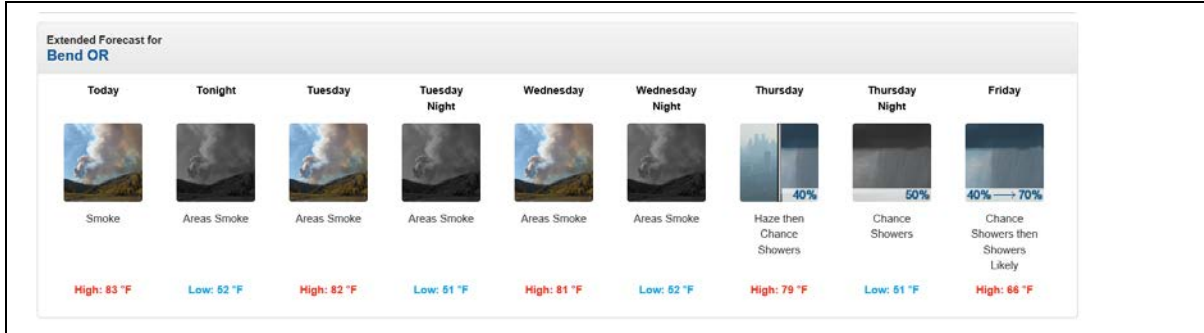




Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

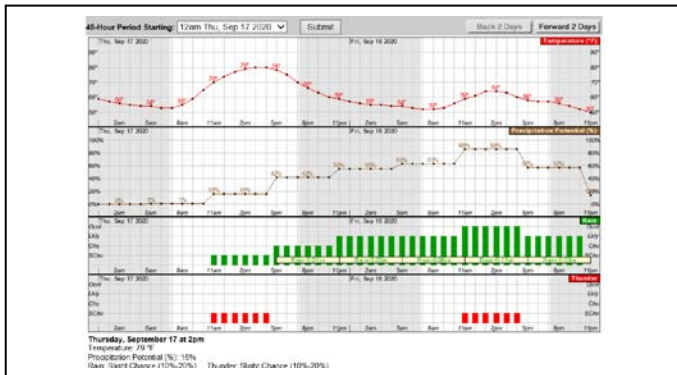
Forecast Read Date: 9/14/2020



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

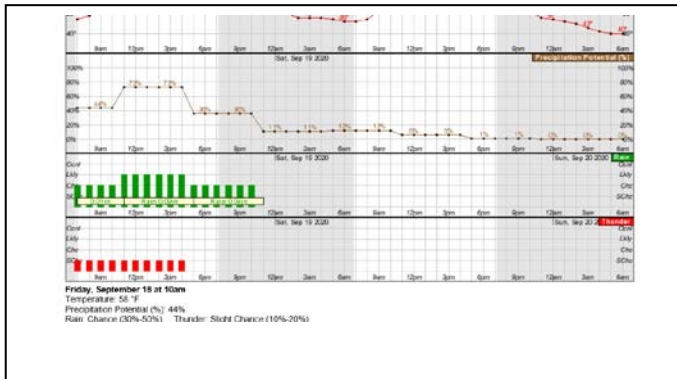
% Chance of Precipitation: 50%-70%  
 Storm Duration: Na  
 Storm Type: Showers

**Forecast (24 Hours Out)**



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .25"  
 % Chance of Precipitation: 90%  
 Storm Duration: 36 Hrs.  
 Storm Type: Showers

**Forecast (4 Hours Out)**



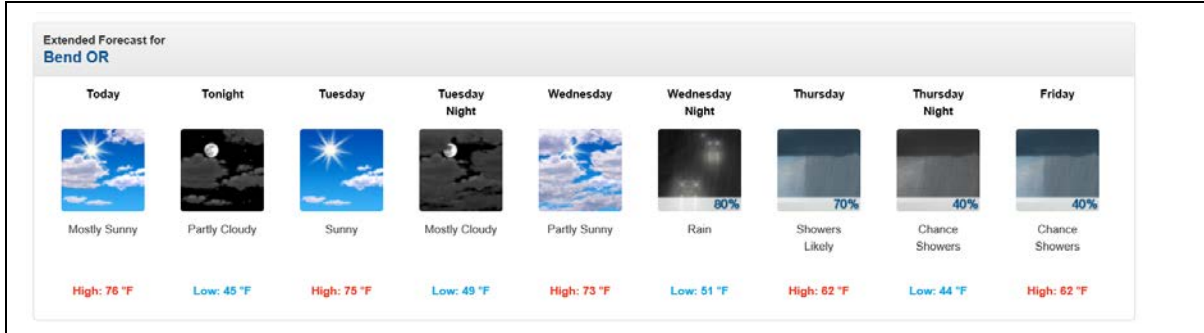
Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .09"  
 % Chance of Precipitation: 73%  
 Storm Duration: 7 Hrs.  
 Storm Type: T-Storms  
 Qualifying rain event: No



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

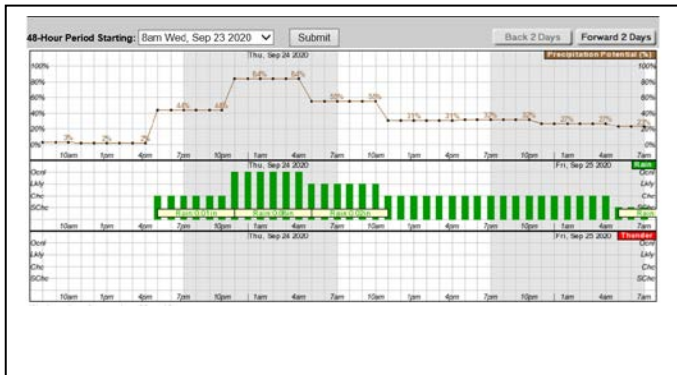
Forecast Read Date: 9/21/2020



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .20"  
 Qualifying rain event: Yes

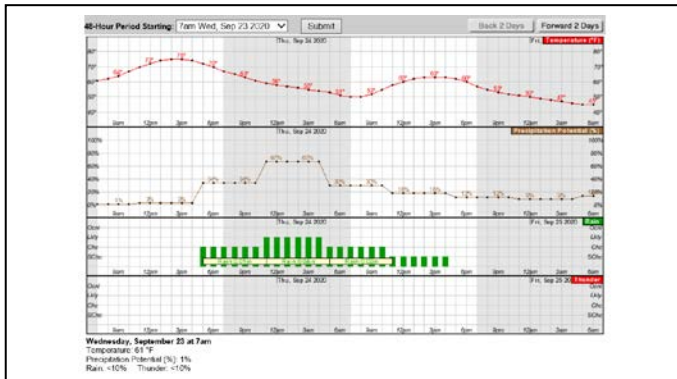
% Chance of Precipitation: 80%  
 Storm Duration: 6 Hrs.  
 Storm Type: Rain

**Forecast (12 Hours Out)**



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .08"  
 % Chance of Precipitation: 80%  
 Storm Duration: 6 Hrs.  
 Storm Type: Showers

**Forecast (4 Hours Out)**



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .04"  
 % Chance of Precipitation: 67%  
 Storm Duration: 6 Hrs.  
 Storm Type: Showers  
 Qualifying rain event: No



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 9/28/2020



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)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



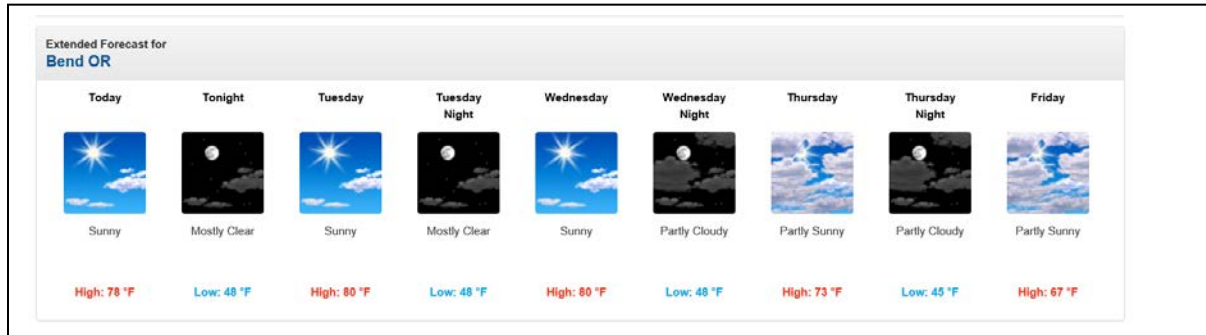
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 10/5/2020



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

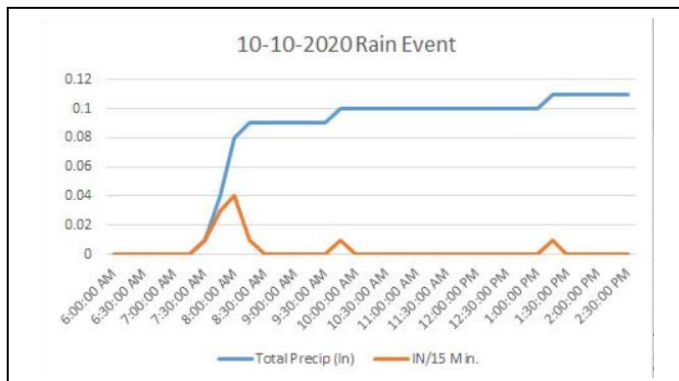
% Chance of Precipitation: Na  
 Storm Duration: Na  
 Storm Type: Sunny

### Forecast (12 Hours Out)

Missed forecast, rain was forecasted for Saturday.

Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .25"  
 % Chance of Precipitation: 90%  
 Storm Duration:   
 Storm Type: Rain

### Rainfall Totals



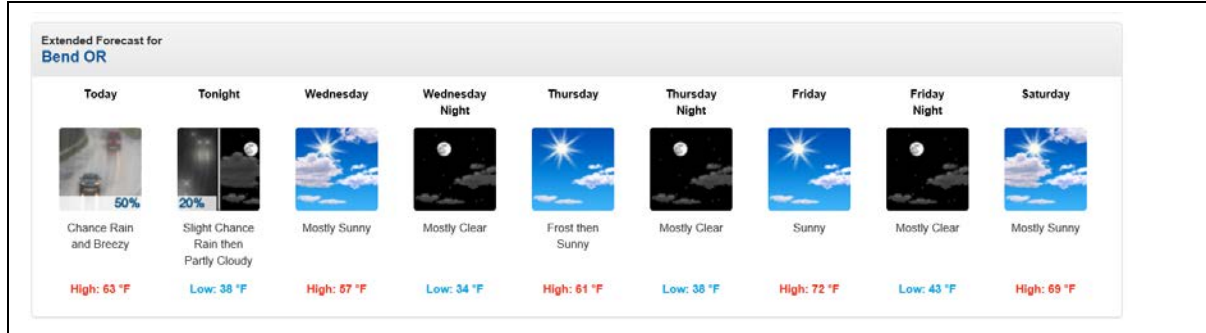
Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .11  
 % Chance of Precipitation: Na  
 Storm Duration: 1 hr.  
 Storm Type: Rain  
 Qualifying rain event: Yes



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

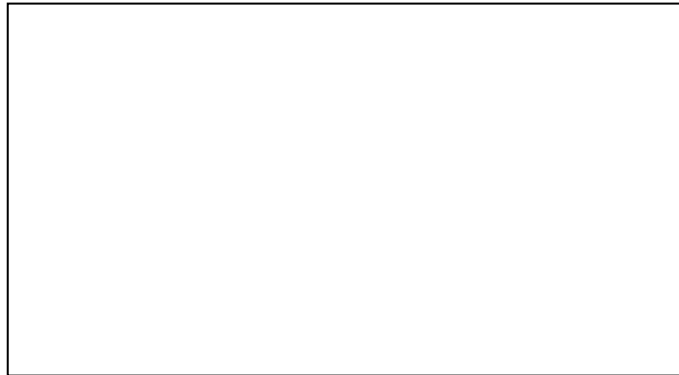
Forecast Read Date: 10/13/2020



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

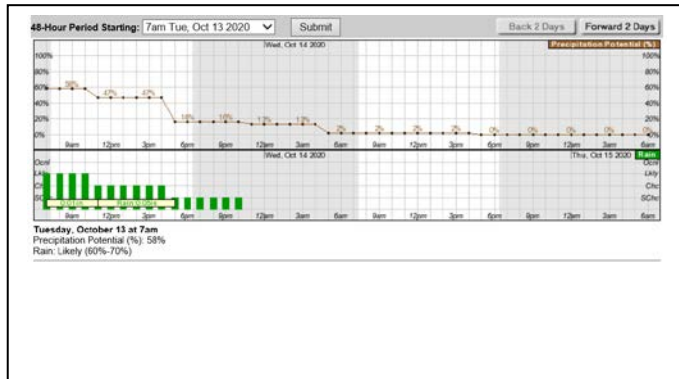
% Chance of Precipitation: 60%  
 Storm Duration: 10 hrs.  
 Storm Type: Rain

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (1 Hour Out)**



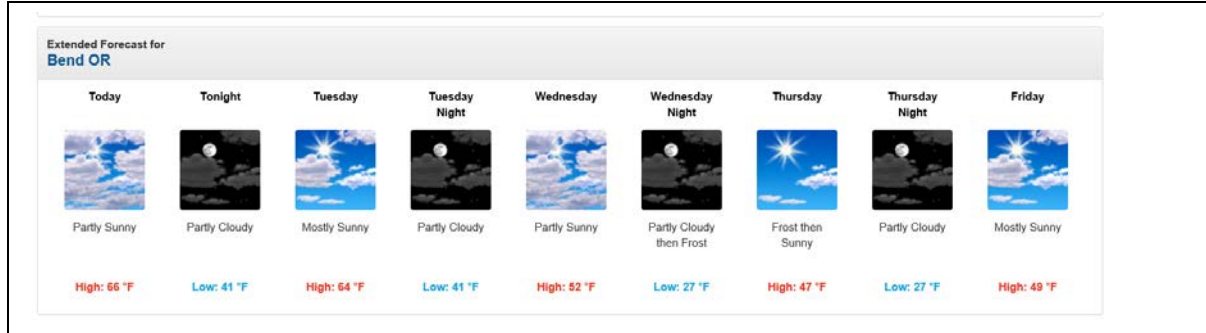
Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .06"  
 % Chance of Precipitation: 60%  
 Storm Duration: 10 hrs.  
 Storm Type: Rain  
 Qualifying rain event: No



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

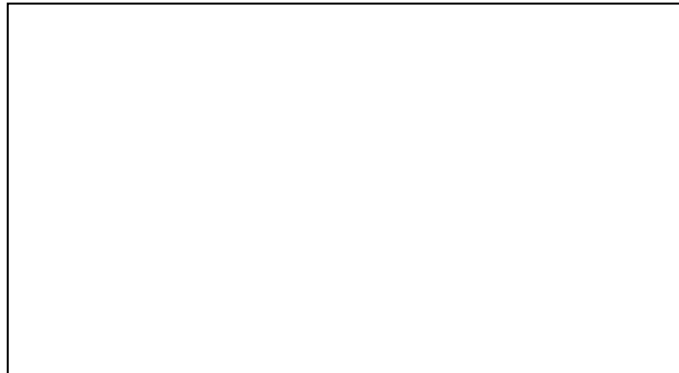
Forecast Read Date: 10/19/2020



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)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



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

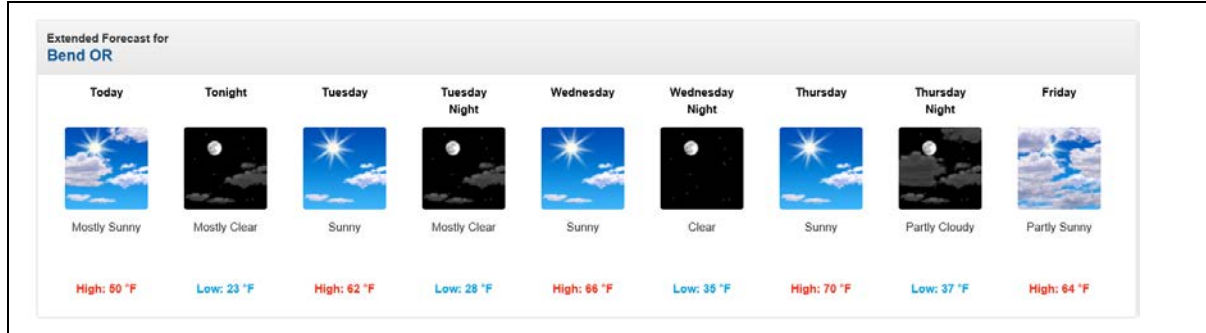


UTILITY DEPARTMENT

Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

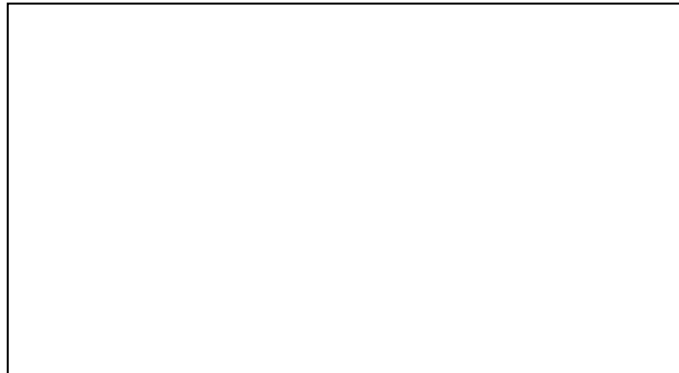
Forecast Read Date: 10/26/2020



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

% Chance of Precipitation: Na  
 Storm Duration: Na  
 Storm Type: Sunny/Cold

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



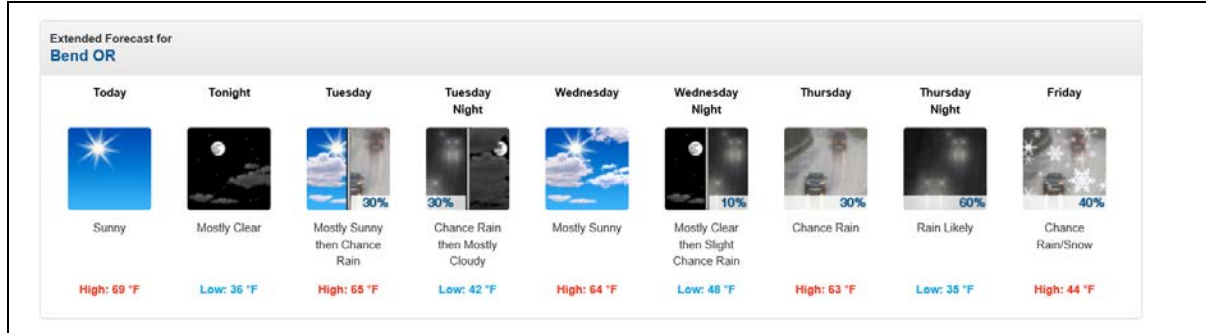
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

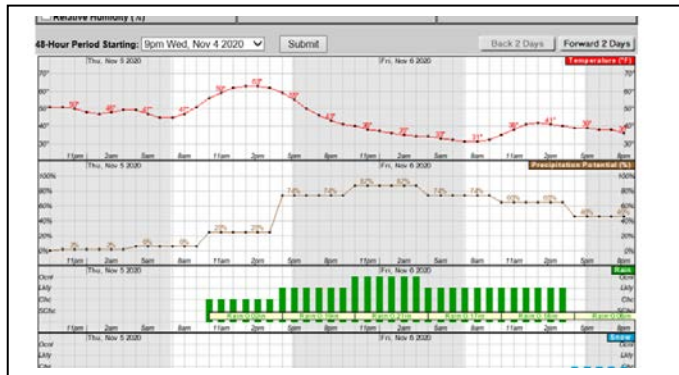
Forecast Read Date: 11/2/2020



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: TBD  
 Qualifying rain event: TBD

% Chance of Precipitation: 90&  
 Storm Duration: TBD  
 Storm Type: Rain

**Forecast (12 Hours Out)**



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .75"  
 % Chance of Precipitation: 74%-87%  
 Storm Duration: 23 hrs.  
 Storm Type: Rain

**Forecast (4 Hours Out)**



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

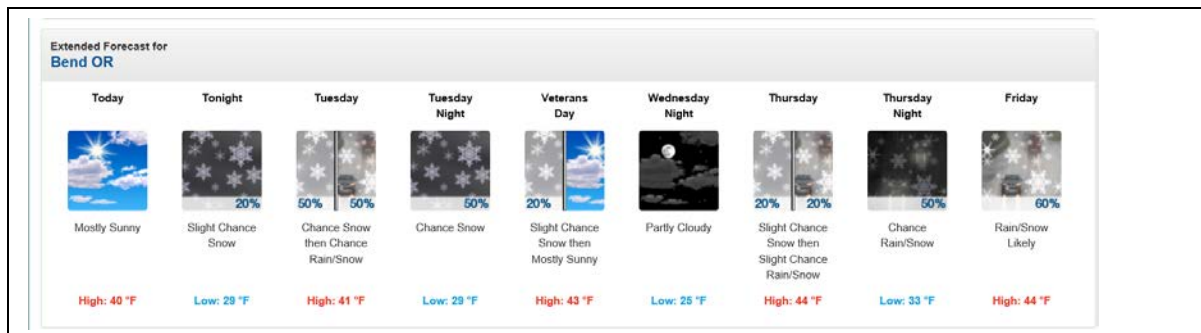




Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

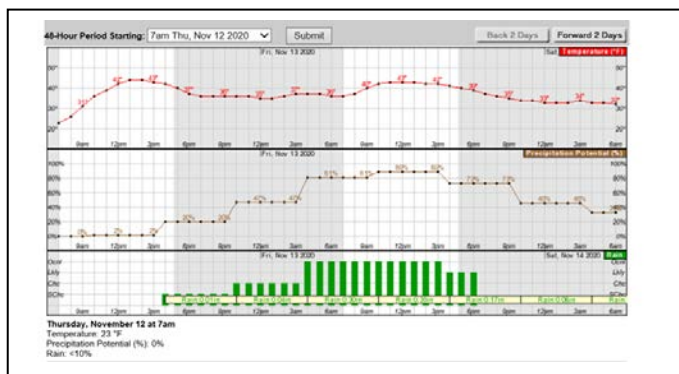
Forecast Read Date: 11/9/2020



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

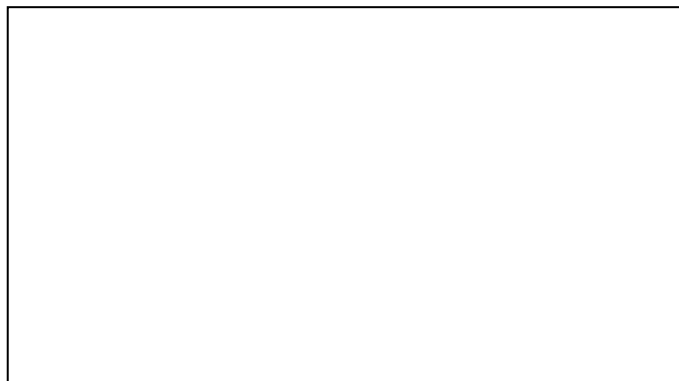
% Chance of Precipitation: 50%  
 Storm Duration: 24 Hrs.  
 Storm Type: Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: 80%  
 % Chance of Precipitation: .65"  
 Storm Duration: 12 Hrs.  
 Storm Type: Rain/Snow

**Forecast (4 Hours Out)**



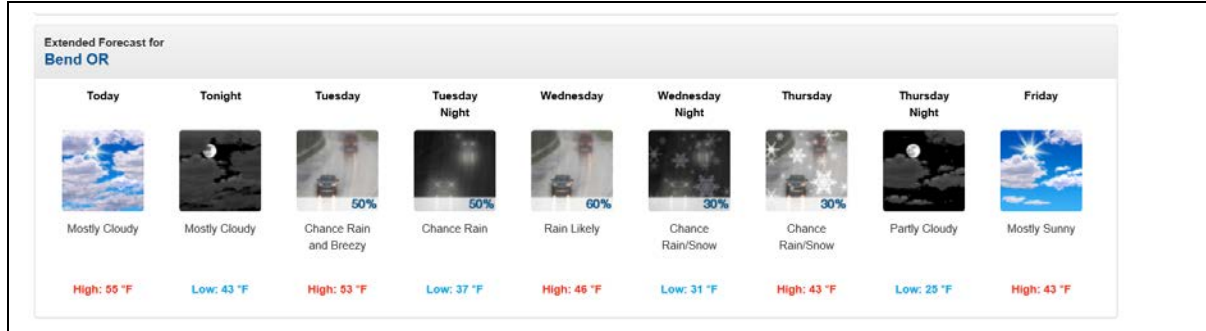
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 11/16/2020



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

% Chance of Precipitation: 60%  
 Storm Duration: 6 Hrs.  
 Storm Type: Rain Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



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



Forecast Reviewed By: \_\_\_\_\_

Weekly Forecast Source: \_\_\_\_\_

Forecast Read Date: 11/23/2020 \_\_\_\_\_

Missed Forecast

Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_

% Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (12 Hours Out)**

Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**

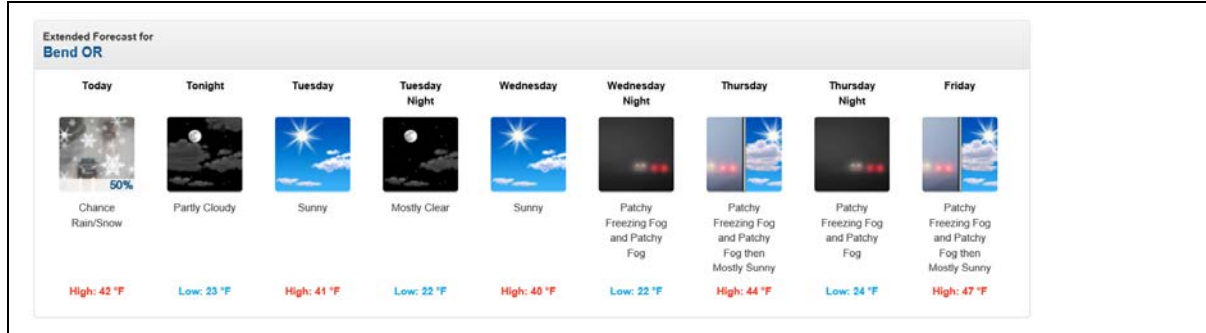
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

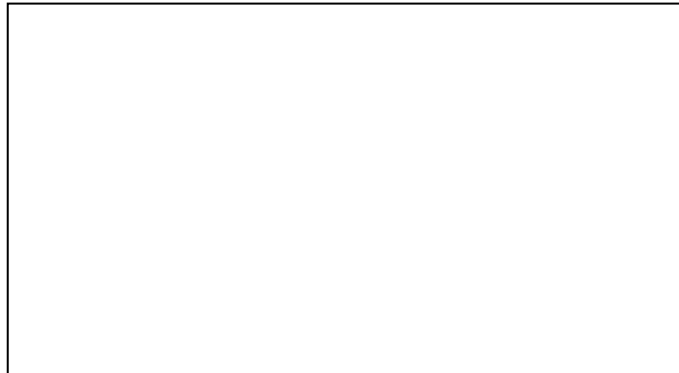
Forecast Read Date: 11/30/2020



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

% Chance of Precipitation: 50%  
 Storm Duration: 8 Hrs.  
 Storm Type: Rain/Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



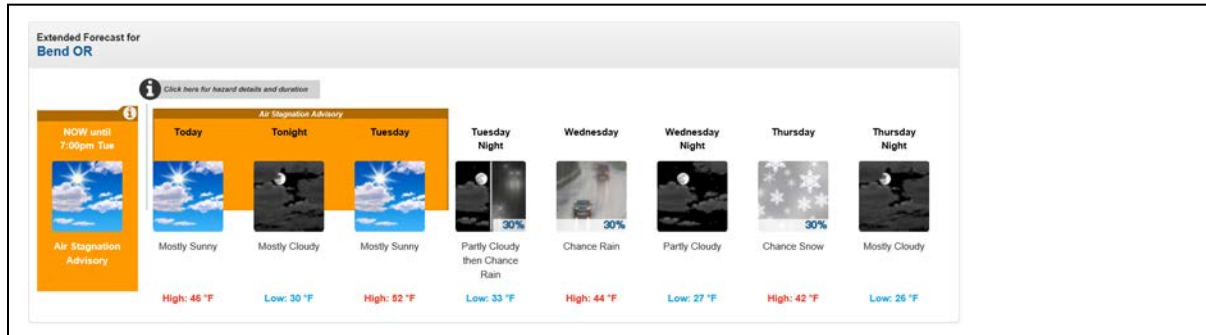
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 12/7/2020



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

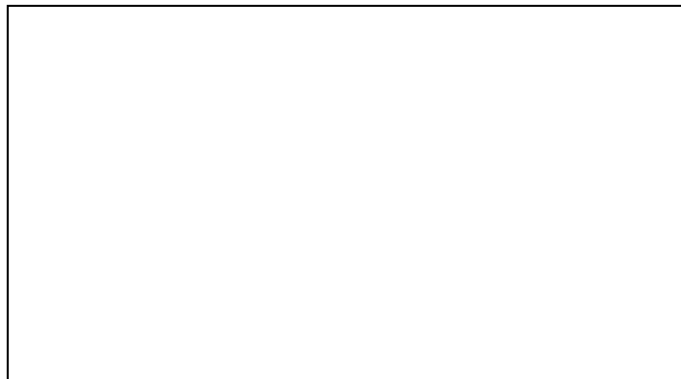
% Chance of Precipitation: 21%  
 Storm Duration: 6 hrs.  
 Storm Type: Rain

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



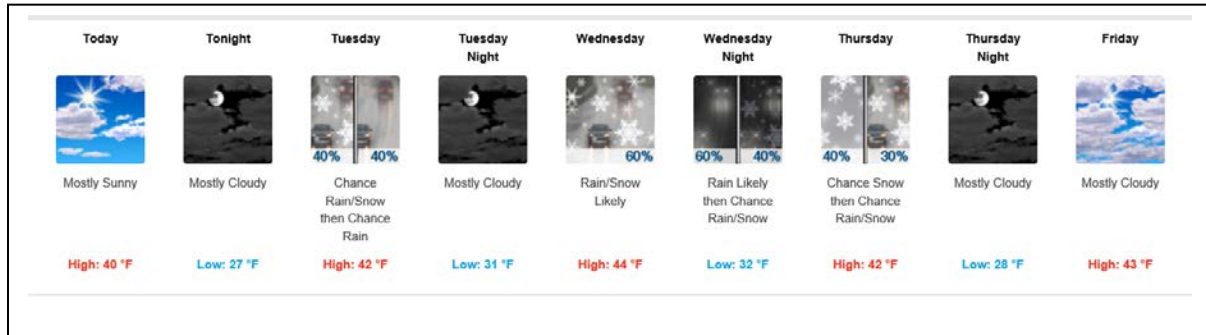
Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 12/14/2020



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .03"  
 Qualifying rain event: TBD

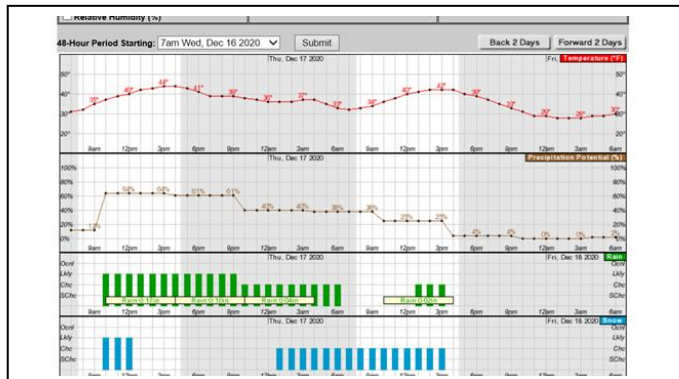
% Chance of Precipitation: 40%  
 Storm Duration: 6 hrs.  
 Storm Type: Rain/Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .27"  
 % Chance of Precipitation: 61%  
 Storm Duration: 12 hrs.  
 Storm Type: Rain/snow  
 Qualifying rain event: Yes



Forecast Reviewed By: \_\_\_\_\_

Weekly Forecast Source: \_\_\_\_\_

Forecast Read Date: 12/21/2020

Missed Forecast

Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 Qualifying rain event: \_\_\_\_\_

% Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (12 Hours Out)**

Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**

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



Forecast Reviewed By: Wendy Edde

Weekly Forecast Source: NOAA

Forecast Read Date: 12/28/2020



Antecedent Dry Period: \_\_\_\_\_  
Estimated Rainfall Total: \_\_\_\_\_  
Qualifying rain event: \_\_\_\_\_

% Chance of Precipitation: \_\_\_\_\_  
Storm Duration: \_\_\_\_\_  
Storm Type: \_\_\_\_\_

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
Estimated Rainfall Total: \_\_\_\_\_  
% Chance of Precipitation: \_\_\_\_\_  
Storm Duration: \_\_\_\_\_  
Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



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

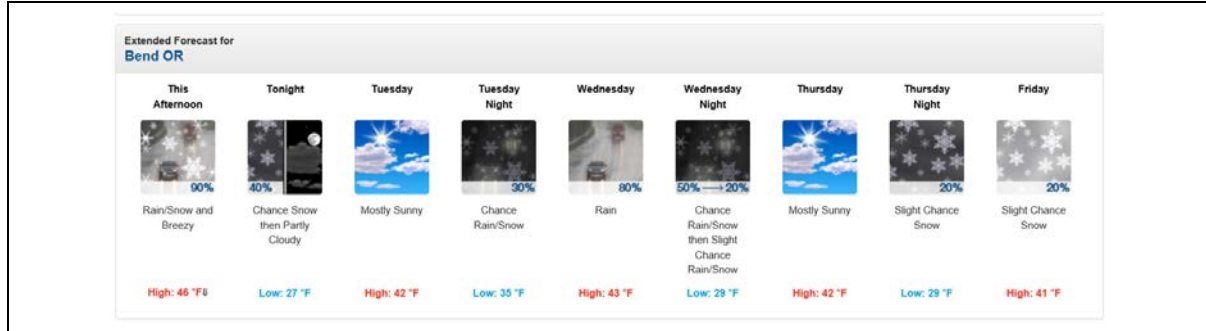




Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

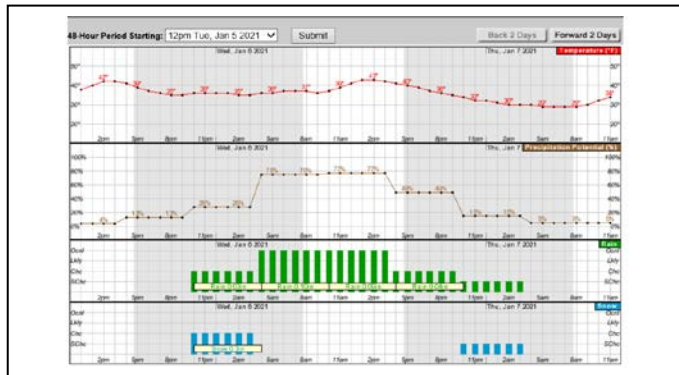
Forecast Read Date: 1/4/2021



Antecedent Dry Period: No, Wed?  
 Estimated Rainfall Total: .09  
 Qualifying rain event: No

% Chance of Precipitation: 80%  
 Storm Duration: 4 hrs.  
 Storm Type: Rain/Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .1"  
 % Chance of Precipitation: 78%  
 Storm Duration: 12 Hrs.  
 Storm Type: Rain

**Forecast (4 Hours Out)**



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

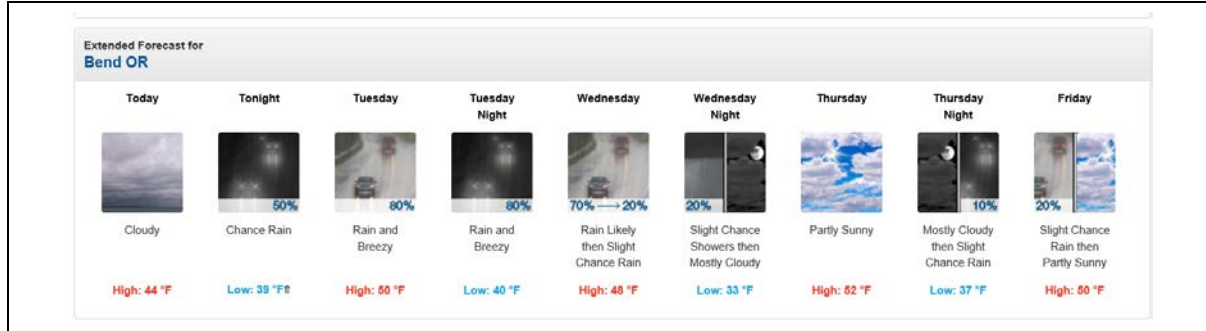


UTILITY DEPARTMENT

Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

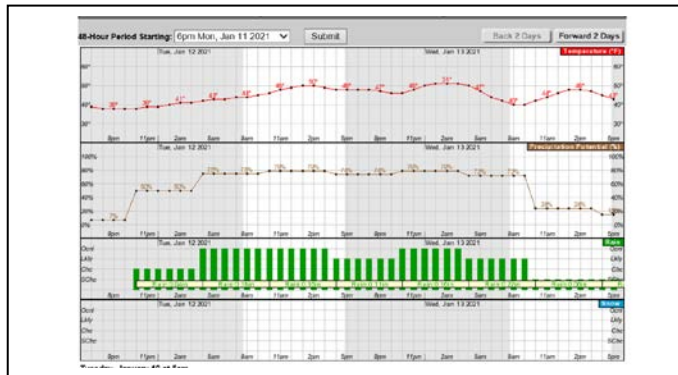
Forecast Read Date: 1/11/2021



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .82"  
 Qualifying rain event: Yes

% Chance of Precipitation: 75%  
 Storm Duration: 36 Hrs.  
 Storm Type: Rain

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



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



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 1/19/2021



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

% Chance of Precipitation: 30%  
 Storm Duration: 12 Hrs.  
 Storm Type: Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



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



Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

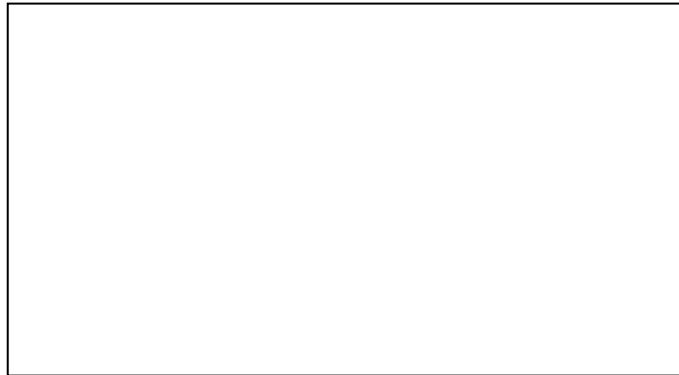
Forecast Read Date: 1/25/2021



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .1"  
 Qualifying rain event: No

% Chance of Precipitation: 70%  
 Storm Duration: 16 Hrs.  
 Storm Type: Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



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

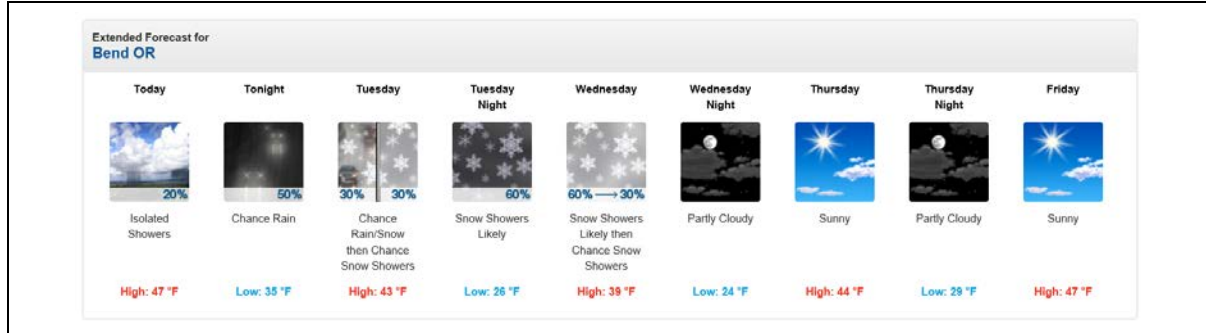


Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 2/1/2021

W



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

% Chance of Precipitation: 50%  
 Storm Duration: 18 Hrs.  
 Storm Type: Rain/Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



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

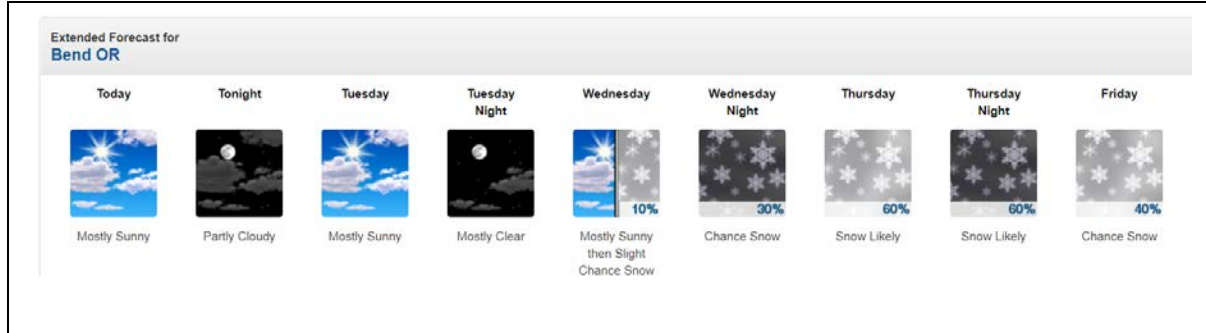


UTILITY DEPARTMENT

Forecast Reviewed By: Buchanan

Weekly Forecast Source: NOAA

Forecast Read Date: 2/8/2021



Antecedent Dry Period: Yes  
 Estimated Rainfall Total: .16"  
 Qualifying rain event: No

% Chance of Precipitation: 80%  
 Storm Duration: 12 Hrs.  
 Storm Type: Snow

**Forecast (12 Hours Out)**



Antecedent Dry Period: \_\_\_\_\_  
 Estimated Rainfall Total: \_\_\_\_\_  
 % Chance of Precipitation: \_\_\_\_\_  
 Storm Duration: \_\_\_\_\_  
 Storm Type: \_\_\_\_\_

**Forecast (4 Hours Out)**



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



### COB UIC Sampler Deployment #1

Sampler Deployed By: Nick Jenness / Matt Sanders

Sampler Deployment Date: 9/16/2020

Sites Deployed:      Airport      Boyd      Brooks      Empire      Ladera      Century      Blank

Time:                    

13:48	15:45	14:48	15:36	14:20	15:15	
-------	-------	-------	-------	-------	-------	--

FD = Indicates Field Duplicate Location

Sample Deployment Notes:

### COB UIC Sampler Collection

Sampler Collected by: Nick Jenness / Matt Sanders

Sample Bucket Collection Date: 9/22/2020

Sites Collected:      Airport      Boyd      Brooks      Empire      Ladera      Century      Blank

Time:                    

NS	NS	NS	NS	NS	NS	NS	NS
----	----	----	----	----	----	----	----

NS = No sample/sample container did not fill.

Sample Collection Notes:

No Samples were collected, not enough rain

Sample Aliquot             Field      Lab



### COB UIC Sampler Deployment #2

Sampler Deployed By: Nick Jenness / Matt Sanders

Sampler Deployment Date: 10/8/20

Sites Deployed:       Airport       Boyd       Brooks       Empire       Ladera       Century       Blank

Time:                      

13:37	15:26	14:18	13:20(FD)	14:02	14:38	13:00
-------	-------	-------	-----------	-------	-------	-------

FD = Indicates Field Duplicate Location

Sample Deployment Notes:

### COB UIC Sampler Collection

Sampler Collected by: Nick Jenness / Matt Sanders

Sample Bucket Collection Date: 10/12/20

Sites Collected:       Airport       Boyd       Brooks       Empire       Ladera       Century       Blank

Time:                      

10:15	12:20	10:27	09:50	NS	11:55	08:29
-------	-------	-------	-------	----	-------	-------

NS = No sample/sample container did not fill.

Sample Collection Notes:

Ladera insufficient rain to collect a sample

Sample Aliquot       Field       Lab





### COB UIC Sampler Deployment #3

Sampler Deployed By: Nick Jenness / Matt Sanders

Sampler Deployment Date: 11/05/20

Sites Deployed:       Airport       Boyd       Brooks       Empire       Ladera       Century       Blank

Time:                      

--	--	--	--	--	--	--

FD = Indicates Field Duplicate Location

Sample Deployment Notes:

### COB UIC Sampler Collection

Sampler Collected by: Nick Jenness / Matt Sanders

Sample Bucket Collection Date: 11/06/20

Sites Collected:       Airport       Boyd       Brooks       Empire       Ladera       Century       Blank

Time:                      

08:23	09:30	08:56	08:06	08:39	09:12	09:48
-------	-------	-------	-------	-------	-------	-------

NS = No sample/sample container did not fill.

Sample Collection Notes:

Sample Aliquot       Field       Lab



UTILITY DEPARTMENT

## IDDE Sample Collection

Sample Collection Date: 10/21/2020 Time: 10:00am  
Sample Location: Hunnell Rd. COB ID# \_\_\_\_\_

### Sample Collection Notes:

RV fire in roadway, City crews collected a sample from the downstream catch basin.

### Photos


Sample Collected by: Jeff B. David B.

# *Appendices*

## APPENDIX H. MONITORING

### *H.2. Sampling Results*







**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

CITY OF BEND

## ANALYTICAL DATA REPORT

October 26, 2020

### City of Bend - Stormwater Division

Project:	Stormwater Monitoring 2020-21
Samples Received:	October 13, 2020
Work Order:	D0J1307
Contact:	Jeff Buystedt 62975 NE Boyd Acres Rd. Bend, OR 97701


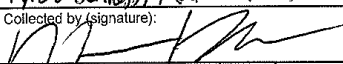
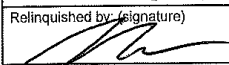

The results in this report apply to the samples analyzed in accordance with the chain of custody document and are reported as rounded values. This analytical data report shall not be reproduced, except in its entirety, without written approval of the laboratory. If you have any questions concerning this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

Report reviewed by,

A handwritten signature in blue ink, appearing to read "Stefan D'Angona".

Stefan D'Angona

Analytical Chemist

Company Name/Address: City of Bend - Stormwater Division 62975 NE Boyd Acres Rd. Bend, OR 97701		Report to: Jeff Buystedt Phone: (541) 322-6369 Email to: jbuystedt@bendoregon.gov		Chain of Custody Page 1 of 1 BWQL-###-COC  CITY OF BEND Water Quality Laboratory 22385 McGrath Rd. Bend, OR 97701 (541) 317-3017		Metals by SM 3.125, Total (Ag, Al, As, Ba, Be, Bi, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Ti, V, Zn)		EPA 625 Benzo(A)pyrene		EPA 625 D(2-ethylnexyl)phthalate		EPA 625 Pentachlorophenol									
Project Description: Stormwater Monitoring 2020-21				City/State Collected:				Work Order: <b>DOJ1307</b>													
Project Notes:				Collected by (print): Nick Semness / Matt Sanders				Call with Results?: Y or <input checked="" type="checkbox"/> N # _____													
Collected by (signature): 				Immediately Packed on Ice: Y or N				Turnaround Time: <input checked="" type="checkbox"/> Std / RUSH: _____ days				Containers									
Sample ID	Lab ID	Comp(C) or Grab(G)	Date	Time	Start Date (Comp only)	Start Time (Comp only)	Matrix*	Containers	Metals	Benzo(A)pyrene	D(2-ethylnexyl)phthalate	Pentachlorophenol									
DDW009618-Airport UIC	-01	Grab	10-12-20	10:15	N/A	N/A	WW	3	X	X	X	X									
DDW003323-Century	-02	Grab	10-12-20	11:55	N/A	N/A	WW	3	X	X	X	X									
DDW003355-Boyd Acres Complex	-03	Grab	10-12-20	12:20	N/A	N/A	WW	3	X	X	X	X									
DDW008884-Empire	-04	Grab	10-12-20	09:50	N/A	N/A	WW	3	X	X	X	X									
DDW003312-Brookwood	-05	Grab	10-12-20	10:27	N/A	N/A	WW	3	X	X	X	X									
(Field Duplicate) Empire	-06	Grab	10-12-20	09:50	N/A	N/A	WW	3	X	X	X	X									
Field Blank	-07	Grab	10-13-20	08:24	N/A	N/A	WW	3	X	X	X	X									
Field Notes (Explain any deviations from sampling SOP):												Sampling Pace: <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Time <input type="checkbox"/> Flow									
*Matrix: DW = Drinking Water, WW = Wastewater, GW = Groundwater, SW = Stormwater, BS = Biosolids, SS = Soil, OT = Other																					
Relinquished by: (signature) 		Date: 10/13/20		Time: 14:05		Received by: (Signature) 				Date: 10/13/20		Time: 14:05		Sample Receipt Form Completed?		Y or N					
Relinquished by: (signature)		Date:		Time:		Received by: (Signature)				Date:		Time:		Internal Transfer?		Y or N					
Relinquished by: (signature)		Date:		Time:		Received by: (Signature)				Date:		Time:		Internal Transfer?		Y or N					



City of Bend Water Quality Laboratory Sample Cooler Receipt Form

Work Order #: 0051307 Received By: [Signature] Date/Time: 10/13/20 14:05

Temperature of samples: 8.7 °C Number of Containers Received: 7

Samples received: On Ice OR Directly from Field

- Is the COC present and signed? Yes No Are samples received within holding times? Yes No N/A
Are sample bottles intact? Yes No Are the samples appropriately preserved? Yes No N/A
Does the COC and sample labels match? Yes No Are the appropriate containers used? Yes No
Are the appropriate containers used? Yes No Do VOA vials have Headspace? Yes No N/A

(For preservation completed at the lab only):

Table with 6 columns: Preservation Type, Preservation LIMS ID, Sample ID(s), Bottle Letter(s), Date and Time, Analyst. Row 1: H2O2, 1113063, 0051307-01,02,03,04,05,06,07, C, 10/13/20 8:40, MB

Comments: \_\_\_\_\_



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
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.





Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

## Sample Summary

Sample ID	Laboratory ID	Matrix	Analysis	Date/Time Sampled	Date/Time Received
DDW009618-Airport UIC	D0J1307-01	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125 Zinc Total SM 3125	12-Oct-20 10:15	13-Oct-20 14:05
DDW003323-Century	D0J1307-02	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125 Zinc Total SM 3125	12-Oct-20 11:55	13-Oct-20 14:05
DDW003355-Boyd Acres Complex	D0J1307-03	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125 Zinc Total SM 3125	12-Oct-20 12:20	13-Oct-20 14:05
DDW008884-Empire	D0J1307-04	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125 Zinc Total SM 3125	12-Oct-20 09:50	13-Oct-20 14:05
DDW003312-Brookwood	D0J1307-05	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125 Zinc Total SM 3125	12-Oct-20 10:27	13-Oct-20 14:05
(Field Duplicate) Empire	D0J1307-06	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125 Zinc Total SM 3125	12-Oct-20 09:50	13-Oct-20 14:05
Field Blank	D0J1307-07	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125	13-Oct-20 08:29	13-Oct-20 14:05



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**Sample Summary**

Sample ID	Laboratory ID	Matrix	Analysis	Date/Time Sampled	Date/Time Received
			Zinc Total SM 3125		



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**DDW009618-Airport UIC  
 D0J1307-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
---------	--------	-----------------	-----	-------	----------	-------	----------	----------	--------	-------

**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>11.5</b>	0.200	0.0750	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Lead</b>	<b>5.27</b>	0.200	0.0117	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Zinc</b>	<b>6900</b>	100	39.0	ug/L	100	20J1409	14-Oct-20	15-Oct-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG156130:	19-Oct-20	19-Oct-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG156130:	19-Oct-20	19-Oct-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG156130:	19-Oct-20	19-Oct-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		<i>51.2 %</i>				<i>10.0-155</i>	<i>WG15613</i>	<i>19-Oct-20</i>	<i>19-Oct-20</i>	<i>8270E</i>
							<i>03</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>		<i>41.6 %</i>				<i>10.0-130</i>	<i>WG15613</i>	<i>19-Oct-20</i>	<i>19-Oct-20</i>	<i>8270E</i>
							<i>03</i>			
<i>Surrogate: 2-Fluorophenol</i>		<i>20.7 %</i>				<i>10.0-120</i>	<i>WG15613</i>	<i>19-Oct-20</i>	<i>19-Oct-20</i>	<i>8270E</i>
							<i>03</i>			
<i>Surrogate: Nitrobenzene-d5</i>		<i>35.4 %</i>				<i>10.0-127</i>	<i>WG15613</i>	<i>19-Oct-20</i>	<i>19-Oct-20</i>	<i>8270E</i>
							<i>03</i>			
<i>Surrogate: Phenol-d5</i>		<i>13.4 %</i>				<i>10.0-120</i>	<i>WG15613</i>	<i>19-Oct-20</i>	<i>19-Oct-20</i>	<i>8270E</i>
							<i>03</i>			
<i>Surrogate: p-Terphenyl-d14</i>		<i>70.8 %</i>				<i>10.0-128</i>	<i>WG15613</i>	<i>19-Oct-20</i>	<i>19-Oct-20</i>	<i>8270E</i>
							<i>03</i>			



# CITY OF BEND

City of Bend Water Quality Lab  
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 541.322.6345 Fax

Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**DDW003323-Century**  
**D0J1307-02 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>33.1</b>	0.200	0.0750	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Lead</b>	<b>0.834</b>	0.200	0.0117	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Zinc</b>	<b>264</b>	5.00	1.95	ug/L	5	20J1409	14-Oct-20	15-Oct-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG156130	19-Oct-20	20-Oct-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG156130	19-Oct-20	20-Oct-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG156130	19-Oct-20	20-Oct-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		59.9 %		10.0-155		WG1561303	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		56.8 %		10.0-130		WG1561303	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		19.4 %		10.0-120		WG1561303	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		56.7 %		10.0-127		WG1561303	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Phenol-d5</i>		12.6 %		10.0-120		WG1561303	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		68.0 %		10.0-128		WG1561303	19-Oct-20	20-Oct-20	8270E	



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Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**DDW003355-Boyd Acres Complex**  
**D0J1307-03 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>25.3</b>	0.200	0.0750	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Lead</b>	<b>2.20</b>	0.200	0.0117	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Zinc</b>	<b>431</b>	5.00	1.95	ug/L	5	20J1409	14-Oct-20	15-Oct-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	U
Bis(2-ethylhexyl)phthalate	1.81 J	3.00	0.895	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	Ja
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		80.2 %				WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		62.3 %				WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		26.0 %				WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		45.2 %				WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Phenol-d5</i>		17.1 %				WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		93.8 %				WG15613 03	19-Oct-20	20-Oct-20	8270E	



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Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**DDW008884-Empire**  
**D0J1307-04 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>40.0</b>	0.200	0.0750	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Lead</b>	<b>1.56</b>	0.200	0.0117	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Zinc</b>	<b>613</b>	5.00	1.95	ug/L	5	20J1409	14-Oct-20	15-Oct-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	U
Bis(2-ethylhexyl)phthalate	2.49 J	3.00	0.895	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	Ja
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		79.7 %				WG15613	19-Oct-20	20-Oct-20	8270E	
				10.0-155		03				
<i>Surrogate: 2-Fluorobiphenyl</i>		64.4 %				WG15613	19-Oct-20	20-Oct-20	8270E	
				10.0-130		03				
<i>Surrogate: 2-Fluorophenol</i>		27.6 %				WG15613	19-Oct-20	20-Oct-20	8270E	
				10.0-120		03				
<i>Surrogate: Nitrobenzene-d5</i>		55.8 %				WG15613	19-Oct-20	20-Oct-20	8270E	
				10.0-127		03				
<i>Surrogate: Phenol-d5</i>		19.0 %				WG15613	19-Oct-20	20-Oct-20	8270E	
				10.0-120		03				
<i>Surrogate: p-Terphenyl-d14</i>		88.7 %				WG15613	19-Oct-20	20-Oct-20	8270E	
				10.0-128		03				



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**DDW003312-Brookwood**  
**D0J1307-05 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>55.7</b>	0.200	0.0750	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Lead</b>	<b>0.953</b>	0.200	0.0117	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Zinc</b>	<b>356</b>	5.00	1.95	ug/L	5	20J1409	14-Oct-20	15-Oct-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.05	0.0400	ug/l	1.05	WG156130:	19-Oct-20	20-Oct-20	8270E	U
Bis(2-ethylhexyl)phthalate	1.20 J	3.15	0.940	ug/l	1.05	WG156130:	19-Oct-20	20-Oct-20	8270E	Ja
Pentachlorophenol	ND	1.05	0.329	ug/l	1.05	WG156130:	19-Oct-20	20-Oct-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		81.9 %			10.0-155	WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		67.2 %			10.0-130	WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		26.9 %			10.0-120	WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		58.2 %			10.0-127	WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Phenol-d5</i>		19.5 %			10.0-120	WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		101 %			10.0-128	WG15613 03	19-Oct-20	20-Oct-20	8270E	



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Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**(Field Duplicate) Empire  
 D0J1307-06 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>55.0</b>	0.200	0.0750	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Lead</b>	<b>2.42</b>	0.200	0.0117	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
<b>Zinc</b>	<b>819</b>	5.00	1.95	ug/L	5	20J1409	14-Oct-20	15-Oct-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	U
Bis(2-ethylhexyl)phthalate	1.23 J	3.00	0.895	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	Ja
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG156130:	19-Oct-20	20-Oct-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		41.0 %		10.0-155		WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		40.0 %		10.0-130		WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		20.8 %		10.0-120		WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		27.8 %		10.0-127		WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Phenol-d5</i>		14.0 %		10.0-120		WG15613 03	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		63.8 %		10.0-128		WG15613 03	19-Oct-20	20-Oct-20	8270E	





Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**Field Blank  
 D0J1307-07 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>0.748</b>	0.200	0.0750	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	
Lead	0.0597 J	0.200	0.0117	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	J
<b>Zinc</b>	<b>51.3</b>	1.00	0.390	ug/L	1	20J1409	14-Oct-20	15-Oct-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG156130	19-Oct-20	20-Oct-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG156130	19-Oct-20	20-Oct-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG156130	19-Oct-20	20-Oct-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		57.5 %		10.0-155		WG1561307	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		61.1 %		10.0-130		WG1561307	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		32.4 %		10.0-120		WG1561307	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		50.8 %		10.0-127		WG1561307	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: Phenol-d5</i>		20.1 %		10.0-120		WG1561307	19-Oct-20	20-Oct-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		67.8 %		10.0-128		WG1561307	19-Oct-20	20-Oct-20	8270E	



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
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
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**Batch 20J1409 - EPA 200.8**

**Blank (20J1409-BLK1)**

Prepared: 14-Oct-20 Analyzed: 15-Oct-20

Copper	ND	0.200	ug/L							
Lead	ND	0.200	"							
Zinc	ND	1.00	"							

**LCS (20J1409-BS1)**

Prepared: 14-Oct-20 Analyzed: 15-Oct-20

Copper	9.90	0.200	ug/L	10.0		99.0	70-130			
Lead	9.65	0.200	"	10.0		96.5	70-130			
Zinc	10.5	1.00	"	10.0		105	70-130			

**Matrix Spike (20J1409-MS1)**

Source: D0J0803-01

Prepared: 14-Oct-20 Analyzed: 15-Oct-20

Copper	36.7	0.200	ug/L	10.0	26.5	103	75-125			
Lead	10.2	0.200	"	10.0	0.630	96.2	75-125			
Zinc	127	1.00	"	10.0	113	133	75-125			QM-4X

**Matrix Spike Dup (20J1409-MSD1)**

Source: D0J0803-01

Prepared: 14-Oct-20 Analyzed: 15-Oct-20

Copper	36.0	0.200	ug/L	10.0	26.5	95.1	75-125	2.09	20	
Lead	10.0	0.200	"	10.0	0.630	94.1	75-125	2.03	20	
Zinc	124	1.00	"	10.0	113	102	75-125	2.48	20	



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

## 8270E - Quality Control ESC LAB SCIENCES

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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### Batch WG1561303 - 3510C

#### LCS (R3583328-1)

Prepared & Analyzed: 19-Oct-20

Benzo(a)pyrene	38.1	1.00	ug/l	50.0		76.2	47.0-120			
Bis(2-ethylhexyl)phthalate	39.6	3.00	"	50.0		79.2	43.0-122			
Pentachlorophenol	27.3	1.00	"	50.0		54.6	23.0-120			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>11.5</i>		<i>"</i>	<i>20.0</i>		<i>57.5</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.01</i>		<i>"</i>	<i>10.0</i>		<i>60.1</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>5.48</i>		<i>"</i>	<i>20.0</i>		<i>27.4</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>6.83</i>		<i>"</i>	<i>10.0</i>		<i>68.3</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>3.25</i>		<i>"</i>	<i>20.0</i>		<i>16.2</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>6.67</i>		<i>"</i>	<i>10.0</i>		<i>66.7</i>	<i>10.0-128</i>			

#### BLANK (R3583328-2)

Prepared & Analyzed: 19-Oct-20

Benzo(a)pyrene	ND	1.00	ug/l			-				U
Bis(2-ethylhexyl)phthalate	ND	3.00	"			-				U
Pentachlorophenol	ND	1.00	"			-				U
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>10.2</i>		<i>"</i>	<i>20.0</i>		<i>51.0</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.24</i>		<i>"</i>	<i>10.0</i>		<i>62.4</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>5.68</i>		<i>"</i>	<i>20.0</i>		<i>28.4</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>4.81</i>		<i>"</i>	<i>10.0</i>		<i>48.1</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>3.18</i>		<i>"</i>	<i>20.0</i>		<i>15.9</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>7.44</i>		<i>"</i>	<i>10.0</i>		<i>74.4</i>	<i>10.0-128</i>			

#### MS (R3583328-3)

Prepared & Analyzed: 19-Oct-20

Benzo(a)pyrene	42.2	1.00	ug/l	50.0		84.4	37.0-120			
Bis(2-ethylhexyl)phthalate	43.4	3.00	"	50.0		86.8	33.0-126			
Pentachlorophenol	32.2	1.00	"	50.0		64.4	10.0-128			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>12.9</i>		<i>"</i>	<i>20.0</i>		<i>64.5</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.44</i>		<i>"</i>	<i>10.0</i>		<i>64.4</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>6.43</i>		<i>"</i>	<i>20.0</i>		<i>32.2</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>4.54</i>		<i>"</i>	<i>10.0</i>		<i>45.4</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>3.78</i>		<i>"</i>	<i>20.0</i>		<i>18.9</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>7.29</i>		<i>"</i>	<i>10.0</i>		<i>72.9</i>	<i>10.0-128</i>			



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

## 8270E - Quality Control ESC LAB SCIENCES

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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### Batch WG1561303 - 3510C

MSD (R3583328-4)	Source: R3583328-3			Prepared & Analyzed: 19-Oct-20						
Benzo(a)pyrene	40.7	1.00	ug/l	50.0	81.4	37.0-120	3.62	24		
Bis(2-ethylhexyl)phthalate	42.2	3.00	"	50.0	84.4	33.0-126	2.80	25		
Pentachlorophenol	29.1	1.00	"	50.0	58.2	10.0-128	10.1	37		
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>11.6</i>		<i>"</i>	<i>20.0</i>	<i>58.0</i>	<i>10.0-155</i>				
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>5.74</i>		<i>"</i>	<i>10.0</i>	<i>57.4</i>	<i>10.0-130</i>				
<i>Surrogate: 2-Fluorophenol</i>	<i>5.83</i>		<i>"</i>	<i>20.0</i>	<i>29.2</i>	<i>10.0-120</i>				
<i>Surrogate: Nitrobenzene-d5</i>	<i>4.14</i>		<i>"</i>	<i>10.0</i>	<i>41.4</i>	<i>10.0-127</i>				
<i>Surrogate: Phenol-d5</i>	<i>3.52</i>		<i>"</i>	<i>20.0</i>	<i>17.6</i>	<i>10.0-120</i>				
<i>Surrogate: p-Terphenyl-d14</i>	<i>7.01</i>		<i>"</i>	<i>10.0</i>	<i>70.1</i>	<i>10.0-128</i>				

### Batch WG1561307 - 3510C

LCS (R3583474-1)	Prepared: 19-Oct-20 Analyzed: 20-Oct-20									
Benzo(a)pyrene	35.3	1.00	ug/l	50.0	70.6	47.0-120				
Bis(2-ethylhexyl)phthalate	36.3	3.00	"	50.0	72.6	43.0-122				
Pentachlorophenol	30.8	1.00	"	50.0	61.6	23.0-120				
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>13.4</i>		<i>"</i>	<i>20.0</i>	<i>67.0</i>	<i>10.0-155</i>				
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.53</i>		<i>"</i>	<i>10.0</i>	<i>65.3</i>	<i>10.0-130</i>				
<i>Surrogate: 2-Fluorophenol</i>	<i>7.14</i>		<i>"</i>	<i>20.0</i>	<i>35.7</i>	<i>10.0-120</i>				
<i>Surrogate: Nitrobenzene-d5</i>	<i>5.02</i>		<i>"</i>	<i>10.0</i>	<i>50.2</i>	<i>10.0-127</i>				
<i>Surrogate: Phenol-d5</i>	<i>4.43</i>		<i>"</i>	<i>20.0</i>	<i>22.2</i>	<i>10.0-120</i>				
<i>Surrogate: p-Terphenyl-d14</i>	<i>6.97</i>		<i>"</i>	<i>10.0</i>	<i>69.7</i>	<i>10.0-128</i>				

BLANK (R3583474-2)	Prepared: 19-Oct-20 Analyzed: 20-Oct-20									
Benzo(a)pyrene	ND	1.00	ug/l			-				U
Bis(2-ethylhexyl)phthalate	ND	3.00	"			-				U
Pentachlorophenol	ND	1.00	"			-				U
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>12.5</i>		<i>"</i>	<i>20.0</i>	<i>62.5</i>	<i>10.0-155</i>				
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.56</i>		<i>"</i>	<i>10.0</i>	<i>65.6</i>	<i>10.0-130</i>				
<i>Surrogate: 2-Fluorophenol</i>	<i>7.18</i>		<i>"</i>	<i>20.0</i>	<i>35.9</i>	<i>10.0-120</i>				
<i>Surrogate: Nitrobenzene-d5</i>	<i>5.48</i>		<i>"</i>	<i>10.0</i>	<i>54.8</i>	<i>10.0-127</i>				
<i>Surrogate: Phenol-d5</i>	<i>4.21</i>		<i>"</i>	<i>20.0</i>	<i>21.1</i>	<i>10.0-120</i>				
<i>Surrogate: p-Terphenyl-d14</i>	<i>7.27</i>		<i>"</i>	<i>10.0</i>	<i>72.7</i>	<i>10.0-128</i>				



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
Project Number: [none]	

**8270E - Quality Control**  
**ESC LAB SCIENCES**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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**Batch WG1561307 - 3510C**

**MS (R3583474-3)**

Prepared: 19-Oct-20 Analyzed: 20-Oct-20

Benzo(a)pyrene	33.2	1.00	ug/l	50.0		66.4	37.0-120			
Bis(2-ethylhexyl)phthalate	35.1	3.00	"	50.0		70.2	33.0-126			
Pentachlorophenol	28.5	1.00	"	50.0		57.0	10.0-128			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>12.9</i>		<i>"</i>	<i>20.0</i>		<i>64.5</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.44</i>		<i>"</i>	<i>10.0</i>		<i>64.4</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>7.47</i>		<i>"</i>	<i>20.0</i>		<i>37.4</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>5.02</i>		<i>"</i>	<i>10.0</i>		<i>50.2</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>4.92</i>		<i>"</i>	<i>20.0</i>		<i>24.6</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>6.83</i>		<i>"</i>	<i>10.0</i>		<i>68.3</i>	<i>10.0-128</i>			

**MSD (R3583474-4)**

Source: R3583474-3

Prepared: 19-Oct-20 Analyzed: 20-Oct-20

Benzo(a)pyrene	31.4	1.00	ug/l	50.0		62.8	37.0-120	5.57	24	
Bis(2-ethylhexyl)phthalate	32.3	3.00	"	50.0		64.6	33.0-126	8.31	25	
Pentachlorophenol	25.0	1.00	"	50.0		50.0	10.0-128	13.1	37	
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>11.4</i>		<i>"</i>	<i>20.0</i>		<i>57.0</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>5.97</i>		<i>"</i>	<i>10.0</i>		<i>59.7</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>7.69</i>		<i>"</i>	<i>20.0</i>		<i>38.5</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>4.75</i>		<i>"</i>	<i>10.0</i>		<i>47.5</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>4.98</i>		<i>"</i>	<i>20.0</i>		<i>24.9</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>6.20</i>		<i>"</i>	<i>10.0</i>		<i>62.0</i>	<i>10.0-128</i>			



Client: City of Bend - Stormwater Division	Work Order: D0J1307
Project: Stormwater Monitoring 2020-21	Reported: 26-Oct-20 08:10
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.
- 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



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 08, 2021

### City of Bend - Stormwater Division

Project:	Stormwater Monitoring 2020-21
Samples Received:	October 22, 2020
Work Order:	D0J2107
Contact:	Jeff Buystedt 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,

A handwritten signature in blue ink, appearing to read "Stefan D'Angona".

Stefan D'Angona

Analytical Chemist

Company Name/Address: City of Bend - Stormwater Division  62975 NE Boyd Acres Rd. Bend, OR 97701	Report to: <b>Jeff Buystedt</b>	Chain of Custody Page 1 of 1 BWQL-###-COC   <b>CITY OF BEND</b> Water Quality Laboratory 22395 McGrath Rd. Bend, OR 97701 (541) 317-3017	Metals by SM 3125, Total (Cu,Pb,Zn)	EPA 8270 Benzo(A)pyrene	EPA 8270 Di(2-ethylhexyl)phthalate	EPA 8270 Pentachlorophenol								
	Phone: (541) 322-6369													
	Email to: jbuystedt@bendoregon.gov													

Project Description: <b>Stormwater Monitoring 2020-21</b>	City/State Collected:
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Project Notes:	Work Order: <b>DOJ2107</b>
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Collected by (print): <i>Dave Buchanan</i>	Call with Results?: Y or <input checked="" type="checkbox"/> N # _____	Containers
Collected by (signature):	Immediately Packed on Ice: Y or N Turnaround Time: <input checked="" type="checkbox"/> Std. / RUSH: ___ days	

Sample ID	Lab ID	Comp(C) or Grab(G)	Date	Time	Start Date (Comp only)	Start Time (Comp only)	Matrix*	Containers	Metals by SM 3125, Total (Cu,Pb,Zn)	EPA 8270 Benzo(A)pyrene	EPA 8270 Di(2-ethylhexyl)phthalate	EPA 8270 Pentachlorophenol								
Hunnel Road RV Fire discharge	-01	Grab	10-21-20	0927	N/A	N/A	WW	3	X	X	X	X								

Field Notes (Explain any deviations from sampling SOP):

Sampling Pace:  N/A    Time    Flow

\*Matrix: DW = Drinking Water, WW = Wastewater, GW = Groundwater, SW = Stormwater, BS = Biosolids, SS = Soil, OT = Other

Relinquished by: (signature) <i>Fridge #2</i>	Date: 10-22-20	Time: 06:20	Received by: (Signature) <i>[Signature]</i>	Date: 10-22-20	Time: 06:20	Sample Receipt Form Completed?	Y or <input checked="" type="checkbox"/> N
Relinquished by: (signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Internal Transfer?	Y or N
Relinquished by: (signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Internal Transfer?	Y or N





Client: City of Bend - Stormwater Division	Work Order: D0J2107
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:48
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.



Client: City of Bend - Stormwater Division  
Project: Stormwater Monitoring 2020-21  
Project Number: [none]  
Work Order: D0J2107  
Reported: 08-Jan-21 12:48

Sample Summary

Sample ID	Laboratory ID	Matrix	Analysis	Date/Time Sampled	Date/Time Received
Hunnel Road RV Fire discharge	D0J2107-01	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125 Zinc Total SM 3125	21-Oct-20 09:27	22-Oct-20 06:20



Client: City of Bend - Stormwater Division	Work Order: D0J2107
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:48
Project Number: [none]	

**Hunnel Road RV Fire discharge  
 D0J2107-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>211</b>	10.0	3.11	ug/L	50	20K1203	12-Nov-20	13-Nov-20	SM 3125	
<b>Lead</b>	<b>187</b>	0.200	0.0175	ug/L	1	20K1203	12-Nov-20	13-Nov-20	SM 3125	
<b>Zinc</b>	<b>5710</b>	50.0	30.8	ug/L	50	20K1203	12-Nov-20	13-Nov-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	20.0	0.762	ug/l	20	WG1566309	28-Oct-20	29-Oct-20	8270E	U
<b>Bis(2-ethylhexyl)phthalate</b>	<b>85.0</b>	60.0	17.9	ug/l	20	WG1566309	28-Oct-20	29-Oct-20	8270E	
Pentachlorophenol	ND	20.0	6.26	ug/l	20	WG1566309	28-Oct-20	29-Oct-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		<i>53.5 %</i>				<i>WG1566309</i>	<i>28-Oct-20</i>	<i>29-Oct-20</i>	<i>8270E</i>	<i>J7</i>
<i>Surrogate: 2-Fluorobiphenyl</i>		<i>67.8 %</i>				<i>WG1566309</i>	<i>28-Oct-20</i>	<i>29-Oct-20</i>	<i>8270E</i>	<i>J7</i>
<i>Surrogate: 2-Fluorophenol</i>		<i>33.8 %</i>				<i>WG1566309</i>	<i>28-Oct-20</i>	<i>29-Oct-20</i>	<i>8270E</i>	<i>J7</i>
<i>Surrogate: Nitrobenzene-d5</i>		<i>42.3 %</i>				<i>WG1566309</i>	<i>28-Oct-20</i>	<i>29-Oct-20</i>	<i>8270E</i>	<i>J7</i>
<i>Surrogate: Phenol-d5</i>		<i>16.8 %</i>				<i>WG1566309</i>	<i>28-Oct-20</i>	<i>29-Oct-20</i>	<i>8270E</i>	<i>J7</i>
<i>Surrogate: p-Terphenyl-d14</i>		<i>68.8 %</i>				<i>WG1566309</i>	<i>28-Oct-20</i>	<i>29-Oct-20</i>	<i>8270E</i>	<i>J7</i>



Client: City of Bend - Stormwater Division	Work Order: D0J2107
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:48
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
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#### Batch 20K1203 - EPA 200.8

##### Blank (20K1203-BLK1)

Prepared: 12-Nov-20 Analyzed: 13-Nov-20

Copper	ND	0.200	ug/L							
Lead	ND	0.200	"							
Zinc	ND	1.00	"							

##### LCS (20K1203-BS1)

Prepared: 12-Nov-20 Analyzed: 13-Nov-20

Copper	10.0	0.200	ug/L	10.0		100	70-130			
Lead	9.52	0.200	"	10.0		95.2	70-130			
Zinc	10.2	1.00	"	10.0		102	70-130			

##### Matrix Spike (20K1203-MS1)

Source: D0J2707-01

Prepared: 12-Nov-20 Analyzed: 13-Nov-20

Copper	33.1	0.200	ug/L	10.0	23.9	92.5	75-125			
Lead	10.2	0.200	"	10.0	0.586	95.7	75-125			
Zinc	159	1.00	"	10.0	148	102	75-125			

##### Matrix Spike Dup (20K1203-MSD1)

Source: D0J2707-01

Prepared: 12-Nov-20 Analyzed: 13-Nov-20

Copper	33.4	0.200	ug/L	10.0	23.9	95.0	75-125	0.737	20	
Lead	9.89	0.200	"	10.0	0.586	93.0	75-125	2.66	20	
Zinc	158	1.00	"	10.0	148	95.6	75-125	0.390	20	



Client: City of Bend - Stormwater Division	Work Order: D0J2107
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:48
Project Number: [none]	

### 8270E - Quality Control

### ESC LAB SCIENCES

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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#### Batch WG1566309 - 3510C

##### LCS (R3587061-1)

Prepared & Analyzed: 28-Oct-20

Benzo(a)pyrene	55.7	1.00	ug/l	50.0		111	47.0-120			
Bis(2-ethylhexyl)phthalate	49.8	3.00	"	50.0		99.6	43.0-122			
Pentachlorophenol	44.6	1.00	"	50.0		89.2	23.0-120			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>18.8</i>		<i>"</i>	<i>20.0</i>		<i>94.0</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>9.22</i>		<i>"</i>	<i>10.0</i>		<i>92.2</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>8.07</i>		<i>"</i>	<i>20.0</i>		<i>40.4</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>6.59</i>		<i>"</i>	<i>10.0</i>		<i>65.9</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>4.88</i>		<i>"</i>	<i>20.0</i>		<i>24.4</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>9.41</i>		<i>"</i>	<i>10.0</i>		<i>94.1</i>	<i>10.0-128</i>			

##### LCSD (R3587061-2)

Source: R3587061-1

Prepared & Analyzed: 28-Oct-20

Benzo(a)pyrene	55.6	1.00	ug/l	50.0		111	47.0-120	0.180	20	
Bis(2-ethylhexyl)phthalate	49.9	3.00	"	50.0		99.8	43.0-122	0.201	20	
Pentachlorophenol	45.2	1.00	"	50.0		90.4	23.0-120	1.34	25	
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>18.6</i>		<i>"</i>	<i>20.0</i>		<i>93.0</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>8.76</i>		<i>"</i>	<i>10.0</i>		<i>87.6</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>7.31</i>		<i>"</i>	<i>20.0</i>		<i>36.6</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>6.03</i>		<i>"</i>	<i>10.0</i>		<i>60.3</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>4.64</i>		<i>"</i>	<i>20.0</i>		<i>23.2</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>9.63</i>		<i>"</i>	<i>10.0</i>		<i>96.3</i>	<i>10.0-128</i>			

##### BLANK (R3587061-3)

Prepared & Analyzed: 28-Oct-20

Benzo(a)pyrene	ND	1.00	ug/l			-				U
Bis(2-ethylhexyl)phthalate	ND	3.00	"			-				U
Pentachlorophenol	ND	1.00	"			-				U
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>16.7</i>		<i>"</i>	<i>20.0</i>		<i>83.5</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>8.56</i>		<i>"</i>	<i>10.0</i>		<i>85.6</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>7.26</i>		<i>"</i>	<i>20.0</i>		<i>36.3</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>6.78</i>		<i>"</i>	<i>10.0</i>		<i>67.8</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>4.21</i>		<i>"</i>	<i>20.0</i>		<i>21.1</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>10.0</i>		<i>"</i>	<i>10.0</i>		<i>100</i>	<i>10.0-128</i>			



Client: City of Bend - Stormwater Division	Work Order: D0J2107
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:48
Project Number: [none]	

**Flags and Definitions**

- U Not detected at the Reporting Limit (or MDL where applicable).
- J7 Surrogate recovery cannot be used for control limit evaluation due to dilution
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- A-01 Ongoing MDL data. % Recovery failure has no impact on data.
- 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



CITY OF BEND

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## ANALYTICAL DATA REPORT

January 08, 2021

### City of Bend - Stormwater Division

Project:	Stormwater Monitoring 2020-21
Samples Received:	November 09, 2020
Work Order:	D0K0604
Contact:	Jeff Buystedt 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,

A handwritten signature in blue ink, appearing to read "Stefan D'Angona".

Stefan D'Angona

Analytical Chemist

Company Name/Address: City of Bend - Stormwater Division 62975 NE Boyd Acres Rd. Bend, OR 97701		Report to: Jeff Buystedt Phone: (541) 322-6369 Email to: jbuystedt@bendoregon.gov	Chain of Custody Page 1 of 1 BWQL-###-COC  CITY OF BEND Water Quality Laboratory 22395 McGrath Rd. Bend, OR 97701 (541) 317-3017															
Project Description: Stormwater Monitoring 2020-21		City/State Collected:	Work Order: <b>D0K0604</b>															
Project Notes:																		

Collected by (print): <i>Nick Semess / Matt Sander</i>		Call with Results?: Y or <input checked="" type="checkbox"/> N # _____		Containers	Metals by SM 3125, Total (Cu, Pb, Zn)	EPA 8270 Benzo(A)pyrene	EPA 8270 Di(2-ethylhexyl)phthalate	EPA 8270 Pentachlorophenol										
Collected by (signature): <i>[Signature]</i>		Immediately Packed on Ice: Y or N																
Sample ID	Lab ID	Comp(C) or Grab(G)	Date	Time	Start Date (Comp only)	Start Time (Comp only)	Matrix*											
DDW009618-Airport UIC	-01	Grab	11-06-20	08:23	N/A	N/A	WW	3		X	X	X						
DDW003323-Century	-02	Grab	11-06-20	09:12	N/A	N/A	WW	3		X	X	X						
DDW003355-Boyd Acres Complex	-03	Grab	11-06-20	09:30	N/A	N/A	WW	3		X	X	X						
DDW008884-Empire	-04	Grab	11-06-20	08:06	N/A	N/A	WW	3		X	X	X						
DDW003312-Brookwood	-05	Grab	11-06-20	08:56	N/A	N/A	WW	3		X	X	X						
DDW003238-Ladera	-06	Grab	11-06-20	08:39	N/A	N/A	WW	3		X	X	X						
(Field Duplicate) Empire	-07	Grab	11-06-20	08:56	N/A	N/A	WW	3		X	X	X						
Field Blank	-08	Grab	11-06-20	09:48	N/A	N/A	WW	3		X	X	X						
<del>Hunnel Road RV Fire discharge</del>	<del>-09</del>	<del>Grab</del>	<del>11-06-20</del>		<del>N/A</del>	<del>N/A</del>	<del>WW</del>	<del>3</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>						

Field Notes (Explain any deviations from sampling SOP):  
*No deviations, grab samples, sample temp out of fridge 3.6°C*

Sampling Pace:  N/A  Time  Flow

\*Matrix: DW = Drinking Water, WW = Wastewater, GW = Groundwater, SW = Stormwater, BS = Biosolids, SS = Soil, OT = Other

Relinquished by: (signature) <i>[Signature]</i>	Date: 11-06-20	Time: 10:00	Received by: (Signature) <i>Fridge #2</i>	Date: 11-06-20	Time: 10:00	Sample Receipt Form Completed? <input checked="" type="checkbox"/> Y or N
Relinquished by: (signature) <i>Fridge #2</i>	Date: 11-06-20	Time: 10:05	Received by: (Signature) <i>[Signature]</i>	Date: 11-09-20	Time: 10:05	Internal Transfer? <input checked="" type="checkbox"/> Y or N
Relinquished by: (signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Internal Transfer? Y or N





City of Bend Water Quality Laboratory Sample Cooler Receipt Form

Work Order #: DOK0604 Received By: Nicholas Scunness Date/Time: 11-09-20 1005

Temperature of samples: 3.6 °C Number of Containers Received: 2

Samples received:  On Ice OR Directly from Field

Is the COC present and signed?  Yes No Are samples received within holding times?  Yes No N/A

Are sample bottles intact?  Yes No Are the samples appropriately preserved?  Yes No N/A  
If No, please explain in the comments section

Does the COC and sample labels match?  Yes No Are the appropriate containers used?  Yes No  
If No, please explain in the comments section

Are the appropriate containers used?  Yes No Do VOA vials have Headspace? Yes No  N/A  
If No, please explain in the comments section

(For preservation completed at the lab only):

Preservation Type	Preservation LIMS ID	Sample ID(s)	Bottle Letter(s)	Date and Time	Analyst
HNO <sub>3</sub>	1112032	DOK0604-01-207/05	C / A	11-09-20	NJS

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Client: City of Bend - Stormwater Division

Work Order: D0K0604

Project: Stormwater Monitoring 2020-21

Reported: 08-Jan-21 12:49

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.



Client: City of Bend - Stormwater Division
Project: Stormwater Monitoring 2020-21
Project Number: [none]
Work Order: D0K0604
Reported: 08-Jan-21 12:49

Sample Summary

Table with 6 columns: Sample ID, Laboratory ID, Matrix, Analysis, Date/Time Sampled, Date/Time Received. Contains 8 rows of sample data including locations like Airport UIC, Century, Boyd Acres Complex, Empire, Brookwood, Ladera, and (Field Duplicate) Empire.



Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**Sample Summary**

Sample ID	Laboratory ID	Matrix	Analysis	Date/Time Sampled	Date/Time Received
			Zinc Total SM 3125		
Field Blank	D0K0604-08	Water	Semi Volatile Organic Compounds (GC/MS)	06-Nov-20 09:48	09-Nov-20 10:05
			Copper Total SM 3125		
			Lead Total SM 3125		
			Zinc Total SM 3125		



Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**DDW009618-Airport UIC**  
**D0K0604-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>16.2</b>	0.200	0.0622	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Lead</b>	<b>2.16</b>	0.200	0.0175	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>2400</b>	50.0	30.8	ug/L	50	20L1507	15-Dec-20	29-Dec-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		<i>67.0 %</i>				<i>10.0-155</i>	<i>WG15755</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>
						<i>80</i>				
<i>Surrogate: 2-Fluorobiphenyl</i>		<i>63.3 %</i>				<i>10.0-130</i>	<i>WG15755</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>
						<i>80</i>				
<i>Surrogate: 2-Fluorophenol</i>		<i>30.2 %</i>				<i>10.0-120</i>	<i>WG15755</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>
						<i>80</i>				
<i>Surrogate: Nitrobenzene-d5</i>		<i>49.0 %</i>				<i>10.0-127</i>	<i>WG15755</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>
						<i>80</i>				
<i>Surrogate: Phenol-d5</i>		<i>19.9 %</i>				<i>10.0-120</i>	<i>WG15755</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>
						<i>80</i>				
<i>Surrogate: p-Terphenyl-d14</i>		<i>73.7 %</i>				<i>10.0-128</i>	<i>WG15755</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>
						<i>80</i>				



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Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**DDW003323-Century**  
**D0K0604-02 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
<b>Copper</b>	<b>33.0</b>	0.200	0.0622	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Lead</b>	<b>1.90</b>	0.200	0.0175	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>159</b>	1.00	0.615	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
Benzo(a)pyrene	ND	10.0	0.381	ug/l	10	WG1575580	13-Nov-20	15-Nov-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	30.0	8.95	ug/l	10	WG1575580	13-Nov-20	15-Nov-20	8270E	U
Pentachlorophenol	ND	10.0	3.13	ug/l	10	WG1575580	13-Nov-20	15-Nov-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		75.5 %			10.0-155	WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		75.7 %			10.0-130	WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		34.1 %			10.0-120	WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		78.5 %			10.0-127	WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: Phenol-d5</i>		25.3 %			10.0-120	WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		75.9 %			10.0-128	WG1575580	13-Nov-20	15-Nov-20	8270E	



Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**DDW003355-Boyd Acres Complex**  
**D0K0604-03 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>32.4</b>	0.200	0.0622	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Lead</b>	<b>5.05</b>	0.200	0.0175	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>362</b>	10.0	6.15	ug/L	10	20L1507	15-Dec-20	29-Dec-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		72.5 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>		66.2 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: 2-Fluorophenol</i>		22.9 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: Nitrobenzene-d5</i>		58.3 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: Phenol-d5</i>		20.1 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: p-Terphenyl-d14</i>		71.7 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>15-Nov-20</i>	<i>8270E</i>	



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Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**DDW008884-Empire**  
**D0K0604-04 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>90.2</b>	0.200	0.0622	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Lead</b>	<b>6.70</b>	0.200	0.0175	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>791</b>	10.0	6.15	ug/L	10	20L1507	15-Dec-20	29-Dec-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG1575580	13-Nov-20	17-Nov-20	8270E	U
Bis(2-ethylhexyl)phthalate	2.23 J	3.00	0.895	ug/l	1	WG1575580	13-Nov-20	17-Nov-20	8270E	Ja
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG1575580	13-Nov-20	17-Nov-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		63.0 %				WG1575580	13-Nov-20	17-Nov-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		57.8 %				WG1575580	13-Nov-20	17-Nov-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		23.5 %				WG1575580	13-Nov-20	17-Nov-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		55.6 %				WG1575580	13-Nov-20	17-Nov-20	8270E	
<i>Surrogate: Phenol-d5</i>		20.7 %				WG1575580	13-Nov-20	17-Nov-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		70.7 %				WG1575580	13-Nov-20	17-Nov-20	8270E	





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Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

## DDW003312-Brookwood

### D0K0604-05 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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### City of Bend Water Quality Laboratory

#### Metals by Method SM 3125

<b>Copper</b>	<b>56.9</b>	0.200	0.0622	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Lead</b>	<b>3.95</b>	0.200	0.0175	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>279</b>	10.0	6.15	ug/L	10	20L1507	15-Dec-20	29-Dec-20	SM 3125	

### ESC LAB SCIENCES

#### 8270E

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		75.0 %				WG1575580	13-Nov-20	16-Nov-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		61.0 %				WG1575580	13-Nov-20	16-Nov-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		26.5 %				WG1575580	13-Nov-20	16-Nov-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		57.4 %				WG1575580	13-Nov-20	16-Nov-20	8270E	
<i>Surrogate: Phenol-d5</i>		20.1 %				WG1575580	13-Nov-20	16-Nov-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		72.2 %				WG1575580	13-Nov-20	16-Nov-20	8270E	



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Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**DDW003238-Ladera**  
**D0K0604-06 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>14.5</b>	0.200	0.0622	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Lead</b>	<b>1.28</b>	0.200	0.0175	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>107</b>	1.00	0.615	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		86.3 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>		77.5 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: 2-Fluorophenol</i>		33.6 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: Nitrobenzene-d5</i>		77.6 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: Phenol-d5</i>		23.6 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: p-Terphenyl-d14</i>		80.1 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	



# 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: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**(Field Duplicate) Empire  
 D0K0604-07 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>55.2</b>	0.200	0.0622	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Lead</b>	<b>3.55</b>	0.200	0.0175	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>240</b>	10.0	6.15	ug/L	10	20L1507	15-Dec-20	29-Dec-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG1575580	13-Nov-20	16-Nov-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		83.5 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>		68.1 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: 2-Fluorophenol</i>		27.3 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: Nitrobenzene-d5</i>		66.9 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: Phenol-d5</i>		21.0 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	
<i>Surrogate: p-Terphenyl-d14</i>		80.4 %				<i>WG1575580</i>	<i>13-Nov-20</i>	<i>16-Nov-20</i>	<i>8270E</i>	



# CITY OF BEND

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Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**Field Blank**  
**D0K0604-08 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

Copper	0.164 J	0.200	0.0622	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	J
Lead	ND	0.200	0.0175	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>3.85</b>	1.00	0.615	ug/L	1	20L1507	15-Dec-20	29-Dec-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	1.00	0.0381	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	3.00	0.895	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
Pentachlorophenol	ND	1.00	0.313	ug/l	1	WG1575580	13-Nov-20	15-Nov-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		68.0 %				WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: 2-Fluorobiphenyl</i>		73.8 %				WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: 2-Fluorophenol</i>		34.2 %				WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: Nitrobenzene-d5</i>		60.2 %				WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: Phenol-d5</i>		24.9 %				WG1575580	13-Nov-20	15-Nov-20	8270E	
<i>Surrogate: p-Terphenyl-d14</i>		81.5 %				WG1575580	13-Nov-20	15-Nov-20	8270E	



Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
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
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#### Batch 20L1507 - EPA 200.8

**Blank (20L1507-BLK1)** Prepared: 15-Dec-20 Analyzed: 29-Dec-20

Copper	ND	0.200	ug/L							
Lead	ND	0.200	"							
Zinc	ND	1.00	"							

**LCS (20L1507-BS1)** Prepared: 15-Dec-20 Analyzed: 29-Dec-20

Copper	9.90	0.200	ug/L	10.0		99.0	70-130			
Lead	9.70	0.200	"	10.0		97.0	70-130			
Zinc	12.7	1.00	"	10.0		127	70-130			

**Matrix Spike (20L1507-MS1)** Source: D0L1504-01 Prepared: 15-Dec-20 Analyzed: 29-Dec-20

Copper	10.1	0.200	ug/L	10.0	ND	101	75-125			
Lead	10.1	0.200	"	10.0	ND	101	75-125			
Zinc	11.8	1.00	"	10.0	ND	118	75-125			

**Matrix Spike Dup (20L1507-MSD1)** Source: D0L1504-01 Prepared: 15-Dec-20 Analyzed: 29-Dec-20

Copper	9.99	0.200	ug/L	10.0	ND	99.9	75-125	0.748	20	
Lead	9.71	0.200	"	10.0	ND	97.1	75-125	3.54	20	
Zinc	9.93	1.00	"	10.0	ND	99.3	75-125	17.0	20	



Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

### 8270E - Quality Control

### ESC LAB SCIENCES

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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#### Batch WG1575580 - 3510C

##### LCS (R3593589-1)

Prepared: 13-Nov-20 Analyzed: 15-Nov-20

Benzo(a)pyrene	39.1	1.00	ug/l	50.0		78.2	47.0-120			
Bis(2-ethylhexyl)phthalate	37.9	3.00	"	50.0		75.8	43.0-122			
Pentachlorophenol	30.5	1.00	"	50.0		61.0	23.0-120			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>13.3</i>		<i>"</i>	<i>20.0</i>		<i>66.5</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.12</i>		<i>"</i>	<i>10.0</i>		<i>61.2</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>5.83</i>		<i>"</i>	<i>20.0</i>		<i>29.2</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>4.69</i>		<i>"</i>	<i>10.0</i>		<i>46.9</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>4.17</i>		<i>"</i>	<i>20.0</i>		<i>20.9</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>7.12</i>		<i>"</i>	<i>10.0</i>		<i>71.2</i>	<i>10.0-128</i>			

##### BLANK (R3593589-2)

Prepared: 13-Nov-20 Analyzed: 15-Nov-20

Benzo(a)pyrene	ND	1.00	ug/l				-			U
Bis(2-ethylhexyl)phthalate	ND	3.00	"				-			U
Pentachlorophenol	ND	1.00	"				-			U
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>11.5</i>		<i>"</i>	<i>20.0</i>		<i>57.5</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>7.26</i>		<i>"</i>	<i>10.0</i>		<i>72.6</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>6.64</i>		<i>"</i>	<i>20.0</i>		<i>33.2</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>5.86</i>		<i>"</i>	<i>10.0</i>		<i>58.6</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>3.78</i>		<i>"</i>	<i>20.0</i>		<i>18.9</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>7.62</i>		<i>"</i>	<i>10.0</i>		<i>76.2</i>	<i>10.0-128</i>			



Client: City of Bend - Stormwater Division	Work Order: D0K0604
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:49
Project Number: [none]	

**Flags and Definitions**

- U Not detected at the Reporting Limit (or MDL where applicable).
- 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







CITY OF BEND

**City of Bend Water Quality Lab**  
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## ANALYTICAL DATA REPORT

January 08, 2021

### City of Bend - Stormwater Division

Project:	Stormwater Monitoring 2020-21
Samples Received:	December 21, 2020
Work Order:	D0L1704
Contact:	Jeff Buystedt 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,

A handwritten signature in blue ink, appearing to read "Stefan D'Angona".

Stefan D'Angona

Analytical Chemist

Company Name/Address:  
 City of Bend - Stormwater Division  
 62975 NE Boyd Acres Rd.  
 Bend, OR 97701

Report to:  
 Jeff Buystedt  
 Phone:  
 (541) 322-6369  
 Email to:  
 jbuystedt@bendoregon.gov

Chain of Custody  
 Page 1 of 1  
 BWQL-###-COC



**CITY OF BEND**  
 Water Quality Laboratory  
 22395 McGrath Rd.  
 Bend, OR 97701  
 (541) 317-3017

Work Order:  
**DOL1704**

Project Description:  
 Stormwater Monitoring 2020-21

City/State Collected:

Project Notes:

Collected by (print):  
 Matt Sanders

Call with Results?: Y or  N # \_\_\_\_\_

Collected by (signature):

Immediately Packed on Ice: Y or N Turnaround Time:  
 Std. / RUSH: \_\_\_ days

Sample ID	Lab ID	Comp(C) or Grab(G)	Date	Time	Start Date (Comp only)	Start Time (Comp only)	Matrix*	Containers	EPA 8270 Benzo(A)pyrene	EPA 8270 Di(2-ethylhexyl)phthalate	EPA 8270 Pentachlorophenol							
DDW003238-Ladera	-01	Grab	12/16/20	5:45	N/A	N/A	WW	3	X	X	X							

Field Notes (Explain any deviations from sampling SOP):

Sampling Pace:  N/A  Time  Flow

\*Matrix: DW = Drinking Water, WW = Wastewater, GW = Groundwater, SW = Stormwater, BS = Biosolids, SS = Soil, OT = Other

Relinquished by: (signature)	Date: 12/16/20	Time: 6:00	Received by: (Signature) Fridge #2	Date: 12/16/20	Time: 6:00	Sample Receipt Form Completed? <input checked="" type="checkbox"/> Y or N
Relinquished by: (signature) Fridge #2	Date: 12/21/20	Time: 6:00	Received by: (Signature)	Date: 12/21/20	Time: 6:00	Internal Transfer? <input checked="" type="checkbox"/> Y or N
Relinquished by: (signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Internal Transfer? Y or N



# City of Bend Water Quality Laboratory Sample Cooler Receipt Form

Work Order #: D061704-01 Received By: Matt Sanders Date/Time: 12/21/20 6:00

Temperature of samples: 4.2 °C Number of Containers Received: 1

Samples received:  On Ice OR Directly from Field

- Is the COC present and signed?  Yes No Are samples received within holding times?  Yes No N/A
- Are sample bottles intact?  Yes No Are the samples appropriately preserved?  Yes No N/A  
If No, please explain in the comments section If No, please explain in the comments section
- Does the COC and sample labels match?  Yes No Are the appropriate containers used? Yes No  
If No, please explain in the comments section If No, please explain in the comments section
- Are the appropriate containers used?  Yes No Do VOA vials have Headspace? Yes No  N/A  
If No, please explain in the comments section If Yes, please explain in the comments section

(For preservation completed at the lab only):

Preservation Type	Preservation LIMS ID	Sample ID(s)	Bottle Letter(s)	Date and Time	Analyst
<u>HWD<sub>3</sub></u>	<u>1113076</u>	<u>D061704-01</u>	<u>C</u>	<u>12/16/20 6:30</u>	<u>MS</u>

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Client: City of Bend - Stormwater Division

Work Order: D0L1704

Project: Stormwater Monitoring 2020-21

Reported: 08-Jan-21 12:50

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.



Client: City of Bend - Stormwater Division	Work Order: D0L1704
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:50
Project Number: [none]	

**Sample Summary**

Sample ID	Laboratory ID	Matrix	Analysis	Date/Time Sampled	Date/Time Received
DDW003238-Ladera	D0L1704-01	Water	Semi Volatile Organic Compounds (GC/MS) Copper Total SM 3125 Lead Total SM 3125 Zinc Total SM 3125	16-Dec-20 05:45	21-Dec-20 06:00



# CITY OF BEND

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Client: City of Bend - Stormwater Division	Work Order: D0L1704
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:50
Project Number: [none]	

**DDW003238-Ladera**  
**D0L1704-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Flags
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**City of Bend Water Quality Laboratory**

**Metals by Method SM 3125**

<b>Copper</b>	<b>4.04</b>	0.200	0.0622	ug/L	1	20L2407	24-Dec-20	29-Dec-20	SM 3125	
<b>Lead</b>	<b>0.407</b>	0.200	0.0175	ug/L	1	20L2407	24-Dec-20	29-Dec-20	SM 3125	
<b>Zinc</b>	<b>143</b>	1.00	0.615	ug/L	1	20L2407	24-Dec-20	29-Dec-20	SM 3125	

**ESC LAB SCIENCES**

**8270E**

Benzo(a)pyrene	ND	5.00	0.191	ug/l	5	WG1596111	23-Dec-20	24-Dec-20	8270E	U
Bis(2-ethylhexyl)phthalate	ND	15.0	4.48	ug/l	5	WG1596111	23-Dec-20	24-Dec-20	8270E	U
Pentachlorophenol	ND	5.00	1.57	ug/l	5	WG1596111	23-Dec-20	24-Dec-20	8270E	U
<i>Surrogate: 2,4,6-Tribromophenol</i>		65.3 %			10.0-155	WG1596111	23-Dec-20	24-Dec-20	8270E	
						1				
<i>Surrogate: 2-Fluorobiphenyl</i>		63.6 %			10.0-130	WG1596111	23-Dec-20	24-Dec-20	8270E	
						1				
<i>Surrogate: 2-Fluorophenol</i>		35.4 %			10.0-120	WG1596111	23-Dec-20	24-Dec-20	8270E	
						1				
<i>Surrogate: Nitrobenzene-d5</i>		80.0 %			10.0-127	WG1596111	23-Dec-20	24-Dec-20	8270E	
						1				
<i>Surrogate: Phenol-d5</i>		30.4 %			10.0-120	WG1596111	23-Dec-20	24-Dec-20	8270E	
						1				
<i>Surrogate: p-Terphenyl-d14</i>		58.5 %			10.0-128	WG1596111	23-Dec-20	24-Dec-20	8270E	
						1				



Client: City of Bend - Stormwater Division	Work Order: D0L1704
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:50
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
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#### Batch 20L2407 - EPA 200.8

**Blank (20L2407-BLK1)** Prepared: 24-Dec-20 Analyzed: 29-Dec-20

Copper	ND	0.200	ug/L							
Lead	ND	0.200	"							
Zinc	ND	1.00	"							

**LCS (20L2407-BS1)** Prepared: 24-Dec-20 Analyzed: 29-Dec-20

Copper	9.77	0.200	ug/L	10.0		97.7	70-130			
Lead	9.59	0.200	"	10.0		95.9	70-130			
Zinc	9.87	1.00	"	10.0		98.7	70-130			

**Matrix Spike (20L2407-MS1)** Source: D0L1704-01 Prepared: 24-Dec-20 Analyzed: 29-Dec-20

Copper	13.7	0.200	ug/L	10.0	4.04	96.5	75-125			
Lead	9.85	0.200	"	10.0	0.407	94.4	75-125			
Zinc	155	1.00	"	10.0	143	116	75-125			

**Matrix Spike Dup (20L2407-MSD1)** Source: D0L1704-01 Prepared: 24-Dec-20 Analyzed: 29-Dec-20

Copper	13.7	0.200	ug/L	10.0	4.04	96.1	75-125	0.268	20	
Lead	9.79	0.200	"	10.0	0.407	93.9	75-125	0.559	20	
Zinc	154	1.00	"	10.0	143	105	75-125	0.728	20	



Client: City of Bend - Stormwater Division	Work Order: D0L1704
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:50
Project Number: [none]	

### 8270E - Quality Control

### ESC LAB SCIENCES

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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#### Batch WG1596111 - 3510C

##### LCS (R3607141-1)

Prepared & Analyzed: 23-Dec-20

Benzo(a)pyrene	43.1	1.00	ug/l	50.0		86.2	47.0-120			
Bis(2-ethylhexyl)phthalate	40.3	3.00	"	50.0		80.6	43.0-122			
Pentachlorophenol	31.9	1.00	"	50.0		63.8	23.0-120			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>15.0</i>		<i>"</i>	<i>20.0</i>		<i>75.0</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.78</i>		<i>"</i>	<i>10.0</i>		<i>67.8</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>7.33</i>		<i>"</i>	<i>20.0</i>		<i>36.7</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>5.51</i>		<i>"</i>	<i>10.0</i>		<i>55.1</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>3.88</i>		<i>"</i>	<i>20.0</i>		<i>19.4</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>7.68</i>		<i>"</i>	<i>10.0</i>		<i>76.8</i>	<i>10.0-128</i>			

##### BLANK (R3607141-3)

Prepared & Analyzed: 23-Dec-20

Benzo(a)pyrene	ND	1.00	ug/l				-			U
Bis(2-ethylhexyl)phthalate	ND	3.00	"				-			U
Pentachlorophenol	ND	1.00	"				-			U
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>13.4</i>		<i>"</i>	<i>20.0</i>		<i>67.0</i>	<i>10.0-155</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>6.87</i>		<i>"</i>	<i>10.0</i>		<i>68.7</i>	<i>10.0-130</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>7.21</i>		<i>"</i>	<i>20.0</i>		<i>36.0</i>	<i>10.0-120</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>5.96</i>		<i>"</i>	<i>10.0</i>		<i>59.6</i>	<i>10.0-127</i>			
<i>Surrogate: Phenol-d5</i>	<i>3.69</i>		<i>"</i>	<i>20.0</i>		<i>18.5</i>	<i>10.0-120</i>			
<i>Surrogate: p-Terphenyl-d14</i>	<i>7.90</i>		<i>"</i>	<i>10.0</i>		<i>79.0</i>	<i>10.0-128</i>			





Client: City of Bend - Stormwater Division	Work Order: D0L1704
Project: Stormwater Monitoring 2020-21	Reported: 08-Jan-21 12:50
Project Number: [none]	

**Flags and Definitions**

- U Not detected at the Reporting Limit (or MDL where applicable).
- 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