Getting Started Guide for the Environmental Data Portal

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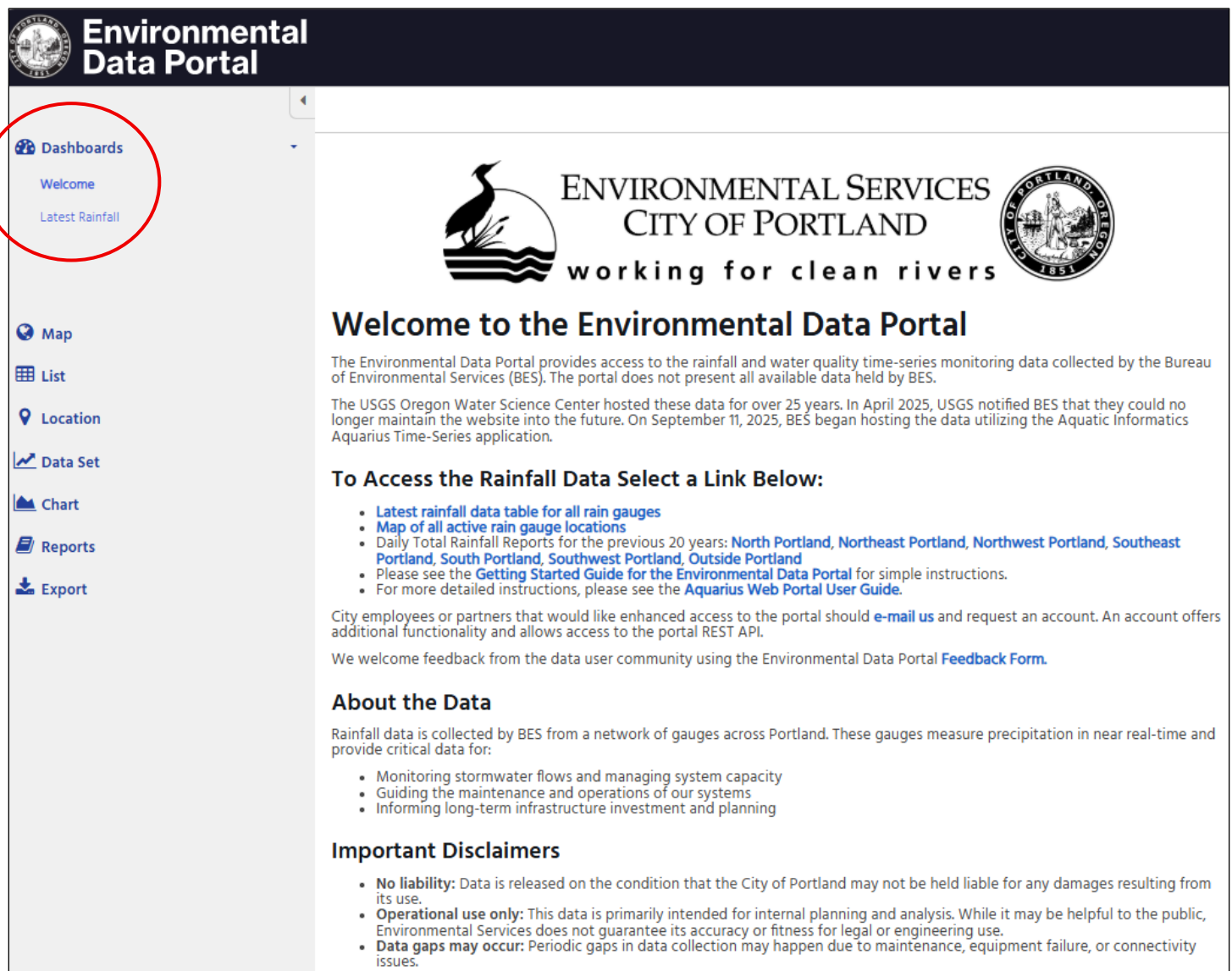
Introduction

This guide provides basic instructions for navigating the City of Portland's Bureau of Environmental Services (BES) Environmental Data Portal at https://aquarius.portlandoregon.gov/Data. The Environmental Data Portal can also be accessed from the City of Portland web site at https://www.portland.gov/bes/rainfall-data-portland.

Dashboards

Two dashboards are located on the left column of the main page: *Welcome* and *Latest Rainfall*. Links are highlighted in blue text. The links in the left column provide access to the precipitation data plus stream conductivity and temperature data that are also stored within the BES Data Portal.

Welcome Page

The Welcome Page has links to:
- The latest rainfall table for all rain gauges
- A map of all rain gauge locations
- Daily rainfall reports for the previous 20 years

To Access the Rainfall Data Select a Link Below:
- Latest rainfall data table for all rain gauges
- Map of all active rain gauge locations
- Daily Total Rainfall Reports for the previous 20 years: North Portland, Northeast Portland, Northwest Portland, Southeast Portland, South Portland, Southwest Portland, Outside Portland
- Please see the Getting Started Guide for the Environmental Data Portal for simple instructions.
- For more detailed instructions, please see the Aquarius Web Portal User Guide.

Latest Rainfall Table

The Latest Rainfall table provides a list of active rain gauge stations, rainfall statistics and links to the hourly data table and charts.
- Click on the rain gauge name for location details.
- Right click on a column header for the time period you are interested in and select "open link in a new tab" for a map of rainfall values for that time period.
- Click on the table and graph icons for hourly data tables and charts.

Latest rainfall from BES rain gauges
- Select the rain gauge location name for location summary
- Click on the ⊞ for the USGS-style hourly data table
- Click on the ⛰ for six charts of results
- Right-click on column headers and select "open in a new tab" for a map of the rain gauges with the values for the selected time period

Rain Gauge Name	Totals (in)										Charts and Graphs
	6 hr	12 hr	24 hr	1 Day	3 Day	5 Day	7 Day	Mon...	Year	Water Year	
CITYWIDE AVERAGE	0	0	0.05	0	0.08	0.08	0.08	0.98	20.08	39.03	⊞⛰
Airport Way 2 Pump Station	0	0	0.03	0	0.03	0.03	0.03	0.92	20.33	39.76	⛰
Albina Pump Station	0	0	0.05	0	0.07	0.07	0.07	1.13	20.26	38.29	⛰
Arleta Elementary School			0.01	0	0.02	0.02	0.02	0.91			
Astor Elementary School				0	0.10	0.10	0.10	0.88			
Beaumont Middle School				0	0.05	0.05	0.05	1.08			
Beverly Cleary School at Fern...	0	0	0.02	0	0.05	0.05	0.05	0.80	18.74	36.62	⊞⛰
Bonny Slope Elementary School	0	0	0.09	0	0.14	0.14	0.14	1.14	19.48	37.22	⊞⛰
Cleveland High School	0	0	0.01	0	0.06	0.06	0.06	0.81	18.86	36.87	⊞⛰
Columbia Influent Pump Station	0	0	0.03	0	0.09	0.09	0.09	0.98	20.24	40.67	⊞⛰

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Click on the gauge name for location details

Click on table and chart icons for hourly data

Map of Total Rainfall Values

- From the page listing the rain gauges, right-click on the column headers and select "open link in a new tab" for a map of rainfall values.

Rain Gauge Name	Totals (in)										Links
	6 hr	12 hr	24 hr	1 Day	3 Day	5 Day	7 Day	Mon…	Year	Water Year	
Airport Way #2 Pump Station	0	0	0					).39	19.39	38.82	⊞▲
Albina Pump Station	0	0	0					.24	19.03	37.06	⊞▲
Portland Fire and Rescue Statio…	0	0	0					.14	19.51	38.73	⊞▲
Arleta School	0	0	0					.25	18.22	35.79	⊞▲
Astor School	0	0	0	0				0.29	17.45	36.57	⊞▲
Beaumont School	0	0	0	0	0	0	0.02	0.26	16.16	33.23	⊞▲
Bonny Slope BSD	0	0	0	0	0	0	0	0.44	17.16	34.90	⊞▲
Cascade PCC	0	0	0	0	0	0	0	0.37	18.15	36.86	⊞▲

Right-click on the column headers and select "open link in a new tab" for a map showing those values

- A map will display showing the rainfall total at each gauge location for that specific time period selected.

Each dot displays a rainfall value for the time period selected at that rain gauge
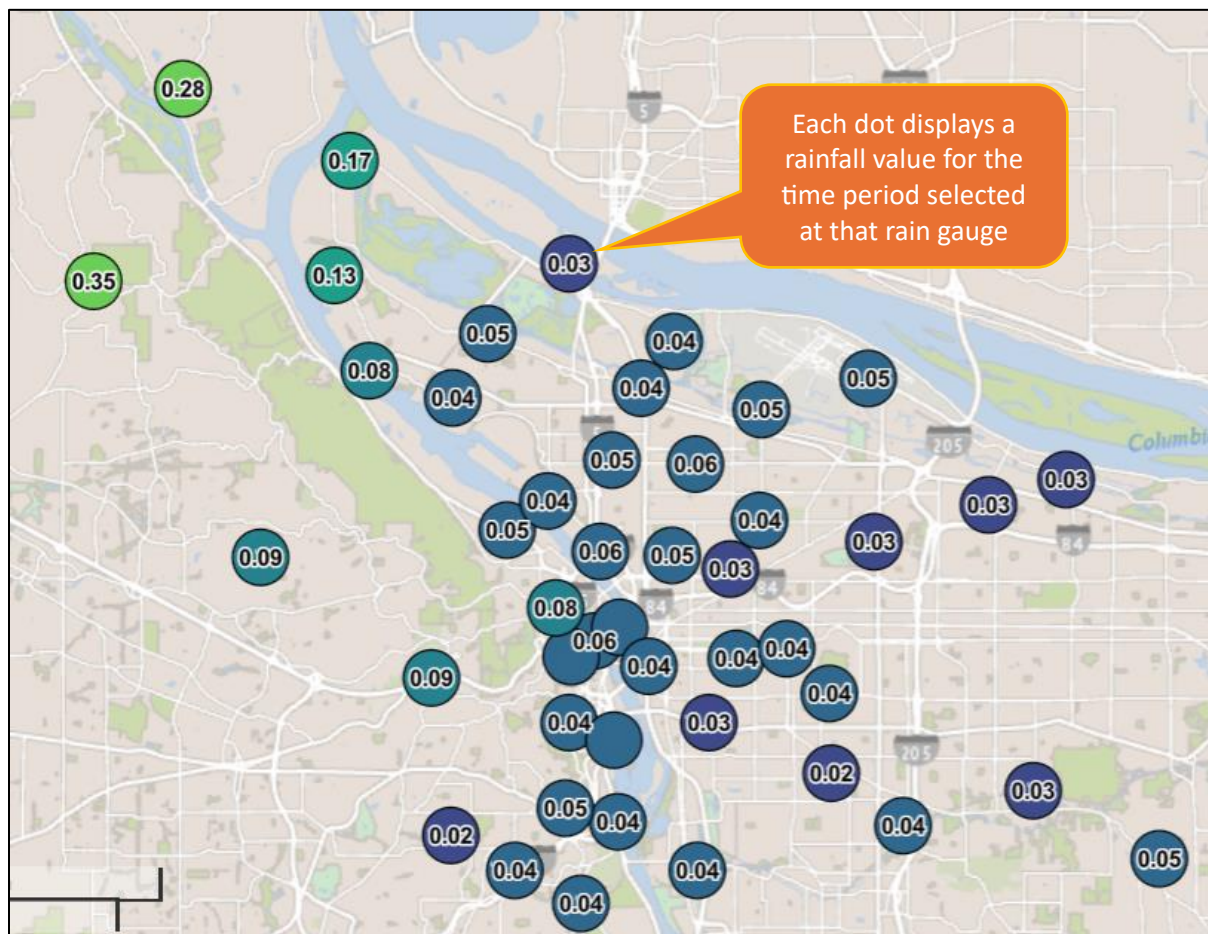
Hourly Data Table

- From the page listing all of the rain gauges, click on the table icon on the far right column for USGS-style hourly rainfall data for that specific rain gauge.
- The citywide average of all rain gauges is also calculated; see the first entry, shown below.

Latest rainfall from BES rain gauges

- Select the rain gauge location name for location summary
- Click on the ⊞ for the USGS-style hourly data table
- Click on the ⛰ for six charts of results
- Right-click on column headers and select "open in a new tab" for a map of the rain gauges with the values for the selected time period

| Rain Gauge Name | Totals (in) | | | | | | | | | Water Year | Charts and Graphs |
	6 hr	12 hr	24 hr	1 Day	3 Day	5 Day	7 Day	Mon...	Year		
CITYWIDE AVERAGE	0	0	0.04	0	0.08	0.08	0.08	0.98	20.08	39.03	⊞⛰
Airport Way 2 Pump Station	0	0	0.03	0				.92	20.33	.76	⊞⛰
Albina Pump Station	0	0	0.04	0					20.26	38.29	⊞⛰
Arleta Elementary School	0	0	0	0					19.23	36.80	⊞⛰
Astor Elementary School	0	0	0.03	0					18.50	37.62	⊞⛰
Beaumont Middle School	0	0	0.01	0				.08	18.30	35.37	⊞⛰
Beverly Cleary School at Fern...	0	0	0.01	0	0.05	0.05	0.05	0.80	18.74	36.62	⊞⛰
Bonny Slope Elementary School	0	0	0.07	0	0.14	0.14	0.14	1.14	19.48	37.22	⊞⛰
Cleveland High School	0	0	0	0	0.06	0.06	0.06	0.81	18.86	36.87	⊞⛰
Columbia Influent Pump Station	0	0	0.03	0	0.09	0.09	0.09	0.98	20.24	40.67	⊞⛰

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> Click on the table icon to display the citywide average of all gauges

- A data table will display showing hourly rainfall at that particular gauge.

```
Airport Way 2 Pump Station (HYDRA-111) - 14614 NE Airport Way
Last updated Monday, September 29, 2025 18:07 PM (17:07 PM Pacific Standard Time)

PROVISIONAL, UNCORRECTED RAW DATA FROM THE CITY OF PORTLAND HYDRA NETWORK.
Data are the number of tips of the rain gauge bucket.
Each tip is 0.01 inches of rainfall.
 [-, missing data]
Dates and times are PACIFIC STANDARD TIME.

            Daily  Hourly data -->
   Date     Total  0  1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23
--------------------------------------------------------------------------------------------
2025-09-29     3   0  0  0  0  0  0  0  0  0  0  0  1  1  1  0  0  0
2025-09-28     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-27     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-26     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-25     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-24     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-23     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-22     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-21    35   0  0  0  0  5 16 12  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-20     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-19     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-18     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-17     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-16     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-15     0   0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
2025-09-14    53   0  0  2  1  1  0  0  3 10 27  9  0  0  0  0  0  0  0  0  0  0  0  0  0
```

Rainfall Summary Charts

- From the page listing the rain gauges, click on the graph icon to display six different graphs specific to that rain gauge:
    - Current Year vs. 20-Year Average
    - Hourly totals (last 7 days)
    - Daily totals (last 60 days)
    - Monthly totals (last 2 years)
    - Water year totals (October 1 – September 30)
    - Calendar year totals

| Rain Gauge Name | Totals (in) | | | | | | | | | | Charts and Graphs |
	6 hr	12 hr	24 hr	1 Day	3 Day	5 Day	7 Day	Mon...	Year	Water Year	
Citywide Average	0	0	0.06	0	0.08	0.08	0.08	0.98	20.08	39.03	⊞ ⛰
Airport Way 2 Pump Station	0	0	0.03	0	0.03	0.03	0.03				⊞ ⛰
Albina Pump Station	0	0	0.06	0	0.07	0.07	0.07				⊞ ⛰
Arleta Elementary School	0	0	0.02	0	0.02	0.02	0.02				⊞ ⛰
Astor Elementary School	0	0	0.04	0	0.10	0.10	0.10	0.88	18.50	37.62	⊞ ⛰
Beaumont Middle School	0	0	0.04	0	0.05	0.05	0.05	1.08	18.30	35.37	⊞ ⛰
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Cleveland High School	0	0	0.03	0	0.06	0.06	0.06	0.81	18.86	36.87	⊞ ⛰
Columbia Influent Pump Station	0	0	0.04	0	0.09	0.09	0.09	0.98	20.24	40.67	⊞ ⛰

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Click on the graph icon for multiple graph options

- Within the graphs, you can zoom in on specific time periods by clicking on the zoom tool at the bottom of the chart along the x-axis.

Drag this to zoom in on the timeline
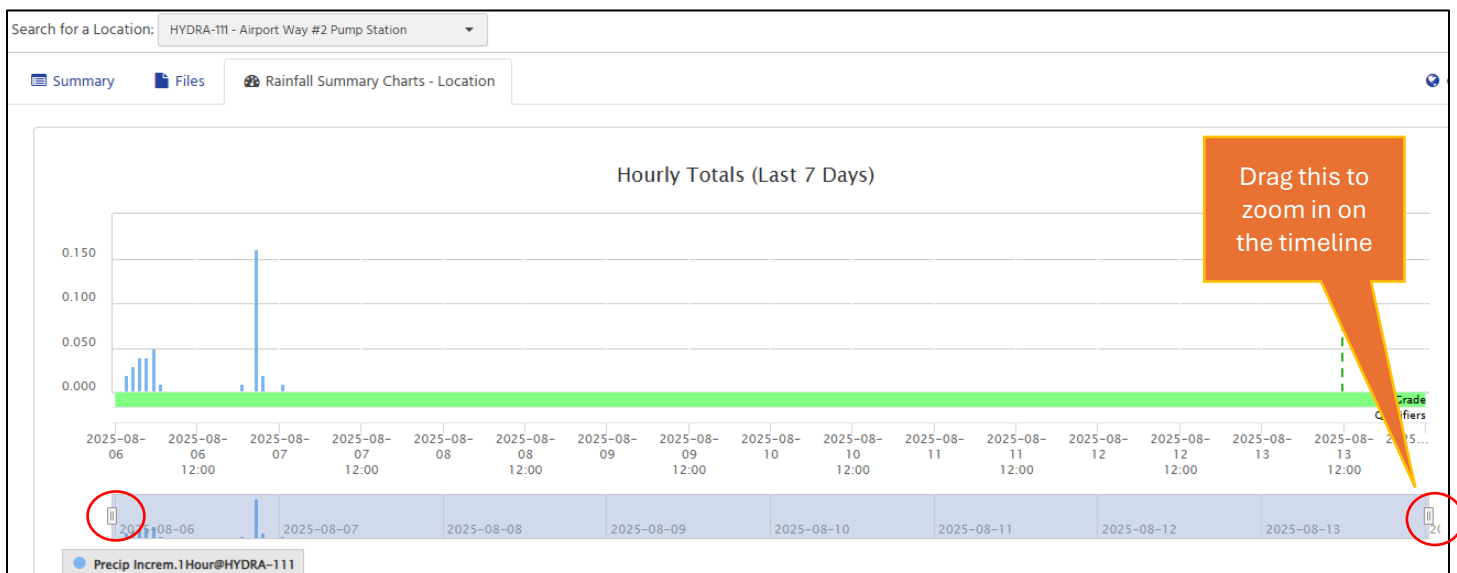
Map of rain gauge locations

- Below are instructions for another method to access rainfall data charts in addition to the one described above.
- Back at the *Welcome Page*, click on the link for the *Map of all active rain gauge locations*.
- Within the map, you can click on a specific rain gauge for more details. A window will appear with rainfall totals for that period.
- Click on *Data Set* to access charts for a specific time period.
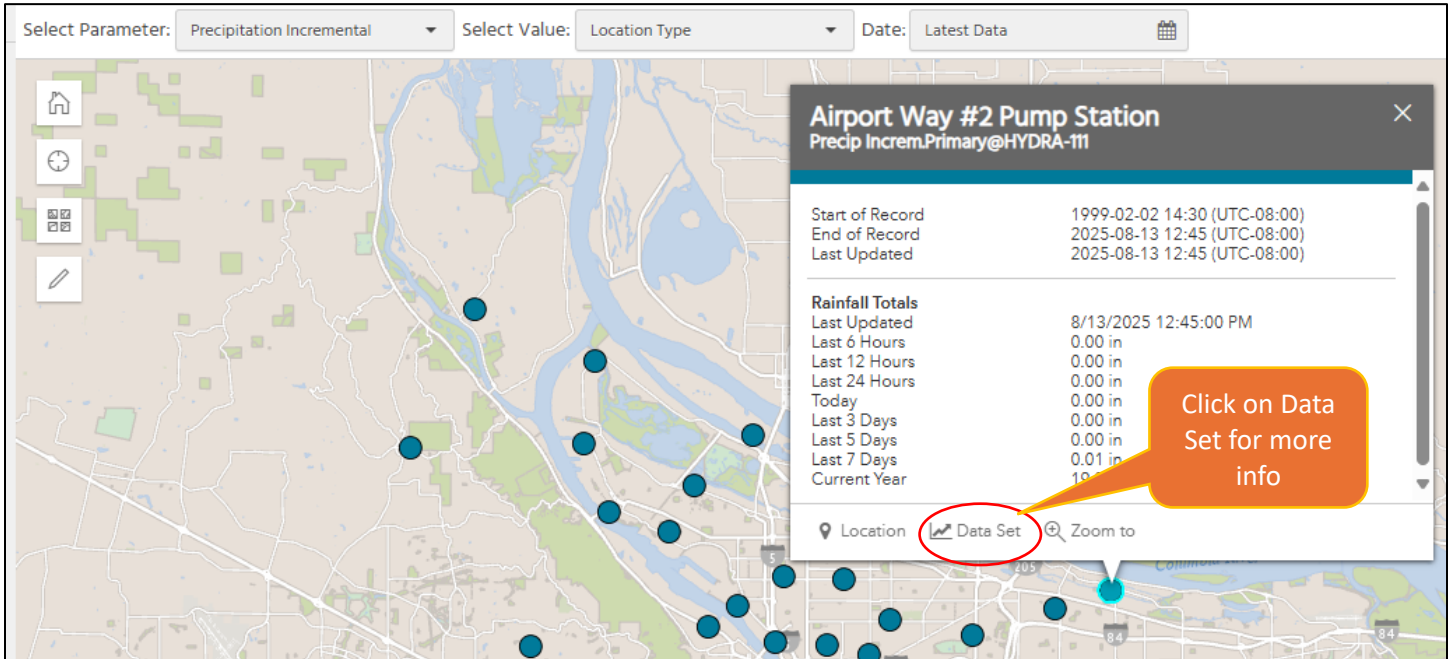
- Click on the tab called *Rainfall Summary Charts – Data Set* to access charts for various time periods, including the water year totals.
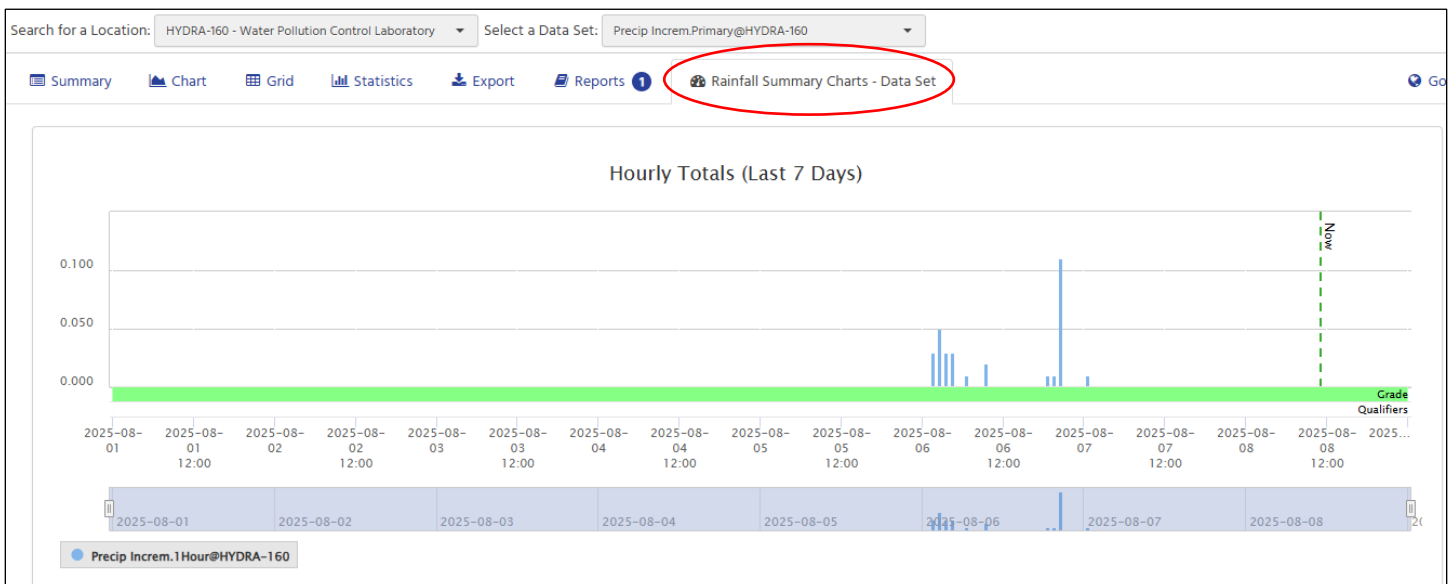
Daily Total Rainfall Reports (for the last 20 years)

To view a spreadsheet of daily rainfall for all of the gauges within a specific region of the city, ex: North Portland:

- Go to the *Welcome Page*
- Click on the link for a region of the city for *Daily Total Rainfall Reports for the previous 20 years: North Portland, Northeast Portland, Northwest Portland, Southeast Portland, South Portland, Southwest Portland, Outside Portland.*

To Access the Rainfall Data Select a Link Below:

- Latest rainfall data table for all rain gauges
- Map of all active rain gauge locations
- Daily Total Rainfall Reports for the previous 20 years: **North Portland, Northeast Portland, Northwest Portland, Southeast Portland, South Portland, Southwest Portland, Outside Portland**
- Please see the **Getting Started Guide for the BES Data Portal** for simple instructions.
- For more detailed instructions, please see the **Aquarius Web Portal User Guide.**

- Open or save the downloaded .csv file (shown below).

TimeStamp	Hayden Island Pump Station	Columbia Influent Pump Station	Albina Pump Station	Cascade PCC	Water Pollution Control Laboratory	Astor School
10/2/2005 0:00	0.011	0.044	0.088	0.044	0.03	0.04
10/3/2005 0:00	0.44	0.517	0.165	0.297	0.56	0.38
10/4/2005 0:00	0.088	0.077	0.044	0.044	0.03	0.04
10/5/2005 0:00	0	0	0	0	0	0
10/6/2005 0:00	0.011	0.011	0.011	0	0	0
10/7/2005 0:00	0.055	0.066	0.077	0.099	0.05	0.07
10/8/2005 0:00	0.044	0.044	0.022	0.011	0.05	0.05
10/9/2005 0:00	0.187	0.242	0.198	0.242	0.21	0.24
10/10/2005 0:00	0	0.011	0	0.011	0.02	0.01

Export Data

- Click on the export buttons to download data into a spreadsheet.

- A download window will display.
- Click *open*.
- Double click on one of the files from the list of available time-series:
  - *Precip Increm.Primary* – Rainfall in 5-minute intervals
  - *Precip Increm.15Minute* – Rainfall in 15-minute intervals
  - *Precip Increm.1Hour* – Rainfall in 1-hour intervals
  - *Precip Increm.Forecast* – Predicted rainfall in 6-hour intervals from NOAA
- A spreadsheet will display showing the rainfall value for the specific time interval.

#Data Set Export - Precip Increm.1Hour@HYDRA-111		
Timestamp (UTC	Event Time	Value (in)
8/7/2025 0:00		0
8/7/2025 1:00		0.01
8/7/2025 2:00		0
8/7/2025 3:00		0
8/7/2025 4:00		0
8/7/2025 5:00		0
8/7/2025 6:00		0
8/7/2025 7:00		0