

PRISM Activity: Find Your Annual Precipitation

PRISM is a great tool to understand climate patterns across the United States. It is used to describe sites in many rangeland research projects, and can be used to understand a sites potential when managing rangelands. For this activity, the goal is to become familiar with PRISM and identify the “30-year normal” for your area. The “30-year normal” can then be used to evaluate if an area is above or below average precipitation and hence, can help land managers determine vegetation patterns.

Step 1: Go to

<http://www.prism.oregonstate.edu/explorer/>
to access PRISM climate data.

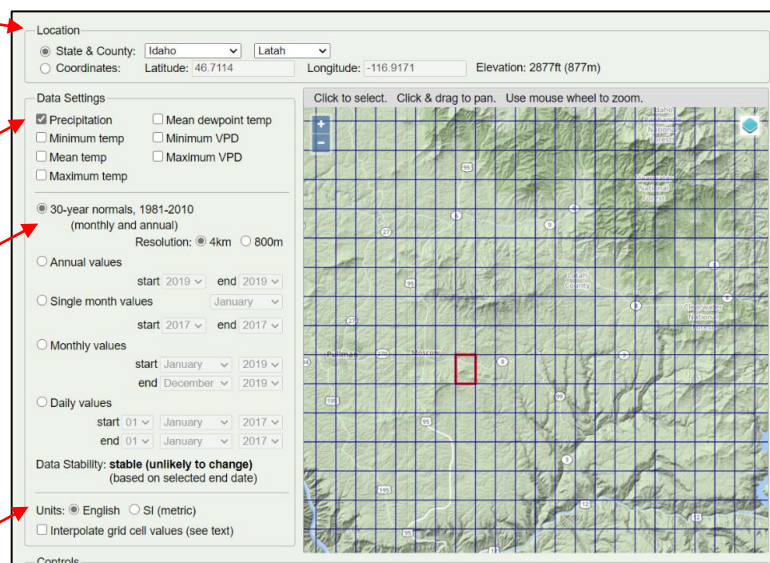


Step 2: Choose a location (either identify a “State & County” or enter “Coordinates”)

- Select the State and County (e.g., Idaho, Latah) under the “Location” section, the map will automatically zoom to that area. Once there, click on the PRISM grid you are interested in (the square will be highlighted with a red box).
- Enter the Latitude and Longitude Coordinates (e.g. Latitude: 46.7114, Longitude: -116.9171)

Step 3: Under “Data Settings”, check the box for “Precipitation”. Next, select “30-year normal, 1981-2010” with a “Resolution” of 4km. By selecting this option you will get monthly and annual climate values.

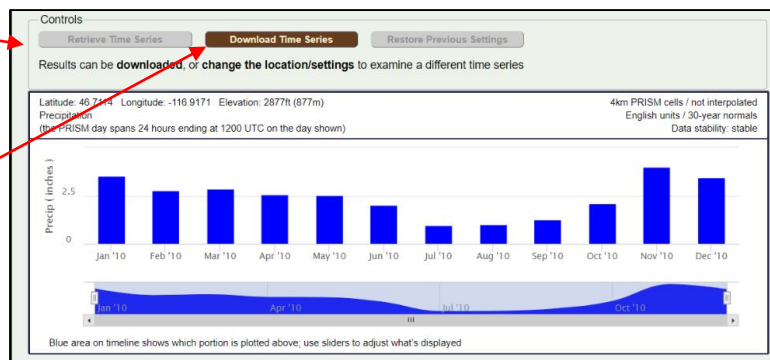
Step 4: Also under “Data Settings” you can select your Units as either “English” or “SI (metric)”. For this activity select “English” which will give you precipitation in inches.



Step 5: Click on “Retrieve Time Series” under the “Controls” section. This will produce a bar graph for precipitation.

Step 6: Once the data is retrieved, click on “Download Time Series” and open the information in excel.

Step 7: Fill in the following table for your location:



Location (e.g., ID, Latah)	Annual ppt (cell B24)	When does most of the ppt occur (e.g., Nov, Dec, Jan)	What month has the least ppt on average?

Step 8: Determine if 2019 was above, at, or below the “30-year normal” precipitation. While your area is still highlighted, select “Annual values” and change the start and end date to 2019. Click on “Retrieve Time Series”. On the graph that is produced, you can hover your mouse over the blue bar and the ppt amount will appear. **Was the annual precipitation in 2019 above, at, or below the average? How might this affect vegetation patterns (e.g., biomass)?**

Location
 State & County: Idaho Latah
 Coordinates: Latitude: 46.7114 Longitude: -116.9171 Elevation: 2877ft (877m)

Data Settings
 Precipitation Mean dewpoint temp
 Minimum temp Minimum VPD
 Mean temp Maximum VPD
 Maximum temp

30-year normals, 1981-2010 (monthly and annual)
 Resolution: 4km 800m

Annual values
 start 2019 end 2019

Single month values
 start 2017 end 2017

Monthly values
 start January 2019 end December 2019

Daily values
 start 01 January 2017 end 01 January 2017

Data Stability: **stable (unlikely to change)**
 (based on selected end date)

Units: English SI (metric)
 Interpolate grid cell values (see text)

Controls
 Retrieve Time Series Download Time Series Restore Previous Settings

Once settings are complete, retrieve the results

Step 9 (Optional): Determine if 2019 was above, at, or below the “30-year normal” precipitation for each month. Select “Monthly values” under the “Data Settings” section. Change the start date to January 2019 and end date to December 2019. Click on “Retrieve Time Series” and then click on the “Download Time Series”. Compare the monthly totals for the “30-year normal” with the “2019 data”. **For each month in 2019, was the precipitation above, at, or below the 30-year normal? How might the timing of precipitation affect vegetation patterns?**

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