

Investigation: Water budget

1. Locate the Wilmington monthly precipitation data on my website and copy the data to the table below
2. Subtract the evaporation data from the precipitation for each month. . Record the results in the row labeled, "Precipitation-Evaporation".
 - i. Calculate the yearly averages for precipitation and evaporation. Write the calculations in the yearly avg. column
 - ii. What does a positive (precipitation-evaporation) value represent? _____
 - iii. What does a negative (precipitation-evaporation) value represent? _____
3. Using the information in the chart and one of your colored pencils, plot a line graph of the monthly **precipitation** for the city.
4. Using a different colored pencil, plot a line on the graph showing the monthly **evaporation** for the city (on the same axis)
5. Use a colored pencil to shade in the area on the graph where the precipitation is greater than the evaporation. Label this area, "**Excess**".
6. Shade in the area where the evaporation is greater than the precipitation and label this area, "**Shortage**"

| | Monthly Precipitation and Evaporation in (in) for _____ | | | | | | | | | | | | |
|---------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Yearly Avg. |
| Precipitation | 3.76 | | | | | | | | | | | | |
| Evaporation | 2.2 | 2.8 | 4.7 | 6.2 | 7.2 | 7.3 | 7.4 | 6.5 | 5.2 | 3.8 | 2.5 | 1.9 | |
| Precipitation-Evaporation | | | | | | | | | | | | | |

Questions:

1. What is a water budget? _____
2. Why does the excess occur? _____
3. Why does the shortage occur? _____
4. How can you tell if there was an excess or a shortage at the end of the year? _____
5. How is Earth's water cycle balanced? _____
6. What would happen if evaporation exceeded precipitation over the continents and oceans? _____

