



Resources for running the Biomass Accumulation Model

In order to run the Biomass Accumulation Model, you will need temperature, precipitation, and biome for your location of interest.

Step 1: Find your latitude and longitude using one of these options:

1. Use a GPS or smartphone to determine your latitude and longitude.
2. In [Google Maps](#) - right click on a location and select 'What's here?'. A location marker will appear on the map and latitude and longitude values will appear in the pop-up box.

Step 2: Find your biome

**Biome is used to determine the Turnover Rate of your location.*

1. Click on this [Biome Map link](#) to find the biome for this location (or copy and paste this link into a browser: <https://ecoregions.appspot.com/>).
2. Click the 'Biome' tab at the top of the page.
3. Use the slider to change the transparency of the biome map.
4. Find your location by dragging and/or zooming in on the map.
5. Click on your location and record the biome information.

Step 3: Find your current climate data

If your location is in the United States (including U.S. territories):

1. [Click here to find current climate data](#) for this location (or copy and paste this link into a browser: <https://www.ncei.noaa.gov/access/us-climate-normals/>)
2. Click on 'Annual/Seasonal'.
3. Choose your State or Territory.
4. Choose the weather station closest to your location.
5. Scroll down and record your Annual Average Temperature (Avg. Temp) and Precipitation (Precip). **Note if the weather station only shows one variable, try another from that town or a nearby town.**
6. **IMPORTANT: Convert to metric!** These values are in English Units. Please use a unit converter (i.e., [Unitconverter.net](#), or [Google Unit Converter](#)). Record your

METRIC values as model inputs (millimeters – mm- for precipitation, and Celsius - °C – for temperature).

Step 2

Monthly Daily Hourly **Annual/Seasonal** 30yr 15y

MAX TEMP (°F)
 MIN TEMP (°F)
 AVG TEMP (°F)
 PRECIP (IN)
 SNOW (IN)

Step 3 find stations by name

US States

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado

ABBEVILLE
 ADDISON
 ALABASTER 2.2 SSW
 ALABASTER 2.4 NE
ALABASTER SHELBY CO AP
 ALBERTA
 ALBERTVILLE 1.8 WNW
 ALBERTVILLE 4.8 WNW

Step 4

ALABASTER SHELBY CO AP, AL

Get this data as [.csv](#) | [.r](#)

Step 5

Season	MAX TEMP (°F)	MIN TEMP (°F)	AVG TEMP (°F)	PRECIP (IN)
Annual	74.9	53.9	64.4	56.19

If your location is outside United States:

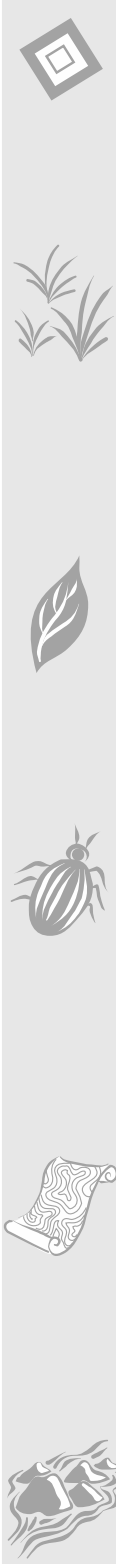
1. [Click here to find current climate data](#) for this location (or copy and paste this link into a browser: <https://en.climate-data.org/>)
2. Click on the map to select a continent, click on the name of your country, and then (if applicable) your region.
3. Scroll down to find your region header and look for the paragraph that contains the sentence: “The average temperature in [YOUR REGION] is XX °C | XX °F. About XX mm | XX inch of precipitation falls annually.”
4. Record the temperature and precipitation value in METRIC units (Celsius and millimeters).

Step 4: Find your future climate data

*Use this option if you are investigating biomass accumulation changes with predicted climate change or completing *Student Worksheet 3 -Extension: Using the Biomass Accumulation Model to Explore Climate Change*.

If your location is in the United States (including U.S. territories):

1. [Click here to find future climate data](#) for this location (or copy and paste this link into a browser: <https://crt-climate-explorer.nemac.org/>)
2. Type in your city and town.



3. Click 'Climate Maps'.
4. Make sure 'Average Daily Maximum Temp' and 'Annual' are selected at the top.
5. Use the zoom feature and/or click and drag to see your county on the map.
6. Click on your county and record the temperature value for your climate projection of choice (*be sure to record if you are using the high or the low projection!*).
7. Follow the same steps to record the values for 'Average Daily Minimum Temp' and 'Total Precipitation' (select from the drop-down menu at the top).
8. **IMPORTANT: Find the Average Temperature!** Find the average annual temperature by adding the Minimum temperature and Maximum temperature together and dividing by 2.
9. **IMPORTANT: Convert to metric!** These values are in English Units. Please use a unit converter (i.e., Unitconverter.net, or Google Unit Converter). Record your METRIC values as model inputs (millimeters – mm- for precipitation, and Celsius - °C – for temperature).

If your location is outside United States, use the tools below or talk to a scientist or expert in your country for more ideas on where to access climate prediction data.

More Tools to Explore Predicted Changes

*** Use the resources below to explore predicted changes in temperature and precipitation in your location:

- **US:** Data Snapshots from NOAA Climate.gov: <https://www.climate.gov/maps-data/data-snapshots/averagetemp-monthly-cmb-2000-03-00?theme=Temperature>
- **US:** EPA Climate Scenarios Projection Map: <https://tinyurl.com/fk72hde6>
- **GLOBAL:** NASA's Climate Time Machine: https://climate.nasa.gov/climate_resources/25/interactive-climate-time-machine/
- **GLOBAL:** Climate Analytics Tools: <https://climateanalytics.org/tools/>
- **GLOBAL:** Climate Maps and Animations: <https://studentclimatedata.sr.unh.edu/data-tools.shtml>
- **GLOBAL:** Climate Impact Map: <https://impactlab.org/map>
 - *Note: Temperature only. Use dropdown to select 'Average Annual Temps'. Can toggle between climate scenarios and change from °F to °C. Use the color legend for finer resolution than hover tool.
- **GLOBAL:** NOAA View: <https://www.nnvl.noaa.gov/view/globaldata.html>
 - *Note: Click 'Add Data', then 'Climate', then 'Simulations' to look at climate projections.