U.S. Exposure LOCATION Profile Report

This report contains location-specific environmental metrics, including elevation, slope, contours, surface water flow directions, and climate warming trends. Such baseline data are important for emergency management and insurance underwriting.

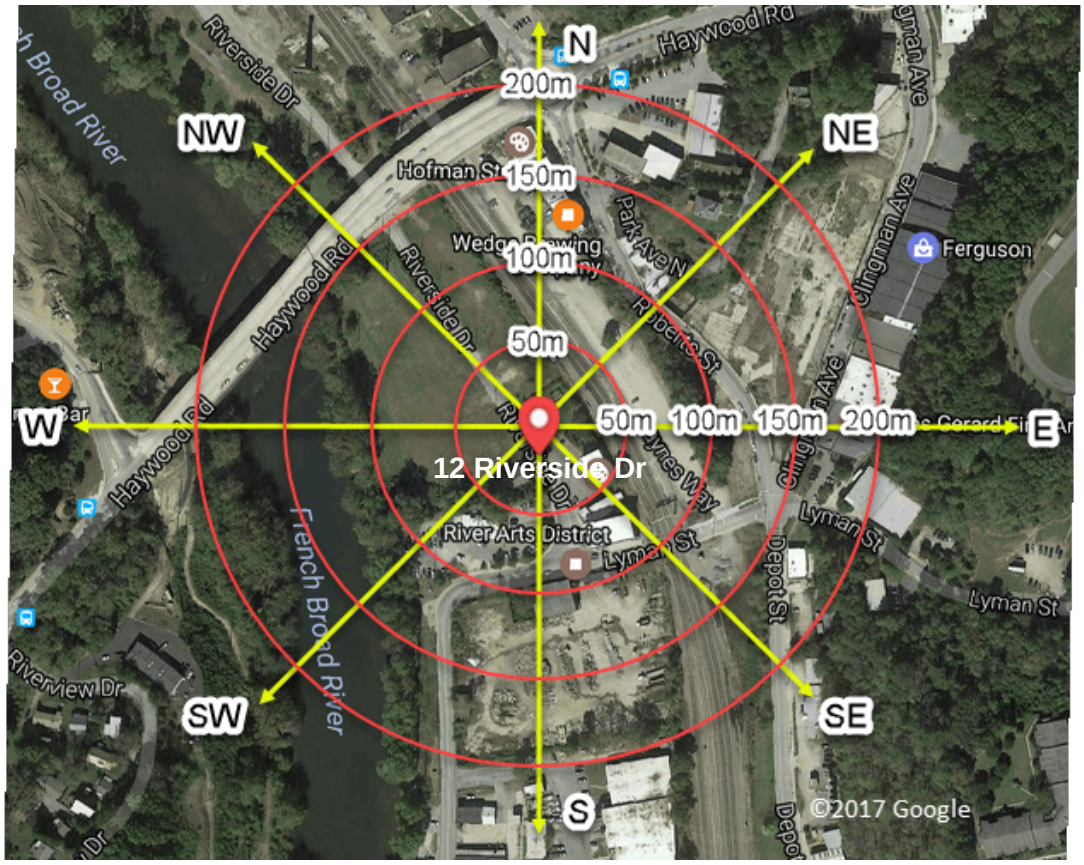
Property Address:

Street Number & Name: 12 Riverside Dr
City: Asheville
State: NC **Zip Code:** 28801
Country: USA

Location (longitude, latitude): -82.56650990, 35.58507500
Distance to Iconic Place (e.g. U.S. Capitol in Washington D.C.): 613.9 km

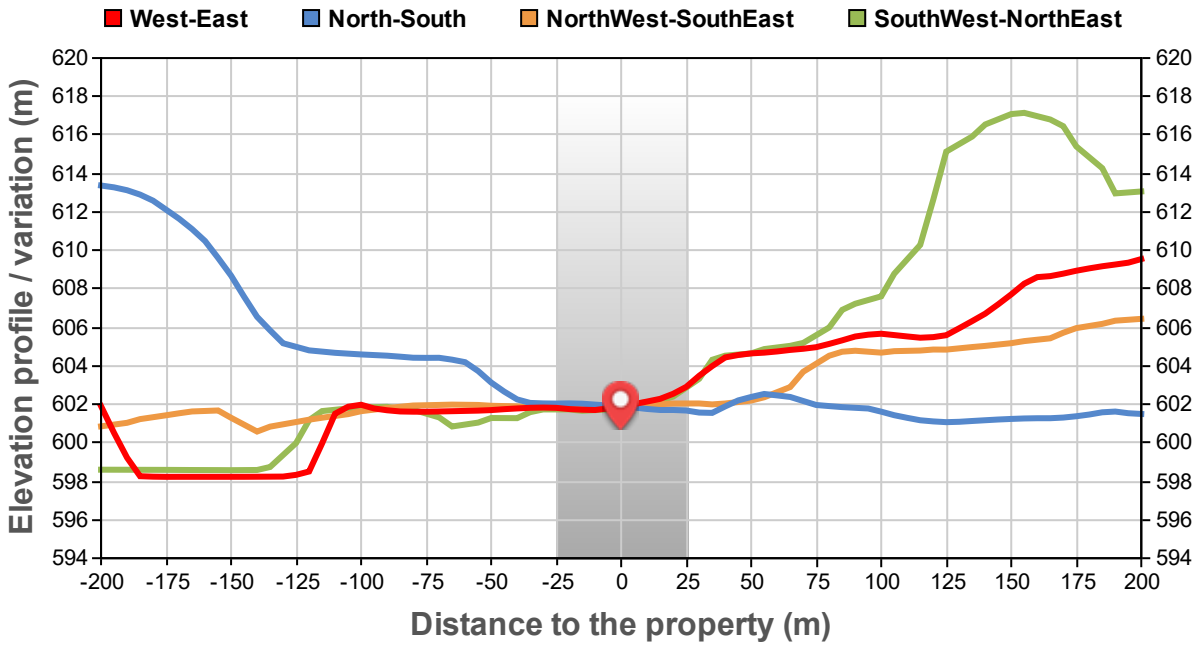
Report Creator: https://www.PropertyLocation360.com (info@PropertyLocation360.com)
Report Date: Tuesday, March 28, 2017
Report Version: V2.1

Overview: Location Imagery & Elevation Profiles



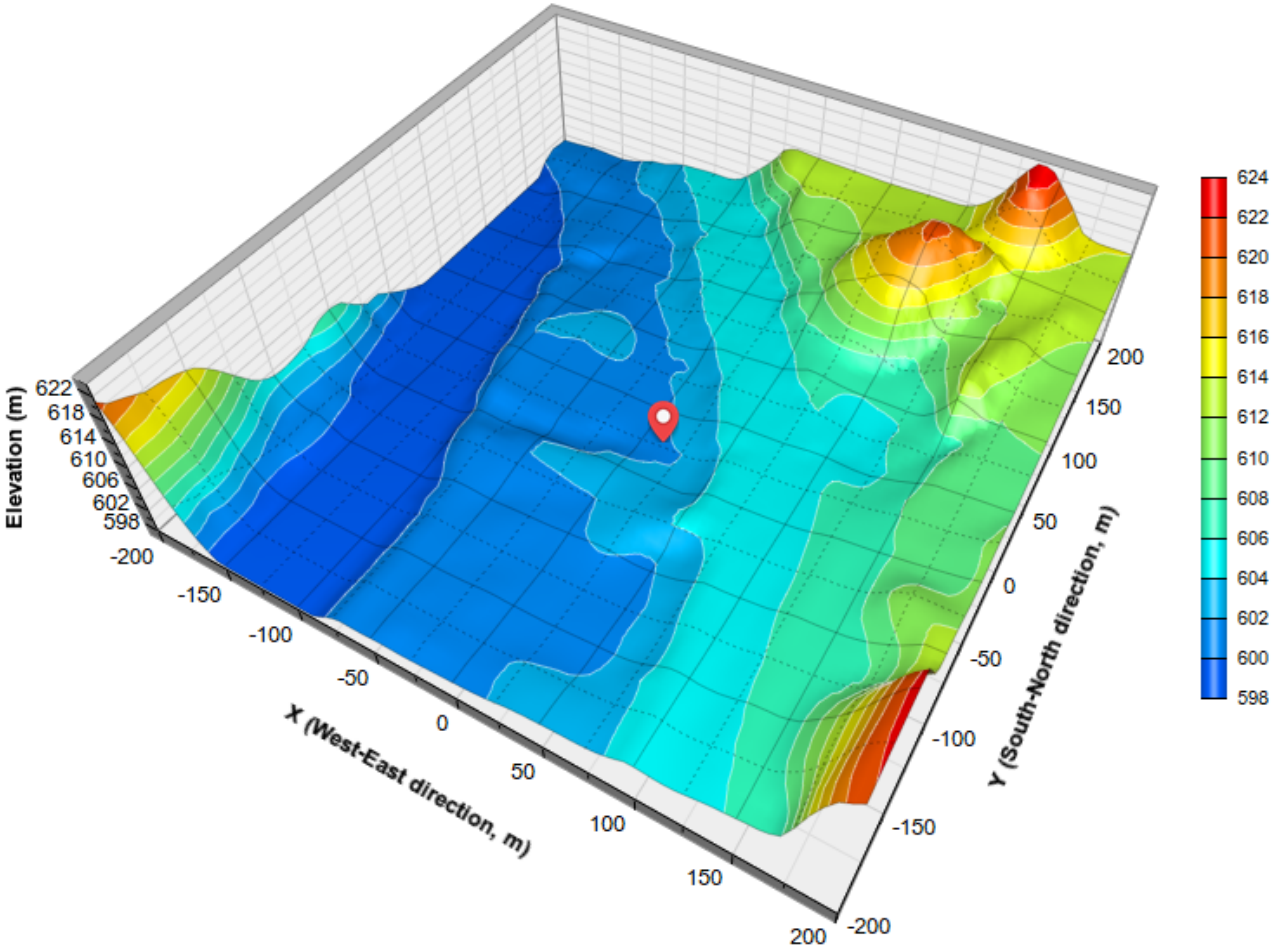
Links: This location in popular online mapping sites, e.g.

Google Maps Bing Maps OpenStreetMap

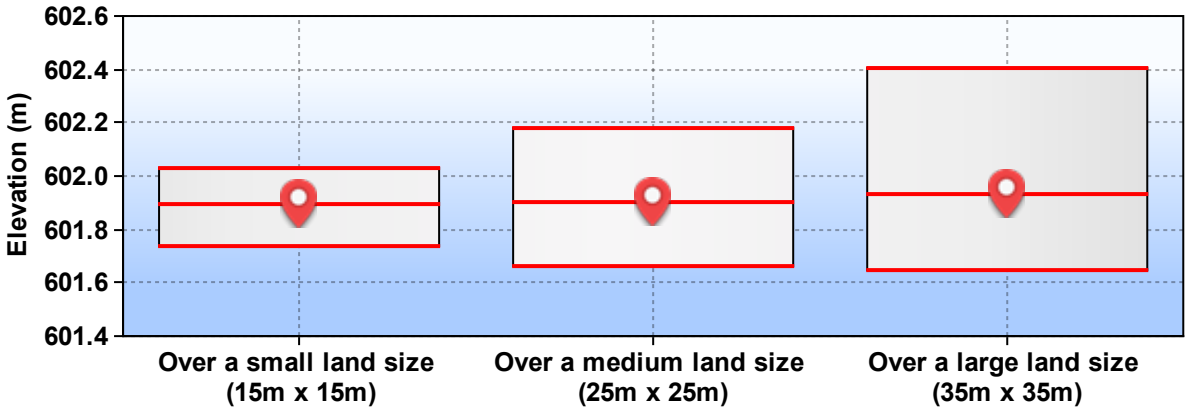


Site spot elevation: **601.9 m**; Slope: **1.3 degrees** (**Nearly Level**, see **Note 1** for slope classification). Slope impacts site stability, surface water runoff and soil erosion.

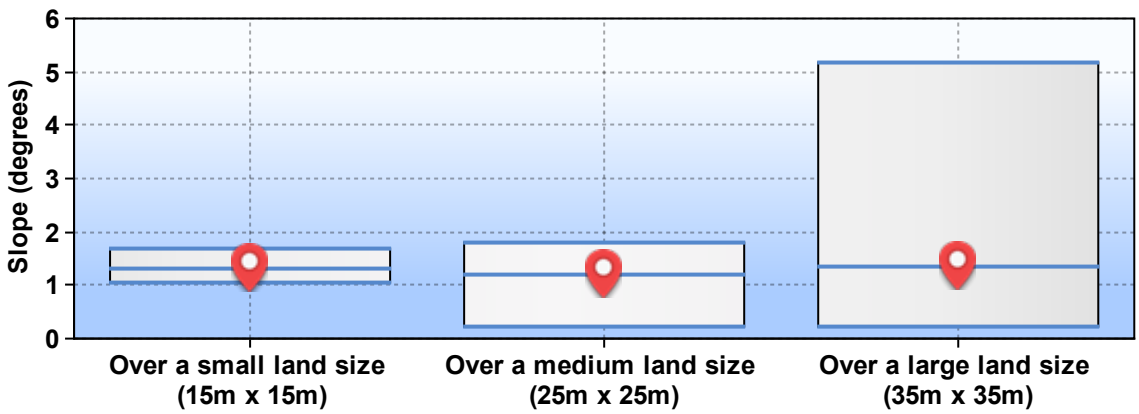
Terrain: Average Elevation & Slope Over Various Land Sizes



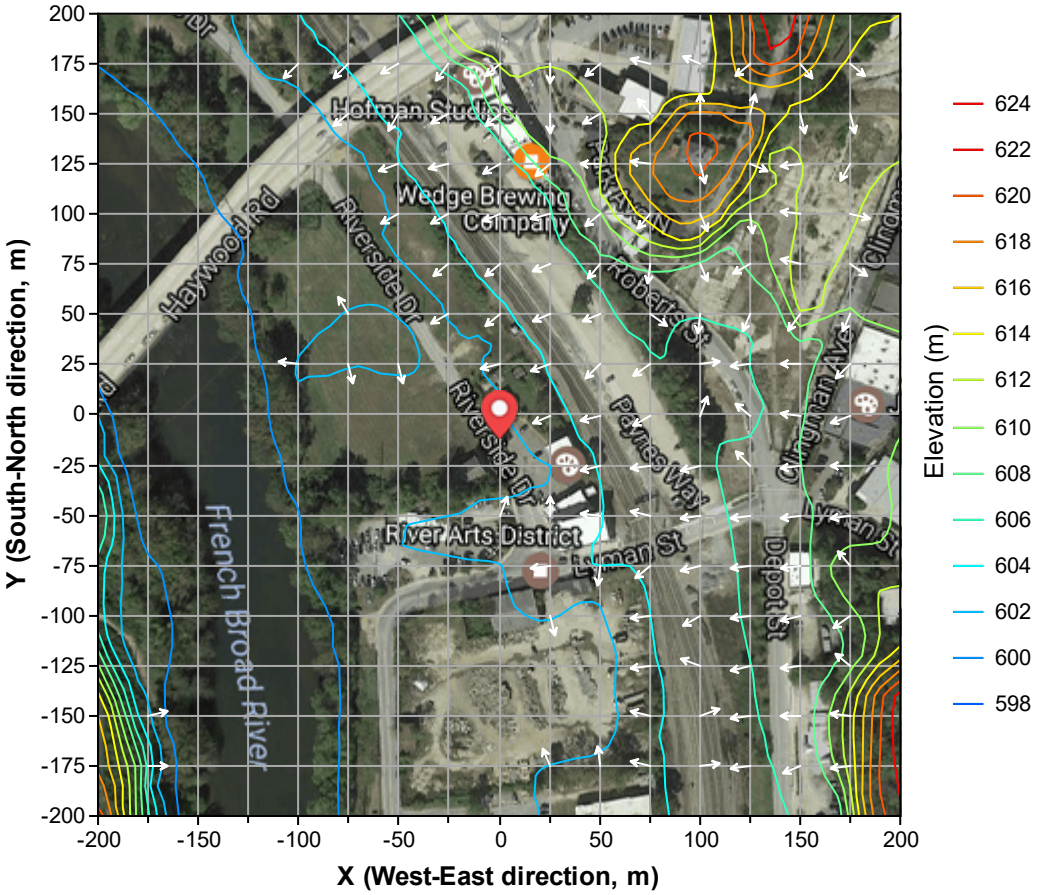
Elevation Variations: Max - Average (middle bar) - Min

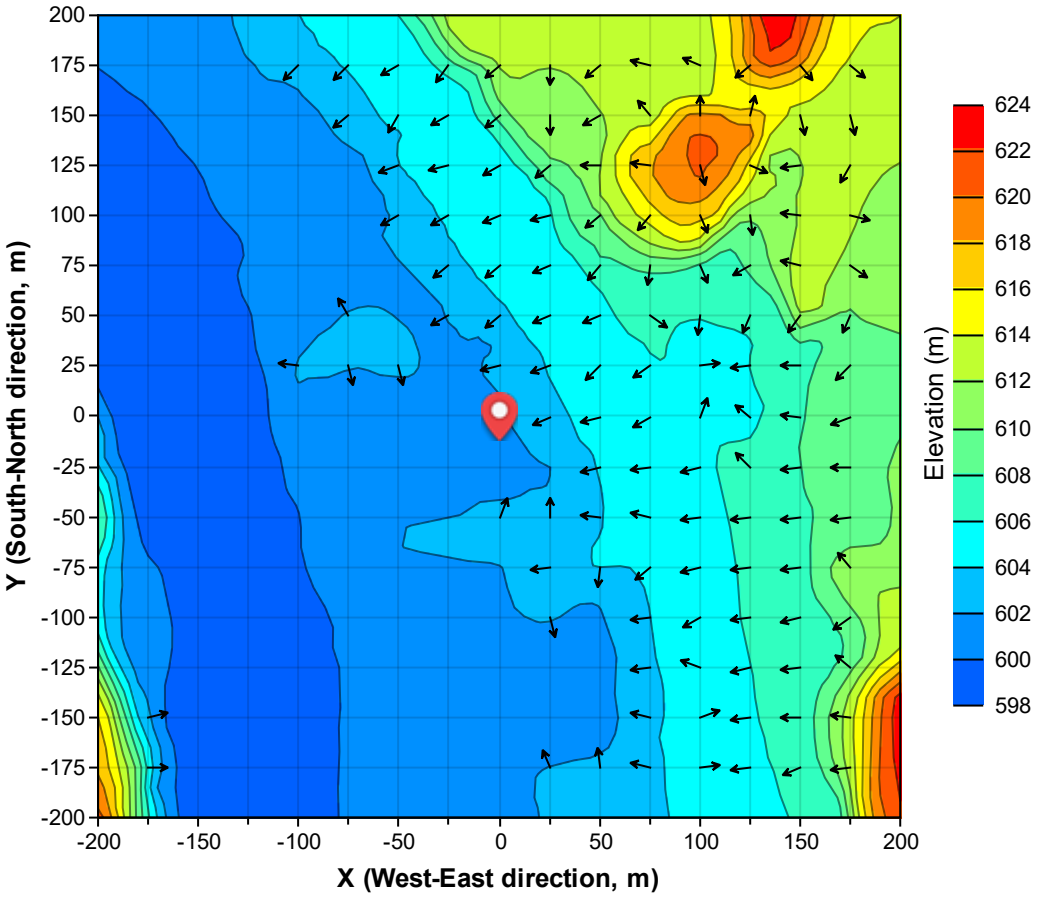


Slope Variations: Max - Average (middle bar) - Min



Flood: Surface Water Flow Directions related to Flash, Riverine, or Coastal Flooding

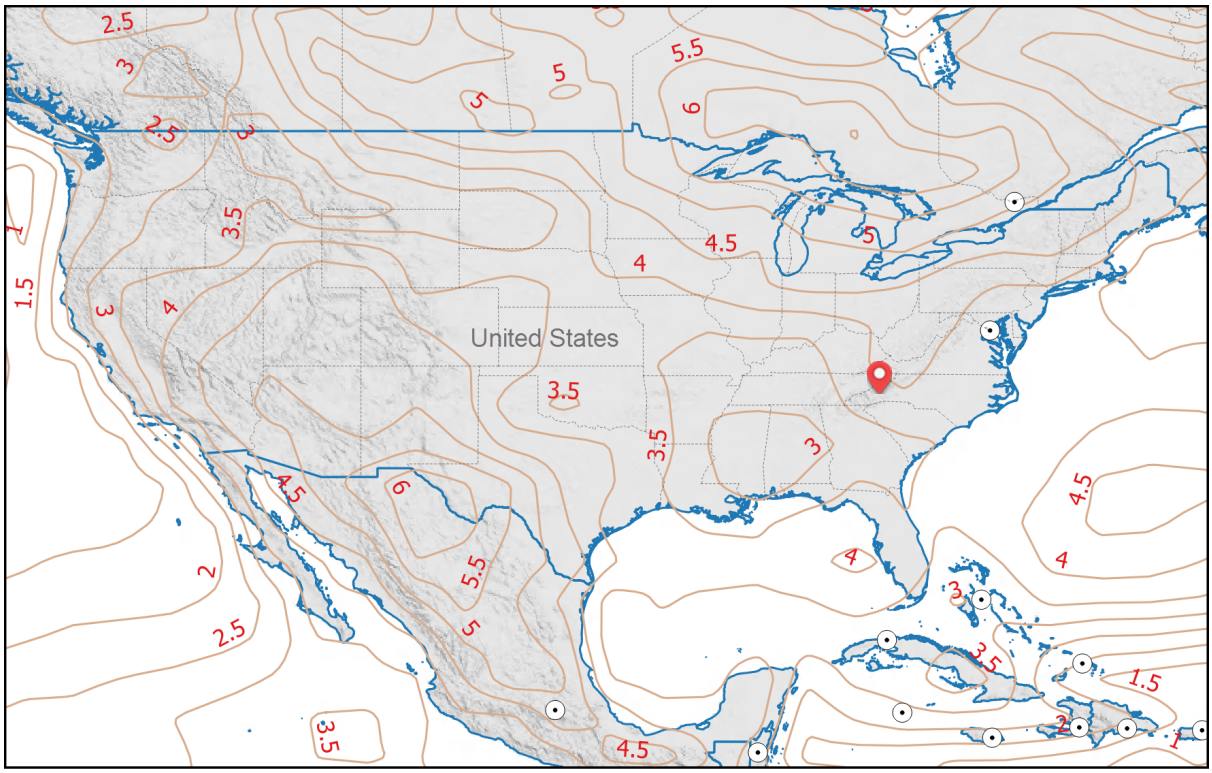




Climate Warming Trend for the Location

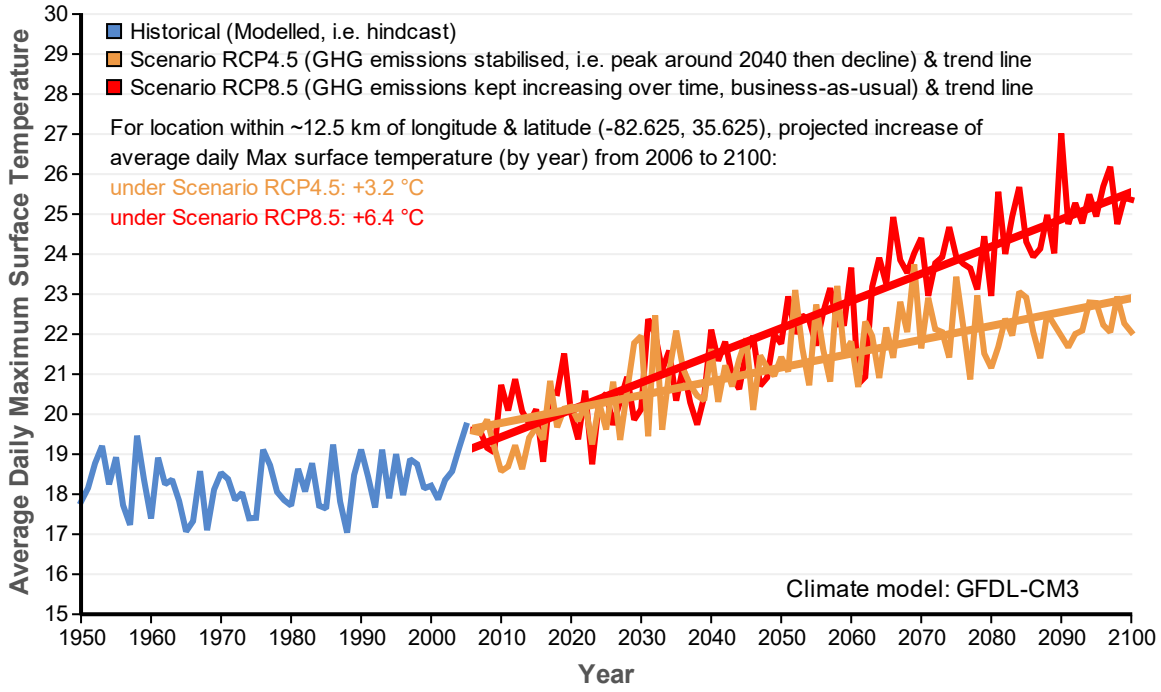
This part contains climate warming projections for the location according to the new NASA climate dataset NEX-GDDP (2015), which is widely used for climate change impact studies and increasing public awareness / understanding of a warming climate. A rapidly warming climate has significant adverse impact on the occurrence (frequency, intensity and duration) of wildfires, droughts, and heatwaves that are directly driven by high surface temperatures. Projected warming trends from two well-known global climate models, GFDL-CM3 (by NOAA GFDL, Princeton, NJ) and CCSM4 (by NCAR, Boulder, CO), under two greenhouse gas emissions scenarios, are presented for the property location. Average daily max and min temperatures by year are compared.

Overview: Projected Warming Trend for the Region

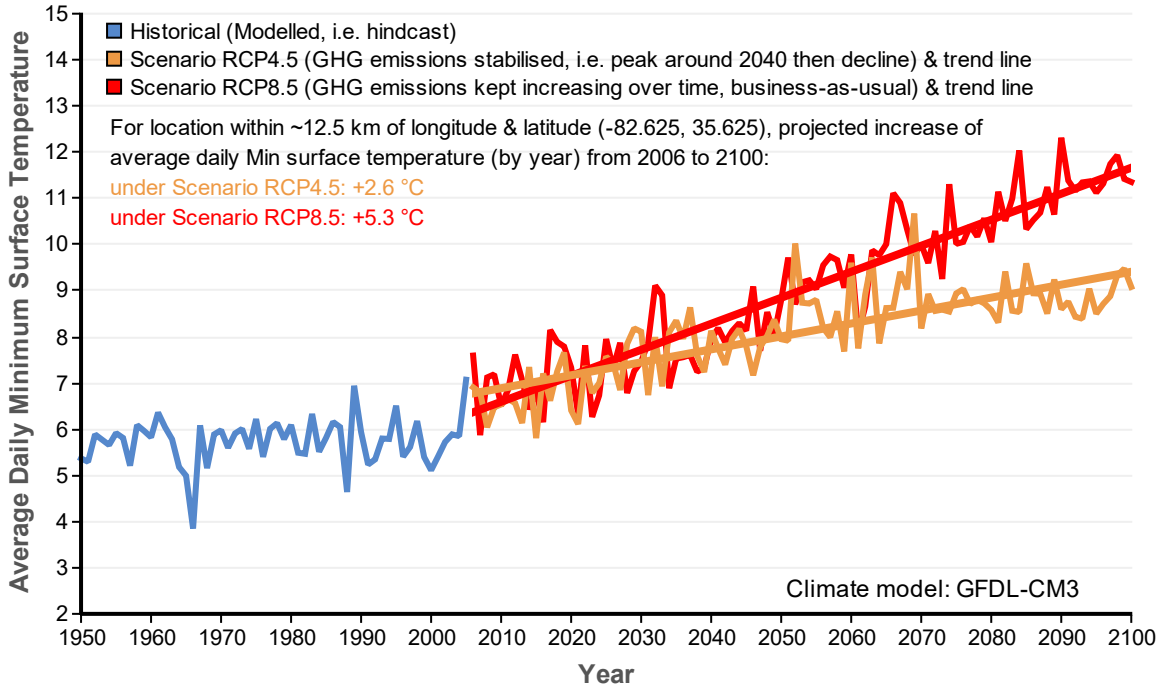


The INCREASE of average daily maximum surface temperature (by year, in degrees Celsius) across the very large region from 2000 (historical hindcast) to 2100 (projected), based on the NOAA GFDL-CM3 climate model under a moderate greenhouse gas (GHG) emissions scenario known as Representative Concentration Pathway – RCP4.5. (Data source: NASA NEX-GDDP, 2015)

GFDL-CM3: Average Daily Max Surface Temperature (by year)

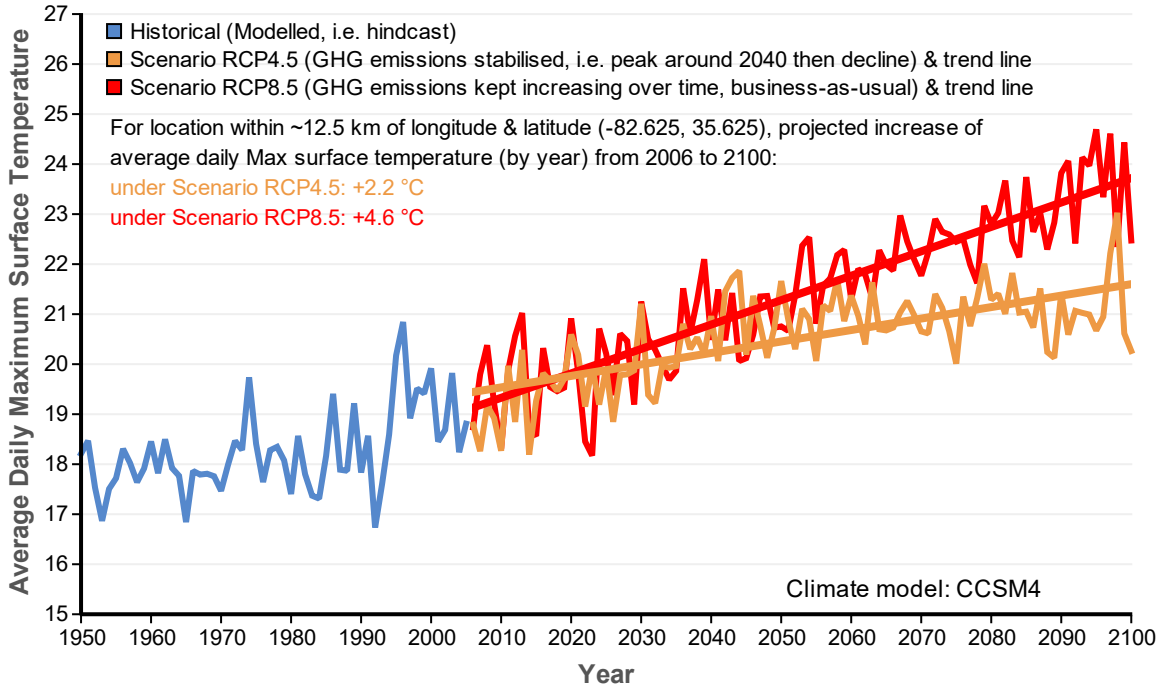


GFDL-CM3: Average Daily Min Surface Temperature (by year)

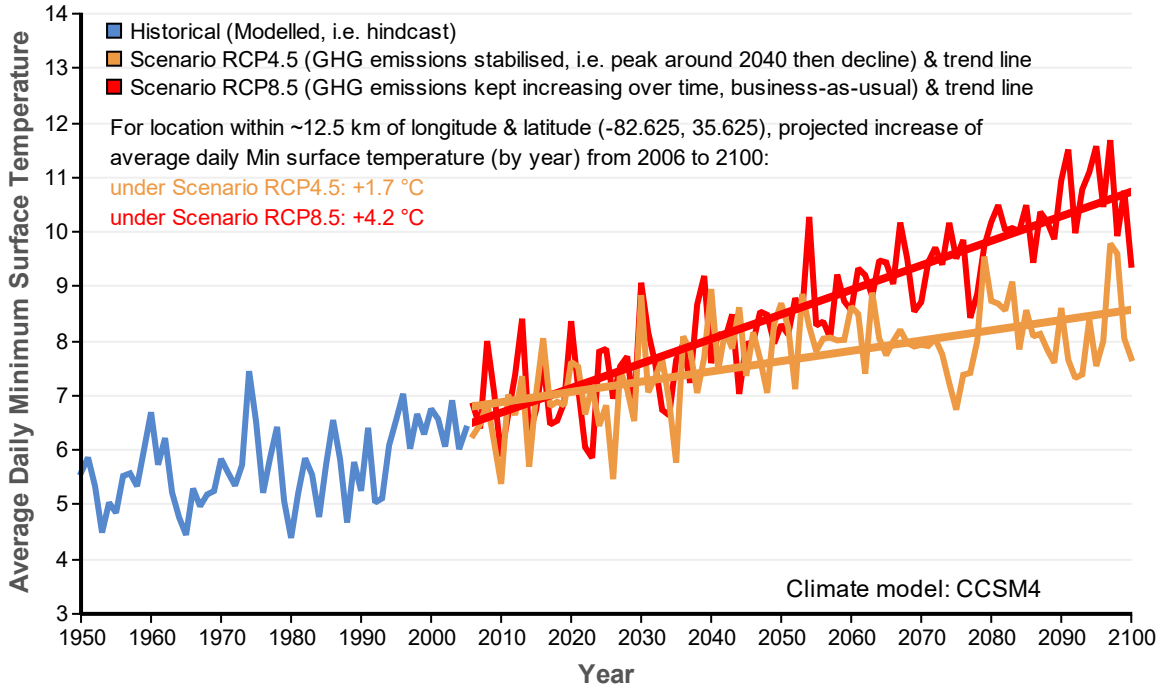


GFDL-CM3 climate model is developed by the NOAA Geophysical Fluid Dynamics Laboratory (Princeton, NJ, USA).

CCSM4: Average Daily Max Surface Temperature (by year)



CCSM4: Average Daily Min Surface Temperature (by year)



CCSM4 climate model is developed by the U.S. National Center for Atmospheric Research - NCAR (Boulder, CO, USA).

Notes

1. Slope Classes: Nearly Level (slope <3%, or <1.72 degrees); Gently Sloping (3-8%, or 1.72-4.57 degrees); Moderately Sloping (8-15%, or 4.57-8.53 degrees); Strongly Sloping (15-25%, or 8.53-14.04 degrees); Steep (25-35%, or 14.04-19.29 degrees); Very Steep (>35%, or >19.29 degrees).

Acknowledgements of Data Sources

This report contains analyses, maps and charts based on a range of open data sources from government agencies:

1. Elevation Data - USGS National Elevation Dataset (NED) at 10m, 3m and 1m resolutions.
2. Map - Hybrid basemap (imagery and roadmap) is accessed from Google Maps with API Key. ©2017 Google.
3. Climate Data - Climate scenarios used were from the NEX-GDDP dataset, prepared by the Climate Analytics Group and NASA Ames Research Center using the NASA Earth Exchange, and distributed by the NASA Center for Climate Simulation (NCCS).
4. Satellite Imagery - Landsat-8 imagery from the NASA and USGS Landsat Program.
5. Satellite Imagery - Sentinel-2 imagery from the European Union Copernicus Sentinel Data and Service Information. The report contains modified Copernicus Sentinel data [2017].

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