

Site-Specific Climate Data

Site climate and weather are critical elements that influence sustainable design. Novus assists clients with the development, analysis and interpretation of localized, site-specific climate data for any location, worldwide. Using state-of-the-art climate downscaling techniques, which are being adopted by ASHRAE and applied to climate and weather investigations in multiple sectors, we predict localized weather and climate to provide our clients with the best possible data for use in design.

Localized, site-specific climate data to enhance your sustainable design strategies.

At Novus, we work with our clients to understand the impact of accurate climate data on sustainable design strategies. For example, we help our clients by reducing the uncertainty associated with using 'nearby airport' climate information in their assessments, or providing site-specific climate data where no nearby weather station exists. The benefits include better-informed decisions related to energy strategies, greater control of energy costs, and more robust building designs.

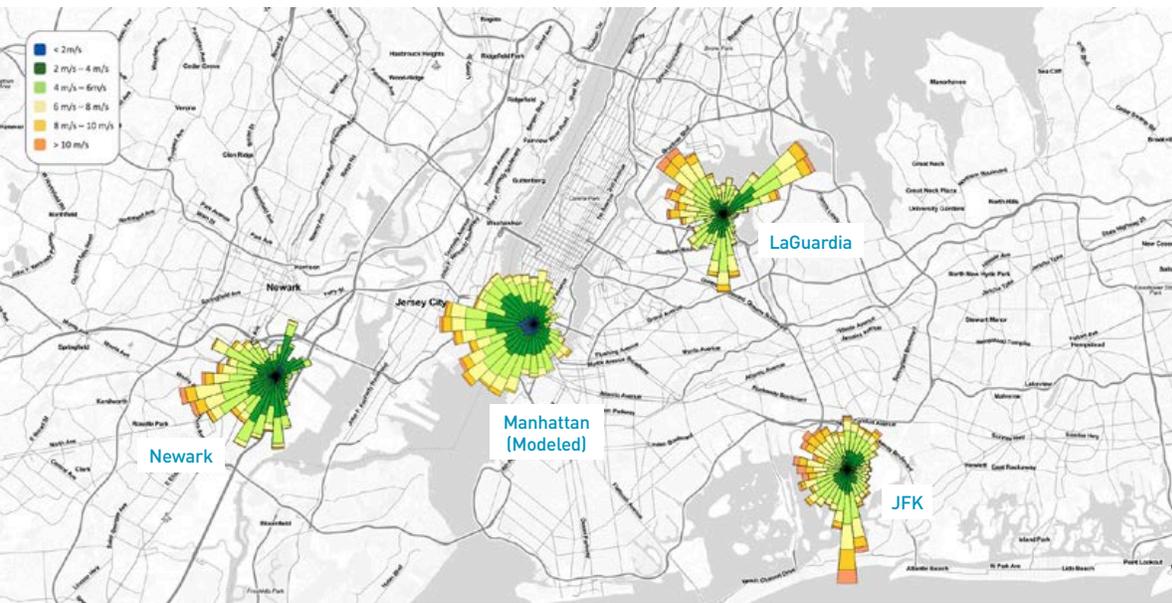


SERVICES:

- Localized site-specific climate data at up to 1 km resolution for any location world-wide, including areas with complex terrain.
- Data provided in any required format (e.g., ASHRAE standard tables etc.).
- Hundreds of climate parameters available for use in design.
- Prediction of extreme weather events, in cloud icing.
- Consulting services related to interpretation and selection of data for use in building design.

SECTORS:

- Building Design
- Sustainable Design
- Master Planning
- Government
- Industry
- Regulatory



In complex microclimates, the use of 'nearest airport' data or simplified blending of 'nearby' data can be misleading. The example illustrates a complex downscaling prediction of wind speeds for downtown Manhattan in comparison to the three nearest major airport sources of climate data.

Applications

Novus provides site specific climate assessment to support sustainable building design and master planning. Accurate reference climate data forms the basis of several key design considerations including:

Sustainable building design encompassing energy modelling; air quality; pedestrian and thermal comfort; right-sizing of physical plants to properly support building life-time comfort and efficiency; building envelope performance; and extreme weather risk.

Master planning encompassing thermal and wind comfort; heat island effects; severe weather; in-cloud building icing; risk management and control; water availability and planning for drought.

Pushing the limits of design vision requires intimate knowledge of local conditions to promote built-form as safe as it is inspiring.

WHY NOVUS:

- Selected consultant for ASHRAE research projects 1561-RP (Procedures to Adjust Observed Climatic Data for Regional or Mesoscale Climatic Variations) and 1699-RP (Update Climatic Design Data in Chapter 14 of the 2017 Handbook of Fundamentals).
- Our experts have over 40 years of combined experience in analysis and application of meteorological data.
- State-of-the-art computing facilities and unique access to one of North America's fastest super computers.
- Extensive experience working with architects, engineers, planners, developers, lawyers and approval agencies.



EMAIL info@novusenv.com
novusenv.com

Novus Environmental Inc.
 Research Park Centre
 150 Research Lane, Suite 105
 Guelph, Ontario, Canada N1G 4T2
 PHONE 226.706.8080