Office of the New Jersey State Climatologist

We assist decision makers, and so much more

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http://njclimate.org
Locals Trust Locals

• Trusted relationships with state and local communities have developed over many years of service

• Climate information must be put into context for each client

• State Climate Offices are experts at doing this because they know the local climate, economy and geography
Understanding NJ Weather & Climate Extremes
Examples of Activities Over the Course of a Year

**Within Rutgers**
Cooperate with colleagues on integrated coastal environmental monitoring, solar and offshore wind energy efforts, integrated solar and agriculture project, etc.
Provide climate data to colleagues (extension, faculty, students)
Presentations at meetings/workshops, guest lectures

**Assisting State Government**
Collaborate with, prepare reports for, and contribute to efforts of numerous state agencies:
- NJ Department of Environmental Protection
- NJ Department of Transportation
- NJ Office of Emergency Management
- NJ Board of Public Utilities
- NJ Highlands Commission
**Assisting Federal Government**
Collaborate with, prepare reports for, and contribute to efforts of numerous federal agencies:
- Federal Emergency Management Agency
- National Drought Monitor
- US Department of Agriculture
- US Forest Service
- NOAA Eastern Region Climate Team
- NOAA Northeast Regional Climate Center

**Outreach/Communication**
Maintain websites and social media accounts
Provide more than 200 media interviews annually
Respond to over 200 data/information requests annually
Post monthly, seasonal and annual NJ weather/climate reports
Presentations to several dozen schools, libraries, NGOs, etc. annually
Data gathering/archiving/dissemination activities
Maintain Rutgers New Jersey Weather Network. Currently 67 active stations.
  (approximately one half billion observations recorded in 2022)
Contribute daily NJWxNet observations to the Network for Environment and Weather Applications (NEWA) agricultural program
Oversee the NJ Community Collaborative Rain, Hail and Snow Network
Maintain NJ Snow Event Totals database and website
Rutgers New Jersey Weather Network

njweather.org
NJWxNet stations measure:
- Air temperature
- Wind speed and direction
- Dew point/Relative humidity
- Precipitation
- Barometric pressure
- Solar radiation
- Soil temperature
- Soil moisture
- Snow depth

Solar power

Cellular communications

Ability for expansion built into station design

Pittstown, NJ
Rutgers Snyder Research and Extension Farm
Product development

In cooperation with the US Forest Service

Employing data from: Rutgers NJWxNet, NIFC RAWS

Updated every 5 minutes
Community Collaborative Rain, Hail and Snow Network (CoCoRaHS)

Daily observations by trained volunteers of all ages

cocorahs.org

7AM 30 Sep 2022 – 7AM 4 Oct 2022
Product development

Snowstorm maps/tables

Employing data from:
- CoCoRaHS
- NWS Coop
- NWS Spotter
- ONJSC Spotter

Major quality control effort by ONJSC
**ONJSC Staff** *(source of support)*

Dave Robinson, NJ State Climatologist (20% NJ Agricultural Experiment Station (NJAES))
Mat Gerbush, NJ Assistant State Climatologist (100% NJAES)
Chad Shmukler, Unit Computing Manager (grant funds)
Jay Read, Unit Computing Specialist (grant funds)
Dave Fittante, Senior Field Technician (part time; grant funds)
Sharon DiAmore, Assistant Field Tech (part time; grant funds)
Chitral Samala, Intern (Rutgers meteorology major, part time; grant funds)
The ONJSC: Keeping an eye on NJ's weather and climate for user communities
To move from large-scale understanding of science to local scale decision making; therein lies the need for federal-state partnerships
Summing up

Knowledge through climate services
- baseline knowledge
- local expertise
- data/information
- collaboration
- outreach/communication
State climate offices always willing to assist and collaborate

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