

**FEMA
FINDING OF NO SIGNIFICANT IMPACT
NYS EARLY WARNING WEATHER DETECTION SYSTEM
STATE OF NEW YORK
FEMA-4085-DR-NY**

BACKGROUND

On October 29, 2012, Hurricane Sandy caused storm damage to several areas across New York State. President Barack Obama declared Hurricane Sandy a major disaster on October 30, 2012. The declaration authorized federal assistance to the State to reduce or eliminate risks to life and property from hazards and their effects per federal disaster declaration FEMA 4085-DR-NY and in accordance with Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974 (42 U.S.C. 5172) as amended. The Research Foundation of the State University of New York (SUNY-RF) “the subgrantee” applied to FEMA’s Hazard Mitigation Grant Program (HMGP) for financial assistance to develop an early warning weather detection system across New York State (NYS). The purpose of this project is to mitigate the impact of future weather events in NYS and increase the state’s resiliency by improving weather detection capabilities. The current Automated Surface Observing System (ASOS) used by the National Weather Service (NWS) does not provide the high-resolution, real-time data needed to support monitoring and predictive modeling of events responsible for weather-related risks statewide. Emergency managers are often unable to correctly assess the level of risk to life and property from this data and to prepare and respond appropriately. The proposed weather detection system will address these concerns and reduce risks to communities by improving the state’s ability to provide better weather-related warnings. The New York State Division of Homeland Security and Emergency Services (NYSDHSES) is the Grantee partner for the proposed action.

SUNY-RF’s application to FEMA states that the current ASOS system used for weather monitoring in NYS is inadequate for three reasons. First, there are significant gaps in coverage throughout the state, including regions such as the Adirondacks and Catskills which have higher susceptibility to wet weather compared to other regions. Second, the ASOS system provides hourly updates instead of updates in real time that could miss rapidly evolving weather systems. Third, there are marked limitations in the number and frequency of meteorological observations within and above the Planetary Boundary Layer (PBL). PBL observations are important for predicting mesoscale, localized weather, pollutant concentrations, fog formation and persistence, and smoke dispersion.

The proposed Mesonet system, which is a network measuring mesoscale meteorological phenomena, would consist of an estimated 125 surface weather stations to detect weather across the state of New York. Seventeen of these stations are proposed with additional instrumentation to remotely gather above-ground meteorological data using profiling technology. SUNY-RF proposed approximate site locations throughout the state based on the weather detection goals of the system. SUNY-RF prefers to locate sites on publicly owned land to reduce private land acquisition and environmental impacts. SUNY-RF’s site selection would be refined by practical considerations of things such as land ownership, road access, avoidance of floodplains, wetlands, species habitat, archaeological resources, and ensuring that counties and their populations are appropriately served. Publicly owned land includes the 64 SUNY campuses, affiliated community colleges, public schools, and municipal lands, as well as lands under the ownership or administrative jurisdiction of other agencies such as the NYS Canal Corporation and the

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Departments of Transportation, Office of Parks, Recreation and Historic Preservation, and Environmental Conservation.

The proposed system would complement existing resources such as the NWS 27-station ASOS network, the NYS Canal Corporation Upstate Flood Warning System, and the Northeast River Forecast Center. It would measure key variables including surface pressure, rainfall, snow, wind speed and direction, temperature, humidity, radiation, and soil moisture. Measurements would feed into data analyses and numerical weather predictions by SUNY-RF and NWS, which would then communicate data to NYSDHSES and other key stakeholders. The improved analyses and predictions enabled by this data would better inform and prepare state agencies and local jurisdictions to address weather-related hazards including hurricane, climate change, flood, high winds, earthquakes, and erosion. The system would also monitor dispersion and help mitigate impacts from hazardous plumes such as pollutant releases and smoke from large fires.

SUNY-RF initially considered five alternatives to provide NYS with improved weather monitoring and prediction capabilities to mitigate the impact of future weather events. SUNY-RF dismissed three alternatives – Amateur Weather Stations, High Resolution Numerical Weather Prediction Model, and Co-location – from further review in this PEA. The alternatives remaining for consideration are: (1) No Action and (2) Construct NYS Early Warning Weather Detection System (Proposed Action).

The PEA analysis is programmatic in nature and does not address individual site-specific impacts, which would be evaluated by FEMA for individual projects prior to approval. If the project is expected to (1) create impacts not described in the PEA; (2) create impacts greater in magnitude, extent, or duration than those described in the PEA; or (3) require mitigation measures that are not described in the PEA to keep impacts below significant levels; then a Supplemental Environmental Assessment (SEA) would be prepared to address the specific action. The SEA would be tiered from the PEA, in accordance with 40 CFR Part 1508.28.

The National Environmental Policy Act of 1969 (NEPA), the President's Council on Environmental Quality regulations implementing NEPA (40 CFR 1500 – 1508) and FEMA's implementing regulations at 44 Code of Federal Regulations (CFR) Part 10, require FEMA to review the environmental effects of proposed actions prior to making a funding decision. FEMA prepared a Draft Programmatic Environmental Assessment (PEA) to analyze potential human and natural environmental impacts of the proposed hazard mitigation action against a series of alternatives. Opportunity for public comment was provided and any substantive comments were incorporated into a Final PEA. FEMA used the NEPA evaluation capture in both documents to inform this Finding of No Significant Impact (FONSI).

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SUMMARY OF POTENTIAL IMPACTS AND MITIGATION

No effects to minor impacts on geology, topography and soils. Any impacts to land use would be negligible. They would be limited to relatively small changes that would be consistent with surrounding or planned land uses, existing land use plans, and zoning regulations. Minor impacts to vegetation would be localized and limited to the removal of weedy, early-successional species within degraded habitats. The proposed action will likely have no adverse effect on commonly found wildlife. Construction-related impacts would be temporary and localized. Any harassment will be minor and temporary from construction generated dust and noise.

Per FEMA's consultation with USFWS, the proposed action "may affect" migratory birds. Subgrantee will follow USFWS issued guidelines for communication tower design to minimize avian collisions. Per FEMA's consultation with USFWS the proposed action "may affect but is not likely to adversely affect" several federally listed species. USFWS has determined that the proposed project will have no effect to bald eagles. No long-term adverse impacts are anticipated for federally listed Endangered and Threatened Species.

The proposed action would result in a localized and negligible increase in impervious surface area. Construction stormwater runoff would not impact water quality. No impacts to Sole Source Aquifers are expected. The proposed action is unlikely to affect wetlands. If any actions are taken near or within wetlands minor impacts to wetlands are anticipated. The proposed action is unlikely to affect the 100-year floodplain and any actions within floodplain will be mitigated to 100 year base floodplain plus 2 feet.

Ground-disturbing activities at sites that have low probability for the presence of archaeological deposits or that have been surveyed and found not to have archaeological deposits are expected to have no effect or no adverse effect on historic properties. Ground-disturbing activities at proposed sites that have moderate to high probability for the presence of archaeological deposits may have no effect, no adverse effect, or adverse effects on historic properties. Constructing weather stations within the viewshed of historic properties may have no effect, no adverse effects, or adverse effects on above-ground historic properties. There is potential for some sites to be located in visually sensitive sites. The proposed weather stations may have a negative visual impact on visually sensitive environments. Visual impacts during construction would be minor and temporary in nature. Cumulative visual impacts are not anticipated.

The proposed action may result in delays or interruptions to public services, utilities, and transportation due to construction activities, but these are expected to be short term and minor in nature. No long-term impacts are anticipated. The proposed action would not impact the roadway network, alter traffic patterns, or cause any road closures because no new roadways would need to be constructed. Potential trip generation would include short-term construction activities and intermittent maintenance. No long-term impacts are anticipated. The proposed action has the potential for the demand for emergency services to decrease due to improved weather projections. Communities will have more time to prepare and plan for severe weather conditions. Proposed action will have a positive impact on communities. Hazardous or toxic materials and/or wastes would be safely and adequately managed in accordance with all applicable regulations

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with limited exposures or risks. Any long-term impacts from vehicular traffic on access roads are expected to be negligible. Noise levels would not exceed typical noise levels from construction equipment or generators. Noise generated from construction and operation of the proposed action would be short-term and minor. The proposed action would have a negligible, if any, impact on air quality. Short-term impacts to air quality would occur during construction and could temporarily increase the localized levels of some of the criteria pollutants but these emissions would be minimal due to the small construction area and time. Adverse short-term impacts to populations in the area during construction are expected to be minor, and would not disproportionately affect EJ populations. The proposed action would have a net positive impact and reduce the risk of damage and disruption to EJ communities from severe weather conditions. Any potential impacts would therefore be negligible.

PUBLIC INVOLVEMENT

The public review and comment period for the PEA was advertised in the following newspapers state wide: Albany Times Union, Adirondack Daily Enterprise, Utica Observer Dispatch, Syracuse Post-Standard, Rochester Democrat & Chronicle, Buffalo News, Watertown Daily Times, Poughkeepsie Journal, Kingston Daily Freeman, Journal News Binghamton Press & Sun, and Newsday June 22, 2015, commencing a 15-day public review and comment period. A Final PEA was released on July 16, 2015. No comments were received to date in response to the Final PEA or from the public during the initial comment period. The NEPA documents were made available at the 10 regional offices of SUNY-RF and on the web at the following site: <http://nysmesonet.org/news>.

PERMITS & PROJECT CONDITIONS

SUNY-RF is responsible for obtaining and adhering to all applicable federal, state and local permits, permit conditions, regulatory compliances and authorizations for project implementation. Any substantive change to the approved scope of work will require re-evaluation by FEMA for compliance with NEPA and other environmental and historic preservation laws and EOs. SUNY-RF must also adhere to the following conditions during project implementation and consider the conservation recommendations outlined below. Failure to comply with grant conditions may jeopardize federal funds.

- 1) Floodplain Best Available Data shall be used to determine the 100-year floodplain elevation for final engineering design in accordance with 44 CFR Part 9. Any placement of fill in a designated floodway requires the preparation of a “no-rise certification” or equivalent.
- 2) Any proposed construction in the floodplain must be coordinated with the local floodplain administrator and must comply with Federal, state and local floodplain laws and regulations.

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- 3) Projects within the coastal zone shall undergo a consistency review with New York State Department of State, and comply with Local Waterfront Revitalization Program conditions, requirements imposed by New York Department of State.
- 4) Work within a half-mile of a designated Study River of the National Wild and Scenic River System or within NYS mapped Wild, Scenic, or Recreational Rivers shall comply with National Park Service or New York State Department of Environmental Conservation restrictions or conditions.
- 5) SUNY-RF shall install Bird Flight Diverters and other approved United States Fish and Wildlife Service (USFWS) mitigation measures on guy wires as visual cues to prevent collisions by migratory birds.
- 6) Security lighting shall be motion or heat sensitive, down-shielded, and of a minimum intensity to reduce nighttime bird attractions and eliminate constant nighttime illumination but still be able to provide adequate safety lighting. Towers shall be unlighted if FAA regulations and lighting standards permit. If lighting on towers is required, they will flash with existing flashing lights in accordance with USFWS Guidelines for Communication Tower Design.
- 7) SUNY-RF shall ensure, through qualified biologists using information databases or field surveys, whether the presence of protected species, suitable habitats, active migratory bird nests, or invasive species are present. If protected species are confirmed to be present, coordination with the appropriate wildlife protection agency is required. If eagle nests or concentration areas are located within 200 meters (660 feet) of proposed activities, USFWS and NYSDEC shall be consulted and protection measures outlined in the 2007 USFWS Bald Eagle Monitoring Guidelines shall be implemented. Proposed activities that could affect migratory birds shall be restricted to outside of the breeding season, or buffer zones shall be established around the nest if restricted work seasons are not viable.
- 8) Projects shall comply with any requirements and avoidance measures provided by USFWS pursuant to Section 7 of the Endangered Species Act, including but not limited to the removal of any trees and/or snags between October 31 and March 31 to avoid impacts to the endangered Indiana bat (*Myotis sodalis*) and the threatened northern long-eared bat (*Myotis septentrionalis*). If protected species are observed during construction, activities that could result in harm or disturbance shall stop immediately and the appropriate regulatory agency shall be consulted. Appropriate distance buffers and seasonal and activity restrictions shall be implemented as instructed.
- 9) Best Management Practices (BMP) that prevent the introduction, establishment, and spread of invasive plant species shall be implemented. Invasive species shall be removed when encountered, per United States Department of Agriculture and state agency guidelines, and suppression or removal practices to prevent their introduction, establishment, and spread shall be implemented. Woody materials and debris shall be

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treated and stored to manage for invasive insects, particularly for sites in Asian longhorn beetle and emerald ash borer quarantine zones.

- 10) Projects that alter less than one (1) acre of land would not require a State Pollution Discharge Elimination System (SPDES) permit. Projects that alter one (1) acre or greater of land shall comply with NYSDEC SPDES permit for Stormwater Discharges from Construction Activities or other applicable SPDES permits, in accordance with state environmental conservation law. If NYSDEC General Permit for Stormwater Discharges is determined to cover the proposed action, SUNY-RF shall provide FEMA a copy of the Stormwater Pollution Prevention Plan and a copy of the Notice of Intent Form at grant project closeout or other time identified by FEMA Grant Programs per grant administrative documentation guidance requirements. Projects that increase impervious area shall meet the state stormwater performance standards and comply with the standards for stormwater management practices as described in the 2010 Stormwater Management Design Manual.
- 11) BMPs shall be implemented during construction, including but not limited to sedimentation and erosion control measures, dust control, noise abatement, and work restrictions in sensitive areas. Stabilized construction entrances and exits using large crushed rocks, stone pads, steel wash racks, hose down systems, and pads shall be established. Slope protection measures, if needed, shall be provided until vegetation is reestablished using bio or photodegradable erosion control blankets, bonded fiber matrices, and/or turf reinforcement mats. Temporary storm drain inlet protection shall be provided until project sites are stabilized. Where possible, disturbed areas shall be seeded or planted using native species as soon as construction activities are completed so that soils are minimally exposed.
- 12) Where possible, ground disturbance shall be restricted to within previously disturbed areas. Projects affecting designated Prime Farmland shall comply with conditions imposed by Natural Resources Conservation Service or Farmland Protection Policy Act. Topsoil shall be maintained and vegetation preserved to the maximum extent practicable. Vegetated buffers shall be maintained and BMPs implemented around water resources to protect water quality from sediment and discharges. Vegetation removal shall be minimized or mitigated through effective restoration and landscaping.
- 13) Excavated soil and waste materials, including hazardous waste, shall be managed and disposed of in accordance with applicable federal, state, and local regulations. Solid waste haulers shall be required to have an NYSDEC waste hauler permit and all waste shall be disposed of or processed at an NYSDEC permitted facility.
- 14) New electric utility connections shall be approved by the affected public service companies and be completed in accordance with their requirements and local building codes.

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- 15) Adequate maintenance of equipment shall be ensured, including proper engine maintenance, adequate tire inflation, and proper maintenance of pollution control devices.
- 16) Noise abatement in residential areas shall limit construction activities, including operation of heavy machinery, to normal business hours (Monday to Friday, 7 am – 5 pm). Construction activities within 200 feet of noise-sensitive receptors, such as schools, hospitals, residential areas, and nursing homes, shall be avoided to the extent practicable.
- 17) A site-specific visual assessment shall be conducted to determine potential effects of the weather station on the surrounding visual landscape.
- 18) SUNY-RF shall submit copies of all obtained permits to NYSDHSES at or prior to final closeout of the Hazard Mitigation Grant.
- 19) Construction activities within the floodplain shall not be initiated until 15 days after the date that the FONSI has been signed as “APPROVED.”
- 20) If an undertaking results in an Adverse Effect to historic properties and treatment measures are approved to mitigate the loss of a cultural resource through the Abbreviated Consultation Process (per Section II.D.6.a. of FEMA’s state-wide Programmatic Agreement with New York State Historic Preservation Office) or by a site-specific memorandum of Agreement (in accordance with Section II.D.6.b), these treatment measures shall become conditions to the project.
- 21) In the event unexpected discoveries are uncovered including, unmarked graves, burials, human remains, and/or archaeological deposits, the subgrantee and its contractors will immediately halt construction activities in the vicinity of the discovery, secure the site, and take reasonable measures to avoid or minimize harm to the finds. The subgrantee will inform the Grantee, New York State Historic Preservation Office, and FEMA immediately. The subgrantee must secure all archaeological findings and shall restrict access to the area. Until an archaeologist who meets the Secretary of the Interior’s Professional Qualification Standards determines the extent and historical significance of the discovery, work in sensitive areas may not resume until consultations are completed. Work may not resume at or around the delineated archaeological deposit until the subgrantee is notified by the Grantee to proceed.
- 22) The subgrantee must obtain all site fill from a permitted commercial supplier or locally municipally owned soil/gravel borrow area permitted for mining/excavation as fill material. If the subgrantee plans to obtain soil or gravel from a non-commercial source or site that is not permitted, the details of the proposed source location must be submitted to FEMA for approval as a scope of work change prior to construction implementation. FEMA would need to conduct a federal agency environmental and historic preservation compliance review of non-permitted/non-commercial sources prior to construction.

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- 23) Occupational Safety and Health Administration standards shall be followed during construction to avoid adverse impacts to worker health and safety.
- 24) The subgrantee and its contractor are required to use best management practices for construction not limited to sedimentation and erosion control measures, dust control, noise abatement and restriction of work areas to limit vegetation removal and habitat impacts. NYSDEC's website provides useful tools for stormwater management during construction: <http://www.dec.ny.gov/chemical/8468.html>.

FINDINGS

In accordance with NEPA and 44 CFR Part 10, FEMA has determined that the proposed action will have no significant adverse impact on the quality of the human environment. As a result of this FONSI, an Environmental Impact Statement will not be prepared, and the proposed project as described in the Final PEA may proceed. This FONSI serves as the final public notice for the proposed project.

APPROVED:



Katherine Zeringue

July 16, 2015

FEMA Region II Acting Regional Environmental Officer