



Rural Resilience: Economic Development, Water Resources, and Infrastructure

U.S. Department of Agriculture Rural Development
Rural Utilities Service
Technical Assistance and Training Grant 2018



Final Report, December 31, 2020

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Account Information:

Sponsor Award: Technical Assistance Grant 2018

Chart String #: 13-20030-00013-05169-001-01

Institution #: 30242 OSP

Contact: Ross Gullo

I. Background of Organization and Program

The Syracuse University Environmental Finance Center (Syracuse EFC) provides technical assistance and training to rural communities in New York State and Puerto Rico for integrated water, wastewater, stormwater, and rural infrastructure resiliency planning; models for sustainable economic development through infrastructure finance; watershed management; flood and drought resiliency; and disaster preparedness. This program includes technical training and individualized assistance to rural communities focused on conducting planning for infrastructure resiliency.

The program leverages the research, data-driven resources, and technical capabilities of Syracuse University for training and technical assistance on topics including stakeholder engagement, participatory budgeting, and informed decision-making, integrated watershed management, financing strategies for infrastructure, vulnerability assessments, and creating or updating comprehensive, asset management, and capital improvement planning documents.

The purpose of this program is to protect the integrity of water infrastructure and resources, stimulate rural economic growth, and increase resilience and vitality of rural communities.

The goals of this program are to help:

- 1) Increase rural community resilience;
- 2) Ensure water quality through infrastructure management and improvement; and
- 3) Ensure community sustainability through infrastructure planning and financing.

The objectives of this program are to:

- 1) Provide rural municipalities with training and assistance to plan for community and infrastructure resilience, manage water resources, and create resilient infrastructure plans;
- 2) Build capacity of local elected leaders and decision makers; and
- 3) Promote practical, long-term infrastructure improvement—emphasizing fiscally sound strategies for rural communities.

The following steps achieved these objectives for Syracuse EFC's TAT 2018 program:

- Conduct a community needs assessment in Puerto Rico;
- Host specialized and technical training workshops, forums, and webinars for rural communities;
- Provide one-on-one technical assistance and individual community resilience planning, including applying to New York State programs; and
- Develop and distribute resources, including guidebooks and training publications.

Summary Table of Project Accomplishments (entire project period)

Task/Deliverable	Training for Sustainable Finance, Operational Efficiency, Flood and Drought Planning, and Resilience to Weather for Rural Infrastructure	
Activities Conducted	Work Proposed	Work Completed
Training Workshops and Conferences	One Local Leaders conference and 3 workshops	One Local Leaders conference and 6 workshops
Conference Sessions	3-5 sessions	7 sessions
Municipal Board Training	Offer services, conduct trainings, funding and technical assistance	Ongoing technical assistance (TA) for one town and one county, two planning conference training sessions
Technical Training webinars	5 webinars	6 training webinars, plus one peer-to-peer training webinar
Training Publications and Online Resources	Develop and distribute printed and electronic resources	Published 5 TA documents, distribution of training and funding guides at workshops and conferences
Peer to Peer Training	Promote peer to peer learning for community resiliency	One in-person training in Puerto Rico, one webinar for New York State
Task/Deliverable	Improving Municipal Usage of State- and Federal-Level Resources Through Identification of Current Rural Community Needs	
Activities Conducted	Work Proposed	Work Completed
Puerto Rico Rural Community Needs Survey	Conduct needs assessment and analyze and share findings	Focus Group completed, report shared with partners, posted to website
Municipal Awareness and Access to Existing Resources	-Provide TA to municipalities -Create and distribute funding opportunities publications -Provide a finance training at a conference	-TA provided to 1 city and 1 county -Distribution of funding and training guides at workshops and conferences - Finance training provided at 5 conferences
Task/Deliverable	Technical Assistance for Flood and Drought Resiliency, Etc.	
Activities Conducted	Work Proposed	Work Completed
Planning for Flood and Drought Resiliency	Help municipalities identify solutions for drought and flood abatement to meet regulatory requirements	-One workshop facilitation -Workshop planning/marketing TA -Ongoing TA for flood training program
One-on-One Technical Assistance	Provide up to 20 hours of technical assistance to up to three communities	-Student-led TA for two community organizations - TA provided to 1 city and one county in NY, TA for community water system alliance in Puerto Rico
NYS DEC Climate Smart Community Certification Assistance	Encourage rural communities to register as climate smart communities	-Technical assistance for 7 rural communities - 2 Town presentations -Supervised 4 summer interns' technical assistance projects -Completed equity analysis report and scorecard tool for program

Cumulative Reporting of Project Activities

A portfolio of work samples and copies of training documents produced during this grant are available for download [at this link](#).

A. Training for Sustainable Finance, Operational Efficiency, Flood and Drought Planning, and Resilience to Weather for Rural Infrastructure		
Activity	Description of Activities	Quarterly Outputs/Outcomes or Next Steps
1. Training Conferences, Workshops, and Forums:		
NYWEA Asset Management and Utility Finances Specialty Conference November 15, 2018 Hilton Albany, Albany, NY -With Workshop in a Box content	SU-EFC co-hosted this conference with NYWEA and the AWWA-NY. Presentations included topics on protecting and maintaining water/wastewater, asset management planning for municipalities, and water/wastewater system finances.	Outputs: SU-EFC assisted in conference organizing and agenda-setting, and presented on public engagement. 85 participated in the conference. Outcomes: NYS water managers applied training information to their water or wastewater operations, and increased their professional networks. Cumulative Outcomes: SU-EFC Associate Director was elected as an officer on the NYWEA board of directors.
Local Leaders Conference April 2-3, 2019 Holiday Valley Resort & Conference Center, Ellicottville, NY -With Workshop in a Box content	SU-EFC's LLC provided New York rural leaders with opportunities to discuss local governance needs and develop leadership skills. Presentation highlights included effective communication with the public sector, grant writing, and state and federal funding roundtable discussion.	Outputs: SU-EFC staff facilitated two day conference event for 41 participants representing 21 New York municipalities, and disseminated conference materials and resources with a follow up e-newsletter. Outcomes: Municipal leaders gained knowledge, had the opportunity to network with other leaders from across New York State, and develop leadership skills from conference content.
Focus Group for Community Water System Leaders February 2, 2019 Parador Villas Sotomayor, Adjuntas, PR -Workshop in a Box	SU-EFC hosted and facilitated a focus group workshop for rural community water system leaders in central highlands. Free, one-day event included break-out water system management discussion and source water protection educational tour of protected forest for all participants.	Outputs: 31 participated in the workshop. SU-EFC staff facilitated discussions and recorded six hours of participant response to focus group questions at three discussion tables. Outcomes: Community leaders from 10 rural water systems across Puerto Rico learned from each other regarding system management strategies and needs.

<p>Funding and Financing Roundtable for Municipal Infrastructure, Association of Towns Annual Meeting February 19, 2019 Marriott Marquis, New York, NY</p>	<p>SU-EFC hosted a 1.5-hour workshop on funding opportunities for safe and clean water management and other community investments that features updates on funding and financing programs, opportunities for co-funding, and a panel discussion. Six state and federal agencies were represented, including USDA RD.</p>	<p>Outputs: 52 attended the session, six agencies presented and answered audience questions about their funding programs. SU-EFC finalized conference session logistics, presented state funding application process, and coordinated with roundtable speakers. Conference participants were notified presentations were posted to EFC website.</p> <p>Outcomes: Trainees gained knowledge of funding sources for environmental infrastructure, to apply to their work in NYS municipalities.</p> <p>Cumulative Outcomes: -Met our agency partner's request to hold a funding information session at this annual conference.</p>
<p>Where's the Money and How to Get It, Syracuse-Onondaga County Planning Agency 31st Annual Planning Symposium March 7, 2019 Marriott Syracuse Downtown Syracuse, NY</p>	<p>SU-EFC staff presented a conference session to provide an overview of popular funding programs available through the NYS Consolidated Funding Application (CFA) as well as additional federal funding opportunities for municipalities. The session included advice and tips on grant writing and do a brief overview of the Regional Economic Development Councils (REDC) and the CFA application process.</p>	<p>Outputs: 50 people attended the session. Updated presentation on funding sources for water and wastewater infrastructure, and other environmental infrastructure for municipalities.</p> <p>Outcomes: Trainees gained knowledge of funding sources for environmental infrastructure, to apply to their work in CNY municipalities.</p> <p>Cumulative Outcomes: 6th presentation by SU-EFC staff at this annual symposium.</p>
<p>Being Underwater Financially, Before You Are Literally Underwater Southern Tier Central Regional Planning & Development Board 23rd Annual Regional Leadership Conference April 4, 2019 Corning, NY</p>	<p>SU-EFC staff presented a conference session to offer insights into what local leaders need to plan for their community's future. Components of resiliency planning were presented, including aspects that communities may already be doing. The session included funding options to prepare plans and implement projects for resilient community services and facilities.</p>	<p>Outputs: 40 attendees participated in conference session.</p> <p>Outcomes: Conveyed information and funding sources for NYS local leaders for resilient communities.</p>
<p>Engaging the Community to Gain Support AWWA New York's Water Event Conference April 17, 2019 Saratoga Springs, NY</p>	<p>This conference session consisted of three presentations to prepare water utility leaders to engage and communicate strategically with customers. Participants learned how to address the lack of public understanding of a utility's role in protecting public health and improve the environment.</p>	<p>Outputs: 70 attendees participated in conference session.</p> <p>Outcomes: Conveyed communication skills and methods for NYS water infrastructure utility professionals.</p>

Funding and Financing Roundtable for Municipal Infrastructure New York Rural Water Annual Technical Training Meeting, May 22, 2019 Verona, NY	SU-EFC hosted a 2-hour workshop on funding opportunities for safe and clean water management and other community investments that features updates on funding and financing programs, opportunities for co-funding, and a panel discussion.	Outputs: 42 attendees represented 29 New York municipalities. Six state and federal agencies were represented. SU-EFC organized and facilitated event and shared funding information packets with participants. Outcomes: Furthered partnership and collaboration with NYS Rural Water Association, conveyed information and funding sources for NYS local leaders to take resiliency measures for their communities, services, and facilities.
Understanding the Root Cause of a Problem: July 13 & July 20, 2019 Caguas, PR -Workshops in a Box Content	This workshop, conducted twice in partnership with EFC West, introduced and demonstrated two tools that will help community water system managers get to the root cause of a difficult problem. By using these tools, community water system managers can use a systemic decision-making approach to define the problem correctly, so they can apply the right solutions and create positive outcomes with their communities.	Outputs: On July 13th, 34 people attended; on July 20th, 20 people attended. SU-EFC staff conducted two workshops in partnership with AsocAguas network and EFC West, to meet the needs of water system leaders in this network. SU-EFC staff recruited participants, translated workshop handouts, questionnaire, and presentations into Spanish, and coordinated all logistics. Outcomes: New partnership development with AsocAguas, a network of 17 rural and peri-urban small water systems surrounding Caguas, PR. Capacitation of water system leaders with new tools of problem and solution analysis.
State & Federal Funding Resources for Municipal Infrastructure Central New York Regional Federation of Lake Associations Conference August 16, 2019 Skaneateles Falls, NY	SU-EFC staff delivered a one-hour presentation to describe state and federal funding sources to improve water infrastructure. The goal was to inform lake associations of funding programs, as they work with their municipalities to manage water quality.	Outputs: 110 people attended the conference. New presentation developed to convey municipal water infrastructure funding information. Outcomes: Developed new conference audience for funding program information. Lake association members informed of funding sources to help protect lake quality in 10-county Central New York region.
Funding and Financing Roundtable for Municipal Infrastructure New York Conference of Mayors Fall Training School September 19, 2019 Saratoga Springs, NY	SU-EFC hosted a 75-minute conference session on funding opportunities for safe and clean water management, and other community investments, that featured program updates and a case study. The case study was presented by the mayor, Village of Montour Falls, Schuyler County, describing a co-funded water treatment plant build in cooperation with the Village of Watkins Glen.	Outputs: 30 people attended the session. Four state and federal agencies were represented, and one case study was presented. SU-EFC organized and facilitated event and shared funding information packets with participants. Outcomes: Created partnership with New York Conference of Mayors, conveyed information and funding sources for NYS local leaders to take resiliency measures for their communities, services, and facilities.
Funding and Financing Roundtable for Municipal Infrastructure The Center for Discovery November 6, 2019 Hurleyville, NY	SU-EFC hosted a free, one-day workshop on funding opportunities for safe and clean water management, and other community investments, that featured program updates and one-on-one discussion with funding agency representatives. The target audience was local government officials from Sullivan and Ulster Counties, NY.	Outputs: 36 people attended the workshop, representing 16 municipalities. Six state and federal agencies were represented. SU-EFC organized and facilitated event and shared funding information packets with participants. Outcomes: Created partnership with Sullivan County Planning, conveyed information and funding sources for NYS local leaders to take resiliency measures for their communities, services, and facilities.

<p>Stream Buffer Workshop Tompkins Center for History and Culture November 21, 2019 Ithaca, NY</p>	<p>SU-EFC co-sponsored this 3-hour evening workshop, which provided Tompkins County municipal officials, board members, conservationists and others interested in protecting streams and wetlands with tools that improve water quality, and reduce flooding and property loss in a changing climate. Five presentations included site review, mapping, project implementation and case studies information.</p>	<p>Outputs: 50 people registered for the workshop. SU-EFC subcontractor helped plan and organize the workshop through the Tompkins County Water Resources Council, then facilitated and presented at the workshop. Outcomes: Tompkins County landowners, nonprofit representatives, watershed organizations, and municipal officials received information about water quality protection through riparian buffers implementation. Cumulative Outcomes: SU-EFC furthered partnerships through co-sponsorship with Tompkins County CCE and SWCD, USC, and NYS WRI.</p>
<p>Virtual NYC Watershed Science and Technical Conference September 15-16, 2020</p>	<p>SU-EFC staff provided technical assistance to NYWEA to plan and run this technical conference as a virtual meeting due to the pandemic. Sessions included wastewater management topics related to maintaining water quality in the rural Catskill/Delaware and Croton watersheds that supply drinking water for New York City, including presentations on dam rehabilitation, emerging contaminants, and algae and protozoa management.</p>	<p>Outputs: 188 people registered for the conference. SU-EFC staff ran the online platform for NYWEA for this two-day, virtual meeting. Outcomes: SU-EFC supported communication of technical information to improve operations for NYS wastewater utility managers and knowledge-base for associated consulting firms. Furthered ongoing partnership and collaboration with NYWEA.</p>
<p>2. Municipal Board Services and Training</p>		
<p>Tompkins County Water Resources Council and Municipal Training and Soil Health subcommittees Ongoing, Tompkins County, NY</p>	<p>SU-EFC subcontractor attends planning meetings for this subcommittee focused on continued non-point source pollution issues in the county, to provide technical services and stormwater management expertise. The committee identified riparian buffers as a current training need.</p>	<p>Outputs: SU-EFC subcontractor chaired the Municipal subcommittee meeting on May 18, 2020 and gave input on the development of a Soil Health outreach document. She attends the TC WRC monthly meetings. Outcomes: SU-EFC subcontractor chairs Municipal Training subcommittee, provides technical assistance, and facilitates professional training for municipalities for water quality.</p>

<p>Town of Caroline Watershed Committee Ongoing, Caroline, NY</p>	<p>SU-EFC subcontractor meets with the Town of Caroline Watershed Committee to discuss outreach and education strategies for engaging community members with watershed management, green infrastructure, nutrient management, and landowner rainwater management.</p>	<p>Outputs: SU-EFC subcontractor attends committee meetings to provide technical assistance, including facilitating a vulnerability assessment (see B.3.). In September, SU-EFC subcontractor helped the committee compile a set of possible watershed projects, focused on stormwater management and erosion control, wetland and riparian corridor management, and forestry and silviculture, for the Cayuga Lake Intermunicipal Organization for potential funding.</p> <p>Outcomes: Town of Caroline applies information gained from technical services and watershed management expertise to improve water quality.</p> <p>Cumulative Outputs/Outcomes: SU-EFC staff helped to finalize the Town's 2017 Stormwater Management Plan and MS4 report and identify stormwater management/GI opportunities for municipal flood study, and delivered a Natural Resources Inventory during first quarter 2019.</p>
<p>3. Technical Training Webinars</p>		
<p>Grant Writing 101 November 8, 2018 Webinar broadcast, 1:00-2:00pm EST</p>	<p>SU-EFC staff conducted this webinar to introduce the basics of grant writing, focusing on:</p> <ul style="list-style-type: none"> – How to identify priority projects – Potential funding alternatives – Planning for a proposal – Mechanics of grant writing – How to find funding opportunities. 	<p>Outputs: 220 people attended. SU-EFC staff shared information on grant writing with water system operators and managers.</p> <p>Outcomes: Water system managers are able to implement training concepts at their workplaces.</p> <p>Cumulative Outputs/Outcomes: Conducted in ongoing partnership with the EFCN's Smart Management for Small Water Systems project.</p>
<p>Ask the Expert: Developing the Water Workforce March 27, 2019 Webinar broadcast, 2:00-3:00pm EST</p>	<p>SU-EFC staff conducted this webinar with EFC Wichita State University staff to provide an overview of workforce planning and facilitate questions and discussion with participants.</p>	<p>Outputs: 103 people attended. SU-EFC staff shared information on workforce development with water system operators and managers.</p> <p>Outcomes: Water system operators and managers are able to implement training concepts at their workplaces.</p> <p>Cumulative Outputs/Outcomes: Conducted in ongoing partnership with the EFCN's Smart Management for Small Water Systems project.</p>
<p>Get to Know Emerging Drinking Water Contaminants: Per- and Polyfluoroalkyl Substances (PFAS) August 6, 2019 Webinar broadcast, 1:00-2:00pm EST</p>	<p>SU-EFC staff recruited representatives at Weston & Sampson to conduct this first webinar on PFAS emerging contaminants. This introductory webinar described how these man-made chemicals came to be and what risks they may pose to drinking water systems. Content included sources of PFAs and their pathway into the environment, risks and challenges PFAS may pose to water systems, and case studies of drinking water impacts.</p>	<p>Outputs: 21 people participated in the webinar in New York State; in total, 250 participated nation-wide.</p> <p>Outcomes: Water system operators increased their understanding of PFAS.</p> <p>Cumulative Outputs/Outcomes: Conducted in ongoing partnership with the EFCN's Smart Management for Small Water Systems project.</p>

<p>Get to Know Emerging Drinking Water Contaminants: PFAS Challenges and Solutions August 13, 2019 Webinar broadcast, 1:00PM-2:00PM EST</p>	<p>SU-EFC staff recruited representatives at Weston & Sampson to conduct this second webinar on PFAS emerging contaminants. This webinar described how water and wastewater systems are addressing the impacts of PFAS, including filtration technologies, the advantages and disadvantages of different treatment methods, and newly-developed destructive techniques.</p>	<p>Outputs: 28 people participated in the webinar in New York State; in total, 272 participated nation-wide. Outcomes: Water system operators learned about available technologies to manage PFAS impacts on their systems. Cumulative Outputs/Outcomes: Conducted in ongoing partnership with the EFCN's Smart Management for Small Water Systems project.</p>
<p>Water Financing Strategies for New York Communities September 18, 2019 Webinar broadcast 1:00PM-2:00PM EST</p>	<p>SU-EFC's Associate Director, Khristina Dodson, conducted this webinar on how to creatively manage investments for water infrastructure projects in NY towns and villages. This webinar featured updates on funding and financing programs and dialogue on the importance and opportunities for co-funding.</p>	<p>Outputs: 36 people participated in the webinar. Outcomes: This webinar was requested by Representative Anthony Brindisi's office, NY Congressional District 22. Water system operators and municipal officials learned about available NYS funding programs for water infrastructure. Cumulative Outputs/Outcomes: Conducted in ongoing partnership with the EFCN's Smart Management for Small Water Systems project.</p>
<p>Developing a Wastewater Coronavirus Surveillance System for New York State June 23, 2020 Webinar Broadcast 1:00-2:15pm EDT</p>	<p>In collaboration with NYWEA and NYS WRI, SU-EFC convened experts from Syracuse University, Cornell, and SUNY College of Environmental Science and Forestry to introduce their pilot project for tracking levels of coronavirus RNA in New York's sewer systems. Included a facilitated discussion about real-time monitoring of coronavirus RNA in wastewater, to inform wastewater utility managers and others how this surveillance method can help guide the process of reopening the state.</p>	<p>Outputs: Organize and conduct 75-minute webinar available at this link, with 149 attendees. Of those who registered: -34% represented municipalities with populations less than 10,000. Outcomes: Shared university faculty expertise and research innovations with utility managers, scientists, and public health and other government officials. Of those who responded to our evaluation survey: - Average rating of webinar delivery: 8.49 on a scale of 1-10, - Average rating of respondent's likelihood of applying information to work: 7.1 on a scale of 1-10. -Sample Comment: "Beautifully facilitated, great panel, very good blend of necessary scientific background and practical questions/considerations. THANK YOU!!!!"</p>
<p>4. Training Publications and Online Resources</p>		
<p>Funding Source Guide: Resiliency for New York State Watersheds and Water Infrastructure November, 2019</p>	<p>The intent behind this publication is to connect readers to non-agricultural NYS water infrastructure funding programs in a short, at-a-glance format. This publication is in distribution as a handout for funding roundtables and presentations, see A.1.</p>	<p>Outputs: Document finalized, posted to EFC website, and distributed at events during fourth quarter 2019 and first quarter 2020. Outcomes: Final document distributed at November 2019 and February 2020 workshops, receiving positive verbal and written feedback.</p>

<p>Green Infrastructure Program for Small Municipalities March, 2020</p>	<p>This publication, developed in collaboration with NYS WRI, is a step-by-step program guide for small municipalities to initiate a residential sewer disconnect and green infrastructure program.</p>	<p>Outputs: Document finalized, posted to EFC website. SU-EFC student intern finalized design and incorporated final edits. Outcomes: Publication is a resource for small municipalities in NYS about stormwater quality management, implementation can bring cost savings for wastewater utilities and decreased combined sewer overflow and stormwater runoff in neighborhoods and local waterways. Cumulative Outputs/Outcomes (If applicable): Content based on research conducted in collaboration with NYS WRI interns in 2018.</p>
<p>Flood Resiliency Crosswalk June, 2020</p>	<p>This publication aligns the common elements between existing state and federal climate adaptation and climate resiliency programs, to aid small municipalities leverage limited resources and focus funding and financing efforts. Document outlines ten key actions that communities can take that have cascading effects, both to improve resiliency and to satisfy state (Climate Smart Communities) and federal (NFIP CRS) programs that promote flood resilience.</p>	<p>Outputs: NYS WRI team finalized and published “Key Actions to Promote Flood Resilience for New York State Communities.” Outcomes: Crosswalk will be useful to municipalities state-wide. Partnership development between SU-EFC, NYS WRI and CCE to provide no-cost flood resiliency technical assistance to New York communities.</p>
<p>Watershed Quality Assessment: Town of Sandy Creek, New York February – July 2020 Town of Sandy Creek, NY</p>	<p>SU-EFC student intern worked with staff and GIS experts at SU to develop maps to illustrate watershed quality for the Town of Sandy Creek, mostly using online tools. Maps were compiled with related data into a reference booklet for Town decision-makers and residents. The booklet included instructions for using online mapping tools.</p>	<p>Outputs: SU-EFC student intern designed and developed an Informational booklet during the spring semester and early summer. In September, SU-EFC staff sent prints to Town officials for distribution. Outcomes: Town of Sandy Creek government and residents can choose to use this resource to inform water quality and land use decisions and become familiar with publicly-available online tools to explore further.</p>
<p>Short Communication: Staying Ahead of the Curve: Wastewater Surveillance for Monitoring COVID-19 Outbreaks in New York State September, 2020</p>	<p>NYS WRI led development of this publication, which describes the processes and benefits of wastewater surveillance to monitor COVID-19 outbreaks.</p>	<p>Outputs: NYS WRI and SU-EFC collaborated to produce and post this document online. SU-EFC student intern developed info-graphics to illustrate concepts. Outcomes: Well-researched document provides reliable, science-based information to local governments and state practitioners about the public health benefits of wastewater surveillance.</p>
<p>5. Peer to Peer Training</p>		

Communications Training & Technical Assistance for Community Water System Leaders July 20, 2019 Caguas, PR	SU-EFC hosted and facilitated a communications training for rural community water system leaders from Adjuntas <i>municipio</i> to exchange information with water system leaders from Caguas <i>municipio</i> , PR. Two-hour training included messaging and internet-based communication methods to strengthen rural water system network.	Outputs: SU-EFC staff translated and coordinated training for five participants, partnering with AsocAgua and EFC West. Outcomes: Provided opportunity for local leaders to share information in peer-to-peer format, to assist their efforts to build a network of resilient community water systems. Cumulative Outputs/Outcomes: New partnership development with network of community leaders for small, rural water systems.
Webinar: Introduction to FEMA National Flood Insurance Program Community Rating System: a New York State Perspective September 22, 2020 Webinar Broadcast 10-11:30am EDT	SU-EFC organized a webinar with NYS WRI, co-hosted with NYSFSMA, to introduce FEMA's CRS program to a local government audience. Presentations were followed by a panel discussion where local government speakers shared their diverse experiences with the CRS program, at the Village, Town, and City level. Two speakers were certified floodplain managers, and all had experience administering CRS programs for their municipalities.	Outputs: Organize and conduct 1.5 hour webinar available at this link , with 172 attendees. Of those who registered: -66% represented municipalities with populations less than 10,000. Outcomes: Shared expertise about the CRS program using a peer-to-peer perspective with local government officials. Of those who responded to our evaluation survey: - Average rating of webinar delivery: 9.3 on a scale of 1-10, - Average rating of respondent's likelihood of applying information to work: 7.7 on a scale of 1-10. -Sample Comment: "I enjoyed the open panel discussion. Very informative and good to hear from the municipal level" Cumulative Outputs/Outcomes: SU-EFC advanced an online training partnership with the NYS Floodplain and Stormwater Managers Association. SU-EFC supported NYSFSMA member outreach, as the association had to cancel in-person training due to the pandemic and did not have online training capacity.
B. Improving Municipal Usage of State- and Federal-Level Resources Through Identification of Current Rural Community Needs		
Activity	Description of Activities	Quarterly Outputs/Outcomes or Next Steps
1. Puerto Rico Community Needs Survey		
Puerto Rico Community Needs Survey Report December, 2019	This report shares findings from the <i>Focus Group for Community Water System Leaders</i> on February 2, 2019 in Adjuntas, PR. The goal is to report on needs that rural communities have regarding water resources protection and infrastructure investment particularly in areas served by community water systems (non-PRASA).	Outputs: SU-EFC staff finalized report and posted to EFC website in December 2019. Report was shared with community water system partners in PR. Outcomes: Report documents needs discussed at focus group, and serves as a resource for community water systems leaders, particularly as support for funding requests.

2. Municipal Awareness and Access to Existing Resources		
Technical assistance for municipal green infrastructure planning and funding March 2019 Geneva, NY	SU-EFC staff met with municipal officials in the City of Geneva, NY, to discuss options for funding green infrastructure and porous paving to manage stormwater and protect water quality of Seneca Lake. SU-EFC staff also explained applying for funding through the NYS CFA process.	Outputs: SU-EFC staff met with City officials on March 26, 2019. SU-EFC shared funding information to address water quality management with this municipality, population 13,200. Outcomes: City of Geneva obtained funding guidance to improve stormwater management.
Technical assistance for municipal water infrastructure funding September-November 2019 Onondaga County, NY	SU-EFC staff advised City of Syracuse Water Department engineer on funding options for new drinking water intake pipe in Skaneateles Lake to benefit the City, and villages of Skaneateles, Jordan, and Elbridge in Onondaga County.	Outputs: SU-EFC staff arranged funding information meetings with City engineer and US EPA on November 25, 2019, and facilitated introduction to NYS EFC. Outcomes: Shared funding program information to benefit villages in western Onondaga County and City of Syracuse.
Publications printing and distribution Applicable to all of NYS	SU-EFC staff distributed our new funding matrix document and training guide booklets for local government leaders on topics such as grant writing, funding programs, and comprehensive planning.	Outputs: Funding Guide and training booklets distributed at workshops described in A.1. Outcomes: Distribution of training and funding program information increased awareness of existing resources for municipal leaders in New York State.
New York State Community Rating System Resources Guide September 2020 Applicable to all of NYS	Resource document prepared by NYS WRI staff to provide 9/22/20 FEMA CRS webinar participants with online sources of technical assistance and guidance related to administering a municipal CRS program.	Outputs: Document posted to EFC website and made available as a download to webinar participants on 9/22/20. Outcomes: Publication is a resource for NYS municipalities to assist them in their decision-making about local floodplain management.
C. Technical Assistance for Flood and Drought Resiliency, Stormwater and Rural Stormwater Infrastructure Management, Resilience to Extreme Weather, and Water Resource Management		
Activity	Description of Activities	Quarterly Outputs/Outcomes or Next Steps
1. Planning for Flood and Drought Resiliency		
Sodus Point Post-Flood Recovery Building Workshop October 30, 2018 Sodus Point, NY	SU-EFC staff provided facilitation assistance on partner-led workshop to use the 2017 Lake Ontario flood to inform preparedness planning for rural lake-front community of 900. SU-EFC staff led and documented breakout group work on economic, environment, and infrastructure measures for municipal staff, residents and business owners.	Outputs: 45 people attended, participants completed a matrix to be used as planning tool. Outcomes: Matrix captured the community's vulnerabilities, strengths and actions, and prioritized actions and potential projects, furthering coordinated project planning. Cumulative Outputs/Outcomes: Furthered ongoing partnership with NY Sea Grant and GFLRPC

NYSAR3 Preconference Workshop: Recycling Organics to Reduce Erosion and Build Soils November 6, 2018 Cooperstown, NY	SU-EFC staff provided marketing and planning assistance to NYSAR3 for a half day workshop on innovative approaches to using compost to build soil health to reduce stormwater erosion for highway use and other applications.	Outputs: 57 people attended, two education sessions conducted with active demonstrations, continuing education credits offered to participants. Outcomes: SU-EFC assisted recruiting a diverse audience of soil & water conservation districts, municipal leaders, nonprofits, managers of solid waste and public works departments to learn about compost applications in stormwater management.
Addressing Floodplain Training Needs for Code Enforcement Officers Ongoing Applicable to all of NYS	SU-EFC continued its partnership with several organizations to address gaps in floodplain training for Code Enforcement Officers (CEOs) in New York state. The group will scope and address needs and gaps in floodplain training for municipal code enforcement officers, including identifying funding sources to increase training.	Outputs: SU-EFC staff assisted with CEO interviews across state. SU-EFC staff provided shareable, online databases to find and track interviewees, and record interview responses. Outcomes: SU-EFC facilitated work by a diverse set of partners to obtain new information about floodplain training programs, directly from training recipients. New training website creation is an outcome of the interview process. Cumulative Outputs/Outcomes: SU-EFC furthered a partnership with The Nature Conservancy, New York Sea Grant, NYS DEC, Genesee-Finger Lakes Regional Planning Council, Tioga County, and the NYS Floodplain and Stormwater Managers Association.
2. One-on-One Technical Assistance		
2019 New York State Sustainable Communities Stewardship Program Academic Year 2018-2019 Rural Central New York	Through this program, Syracuse University and SUNY ESF students learned fundamental concepts and principles of water and resiliency. Following the completion of two initial training sessions, students were connected with a partner organization and assigned a water/resiliency-related project to implement throughout the spring semester. SU EFC staff provided technical assistance to develop student project ideas.	Outputs: Two students completed projects for two partner organizations by 5/31/19. SU-EFC provided technical assistance for student project ideas. Students provided the following useable products: a digitized data package from paper Skaneateles Lake drinking water reports for Onondaga County Soil & Water Conservation District, and green infrastructure mapping and maintenance guides for Onondaga County youth conservation corps. Outcomes: Further projects focusing on water quality and green infrastructure for a CNY nonprofit organization and a local government agency. Students gained understanding of water and resiliency, developed leadership skills, and gained professional experience.
One-on-One Technical Assistance Ongoing	See also technical assistance for municipalities described in sections A.2., A.5., B.2., and C.3.	Outputs: Technical assistance meetings conducted with specific municipalities or water utility group. Outcome: SU-EFC provided technical assistance on watershed management, communications, green infrastructure, and drinking water infrastructure funding.

3. NYSDEC Community Certification Assistance		
<p>Climate Smart Resiliency Planning Ongoing Tompkins and Schuyler Counties, NY</p>	<p>SU-EFC is collaborating with Tompkins County CCE, and NYS WRI in support of the stormwater, flooding, and wastewater components of NYS DEC's Climate Smart Communities certification and NYSEDA's Clean Energy Communities programs. Subcontractor, now working for NYS WRI, provides direct technical assistance to NYS communities to develop materials for Climate Smart Resiliency Planning.</p>	<p>Cumulative Outputs/Outcomes:</p> <ul style="list-style-type: none"> -- SU-EFC subcontractor mentored a team of 4 NYS WRI summer interns who helped develop funding guidance and case studies for new CSC actions and performed a quantitative analysis of equity in the CSC program. - SU-EFC subcontractor continued to provide technical assistance to CCE Staff for development of the Town of Lansing's NRI. SU-EFC subcontractor partnered with CCE staff to develop the Climate Vulnerability Assessment for the Town of Caroline, Tompkins County, NY (population 3,348), with an emphasis on flood and drought planning. This effort included developing a vulnerability assessment document, virtual presentations and community input sessions (4/9 and 4/10/2020) and the Climate Vulnerability Assessment Survey, which included a participatory mapping component to compile local knowledge of threats and vulnerabilities in the community. - Subcontractor provided technical assistance to three of the four communities in the Southern Tier to achieve Climate Smart Certification status in 2019: Town of Caroline, Town of Dryden, and Village of Montour Falls. - Natural Resources Inventories (NRIs) completed during 2017/2018 TAT grant periods: Towns of Caroline, Ulysses, Danby, and Dryden (Tompkins County, NY), and Delaware County, NY. - Capacitation of partners and state agency with "scorecards" for state-wide use. - Developed with a student an equity analysis of the CSC program. - Furthers multiple partnerships, with NYS DEC, CCE and NYSWRI; ongoing student training by working with interns from the NYS WRI. - SU-EFC supported continued advancement of rural municipalities in the Climate Smart Community Planning process, for improved water resources and infrastructure resiliency.

Abbreviations:

AWWA-NY	American Water Works Association – New York Section
CCE	Cornell Cooperative Extension
CEO	Code Enforcement Officer
CFA	Consolidated Funding Application
CNY	Central New York
EFCN	Environmental Finance Center Network
GFLRPC	Genesee/Finger Lakes Regional Planning Council.

LLC	Local Leaders Conference
NRI	Natural Resource Inventory
NYSAR3	New York State Association for Reduction, Reuse and Recycling
NYS DEC	New York State Department of Environmental Conservation
NYS DOT	New York State Department of Transportation
NYS EFC	New York State Environmental Facilities Corporation
NYSERDA	New York State Energy Research and Development Authority
NYSFSMA	New York State Floodplain and Stormwater Managers Association
NYWEA	New York Water Environment Association
NYS WRI	New York State Water Resources Institute
TC WRC	Tompkins County Water Resources Council
SU-EFC	Syracuse University Environmental Finance Center
USC	Upper Susquehanna Coalition
USCA	Upper Susquehanna Conservation Alliance