



Community Resiliency: Planning & paying for it

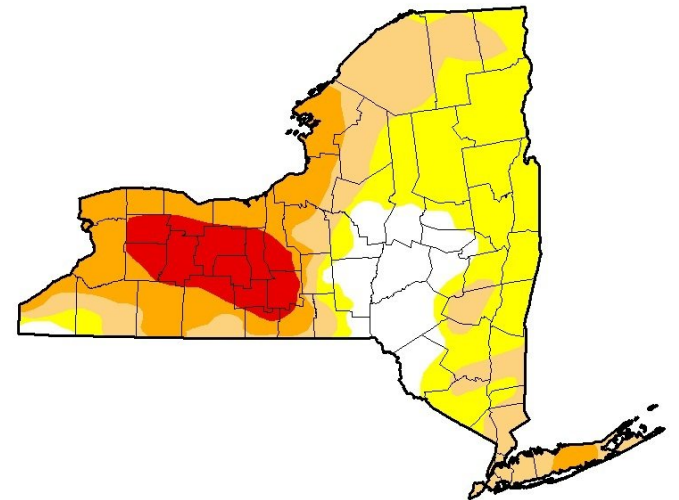


**Khris Dodson, Associate Director
Syracuse University Environmental Finance Center**

How Do We Define Resiliency?

Community resiliency can include:

- Municipal financial health
- Community financial health
- Is your portfolio diversified?
- Consider:
 - community demographics
 - Commerce
 - relation to neighboring communities
- Adaptation to {Climate} Change
- Environment:
 - water supply,
 - impacts from storms,
 - drought,
 - Social, cultural, and economic changes



A definition of Resiliency

A resilient community is one in which residents and institutions have the capacity to prepare for, respond to, and recover from events and trends with minimal outside assistance.

4 Rs of Resiliency

- Redundancy
- Robust
- Resources
- Rapid Response

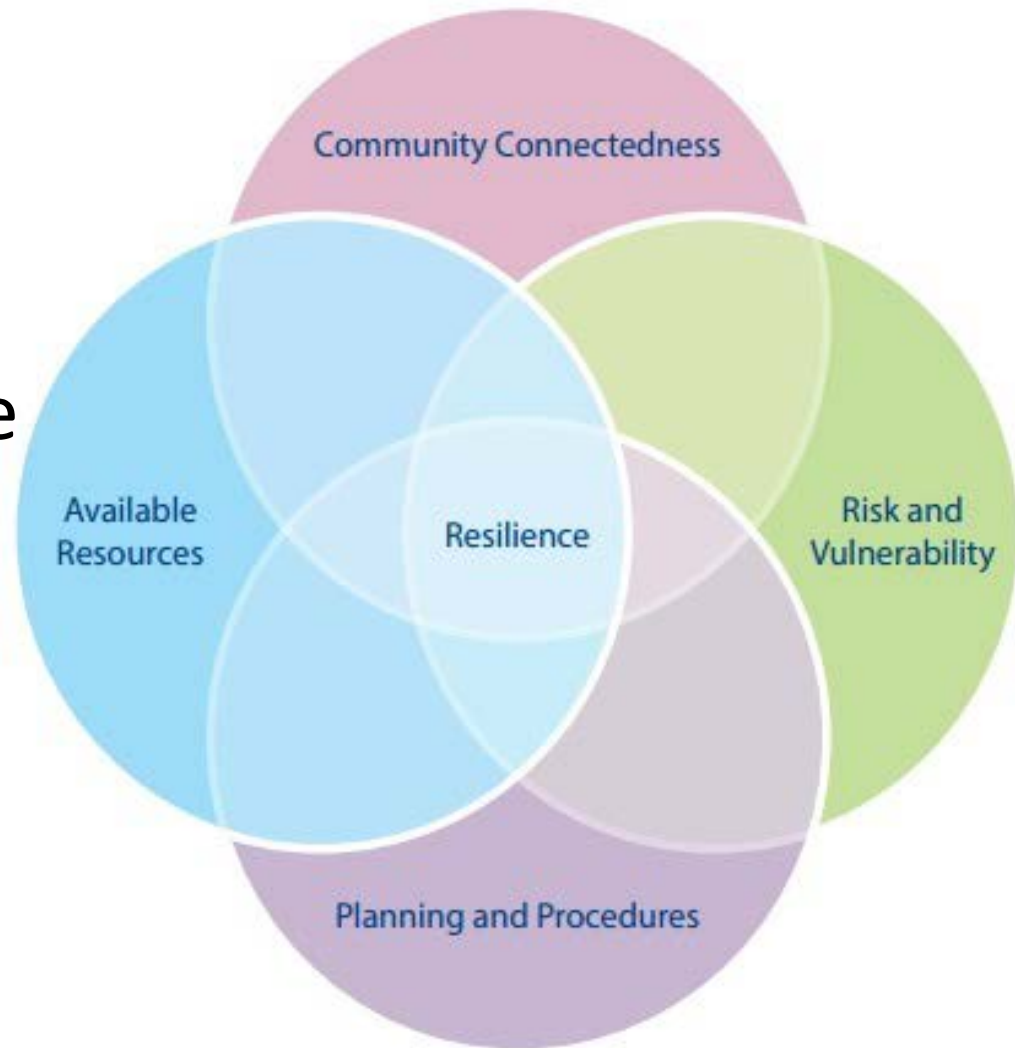


Figure 1. A model for community disaster resilience.

How Else Can We Define Resiliency?

How quickly are you able to 'bounce back'?

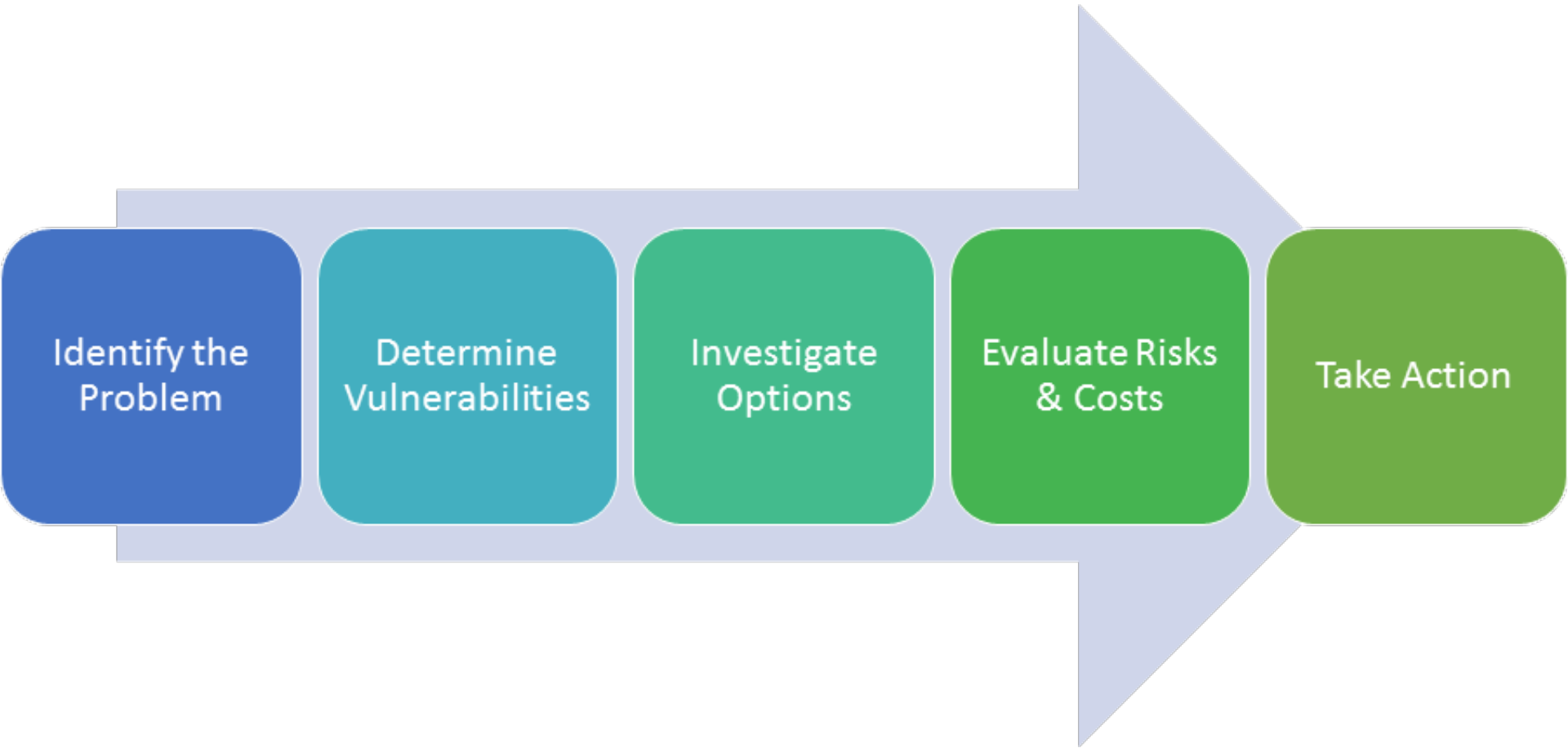
Do you need external resources to do so? If so, often?

Planning for Resiliency

- Comprehensive Plans
- Zoning
- Asset Management Planning
- Capital Improvement Planning
- Land-Use Planning

RISK ASSESSMENT MATRIX				
SEVERITY PROBABILITY	Catastrophic (1)	Critical (2)	Marginal (3)	Negligible (4)
Frequent (A)	High	High	Serious	Medium
Probable (B)	High	High	Serious	Medium
Occasional (C)	High	Serious	Medium	Low
Remote (D)	Serious	Medium	Medium	Low
Improbable (E)	Medium	Medium	Medium	Low
Eliminated (F)	Eliminated			

Steps toward Resiliency





Venice Italy: Today



Venice Italy: Today



Venice Italy: Today



2011: Lourdes Hospital, Binghamton

Potential Adaptive Measures for Binghamton-Johnson City Joint Sewage Treatment Plant

ADAPTIVE MEASURE	DESCRIPTION	ESTIMATED COST
Back-up power	Three (3) back-up generators and diesel storage tanks to provide power for the entire plant and related processes during future power outages.	300 kW \$75,000 - \$240,000
Alternate wastewater capabilities	Develop redundant treatment processes. Development or replacement could include entire facility or just critical portions to support operations when damage or loss occurs.	\$5,000,000 - \$20,000,000
Flood wall	Construct a flood wall for protection against high flow events. Construction and design is 1.5 feet of freeboard above the 2011 storm event level.	\$1,750,000 - \$4,000,000
Submersible pumps	Install submersible pumps that will not be significantly impacted by flood waters entering the plant.	\$1,500,000 - \$3,000,000
Raise electrical equipment	Raise electrical equipment above the 2011 flood level.	\$100,000 - \$200,000
Raise VFDs	Raise the Variable Frequency Drives (VFDs) at least one foot above the 2011 flood level.	\$50,000 - \$100,000
Flood risk management plan	Develop phased, adaptive risk management plan for urban flood risks and treatment requirements that will prioritize the ability to limit or prevent damage to the facility during floods. Integrating observations, process models and decision frameworks provides a powerful suite of tools to anticipate potential flood scenarios and deal with flood damage.	\$7,500 - \$10,000
Water tight doors	Install water tight doors at critical infiltration points to mitigate impacts of flood waters on plant and equipment.	\$200,000 - \$500,000
Permeable pavement	Install permeable pavement at the facility to allow for infiltration of stormwater through the pavement surface reducing runoff (and localized flooding). Could be constructed from porous asphalt, porous concrete, and interlocking pavers.	\$100,000 - \$350,000
Flood models	Build integrated flood models for catchments and urban drainage. Beyond many current hydrologic and flood models, these new models should ensure that changing climate conditions can be accommodated in models and that these models include topographic information (GIS) and risk assessment components.	\$35,000 - \$75,000
Quick disassembly pumps	Retrofit existing pumps to make it easier to disassemble them and remove them in advance of a flooding event. Costs include the retrofitting and the cost to remove them for one event.	\$50,000 - \$100,000

You can't (necessarily) buy resiliency

But, you can become resilient by investing in things that will make you so.

- Infrastructure upgrades
- Community planning
- Building capacity
- Economic development

REGIONAL COUNCILS



REDCs and You

Each Region created a strategic plan.

- Main initiatives
- Critical issues
- Challenges
- Strategies and goals to improve economy

Align your project goals with regional strategies to get funding!

The Basics

- REDC: Regional Economic Development Councils
- CFA: Consolidated Funding Application
- A single on-line application for dozens of programs from various state agencies.
- Up to \$750 million in grants, loans and tax credits were available in previous years. The deadline is July 28th.

REDC and the CFA

Selection Criteria for NYS DEC/EFC Wastewater Infrastructure Engineering Planning Grant

	Points Assigned	Criteria
Regional Economic Development Priority	20	Alignment with the goals and priorities of its REDC
Performance Measures	40	Severity of existing water quality impairments
Strategies	24	Proposed project is required by a Consent Order, SPDES permit or TMDL
Process	8	Local commitment
Vision	4	Planning project is identified in a formally adopted plan
NYS DEC Regional Priority	4	Alignment with the goals and priorities of the DEC region that the project is located

As soon as possible...

- Have the support of your REDC – submit a white paper or form (depends on region) as soon as a project is identified as viable.
- Align community strategies with REDC strategies
- Get the 20 points!

Guidebook

- Resources announced in May
- Applications due July 28th



Regional Economic
Development Councils



Implementing
Our Plans
2017



A Division of Empire State Development

Some popular funding programs

ESD Grants

- Infrastructure Investments, Economic Investments
- Up to 25% of total project costs
- ESD also funds strategic planning studies

HCR

- Community Development Block Grant (Public Infrastructure, Public Facilities, Planning) 50k-600k
- New York Main Street – for targeted building renovations (up to 75%/500k) or technical assistance (up to 95%/20k)

NYS DOS

- Local Waterfront Revitalization Program – plan development or implementation; hamlets, downtowns, waterfronts
- Canalway Grants – development along designated canals (50%)
- Local Government Efficiency

Some popular funding programs

NYSERDA

- Technical Assistance, Energy Assessments, etc.

OPRHP

- Parks, Trails, Historic Preservation, Heritage Areas (Very competitive)
- Recreational Trails (TBD in 2016)

NYS Ag/Markets

- Ag district planning grants

NYS Environmental Facilities Corporation

- *Wastewater Infrastructure Engineering Planning Grant
- 30k for planning study (80% + \$7,500 local match)
- WQIP – up to 85% total costs for addressing local water quality improvements.
- Green Innovation Grant Program (GIGP) – well-funded program for up to 90% of total costs for stormwater street trees, wetland construction, bioretention, stream daylighting, etc.

Some popular funding programs

USDA Rural Development (not CFA)

- Water/wastewater
- Community Facilities
- Distance Learning Telemedicine
- Housing Loans/grants

Climate Smart Communities Grant Program



Department of
Environmental
Conservation



Climate Smart
Communities

Part of the Environmental Protection Fund

Climate Smart Communities Grants

Who is eligible?

- **Local governments only**
 - Counties, cities, towns, villages in NYS
- Others may participate as part of a partnership with a designated, eligible lead applicant
- Do **NOT** need to be a Registered Climate Smart Community to apply



Climate Smart Communities Grants

When are applications due?

- Applications deadline July 28, 2017 by 4:00 PM
- Read the **Request for Applications** (RFA) for complete info

How do I apply?

- Apply online through the **Consolidated Funding Application** (CFA) at <https://apps.cio.ny.gov/apps/cfa/index.cfm>

Climate Smart Communities Grants

What is the match?

- Required local match is 50% of project costs
- **Match w/ in-kind municipal staff salaries**
- Eligible costs:
 - Travel & equip.
 - Salaries & fringe benefits
 - Contractual services
- No state or federal funds as match



Climate Smart Communities Grants

What kinds of projects are eligible?

- **Mitigation:** reduce GHGs from *non-power* sources (from e.g., food waste & transportation)
- **Adaptation:** build local resiliency to climate change
- Two categories of grants: **implementation** and **certification** (planning)

Climate Smart Communities Grants

Implementation projects:

- Total available: \$9.5 million
- Award size: \$10,000 to \$2 million
- Construction projects
- No more than 15% on design & engineering



Climate Smart Grants: Implementation

Eligible adaptation projects:

- **Reduce future flood risk (1 of 2 categories):**
 - Increase natural resiliency (e.g., living shorelines)
 - Relocate or retrofit critical infrastructure or facilities
 - Replace or right-size flow barriers (i.e., culverts & bridges)
 - To facilitate emergency response and/or protect people, infrastructure and natural resources

Climate Smart Grants: Implementation

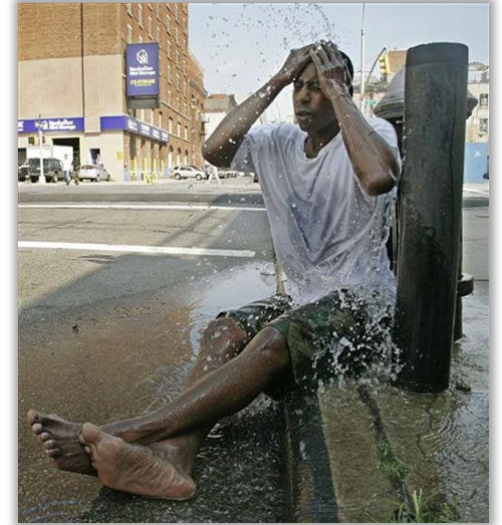
Eligible adaptation projects:

- **Extreme event preparation (2 of 2):**
 - Address anticipated future extreme heat conditions
 - E.g., cooling centers, shade structures
 - Improve emergency preparedness and response systems
 - E.g., warning systems

Climate Smart Communities Grants

Certification projects:

- Total available: \$500,000
- Award size: \$10,000 to \$100,000
- For planning, assessments, inventories, development of strategies
- Actions from the **CSC Certification Program**
 - **CSCC Manual** is online at <http://www.dec.ny.gov/energy/96511.html>



Climate Smart Grants: Certification

Eligible adaptation projects:

- **Adaptation planning actions** such as:
 - Vulnerability assessments (7.1), CSRP process (7.3), identification of climate adaptation strategies (7.4)
- **Land use planning actions** such as:
 - Development of comprehensive plans with sustainability or smart growth principles (6.1, 6.2), creating resource-efficient site design guidelines (6.5), conducting natural resource inventories (6.17),

Be in the know...

www.regionalcouncils.ny.gov

Capital Region

Downtown Revitalization Initiative (DRI) Round II

Applications due by Wednesday, June 14, 2017.

[Regional Guidance](#) | [Application](#)

Upcoming CFA Workshops



5/1/2017
1:30PM – 4:00PM
Albany, Empire State Plaza

[Click here to RSVP](#)

5/22/2017
8:00AM – 10:00AM
Hudson, Columbia-Greene
Community College

[Click here to RSVP](#)

6/1/2017
Warren & Washington County
Consolidated Funding Application
Down Town Revitalization Initiative
Round II
Information Session

[Click here to RSVP](#)

6/26/2017
2:00PM – 4:30PM
Troy, Hudson Valley Community
College

[Click here to RSVP](#)

6/30/2017
8:30 AM – Registration
9:00 – 11:00 AM – Program
Saratoga Springs, Empire State

[Click here to RSVP](#)

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