

ALBANY COUNTY

CLIMATE RESILIENCY PLAN

Technical Advisory Committee // Meeting #2

January 18, 2022

MEETING OVERVIEW

01 Welcome

02 Project status

03 Asset inventory review

04 Preliminary needs + opportunities

05 County resilience vision

06 Risk assessment method

07 Next steps

02

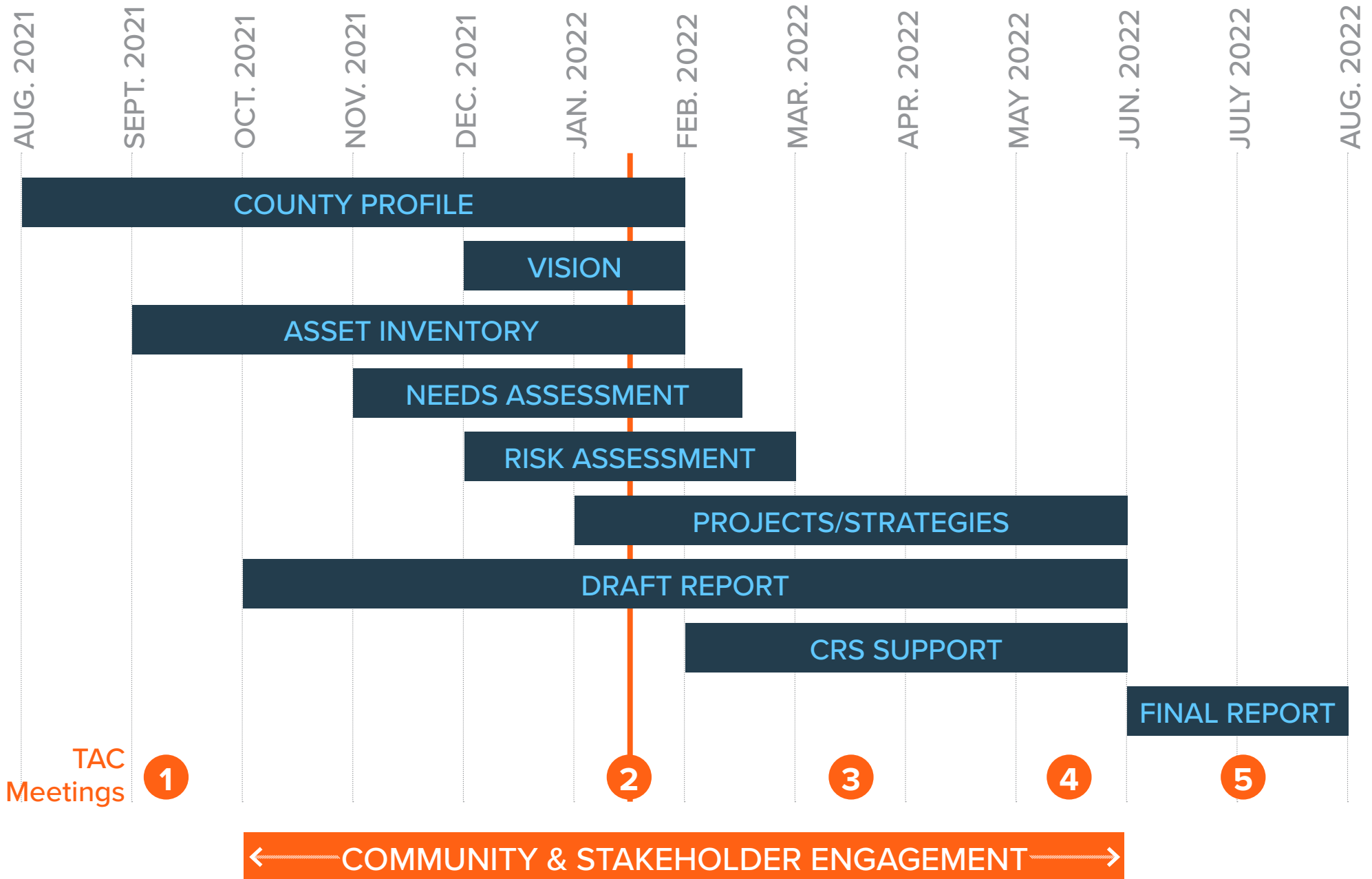
PROJECT STATUS

Project schedule

Public engagement

Relevant state and federal plans/laws

PROJECT SCHEDULE



02 PROJECT STATUS

PUBLIC ENGAGEMENT

Municipal Working Group

1st meeting: October 2021

Next meeting: February 2022

Project Webpage on County Website

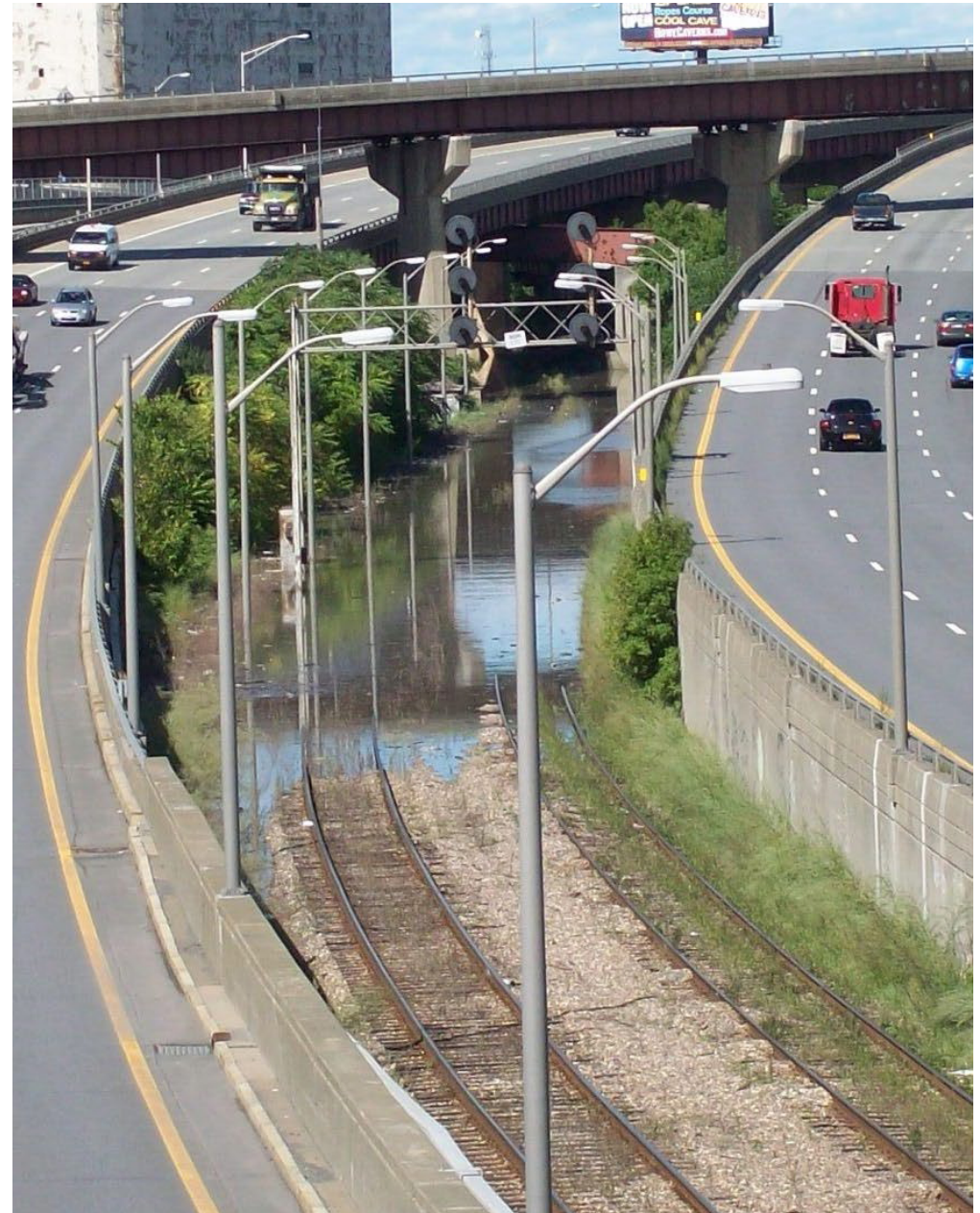
albanycounty.com/climateresiliency

Virtual Public Meetings

1st meeting: November 2021

Next meeting: March/April 2022

*Other suggested community events
or meetings for sharing information
about this climate resilience plan?*



PUBLIC ENGAGEMENT

Stakeholder Meetings: Completed

Stormwater Infrastructure

- City of Albany
- Menands
- UAlbany
- Colonie
- Cohoes
- Green Island

Energy Infrastructure

- National Grid

Community Planning

- Capital District Regional Planning Commission

Housing

- Albany County Land Bank
- Affordable Housing Partnership
- Habitat for Humanity

Transportation / Economic

- Port of Albany
- Port of Coeymans

Economic

- Redburn Development
- Rosenblum
- Center for Economic Growth

Natural Systems

- Albany Pine Bush Preserve
- Mohawk Hudson Land Conservancy
- Five Rivers Environmental Center
- Radix Ecological Sustainability Center

Emergency Services

- Red Cross
- Albany County Office of Emergency Management
- UAlbany

PUBLIC ENGAGEMENT

Stakeholder Meetings: Upcoming

Transportation

Socially Vulnerable Communities

County Departments

- Social Services
- Natural Resources / Agriculture

Stormwater Infrastructure

- Guilderland
- Bethlehem
- New Scotland
- Albany County Stormwater Coalition



RELATED STATE / FEDERAL INITIATIVES

FEDERAL:

Infrastructure Investment and
Jobs Act

STATE:

State of the State climate
priorities

Climate Action Scoping Plan
(CLCPA)

*These State and Federal initiatives
are aligned with the County's Climate
Resiliency Plan and provide important
new funding opportunities.*



03

ASSET INVENTORY REVIEW

Data sources

Infrastructure systems

Housing

Health + social services

Natural + cultural assets

Economic systems

DATA SOURCES

Public Sources

NYS GIS Clearinghouse
NYS Department of Health
NYSERDA
New York Natural Heritage Program
SSURGO (Soil Survey Geographic Database)
FEMA

Floodplains

Soils

Municipalities

Albany County
City of Cohoes
Town of Colonie
Town of Coeymans
Village of Menands

Municipal buildings

Housing complexes

Important local businesses

Local Organizations

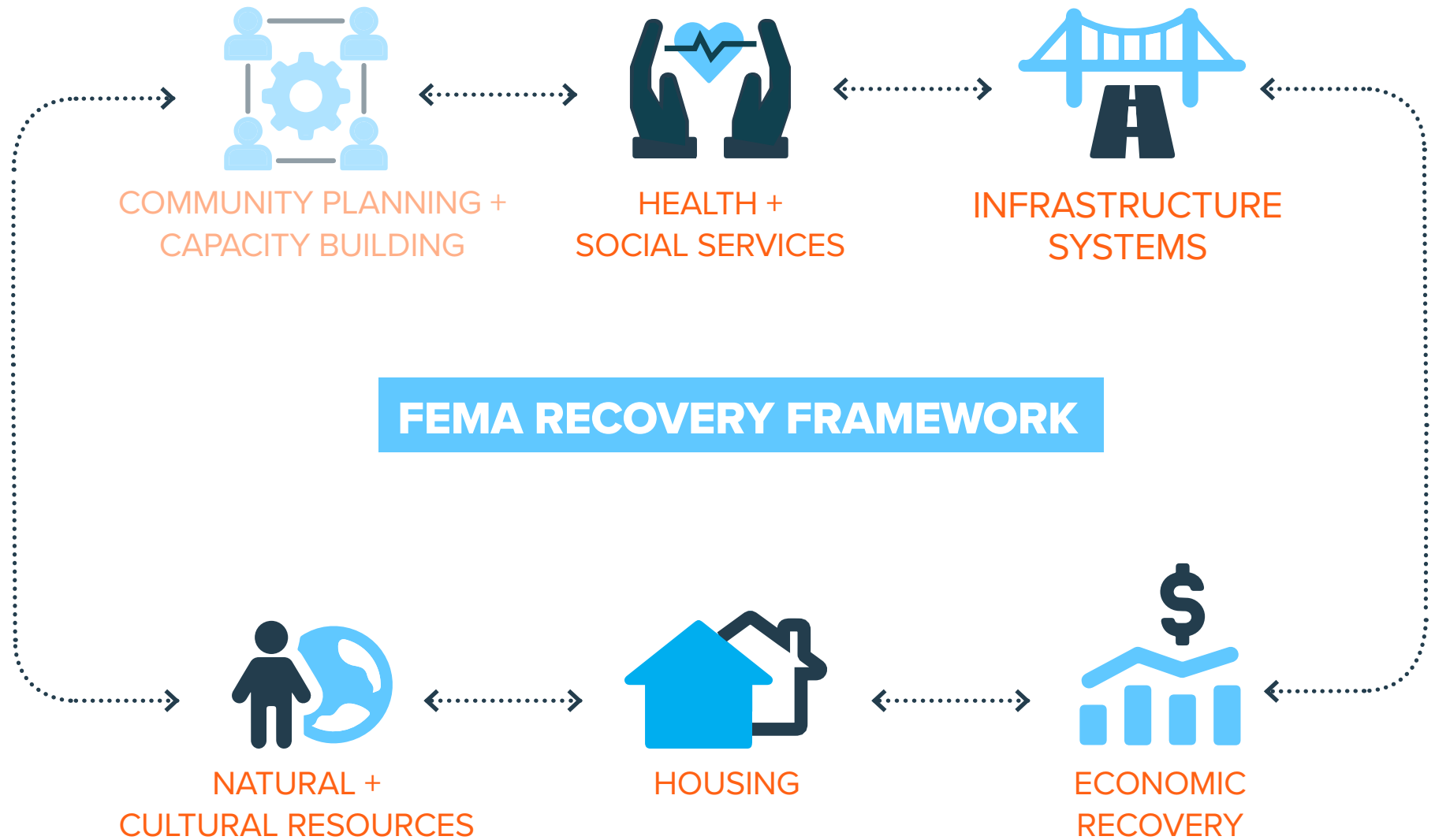
Albany Pine Bush Preserve
Albany County Stormwater Coalition
The Nature Conservancy
University at Albany
Visualization and Informatics Lab (AVAIL)

Trails

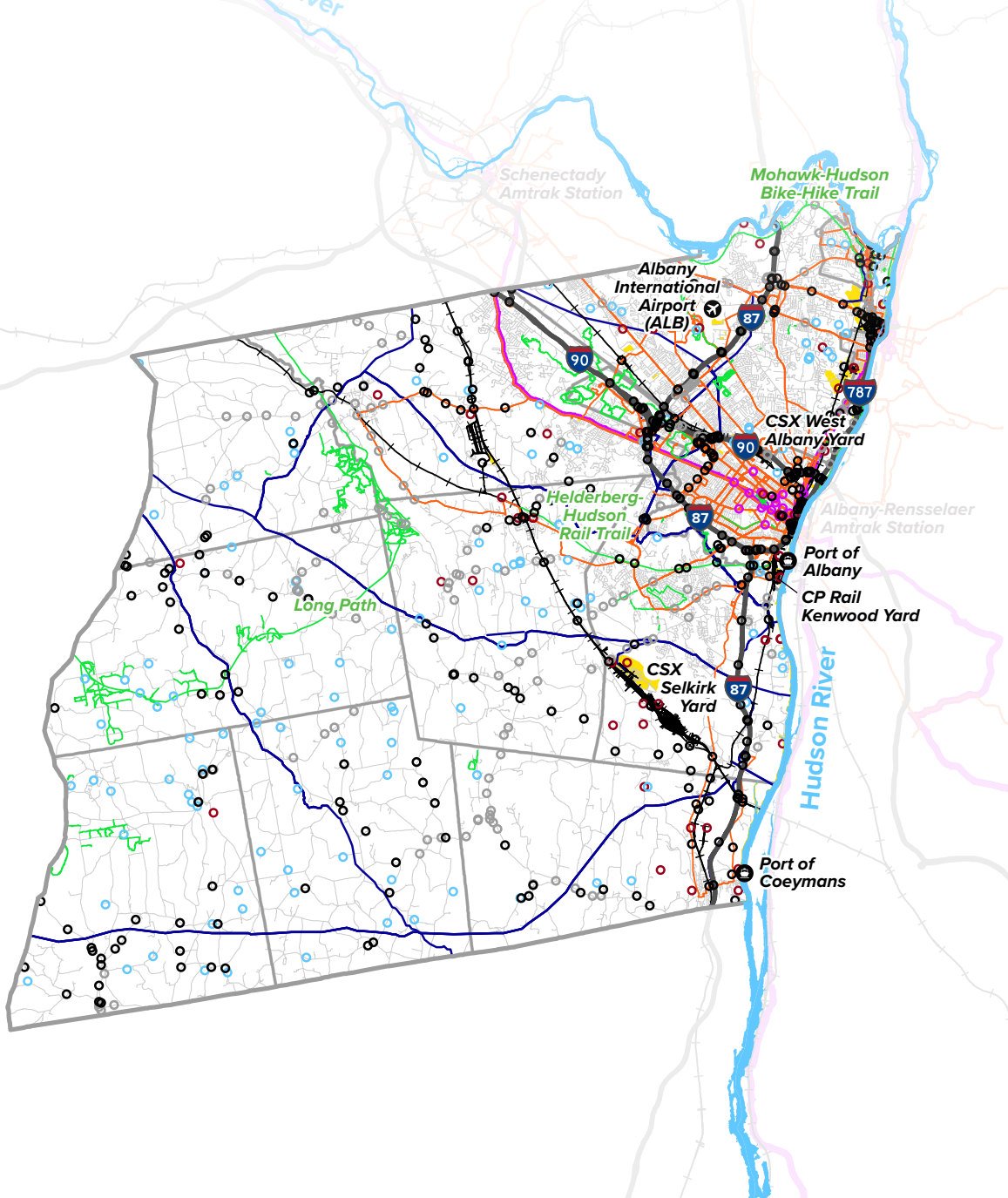
Critical facilities

Watersheds

ORGANIZATIONAL STRUCTURE



INFRASTRUCTURE SYSTEMS



Roads

- Interstates
- Other roads
- Bridges



Ports

- Ports
- Airports



Rail

- Railroads
- Freight Stations



Water

- Culverts
- Dams
- Wastewater treatment plants



Public Transit Infrastructure

- Bus routes
- Bus stops



Energy

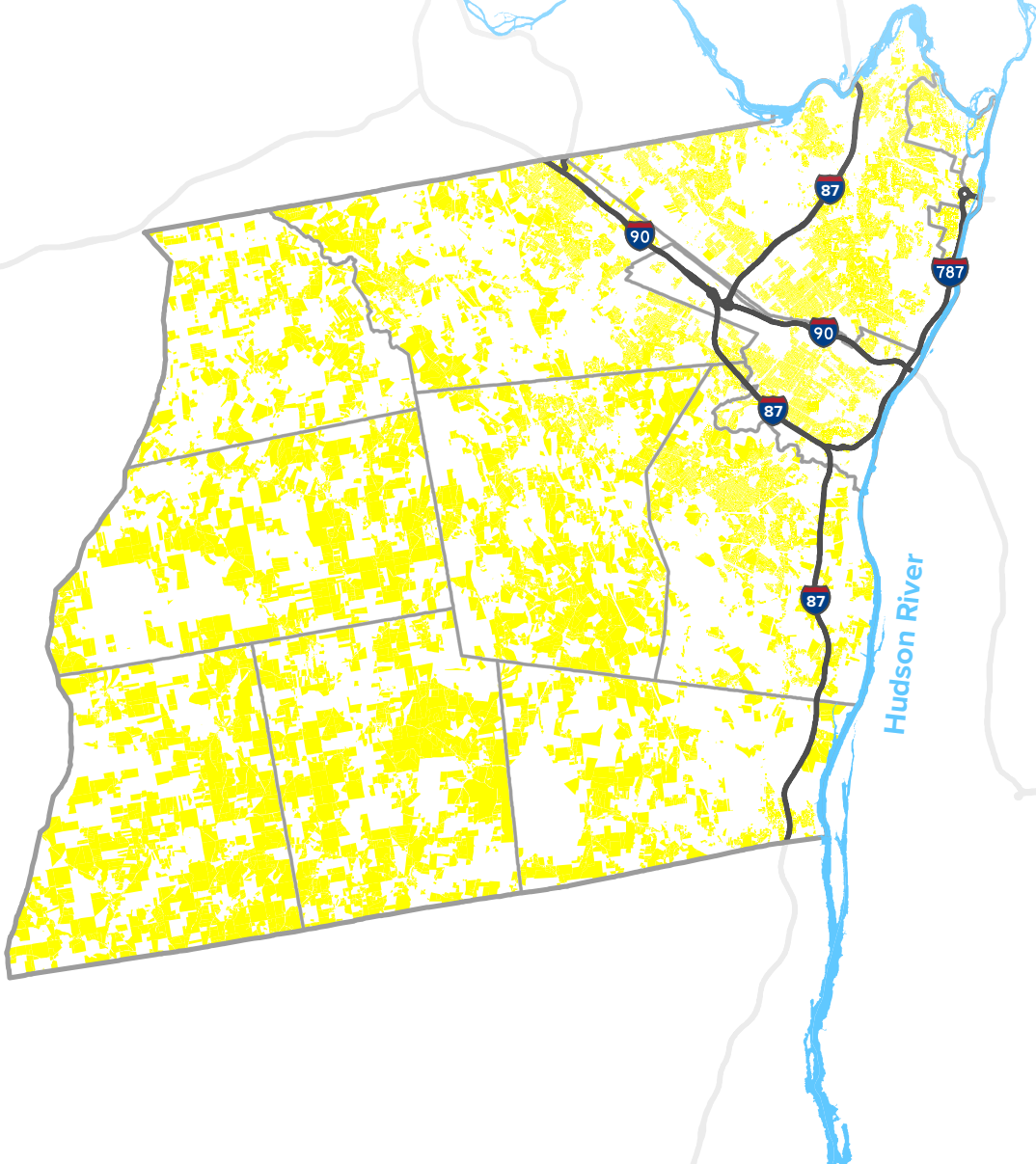
- Pipelines
- Environmental remediation sites



Active Transportation

- Trails
- Bike share stations

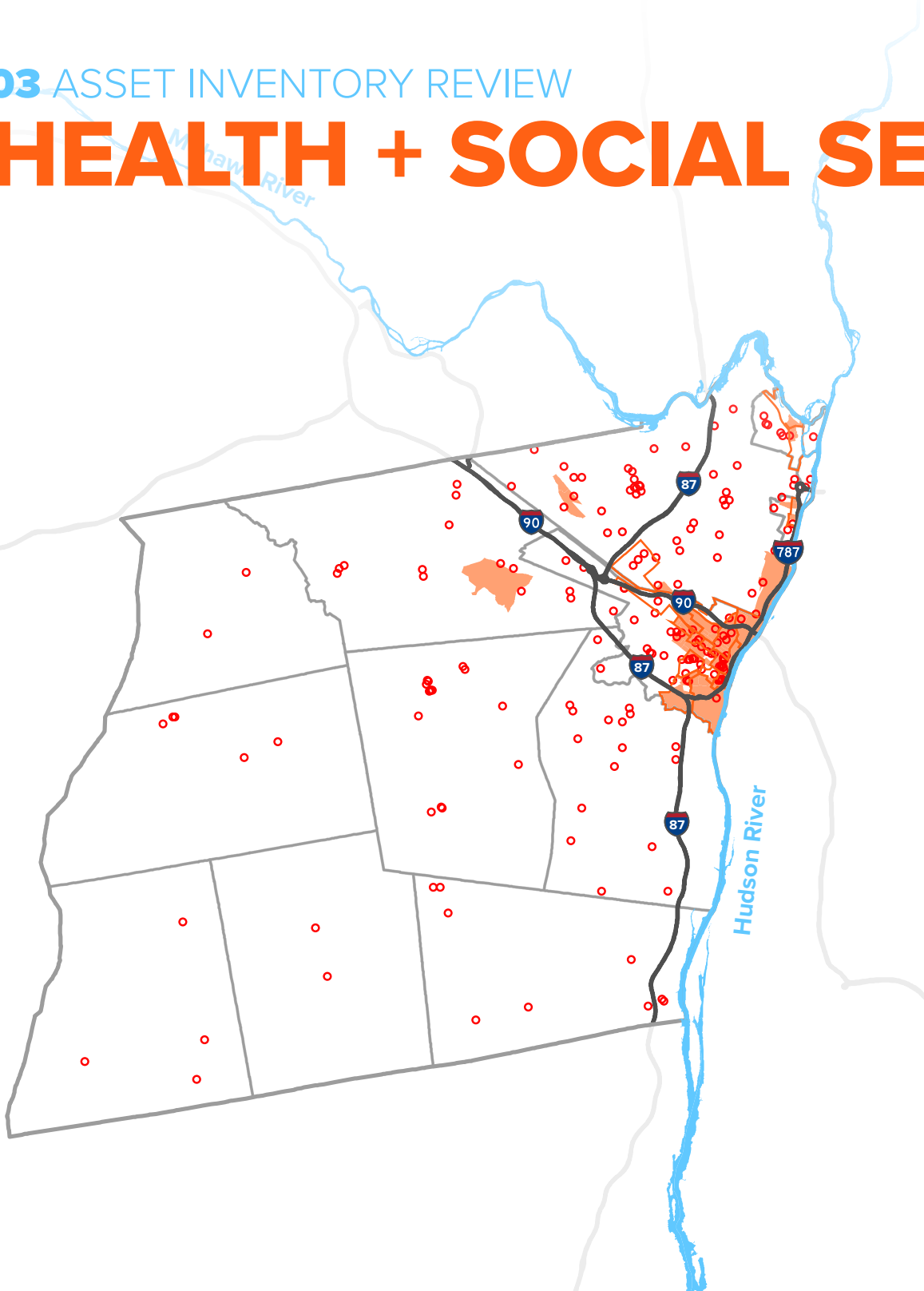
HOUSING



Housing

- Residential parcels
- Important housing complexes (senior living facilities, dormitories, high-density apartment buildings)

HEALTH + SOCIAL SERVICES



Vulnerable Populations

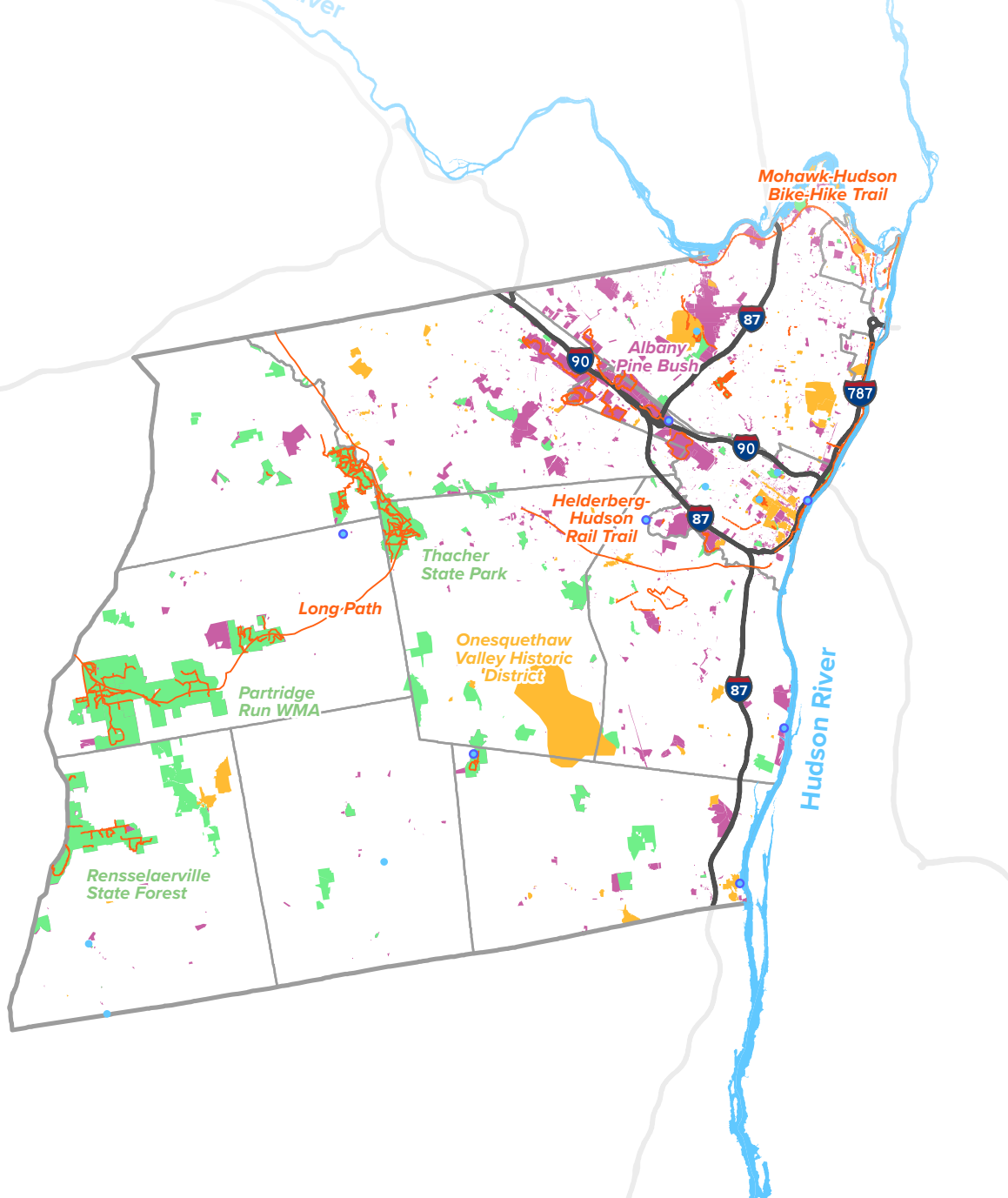
- Socially vulnerable areas (CDC)
- Potential environmental justice areas (NYS DEC)



Critical Facilities

- County-owned facilities
- Fire Departments
- Government buildings
- Higher education institutions
- Hospitals
- Police stations
- Public schools
- Red cross shelters

NATURAL + CULTURAL ASSETS



Parks + Trails

- Parks and preserves
- Trails
- Boat launches



Public Lands

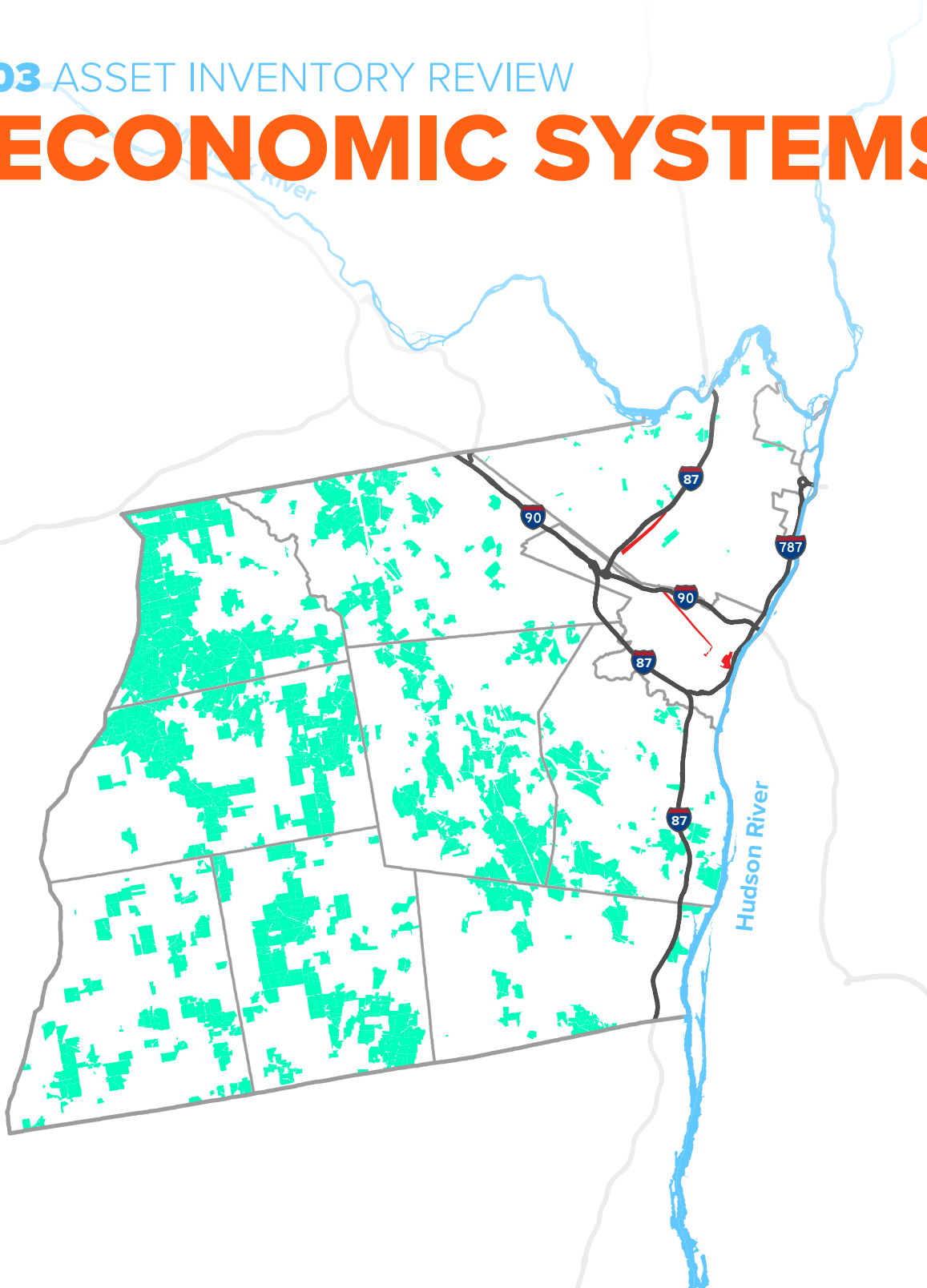
- Publicly-owned lands
- Public fishing sites



Historic + Cultural Resources

- National Register Historic Places

ECONOMIC SYSTEMS



Agriculture

- Agricultural Districts



Commerce

- Business Improvement Districts (BIDs)
- Important local businesses

04

PRELIMINARY NEEDS + OPPORTUNITIES

Housing

Natural systems

Vulnerable communities

Emergency services

Infrastructure (water, energy, + transportation)

04 PRELIMINARY NEEDS + OPPORTUNITIES

OVERVIEW

INITIAL FINDINGS FROM:

Development of County Profile
and asset inventory

Stakeholder meetings

Municipal working group
discussions

TAC input from first meeting

This preliminary needs + opportunities assessment represents one of the first steps towards identifying resilience projects and strategies.



HOUSING



● Infrastructure Investment & Jobs Act ● State of the State 2022 ● CLCPA

ISSUE

Lack of climate resilient and affordable housing stock

Older housing stock is vulnerable to severe weather events, increasing the frequency and cost of maintenance and repairs

Housing is located in flood hazard areas

NEED

Identify safe growth areas that meet the community's needs; encourage/incentivize resilient construction and retrofits

Block-by-block approach that holistically tackles historic preservation, energy efficiency, floodproofing, and vacant structure redevelopment

Identification of where open space can be acquired to mitigate flooding and increase recreational opportunities

OPPORTUNITY

Proactive identification of areas suitable for new residential uses; **Stretch Code** compliance; **workforce development**

Create a **centralized entity** to coordinate funding streams and provide grant application assistance to broaden participation and access

Coordinated open space planning to strategically acquire and preserve open space in flood hazard areas adjacent to residential uses



NATURAL SYSTEMS



● Infrastructure Investment & Jobs Act ● State of the State 2022 ● CLCPA

ISSUE

Shifts in species' distributions

Increase in invasive species (plant, animal) that are out-competing native species and threatening whole ecosystems

Public awareness of, engagement with, and access to existing nature preserves

NEED

Identification and creation of wildlife corridors throughout the county

Proactively prevent and monitor the spread of invasive species

Protect and expand the county's diverse, native ecosystems and increase public access to and awareness of the value of these resources

OPPORTUNITY

Interconnected open space network to support species' movement between the Catskills and Adirondacks

Development of **educational, citizen science, and workforce training programs** as well as local job creation

Support existing nature preserves in adapting to climate stressors, establishing native seed banks, and providing free public transit/educational opportunities



VULNERABLE COMMUNITIES



● Infrastructure Investment & Jobs Act ● State of the State 2022 ● CLCPA

ISSUE

Climate change is disproportionately impacting socially vulnerable communities

NEED

Strengthen partnerships and networks to promote, protect and advocate for vulnerable communities

OPPORTUNITY

Create a **Climate Justice Corps** that is rooted in local communities, prioritizes inclusion and participation in decision-making processes, and builds local capacity

Prevalence of impervious surfaces and lack of vegetative cover increase vulnerability to climate stressors

Integrate nature into urbanized areas to mitigate the urban heat island and reduce impervious cover

Undertake a coordinated effort to inventory, monitor, diversify, and **expand the urban forest** that:

- Increases the capacity of existing programs (e.g., Mow to Own) and organizations
- Creates local job opportunities
- Expands urban agriculture

04 PRELIMINARY NEEDS + OPPORTUNITIES

EMERGENCY SERVICES



● Infrastructure Investment & Jobs Act ● State of the State 2022 ● CLCPA

ISSUE

Deploying volunteers from other regions to help respond to and recover from an emergency is expensive and time consuming

Extreme heat and extreme cold events will increase with climate change; these could be exacerbated during electric outages

Natural disasters displace people and are particularly challenging during a pandemic and for those without stable housing

NEED

Need a trained local workforce to respond to disasters

Need a coordinated network of organizations that can mobilize quickly and respond to emergencies

Provide shelter for all during an emergency, including non-congregate and longer-term solutions

OPPORTUNITY

Building on existing UAlbany partnership, develop a **trained, local volunteer workforce**

Partner with electric utilities and local community organizations to establish **heating and cooling centers**

Increase capacity to identify **new sheltering options** in low hazard areas and **update sheltering agreements** countywide



WATER INFRASTRUCTURE



● Infrastructure Investment & Jobs Act ● State of the State 2022 ● CLCPA

ISSUE

Lack of a consistent and comprehensive dataset documenting past storm events

NEED

Data collection system to measure and monitor storm events in diverse locations

OPPORTUNITY

Countywide **network of rain gauges** with public access to dataset



Aging and undersized stormwater infrastructure increases flood risks in developed areas

Stormwater infrastructure upgrades and replacements

Strategically **prioritize upgrades** that:

- Use a coordinated watershed-based approach
- Are in socially vulnerable communities
- Reduce flood hazards and CSOs
- Include natural infrastructure and ecological restoration



ENERGY INFRASTRUCTURE



● Infrastructure Investment & Jobs Act ● State of the State 2022 ● CLCPA

ISSUE

Electrical infrastructure is vulnerable to flooding

Electrification of the county's energy system requires new storage and distribution facilities to ensure reliability and meet demand

Spread of invasive species impacts transmission infrastructure

NEED

Storm hardening / relocation of existing energy infrastructure

New energy infrastructure needed to support renewable energy generation and electrification of the grid

Plant native, disease resistant trees along transmission corridors

OPPORTUNITY

Coordinated planning effort to **identify flood resilient locations** for new substations and strategic replacements/upgrades of old infrastructure

Coordinated identification of **locations for new energy storage, charging facilities, and microgrids** to improve reliability and redundancy

Work collaboratively to **align energy and ecological resilience and urban forestry goals** / initiatives



04 PRELIMINARY NEEDS + OPPORTUNITIES

TRANSPORTATION



● Infrastructure Investment & Jobs Act ● State of the State 2022 ● CLCPA

ISSUE

Lack of charging infrastructure to support electrification of the transportation system

Lack of active transportation facilities to support emissions-free transportation

Transportation corridors are often located in close proximity to waterways

NEED

Increased public access to E/V charging infrastructure

Interconnected, countywide network of non-motorized transportation infrastructure

Reduce flood hazards impacting transportation infrastructure, particularly along evacuation routes

OPPORTUNITY

Installation of **public E/V charging stations** on county-owned property

Expand existing and create new **trail systems** to better connect local communities, including implementation of the Capital District Trails Plan

Integrate ecological restoration and natural protective features into transportation infrastructure improvements



05

COUNTY RESILIENCE VISION

Draft vision statement

Discussion

DRAFT VISION STATEMENT

Albany County leads a proactive and coordinated intermunicipal effort to anticipate, adapt to, and quickly recover from climate-related disturbances. The County is nimble; it works collaboratively and transparently across scales and systems to understand the impacts of proposed policies and projects prior to implementation. Albany County prioritizes a high quality of life for all residents, particularly those who have experienced historic disinvestment, by equitably distributing resources, expanding access to nature and affordable housing, improving connectivity between communities, supporting a diversified local economy and workforce, and strategically locating and upgrading critical infrastructure to avoid natural hazards.

Working closely with local communities, Albany County is actively mitigating future climate change by transitioning to renewable energy and a decentralized grid, re-envisioning its transportation network, restoring and preserving natural systems, and growing a new green jobs sector. The County is adapting to climate change by leveraging its world class educational institutions to advance innovative technologies, educate a new generation of climate leaders, and support a countywide network of climate resilience demonstration projects.

06

RISK ASSESSMENT METHOD

Flood risk assessment

Heat vulnerability

Vulnerable communities

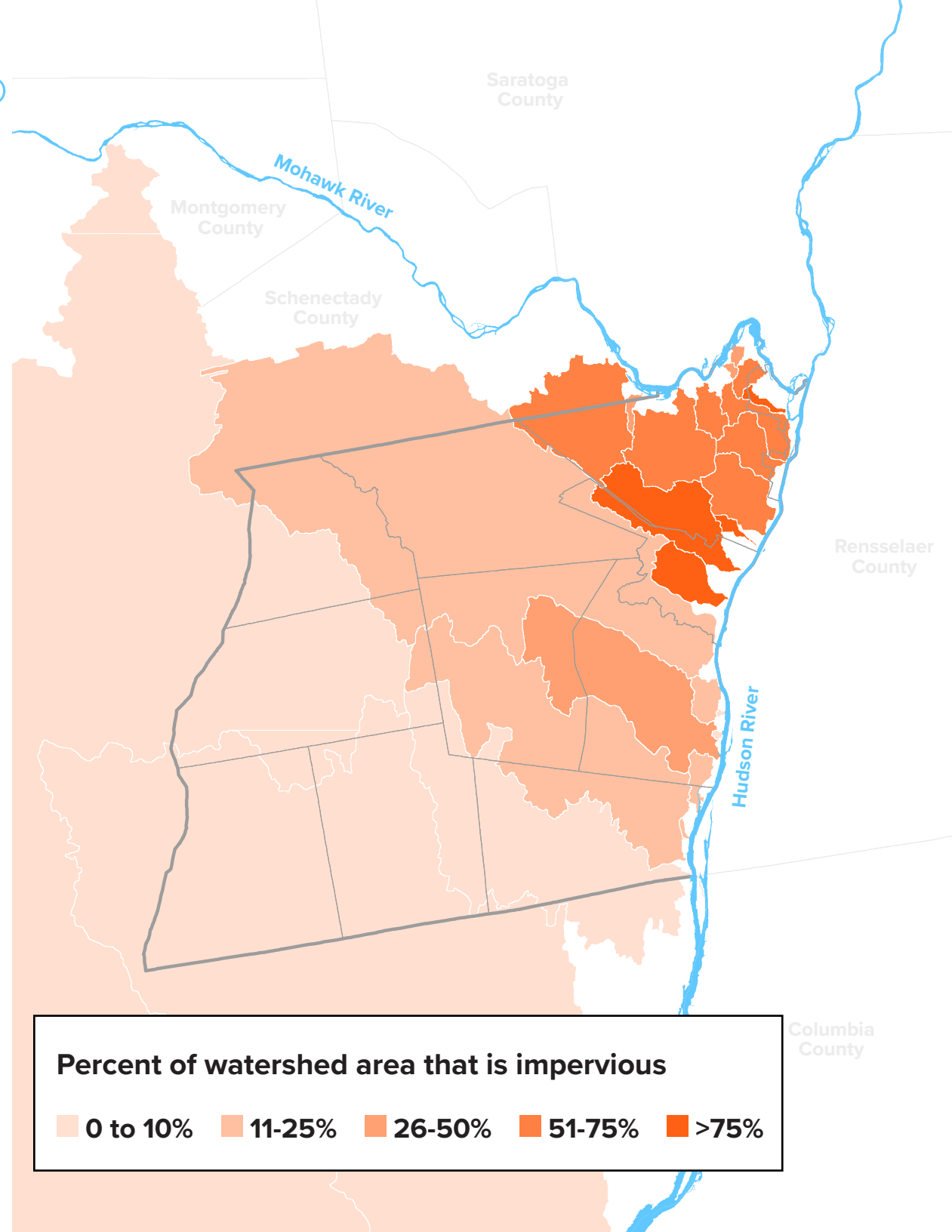
Composite climate risk

OVERVIEW

PURPOSE OF THE RISK ASSESSMENT:

A spatial analysis to understand the vulnerability of the county's assets to climate-related stressors

Specific focus on **flood, heat,** and **social vulnerability**



Percent of watershed area that is impervious

0 to 10% 11-25% 26-50% 51-75% >75%

06 RISK ASSESSMENT METHOD

FLOOD RISK ASSESSMENT

FLOOD RISK AREA DATASETS:

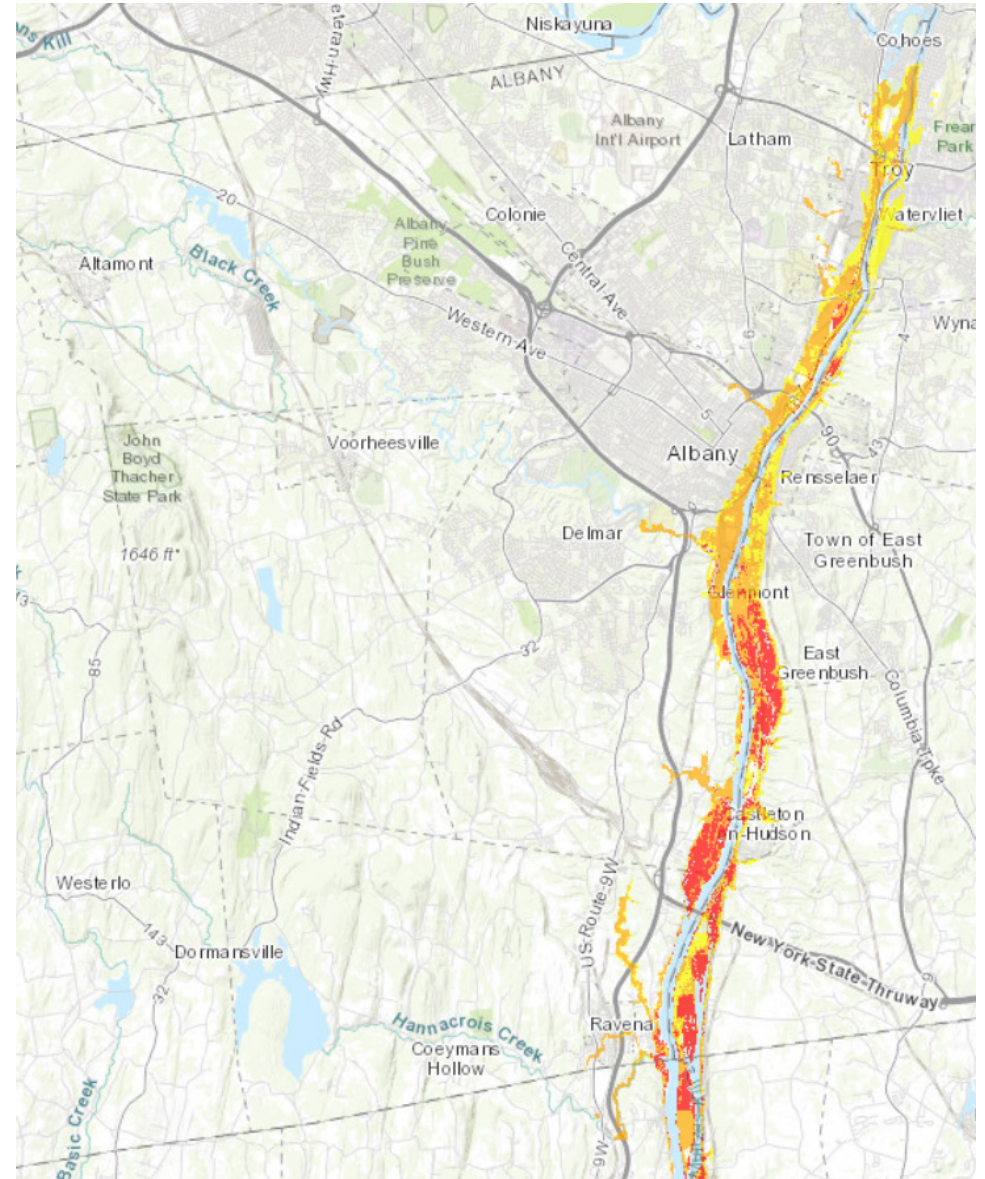
NYS DOS risk areas

First Street Foundation flood models

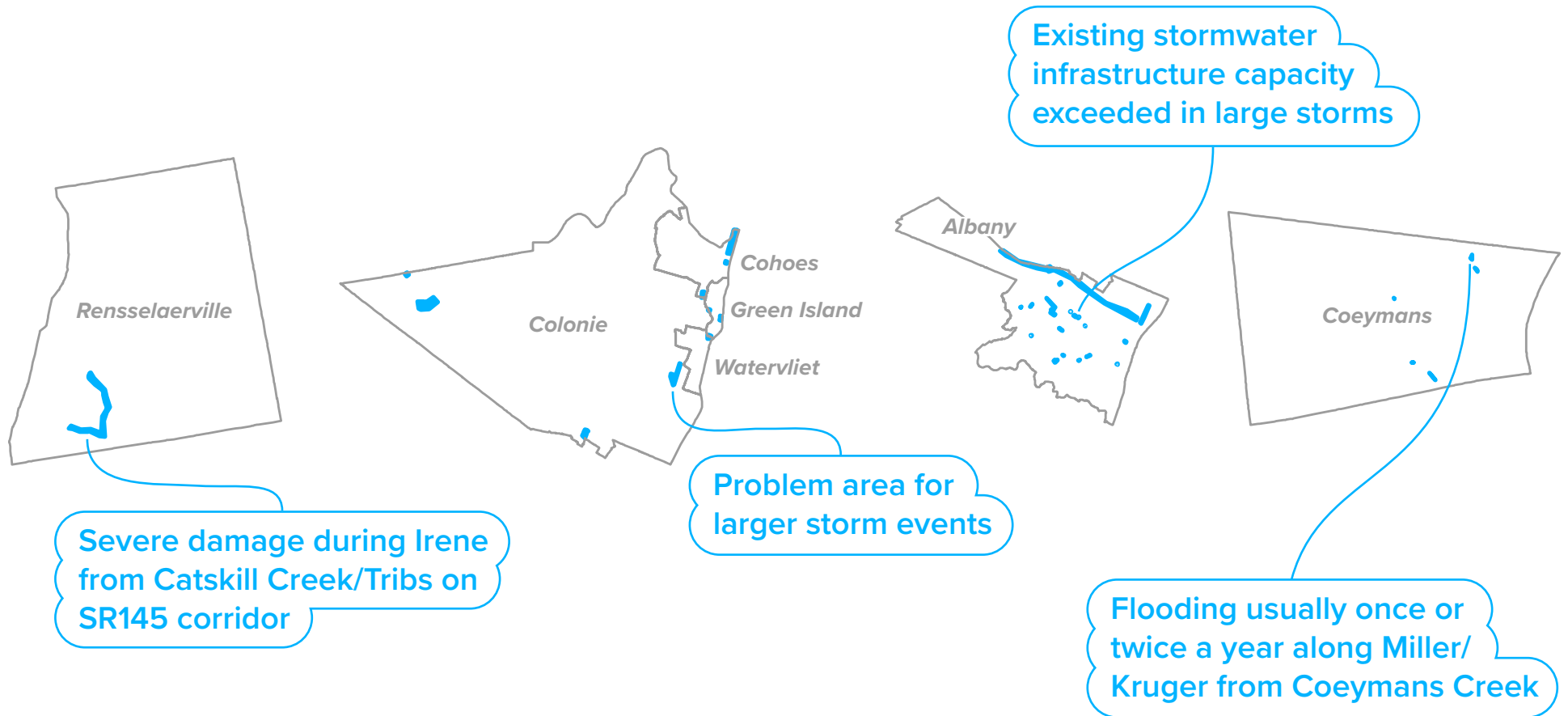
Locally-Identified flood issues

METHODOLOGY:

NYS DOS Risk Assessment for riverine areas and the Hudson River



LOCALLY-IDENTIFIED FLOOD ISSUES



»» Nuisance Flooding

Low levels of inundation that do not pose significant threats to public safety or cause major property damage, but can disrupt routine day-to-day activities, put added strain on infrastructure systems such as roadways and sewers, and cause minor property damage

FIRST STREET FOUNDATION DATA

FLOOD RISK DATASET:

Supplements DOS risk areas

Nationwide hydrological modeling that incorporates climate change models and fluvial and pluvial flooding

Datasets are 3m raster grids with flood depth for the following scenarios:

- Low, medium, and high climate scenarios
- Three different years: 2021, 2036, and 2051
- Four different return intervals: 2-year storm, 5-year storm, 20-year storm, and 100-year storm



HEAT VULNERABILITY

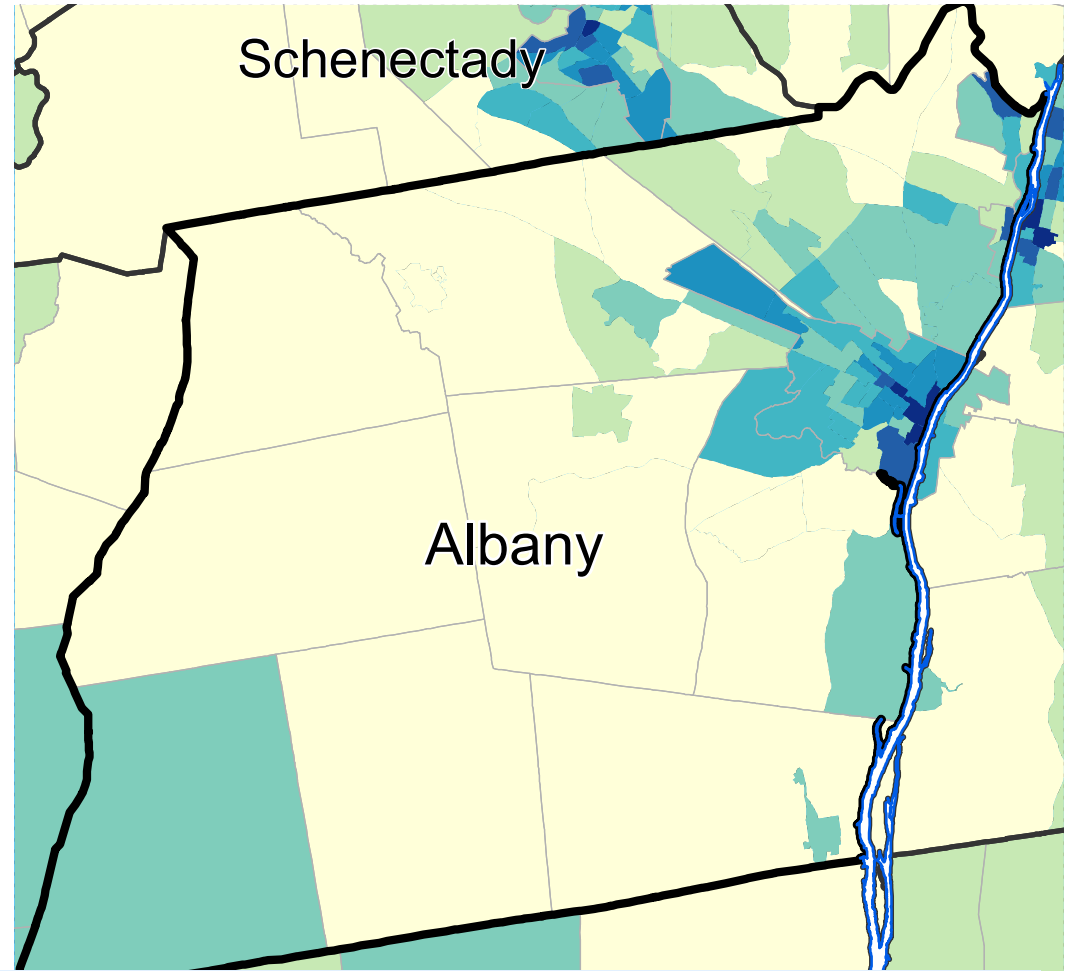
HEAT VULNERABILITY DATASET:

NYS DOS Heat Vulnerability Index

Mapped by Census Tract

Considers 4 factors:

- Language vulnerability
- Socio-economic vulnerability
- Environmental + urban vulnerability
- Elderly isolation + vulnerability



»» NYS DOH Heat Vulnerability Index

Extreme heat events and average summertime temperatures are increasing as a result of climate change and are expected to substantially increase the risk of heat-related illnesses in New Yorkers. This Index considers 13 environmental and socio-demographic heat vulnerability factors to help local and state public health officials identify and map heat-vulnerable areas and populations

SOCIALLY VULNERABLE COMMUNITIES

SOCIAL VULNERABILITY DATASETS:

CDC Social Vulnerability Index

NYS Potential Environmental Justice Areas



Disadvantaged Communities Interim Criteria (CLCPA)

Located within census block groups that meet the HUD 50% AMI threshold that are also located within the DEC Potential Environmental Justice Areas; or are located within New York State Opportunity Zones

07

NEXT STEPS

Stakeholder meetings

Risk assessment

Project identification

Next TAC meeting

SHORT-TERM ACTIONS

JANUARY - FEBRUARY 2022

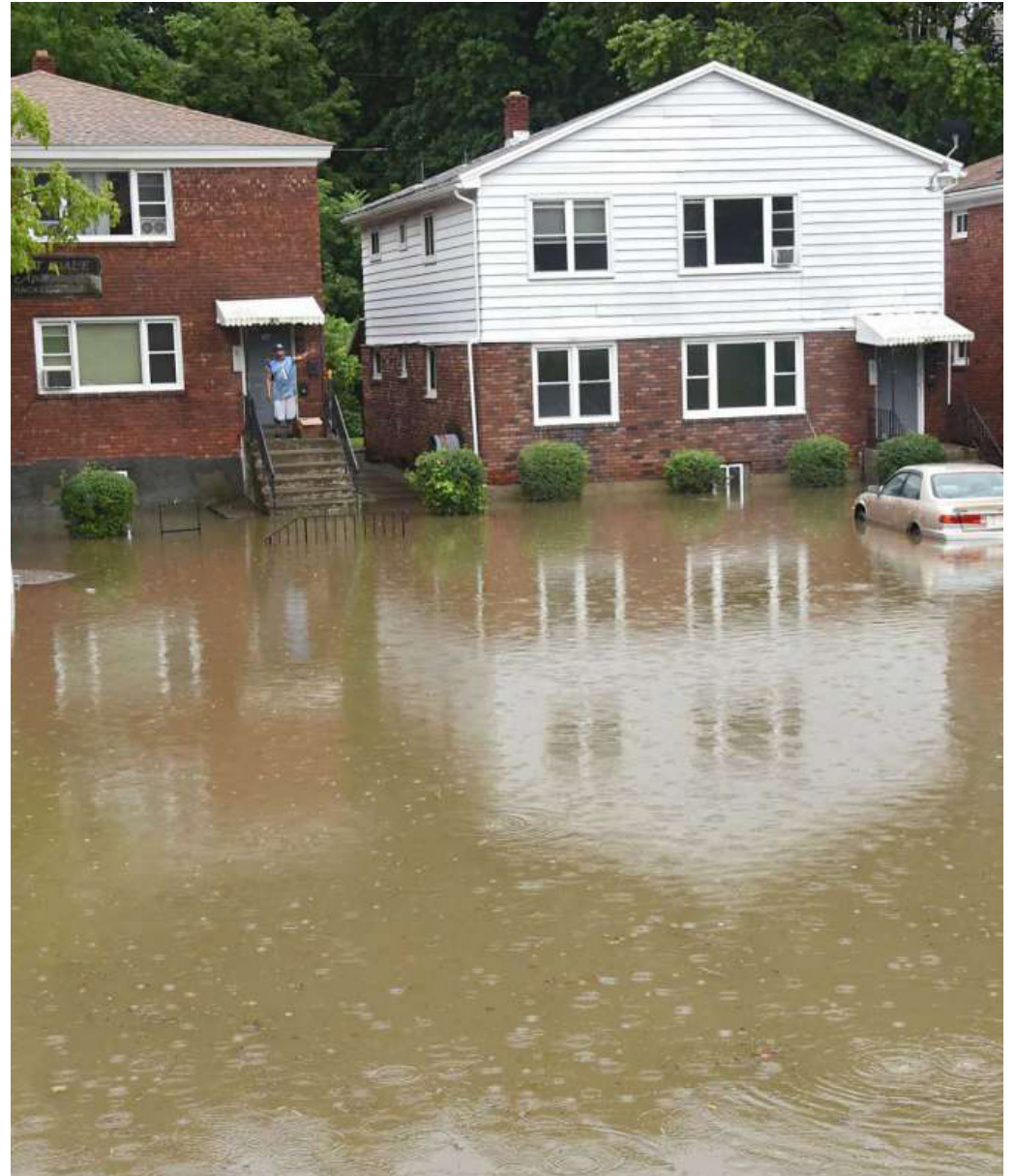
Wrap up stakeholder meetings
Needs/opportunities analysis

FEBRUARY 2022

Risk assessment

MARCH

Project identification



07 NEXT STEPS

NEXT TAC MEETING

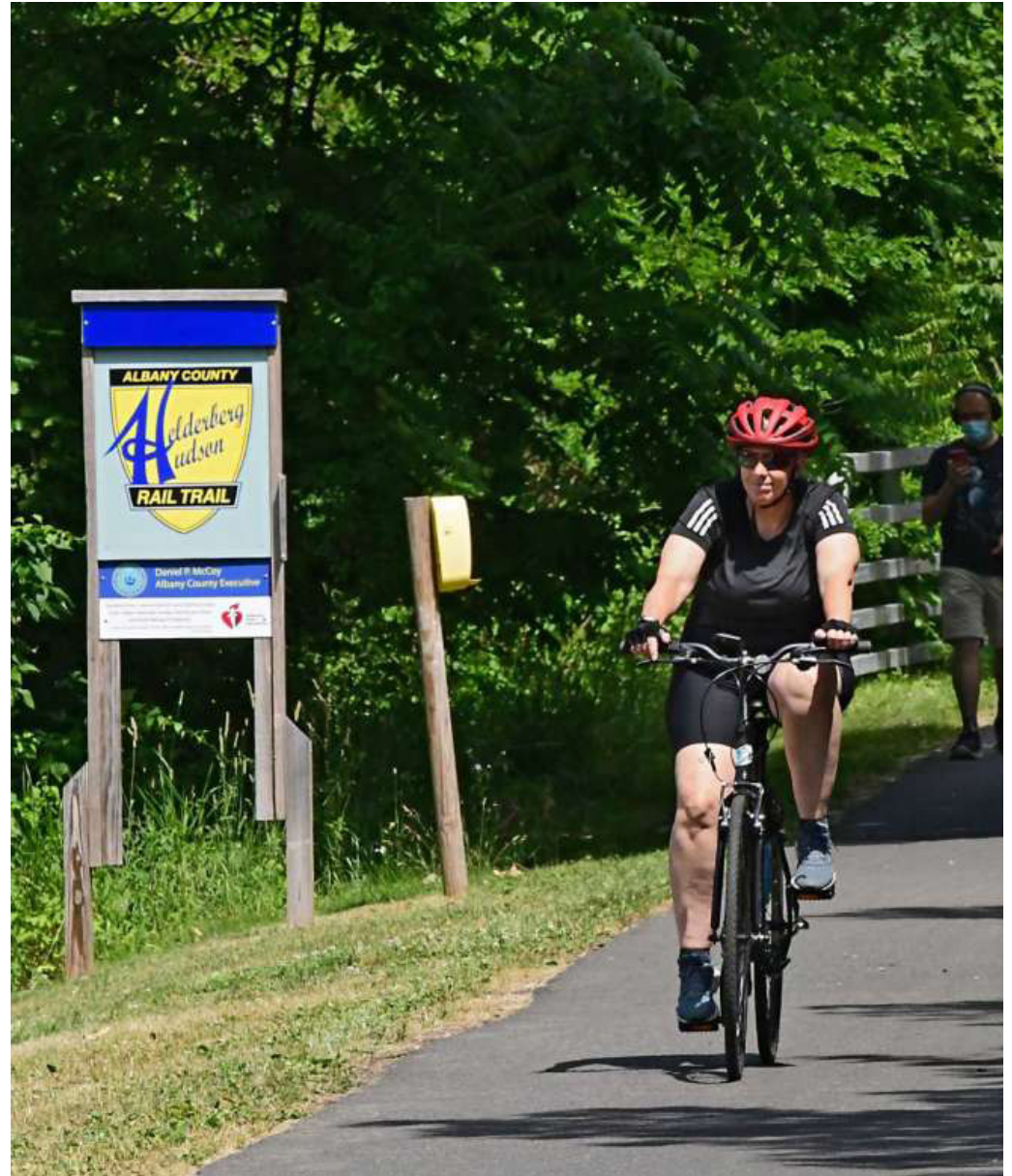
MARCH 2022

Next meeting topics:

Risk assessment results

Needs / opportunities analysis
(distributed in advance)

Project identification



THANK YOU!

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