



Community  
Planning and  
Environmental  
Associates



# Zoning and Siting Large Solar Facilities

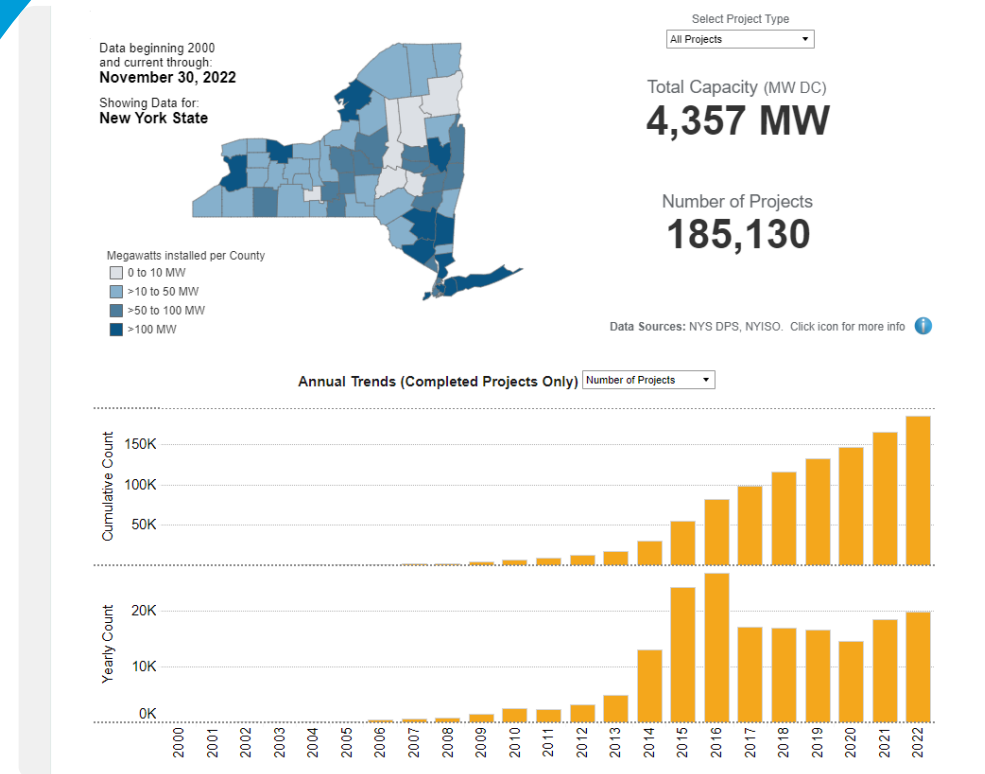
NYS Tug Hill Commission  
32<sup>nd</sup> Annual Local Government  
Conference  
April 6, 2023

Presented by Nan Stolzenburg FAICP CEP

# Session Agenda

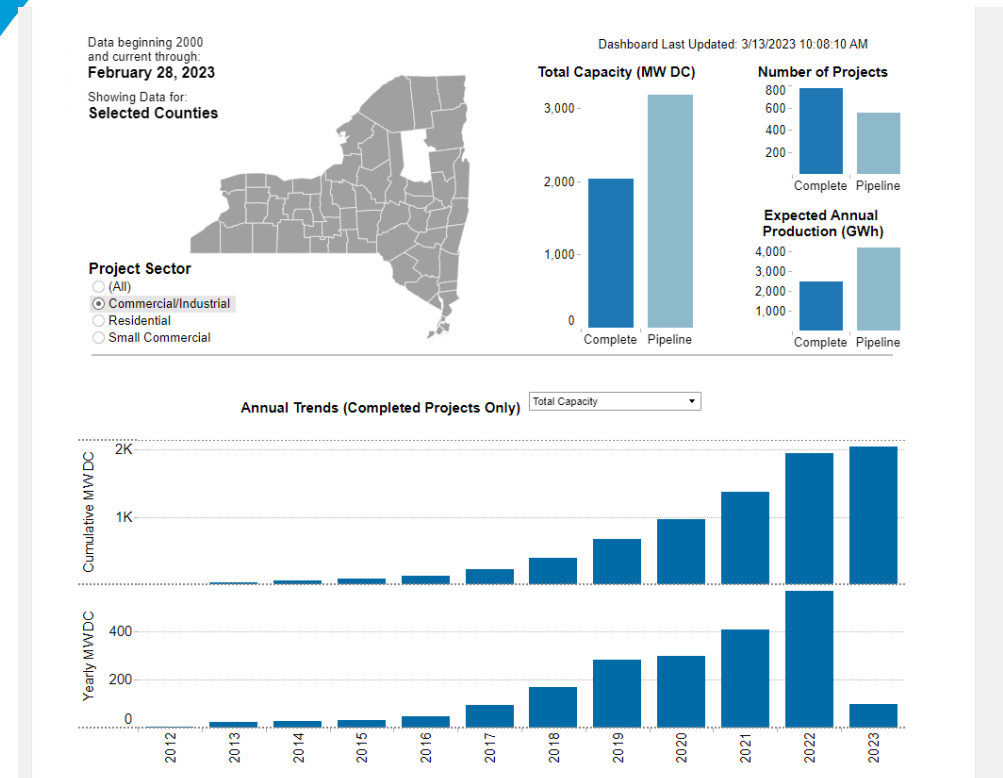
- Planning for Large Solar Facilities
- Zoning Options and Siting Considerations
- Q and A

# A Timely Topic - Solar Development is Affecting Many Communities



All Projects

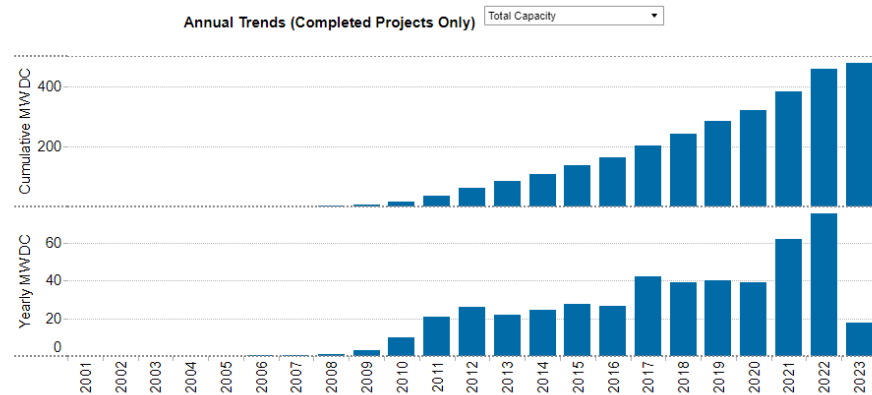
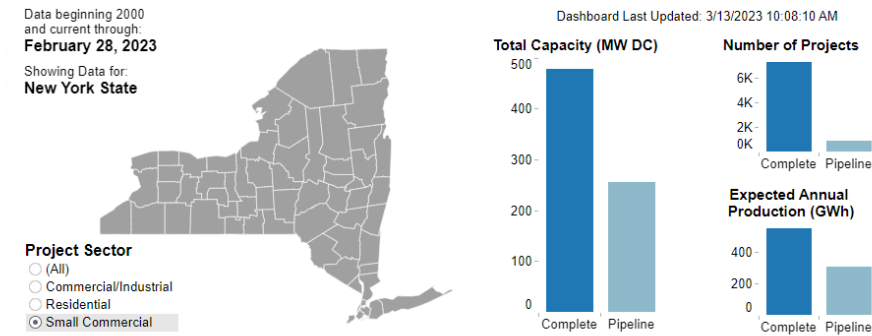
# A Timely Topic - Solar Development is Affecting Many Communities



NYSERDA Supported  
Commercial/Industrial



# A Timely Topic - Solar Development is Affecting Many Communities



NYSERDA Supported  
Small Commercial

# Terminology: What is a Large-Scale Solar Facility?

## Commonly Used Terms

- Small
- Large
- Utility
- Community Solar
- Battery Storage Facility

## NYSERDA Model Law Terms

- Tier 1 – roof mounted
- Tier 2 – consumed on site
- Tier 3 – up to 5 MW/up to 40 acres
- Tier 4 – Everything bigger

- < 20 MW – Regulated by municipality
- 20 – 25 MW – Regulated by municipality unless applicant elects to be under State Section 94-C regulations
- > 25 MW – Regulated by NYS under Section 94-C

4-5 Acres/MW +/-

# Before We Can Talk About Zoning.....


- Comprehensive Planning Comes First!
- Do you have a plan?
- How old is it?
- Does it include any data, mapping, goals, or policy related to solar facilities?

Your comprehensive plan should be developed or updated to establish policy related to solar facilities.

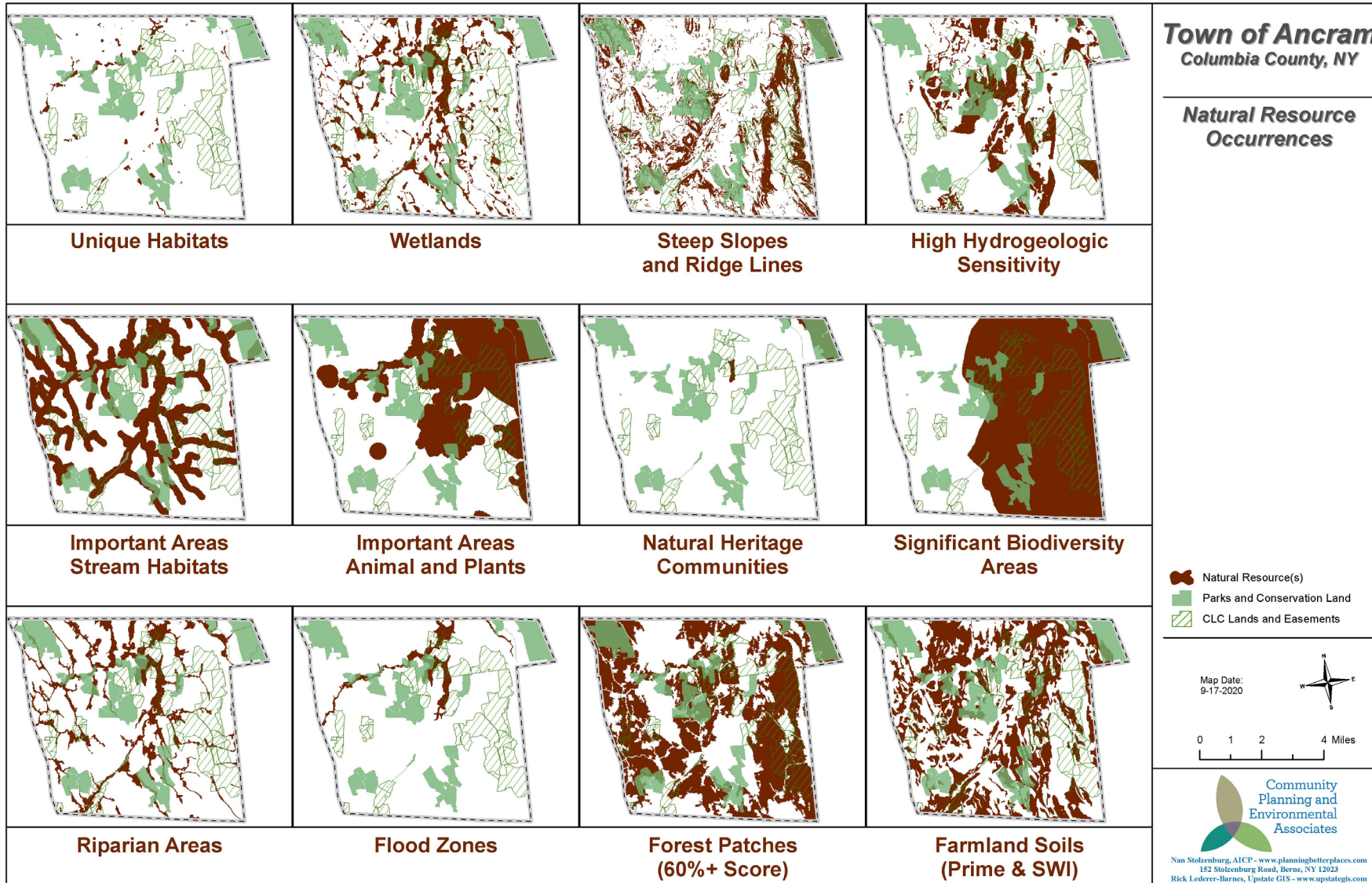




# Solar Facilities Should Be Addressed in the Plan

- In Your Current Conditions Analysis (Profile and Inventory)
    - Evaluate Hosting Capacity Maps
    - Inventory Current Land Uses
    - Inventory Environmental Conditions
    - Existing land Use regulations
  - Goals/Objectives
  - Strategies and Policies
- 

# Solar Facility Siting Planning & Analysis

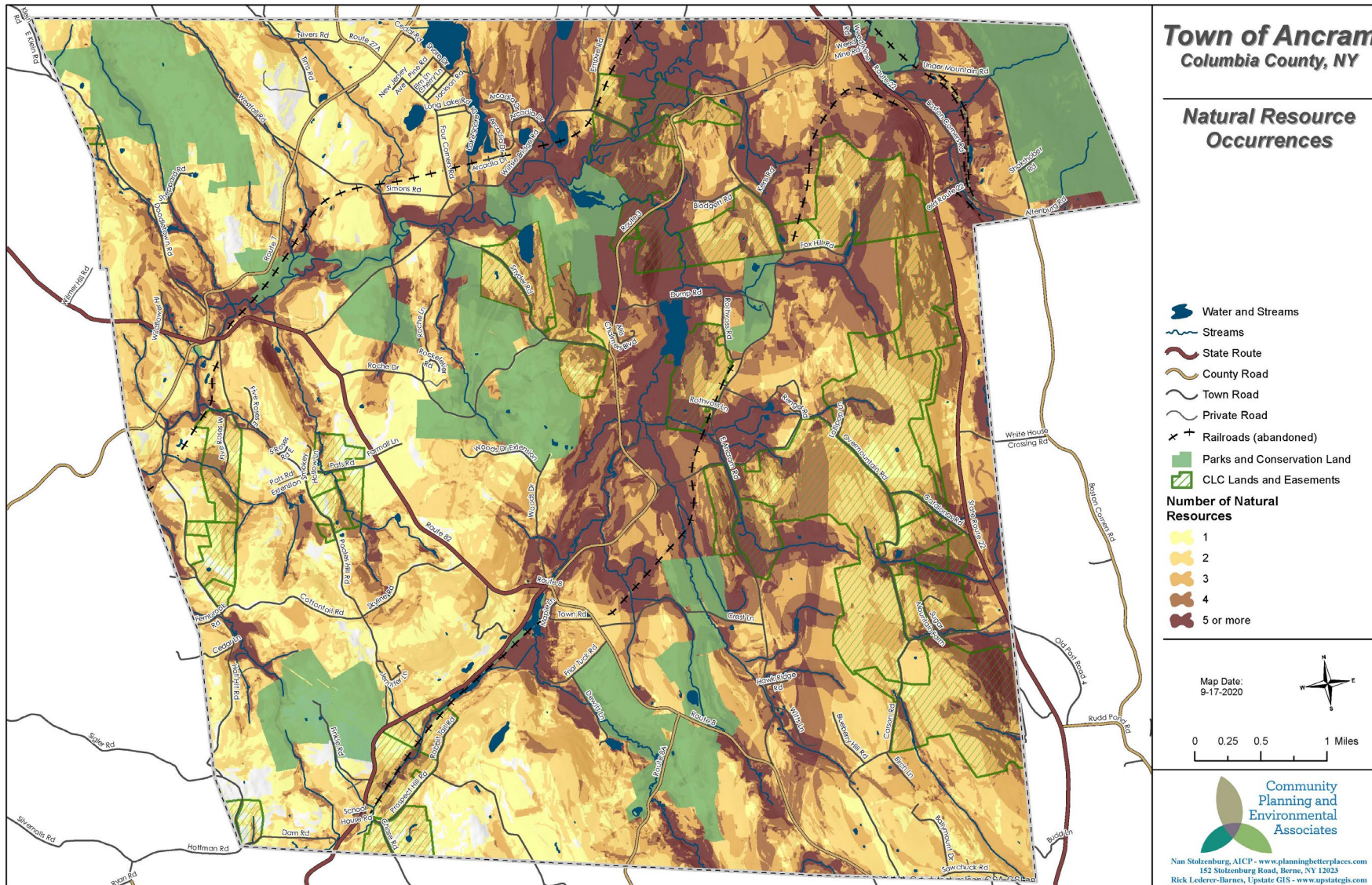


Understand  
your  
resources

Analysis Conducted  
by CP&EA and  
Upstate GIS



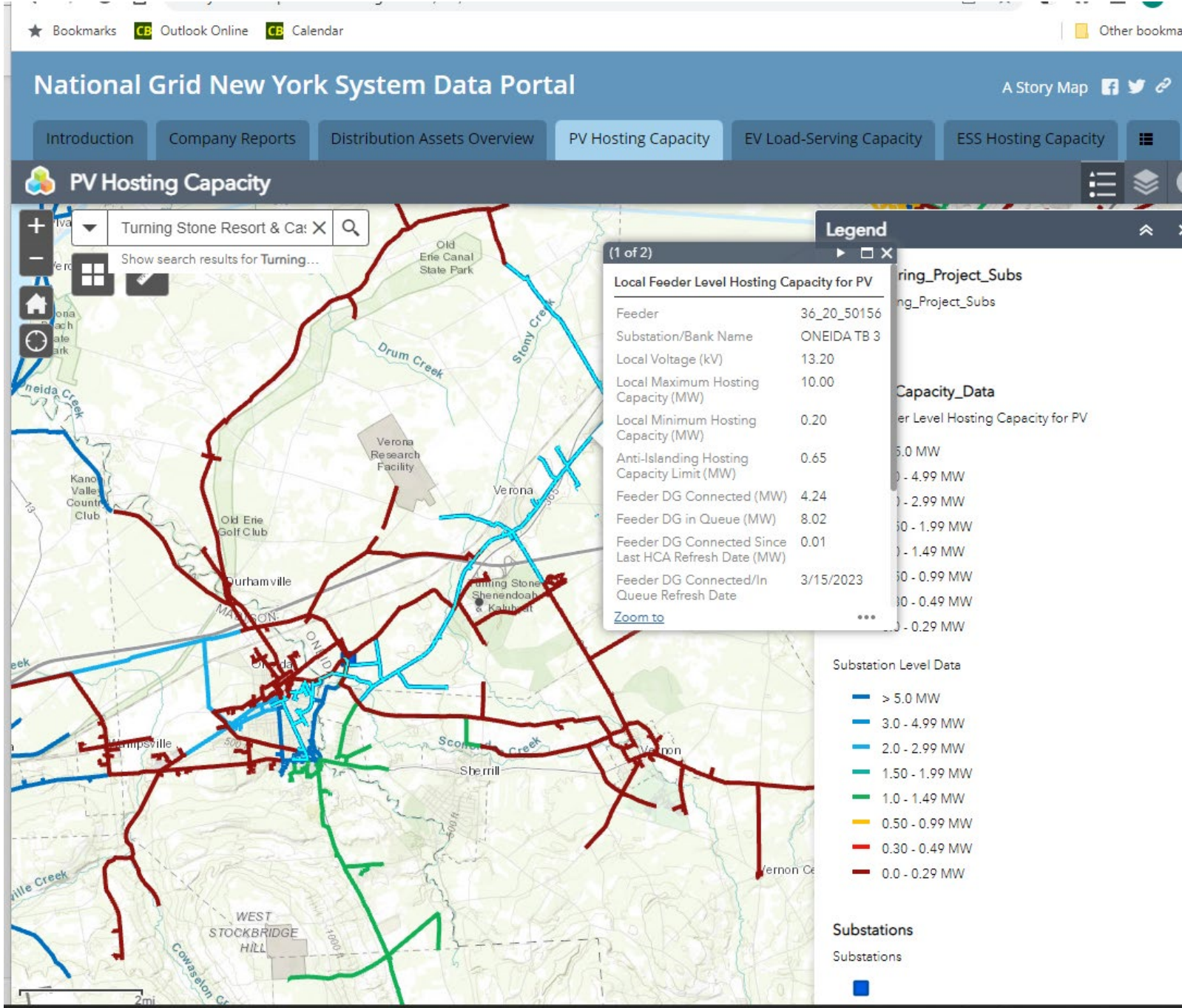
# Solar Facility Siting Planning & Analysis



Analyze to find preferred and low-conflict sites.

Analysis Conducted by CP&EA and Upstate GIS



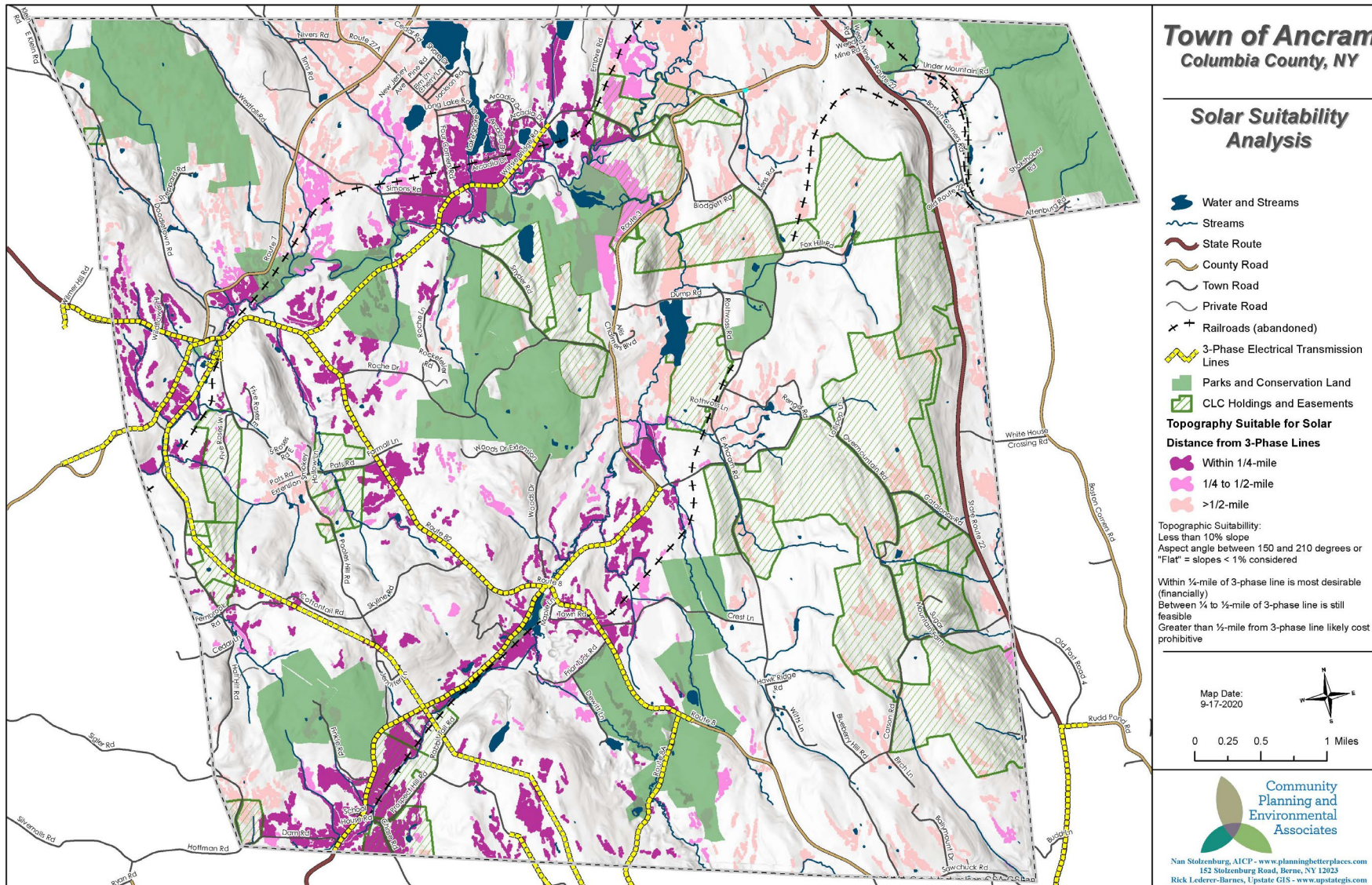


# Understanding a Hosting Capacity Map

- Distribution lines need spare hosting capacity (without updating lines)
- Upgrades can open up new areas
- Red areas suitable for solar but could be upgraded



# Solar Facility Siting Planning & Analysis

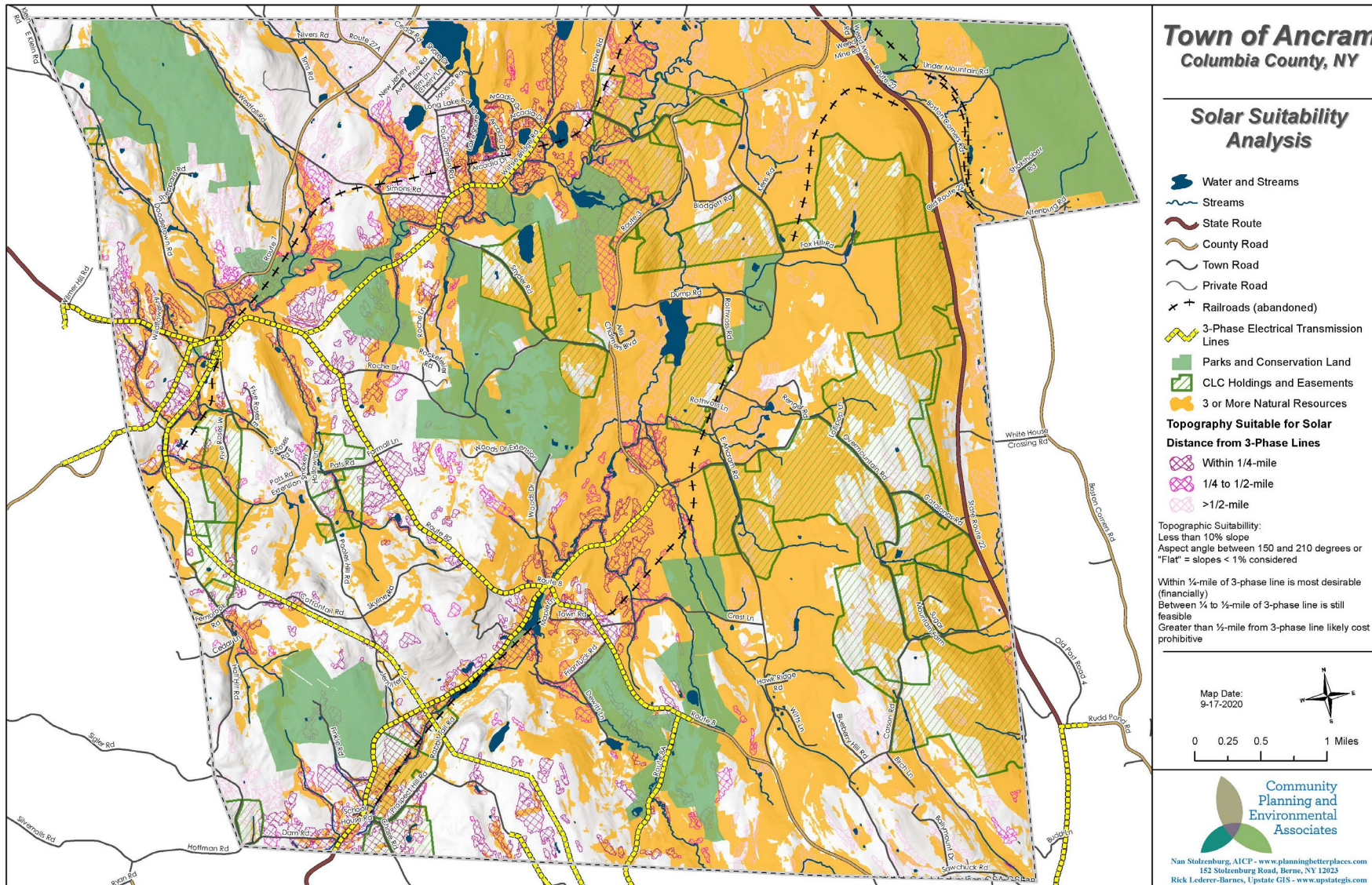


Analyze to find potential sites having capacity for solar

Analysis Conducted by CP&EA and Upstate GIS



# Solar Facility Siting Planning & Analysis

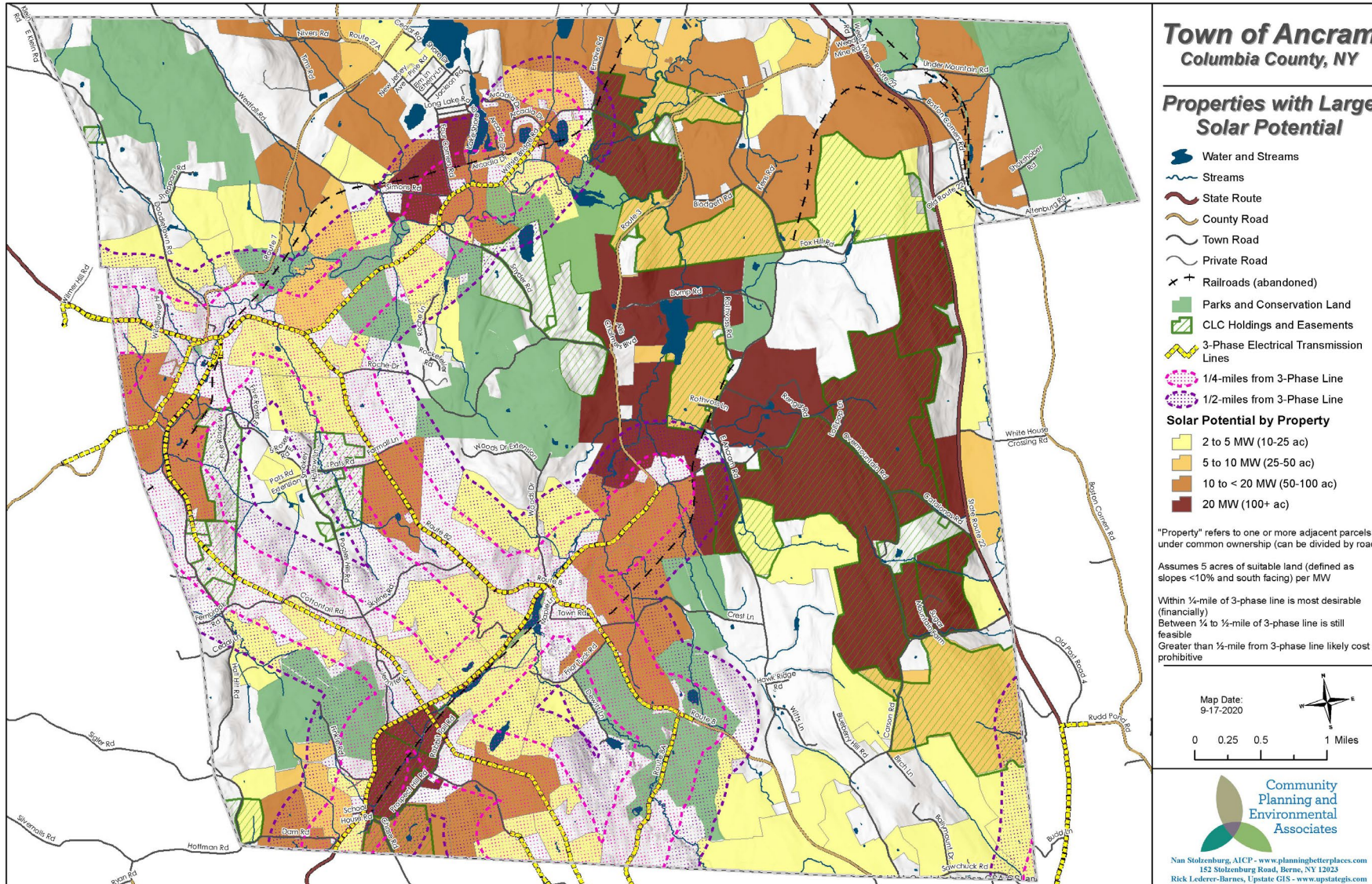


Look at interaction of resources and potential sites for solar

Analysis Conducted by CP&EA and Upstate GIS



# Solar Facility Siting Planning & Analysis



Use information to help identify locations where solar is acceptable

Analysis Conducted by CP&EA and Upstate GIS

# Setting Policy and Recommend Strategies

Example:

**Goal:** Allow for solar facilities < 20 MW in a manner that protects core forests, prime agricultural lands, and scenic byways.

**Strategy:** Update zoning to create a solar overlay district based on the solar analysis in this Plan (see Map 1) and require solar facilities < 20 MW only within this overlay via a special use permit and with strong siting standards that minimize adverse impacts especially on wetlands, core forests and prime farmlands, and that screens facilities from view, incorporates **agrivoltaics**, protects wildlife travel, prevents glare, and maintains the Town's rural character and aesthetics.



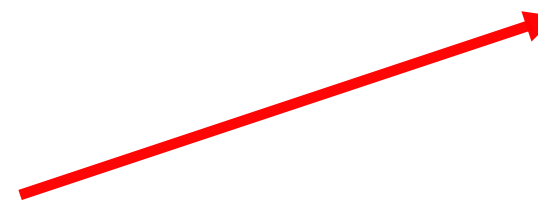
# Agrivoltaics (Co-location)

The use of land for both agriculture and solar photovoltaic energy generation. Complement instead of compete. Allow working lands to stay working. New research shows solar panels perform better too.



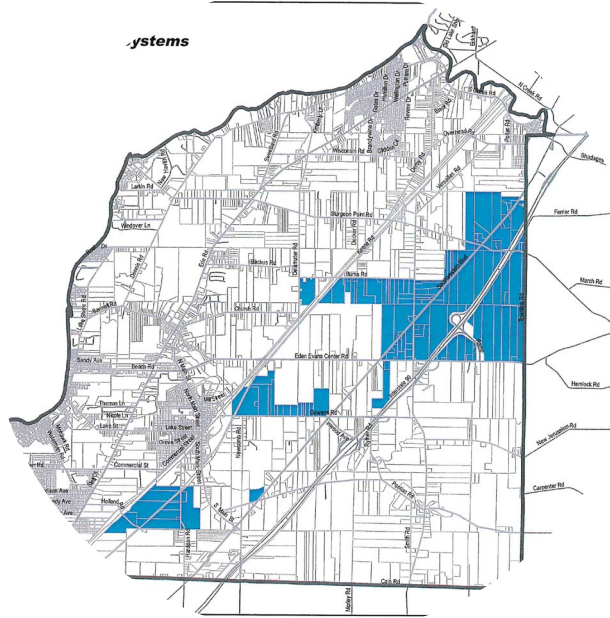
# On To Zoning...

- Developed/updated to implement policy set in Plan
- If you have no zoning in your municipality, you can address solar facilities via
  - Site Plan Law
  - Separate Solar Law (be careful)



# Determine Permitted Locations

- Decide location(s) where allowed (or prohibited)
  - In **base zoning district**
  - With a **mapped overlay district**
  - Through use of an unmapped **floating district**





# Determine Appropriate Zoning Review Process

- Assuming you are not going to prohibit facilities <20MW...

## What Review Process?

- As-of-Right – Building permit only, no Planning Board Review
  - Site Plan Review – Reviews site elements only
  - Special Use Permit – Reviews use as a solar farm
- } Or Both?

# Establish Supplemental Standards

- Dimensional standards - setbacks, height limits, lot coverage, acreage (minimum and/or maximum)
- Siting Conditions:
  - Buffers/screening/landscaping (Be detailed and specific)
  - Soils (rules for active farmlands and/or prime farmland soils)
  - Forest Cover (rules for large scale removal of forestland)
  - Site security (rules for fencing and addressing wildlife travel/access)
  - Access (rules for County, State or local roads)
  - Agrivoltaics



# Establish Supplemental Standards

- Other Topics Related to Environmental Performance of Solar Site
  - Noise/light pollution
  - Scenic viewsheds (screening/photosimulations)
  - Wildlife habitat protection (fencing/pollinator friendly planting, native species)
  - Water quality protection (watershed protection <https://www.nrel.gov/solar/market-research-analysis/pv-smart.html>)
  - Historic/cultural resources
  - Wetlands (local wetland protection rules)

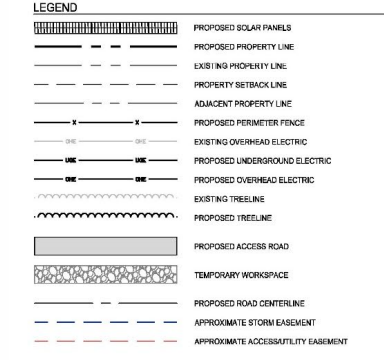
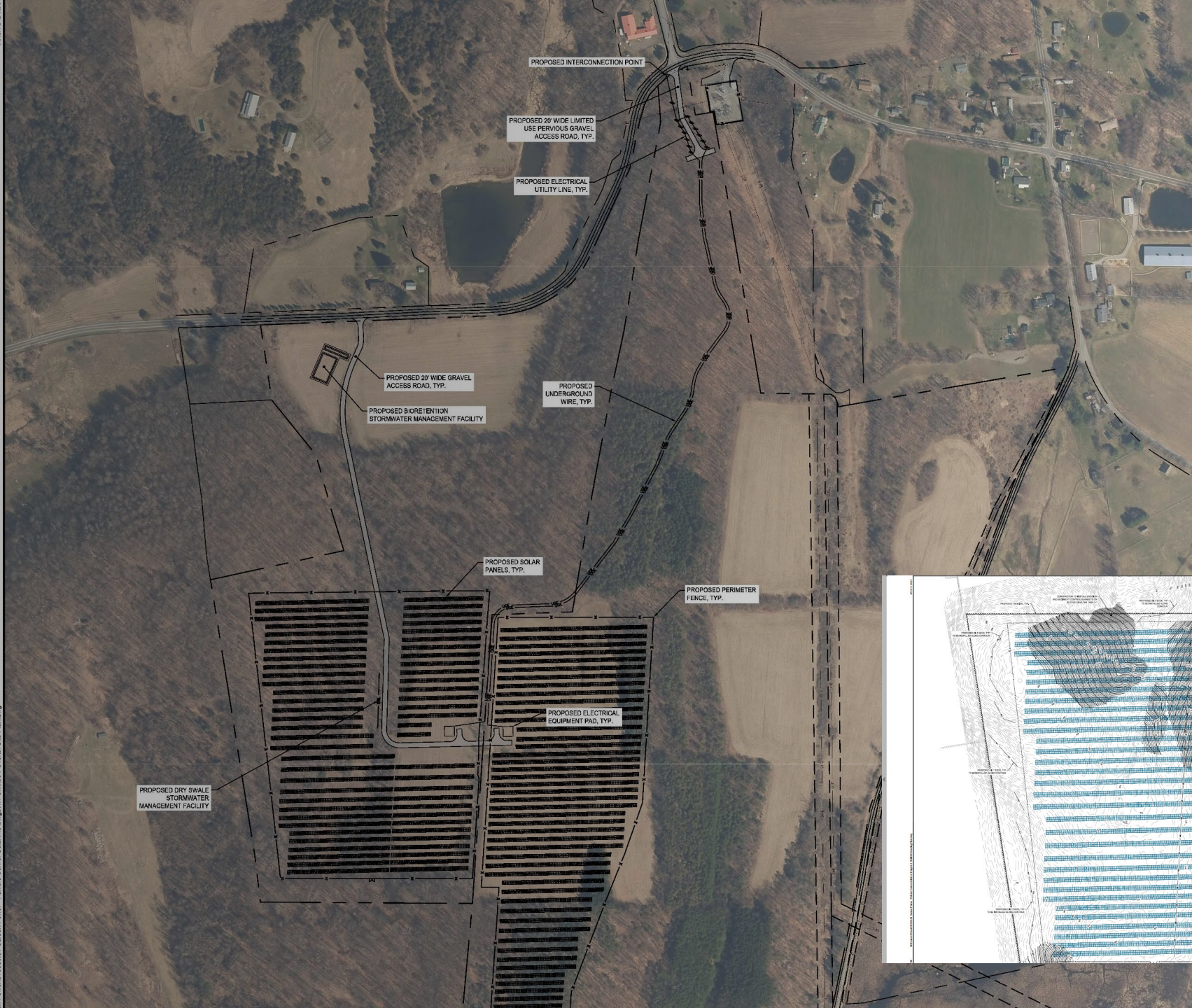
# Set Procedural Requirements

- Decommissioning and restoration
- Monitoring and inspection
- Establish procedures
  - Require preapplication materials for sketch phase conference with applicant
  - Detailed application material requirements specific to solar facilities
- Establish fees (Establish separately in Fee Schedule)
  - Permit fee
  - Escrow for consultant assistance
  - Inspection fee or escrow

# What Does A Large Scale Solar Facility Site Plan Look Like?







**SITE PLAN DATA TABLE**

SITE IS LOCATED IN THE "R" RURAL ZONING DISTRICT

PROPOSED USE: SOLAR, PERMITTED USE BY SPECIAL USE PERMIT AND SITE PLAN APPROVAL

PARCELS: 154200-7017-00-054841 & 154200-7017-00-202959

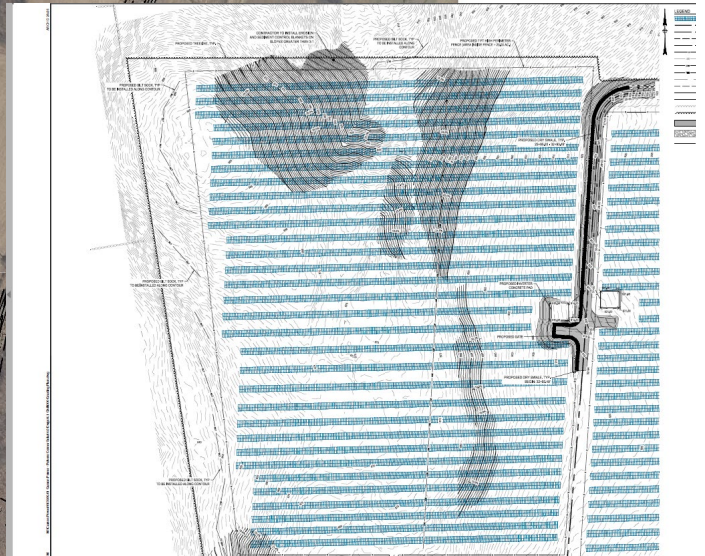
TOWN OF PINE PLAINS, COUNTY OF DUTCHESS  
STATE OF NEW YORK

APPLICANT: CARSON POWER  
28 5TH STREET  
EAST HAMPTON, NY 11937  
(517) 407-8688

OWNER(S) OF RECORD: LUCIE, CAROL, & DIANE GIARDINO  
454 BEAN RIVER ROAD  
PINE PLAINS, NY 12967

PLANS PREPARED BY:  
BERGMANN  
2 WINNERS CIRCLE, SUITE 102  
ALBANY, NY 12205  
(518) 862-0325

DESCRIPTION	REQUIRED	PROPOSED (EAST/WEST)
MIN. LOT AREA	2 AC	67.84 AC/74.14 AC
FRONT YARD SETBACK	75 FT	107 FT
SIDE YARD SETBACK	100 FT	152/88 FT
REAR YARD SETBACK	75 FT	80 FT
MAX. HEIGHT OF PANELS	12 FT	<12 FT
MAX. LOT COVERAGE	30%	9.7%/13.8%





# Q and A

- Thank you for Attending!

Nan Stolzenburg FAICP CEP

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