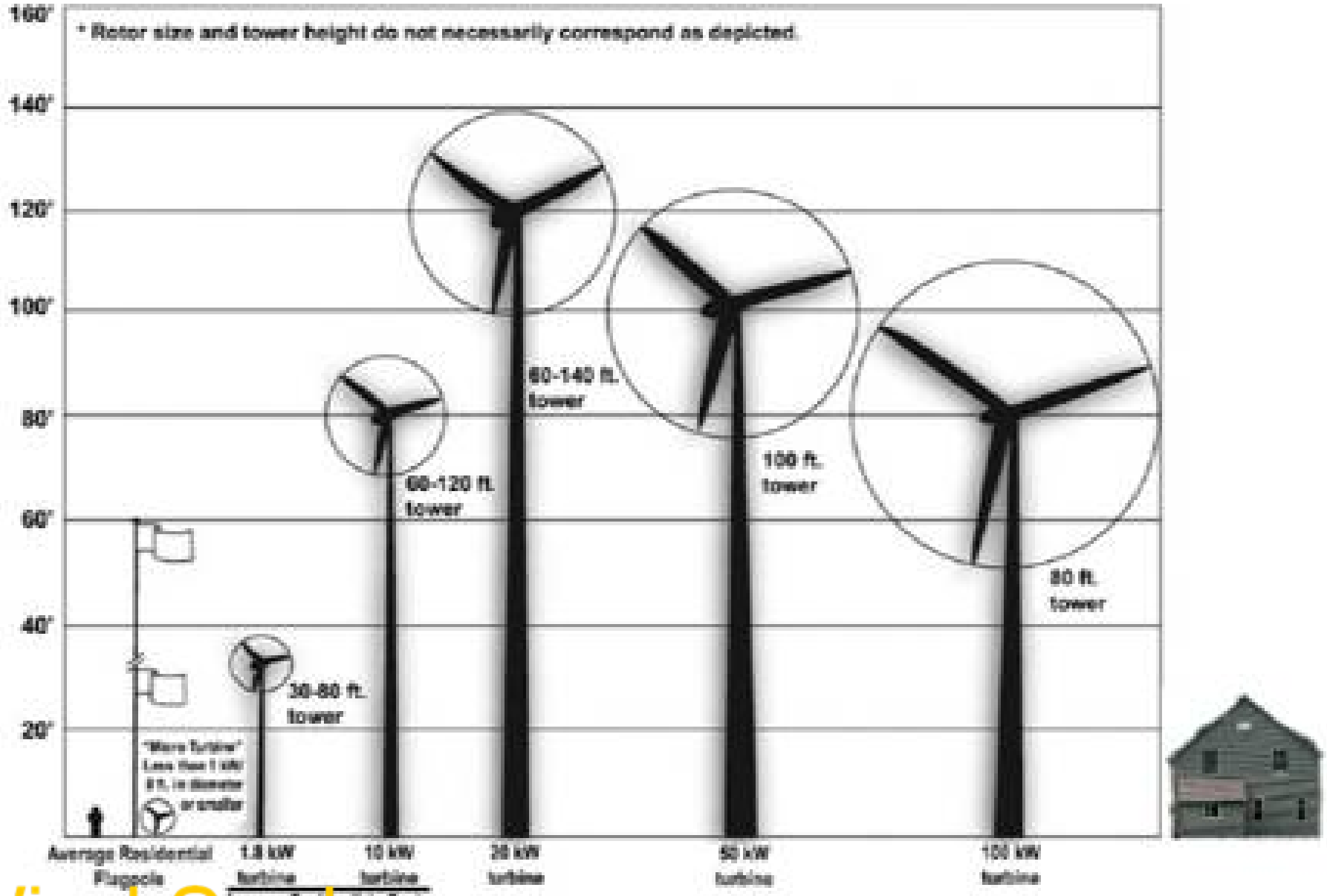
ALTERNATIVE ENERGY FACILITIES

Challenges for New Jersey Municipalities

Clarke Caton Hintz

Municipal Challenges Wind and Solar Facilities

- Scale
- Master Plan Policy
- Ordinance Adoption
- Approval Process
- Negative Impacts
- Mitigation
- Taxation


160'
140'
120'
100'
80'
60'
40'
20'
* Rotor size and tower height do not necessarily correspond as depicted.
60-140 ft. tower
100 ft. tower
80 ft. tower
60-120 ft. tower
30-80 ft. tower
Average Residential Flagpole
1.8 kW turbine
10 kW turbine
20 kW turbine
50 kW turbine
100 kW turbine

Wind Scale

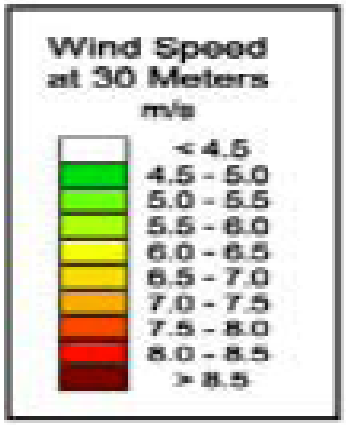
Small Wind

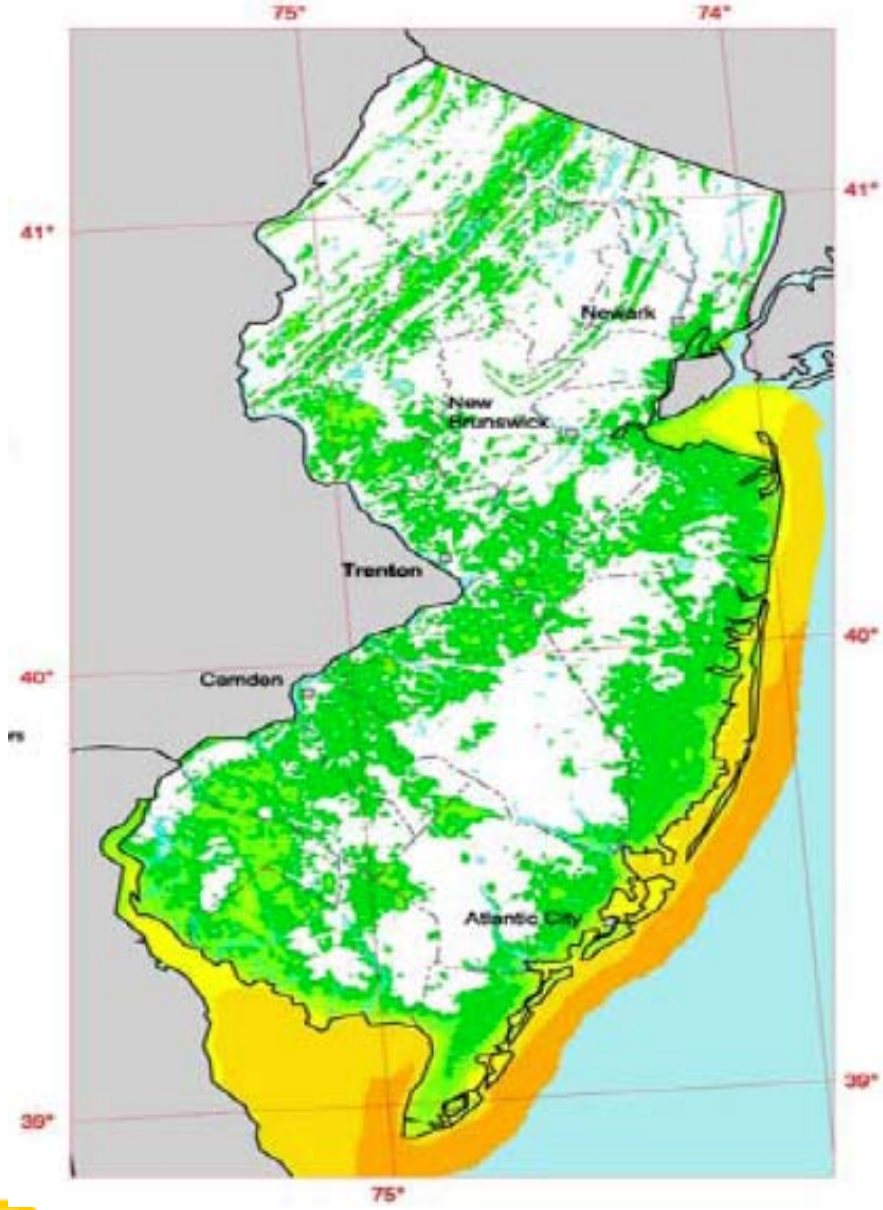
Residential/Farm Scale

Wind Scale

Grid Scale Wind

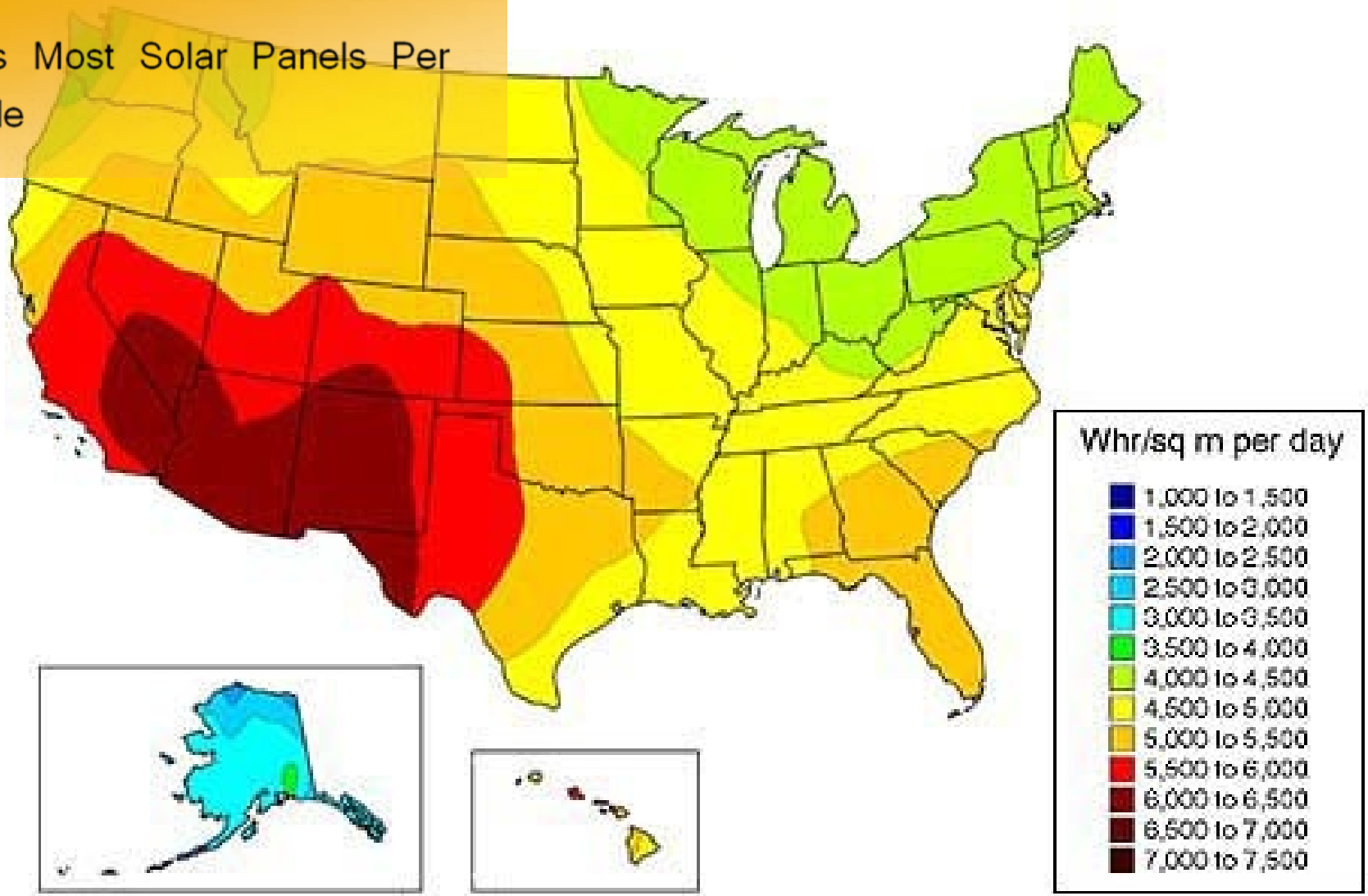
- NJ's major wind resources are along the Atlantic Coastline and Delaware Bay. Some wind resources do exist inland.





NJ Limited Wind Resources

NJ Has Most Solar Panels Per Sq. Mile



Why New Jersey?

State and Federal Incentives

Rebates, RECS, and Risk

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Solar Scale

Photos provided by Sun Farm Network, Inc

Residential Scale

Average home 6kW

Solar Scale

Farm Scale

Up to 2MW or 10 ac.

Solar Scale

- MLUL purpose: to promote utilization of renewable energy. *NJSA 40:55D-2 n*
- Most Master Plans include unspecific language supporting alternative energy

Master Plan Policy

New Policy:

Grid Scale Solar Facilities

- Parcels with less than 75% Prime Agricultural Soils
- Not adjacent to Preserved Farmland/ Open Space
- Perimeter setbacks and planting to achieve year round visual screen

Master Plan Policy

Barriers to Adoption of Ordinances

- Lack of Experience/ Misinformation
- No Established Standards
- Concerned Citizens
- Permitted or Conditional Uses Difficult to Deny

Implementing Ordinances

Possible Conditions

- Screening buffering year round visual screen
- Adequate setbacks from residences (wind 150 x height)
- No wind or ground mounted solar on lots less than 1 acre.
- Avoid site with 75% prime soil

Implementing Ordinances

Possible Conditions (cont'd)

- Avoid sites adjacent to Preserved farmland or open space
- No footings
- Avoid Carbonate rock areas
- Minimal clearing permitted
- Hillside locations increase setbacks and screening requirements

Implementing Ordinances

"D" Variances

- Strongly Recommend Against "Bifurcating"
- Site plan details critical to impact assessment

Site Plan Approval

Adequate Screening

- Neighboring Residential Uses
- Roadside Vistas
- Historic Areas
- Scenic Areas
- Glare
- Substations
- Wiring

Visual Impact

Adequate Buffering

Adequate Buffering

- Inverters

- 8-10 feet height
- 15-20 feet in depth
- 1-2 Inverters for every MW
- Emit humming noise
- Adequate setbacks- 300-500 feet

Visual Impact

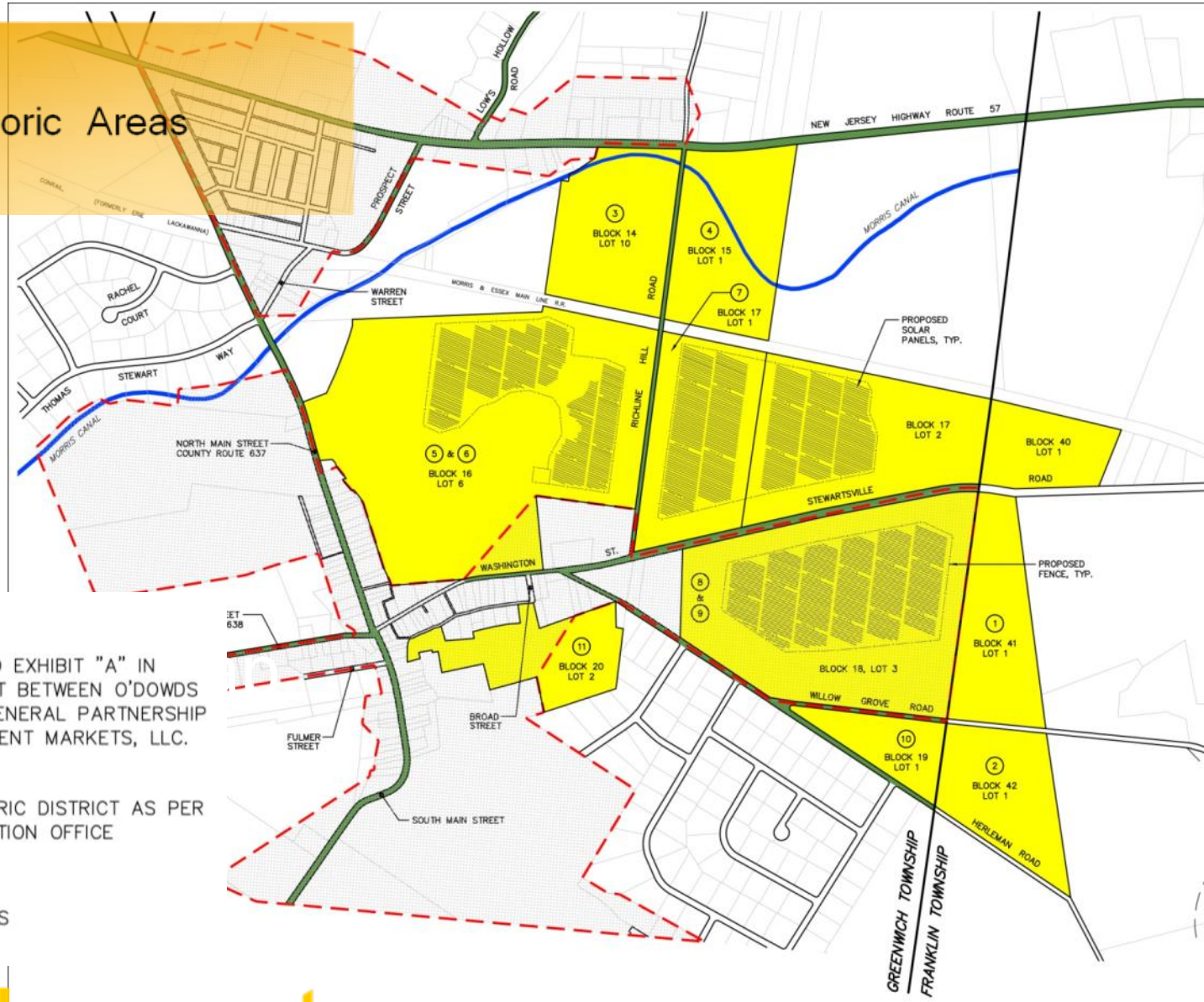
Avoid Important Scenic Vistas
Visual Impact

Consider views from neighbors
Visual Impact

Reflection

Visual Impact

Avoid Scenic/Historic Areas



LEGEND

- (1) TRACT NUMBER ACCORDING TO EXHIBIT "A" IN GROUND LEASE AND EASEMENT BETWEEN O'DOWDS ASSOCIATES A NEW JERSEY GENERAL PARTNERSHIP AND BRIAN O'DOWD AND ELEMENT MARKETS, LLC.
- STEWARTSVILLE VILLAGE HISTORIC DISTRICT AS PER NJ STATE HISTORIC PRESERVATION OFFICE
- SCENIC BYWAY AND CORRIDORS

Visual Impact

Energy Farmland Habitat

Balancing Competing Public Purposes

Case Study: Mannington Twp.

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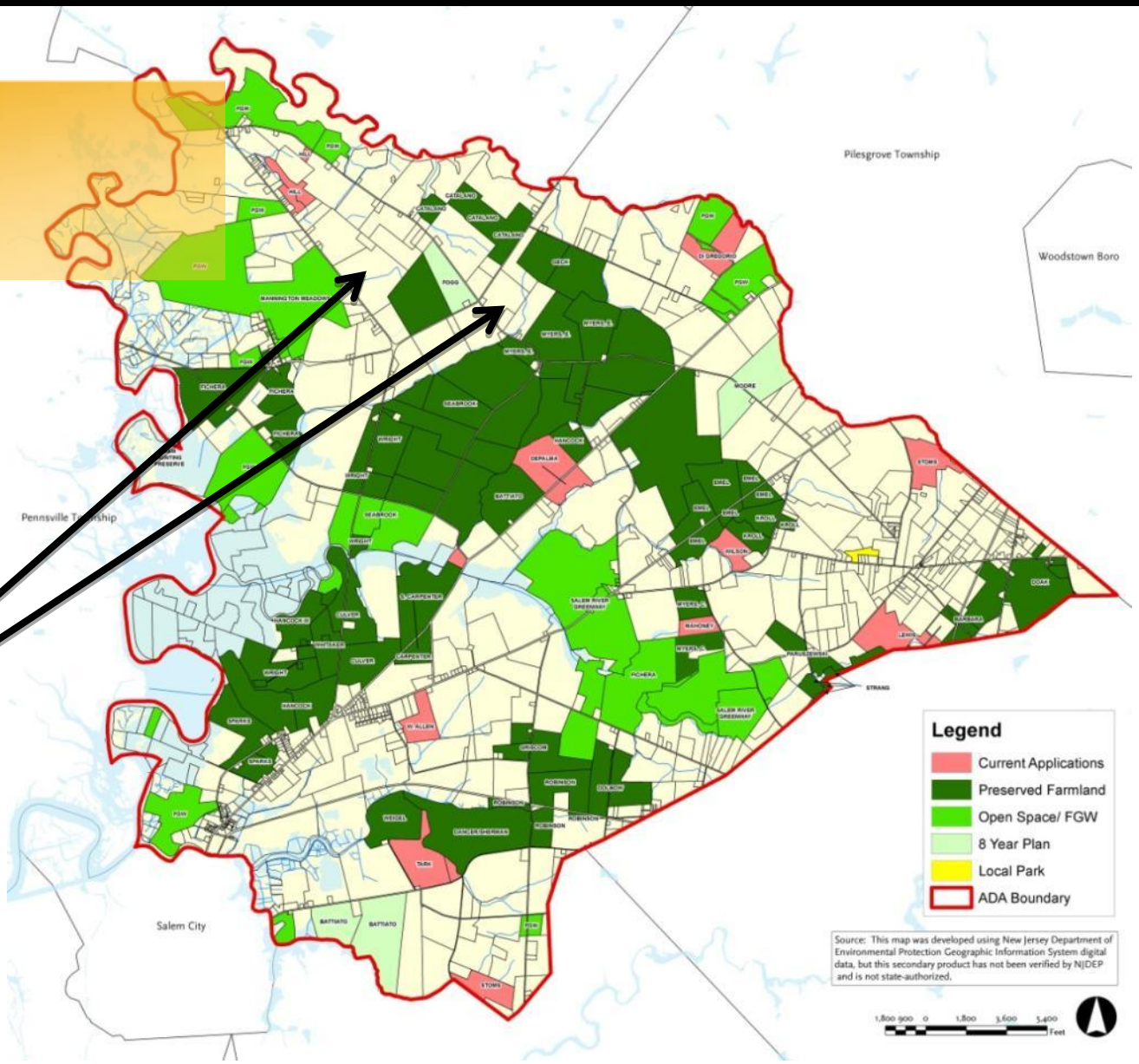
Mannington Township

Salem County

SOLAR SITES



NJ Municipalities Targeted

Case Study

Case Study

Buffers and Setbacks

Mitigation Techniques

Meadow Grass Habitat

Donation of Farmland or Conservation Easements

LINCOLN
RENEWABLE ENERGY, LLC

Long Term Escrow or Bond

- Decommissioning
- Maintenance

Taxation

- Roll Back Taxes- 3 years
- Real Property Taxed as Industrial Use
- Portion of the Array taxed

Taxation

- Manning ton Example $147,000 per year
- Guidance from State Dept of Treasury pending
- Local tax assessor must make determination

Thank You!