

Exploring Landscape Design for Biomass Production in the Northeast U.S.



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PENNSSTATE



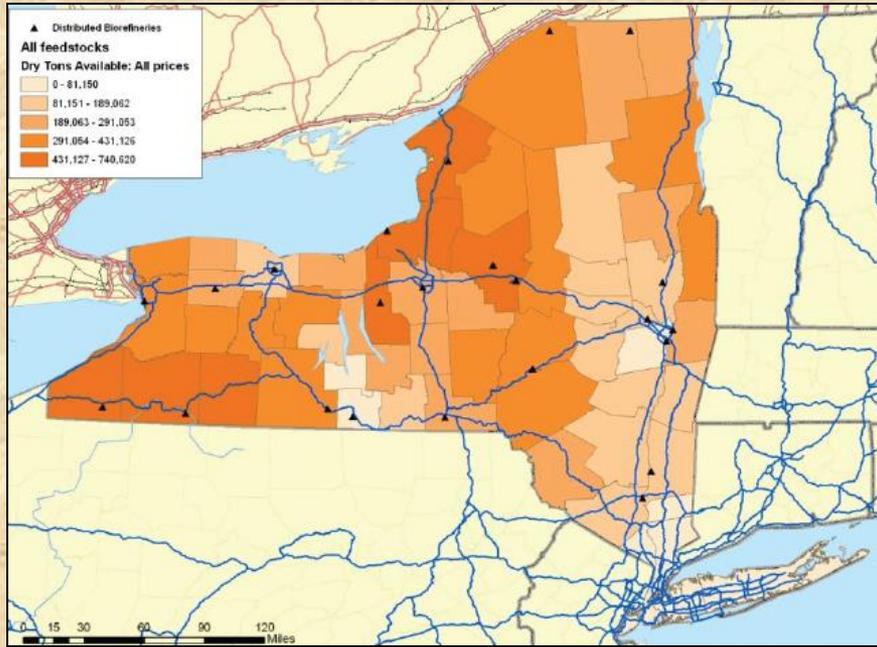
Cornell University



Delaware State University



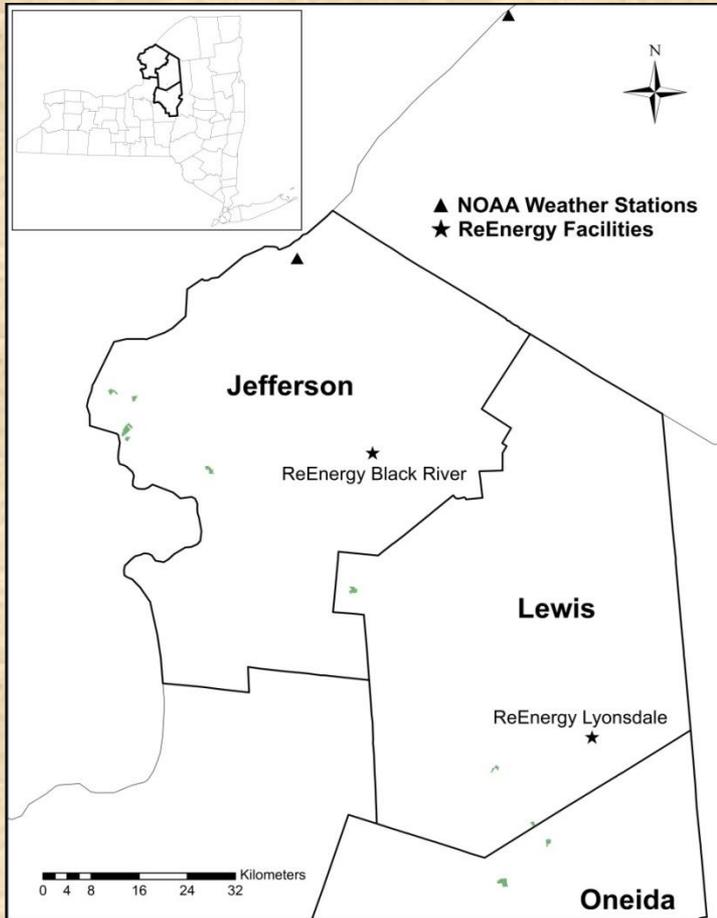
Multiple Feedstocks across the Landscape in the Northeast



NY Biofuels Roadmap showing potential location for 24 biorefineries with an average capacity of 60 MGY.

- Potential for blending forest biomass and energy crops
- Dramatic decline in pulp and paper
- Abundance of low grade material but few reliable markets
- Long term supply contract at Fort Drum

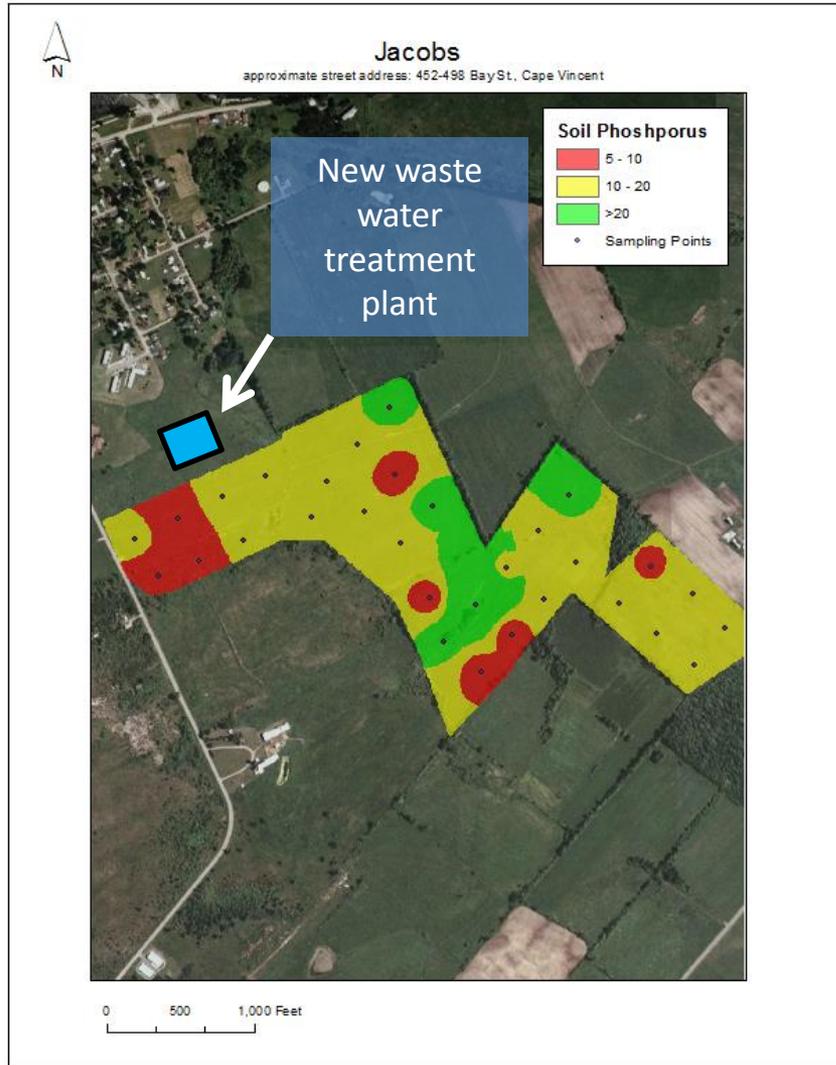
USDA Willow BCAP Project Area



Location of willow fields
and power plants in
upstate NY

- Almost 1,200 acres of willow to be used for power and heat production
- Building willow vegetation file for RUSLE and willow growth models
- Plan to apply models to assess changes at landscape level
- Plans for collection of some social and economic data
- Potential for testing sustainability systems

Monitoring and Community Drivers



- Monitoring willow fields
 - Baseline soil data
 - Planting rates
 - Growth rates
 - Starting small water quality monitoring effort
- Starting assessment of social factors in driving biomass use in the region
- Connection with local community to address local concerns
 - Apply biosolids or wastewater to willow

Multifunctional Systems



An alternative vegetative cover using shrub willow is being deployed on almost 600 acres of industrial waste sites near Syracuse, NY

- Sustainable Reuse Remedy
 - Use organic waste stream from local brewery to create favorable growing conditions
 - Managing water to minimize leaching to surface and ground water
 - Biomass production Potential for recreation uses
- Shrub willow in highway rights of way for snow drift control and potential biomass production
- Willow incorporated into riparian buffers

Contact Information

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NewBio Project

<http://www.newbio.psu.edu/>