

An aerial photograph of a rural landscape. The scene is dominated by vibrant green agricultural fields, likely rice paddies, which are divided into irregular shapes by narrow dirt paths or canals. In the center-right of the image, there is a prominent, elongated pond with a brownish, slightly murky surface. To the left of the pond, a white outline of the state of New Jersey is superimposed on the image, with its top-right corner pointing towards the pond. The bottom-left corner of the image shows a dense forest of tall, green trees. The overall lighting is bright, suggesting a clear day.

# New Jersey Climate Change Policy

Honors Senior Thesis Presentation

Michael Stellitano

# Purpose of Study

- ▶ After producing virtually no climate change legislation for 8 years, New Jersey suddenly has had a barrage of climate change laws and executive orders passed in the last year.
- ▶ With the speed and recent nature of these laws, it is important to understand the context and possible effectiveness of legislation being passed.
- ▶ It is also essential to determine if more policy is needed on the topic, and if so, where in particular the state is still lacking appropriate policy.



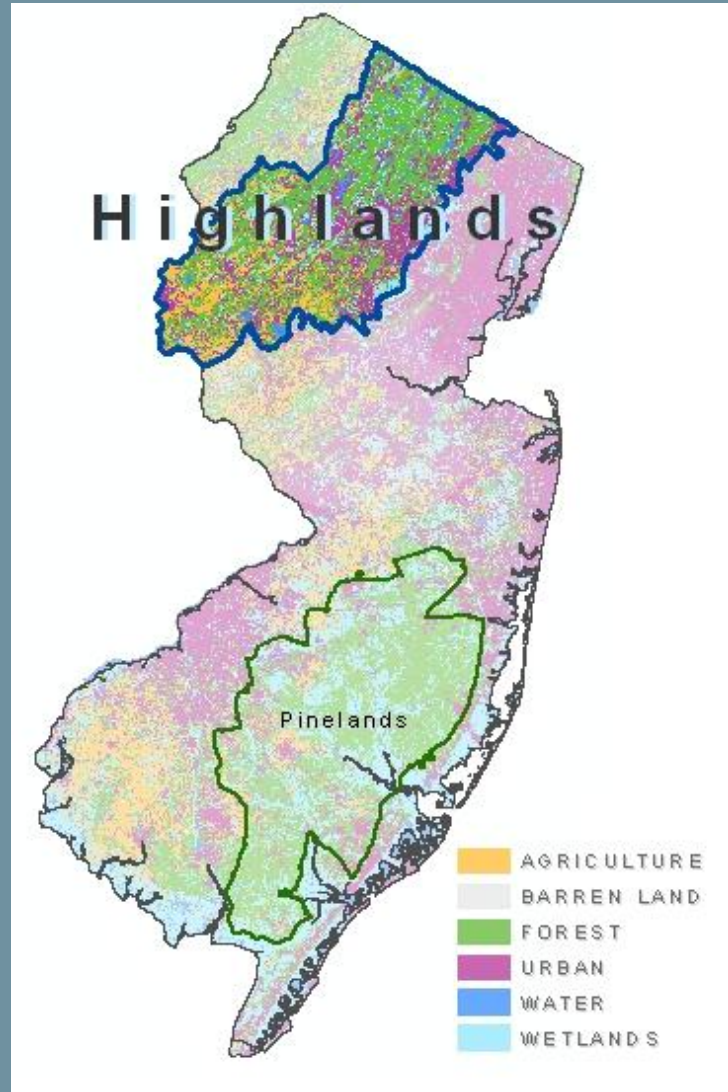
# NJ Climate Change Policy Review

- ▶ Global Warming Response Act (2007)
- ▶ Energy Master Plan (2011)
- ▶ Solar Act (2012)
- ▶ Regional Greenhouse Gas Initiative (2018)
- ▶ Joining Paris Climate Accord (2018)
- ▶ Energy Master Plan Amendments (2018)
- ▶ Offshore Wind Energy Development Act (2018)
- ▶ Clean Energy Act (2018)



# NJ Climate Change Policy Recommendations

# Policy Recommendation Summary



<http://www.saveh2onj.org/about-us/new-jersey-highlands/>

- ▶ Land Conservation
  - ▶ Increase efforts to acquire undeveloped land
  - ▶ Increase protections on preserved lands
- ▶ Regional Protections
  - ▶ Stop development in the Highlands, Meadowlands, and Pinelands
  - ▶ Preserve undeveloped land in the Delaware and Raritan Watersheds
  - ▶ Convert developed land along rivers into wetlands
  - ▶ Halt fertilizer usage along New Jersey bays

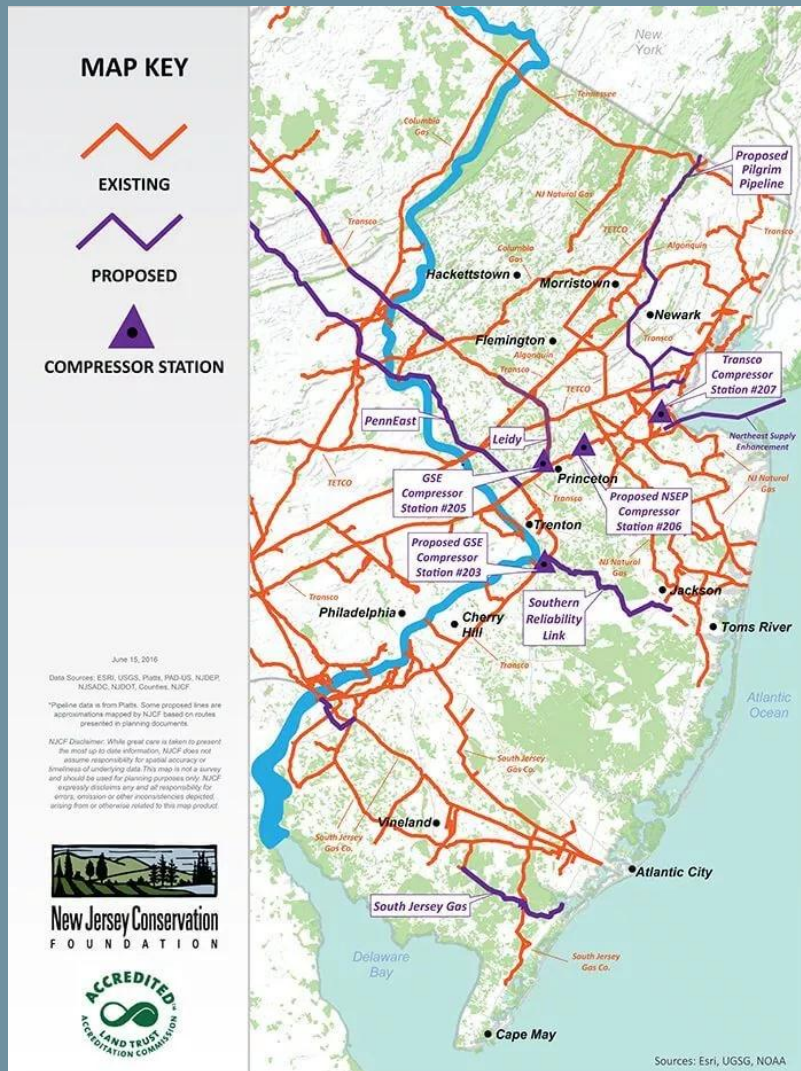


# Policy Recommendation Summary

- ▶ **Smart Growth with Green Infrastructure**
  - ▶ Mandate LEED certification for new construction projects
  - ▶ Mandate flood resistance for all newly constructed structures
  - ▶ Modernize electric grid by emphasizing efficiency
- ▶ **Public Transportation**
  - ▶ Return rail service to South Jersey
  - ▶ Acquire federal funding for Gateway Tunnel
  - ▶ Construct new light rail systems in Gloucester and Camden Counties
  - ▶ Re-fund and re-staff NJ Transit
  - ▶ Add new trains and rail cars
  - ▶ Increase subsidies for electric vehicles



# Policy Recommendation Summary



<https://rethinkenergy.nj.org/does-new-jersey-need-more-pipelines/>

- ▶ Energy
  - ▶ Halt construction of natural gas pipelines
  - ▶ Increase solar and wind subsidies
  - ▶ Mandate that newly built houses must have solar panels
  - ▶ Implement a more expensive carbon credit system for GHG producers
  - ▶ Consider building safe, new nuclear power plants



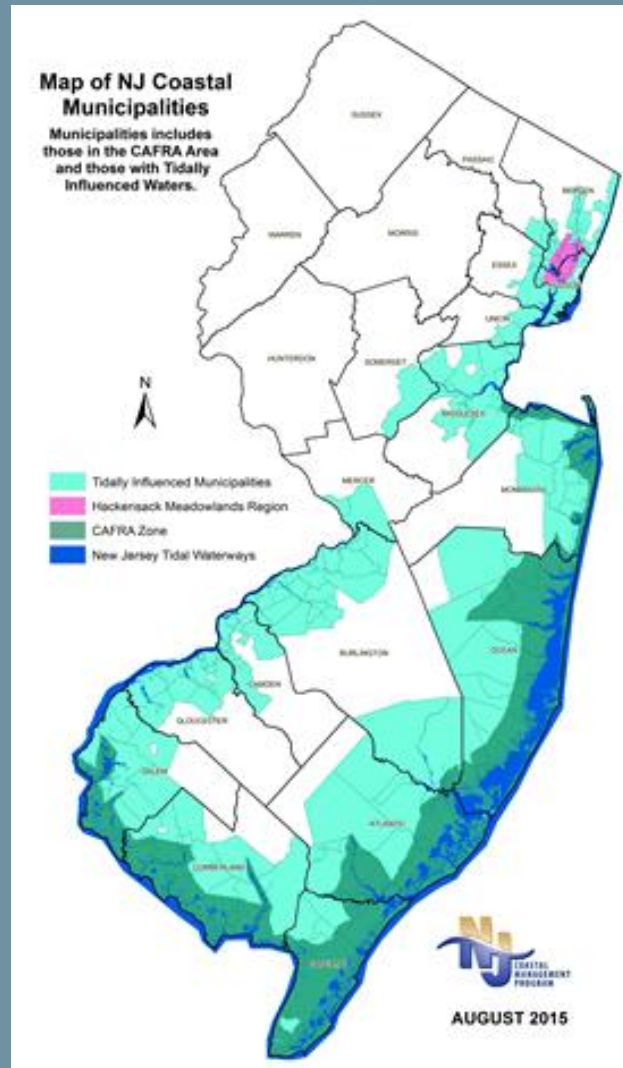
# Policy Recommendation Summary

- ▶ **Environmental Justice**
  - ▶ Fully fund the state's Environmental Justice Commission
  - ▶ Prioritize renewable energy projects in low income areas
  - ▶ Freeze public transportation fares for low income commuters
- ▶ **Urban Planning**
  - ▶ Reduce heat islands
  - ▶ Build more heat shelters
  - ▶ Fund new greenway projects
  - ▶ Build more urban parks
  - ▶ Mandate green rooftops





# Policy Recommendation Summary



<https://www.state.nj.us/dep/cmp/>

## ► Coastal Protection

- Protect remaining wetlands
- Construct artificial wetlands in bays
- Re-map coastal flood zones by accounting for climate change
- Ban construction and rebuilds in high-risk flood zones



# Policy Recommendation Summary



<https://geology.com/lakes-rivers-water/new-jersey.shtml>

## ► Inland Water Policies

- Re-map inland flooding zones by accounting for climate change
- Mandate flood resistance for all newly constructed structures
- Re-construct storm water infrastructure by accounting for climate change
- Mandate increased capacities for waste water treatment facilities
- Convert developed properties at a high-risk of flooding into undeveloped land



# Acknowledgments

I would like to thank professor Patrick O'Connor for being my thesis sponsor, and professor Jeremy Teigen for being a reader for this thesis, their support and insight were critical for this project.



An aerial photograph of a coastal area. In the foreground, there is a parking lot with several cars and a few small buildings. A road curves through the area. The middle ground shows a sandy beach with a rocky shoreline. The background features a large body of water with a rocky breakwater. A dark horizontal bar with the text "Thank You" is overlaid on the image.

Thank You