



# *Climate Change in* **DELAWARE**

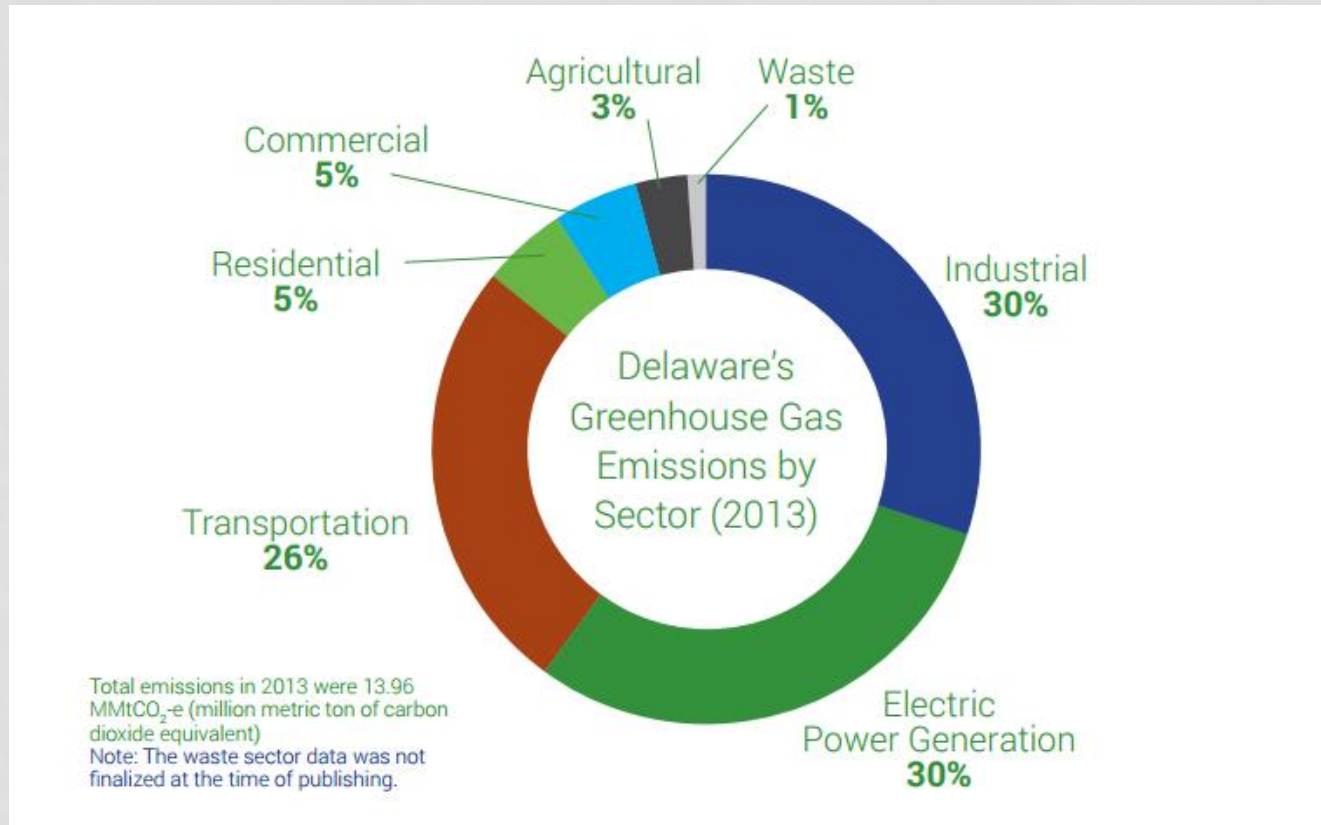
*It's happening now – temperatures,  
rainfall, and sea levels are changing.*

*It affects all of us and the places and  
resources we care about.*

*Climate change is a challenge,  
caused mainly by human actions.*

*Our choices today can make a  
difference.*

# DELAWARE'S GREENHOUSE GAS EMISSIONS



Goal: DE will reduce its GHG emissions by 30% by 2030.  
80% reduction needed by 2050-2080 to keep warming below 2 degrees C

# EFFECTS OF CLIMATE CHANGE IN DELAWARE



Increasing Temps

**Effects:**

- Human Health
- Air Quality
- Electricity Use
- Growing Season



Heavy Precipitation

**Effects:**

- Public Safety
- Infrastructure Damage
- Home Damage



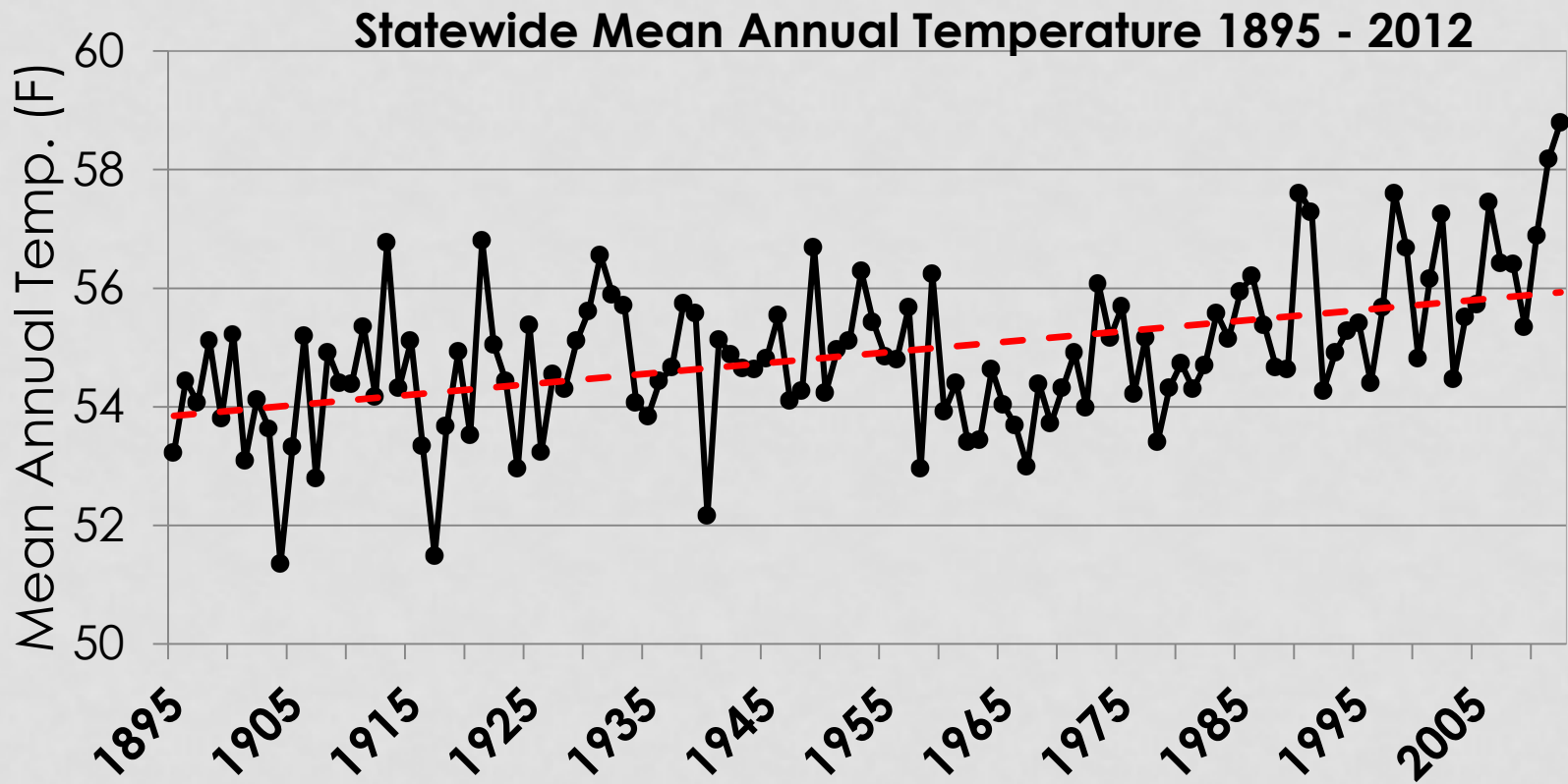
Sea Level Rise

**Effects:**

- Public Safety
- Flooding of land
- Water Quality
- Infrastructure Damage
- Home Damage

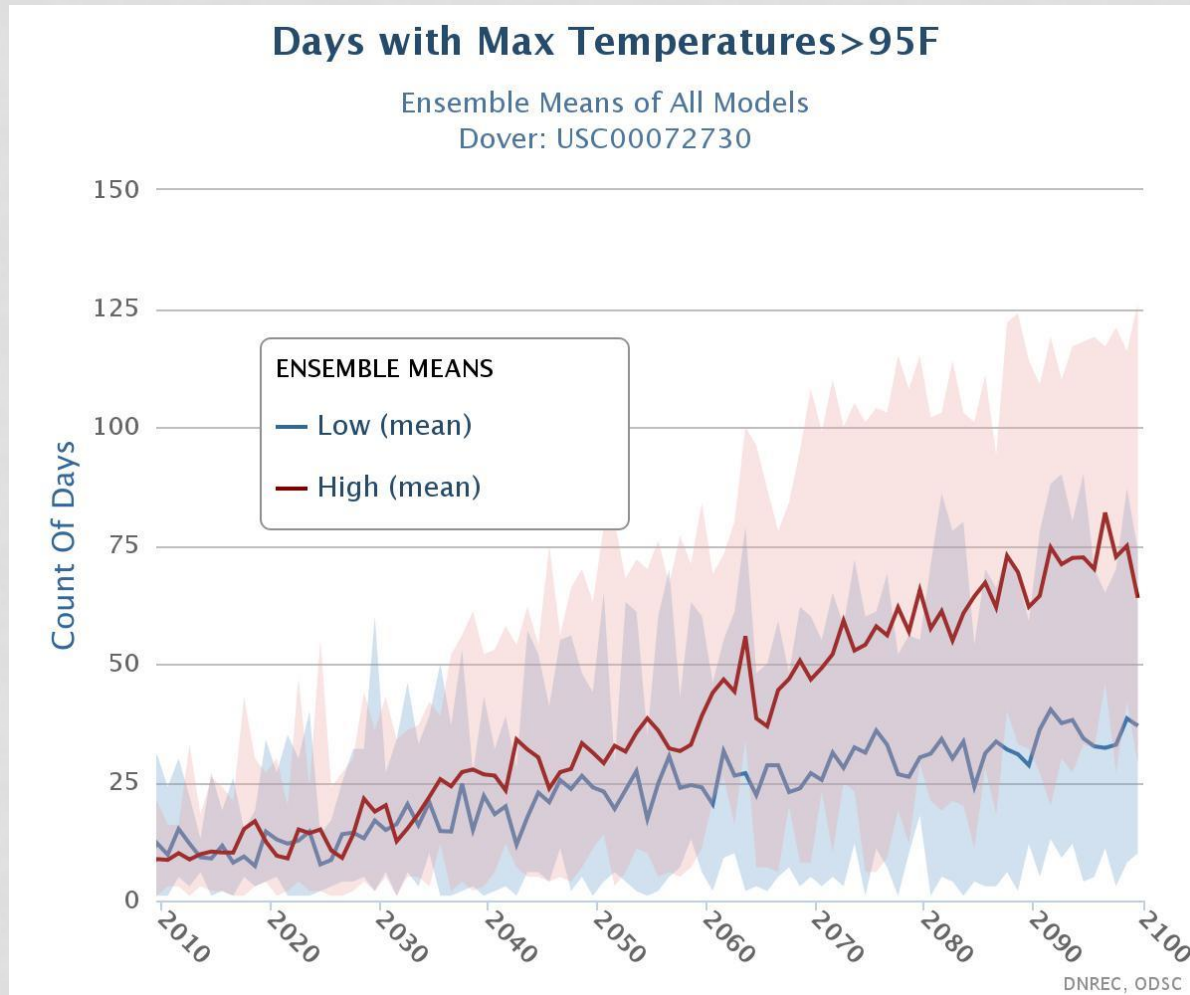
# DELAWARE'S AVERAGE TEMPERATURE HAS INCREASED

+0.2°F per decade in every season except Autumn

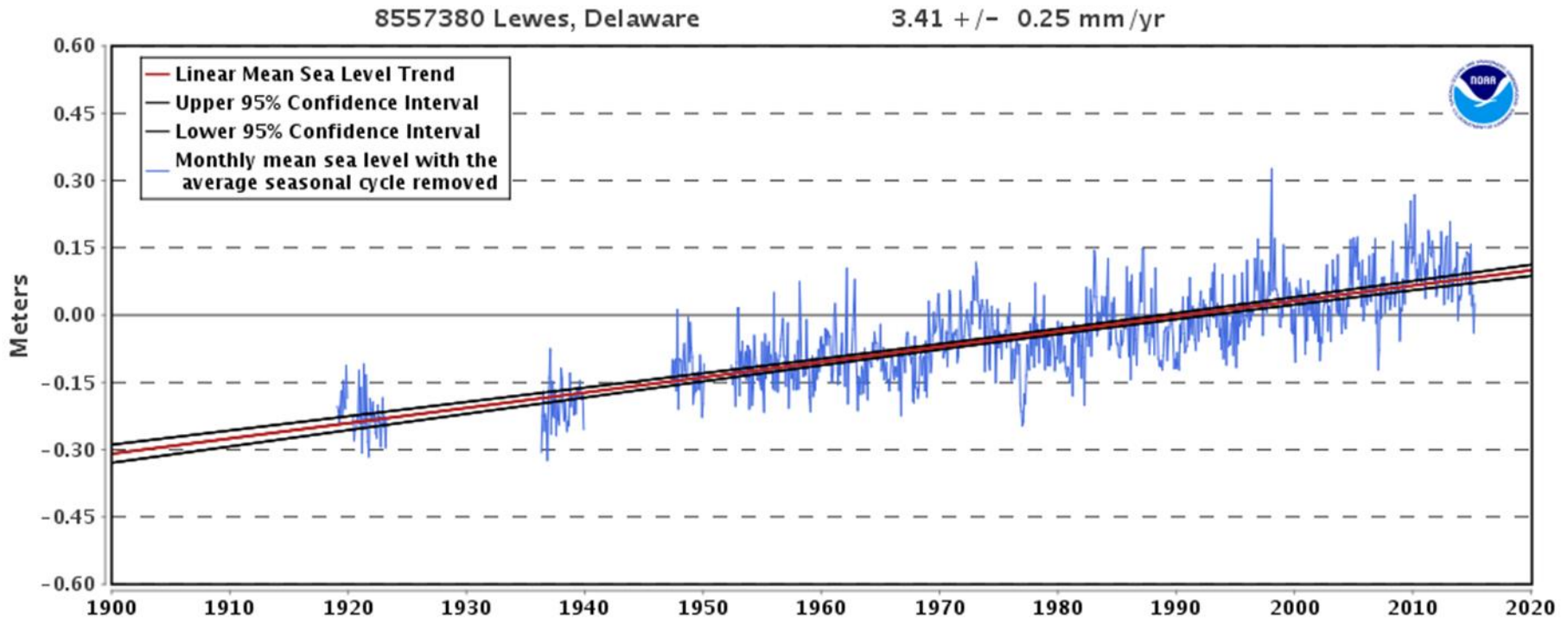


Source: Dr. Daniel J. Leathers, State Climatologist

# TEMPERATURES WILL CONTINUE TO INCREASE



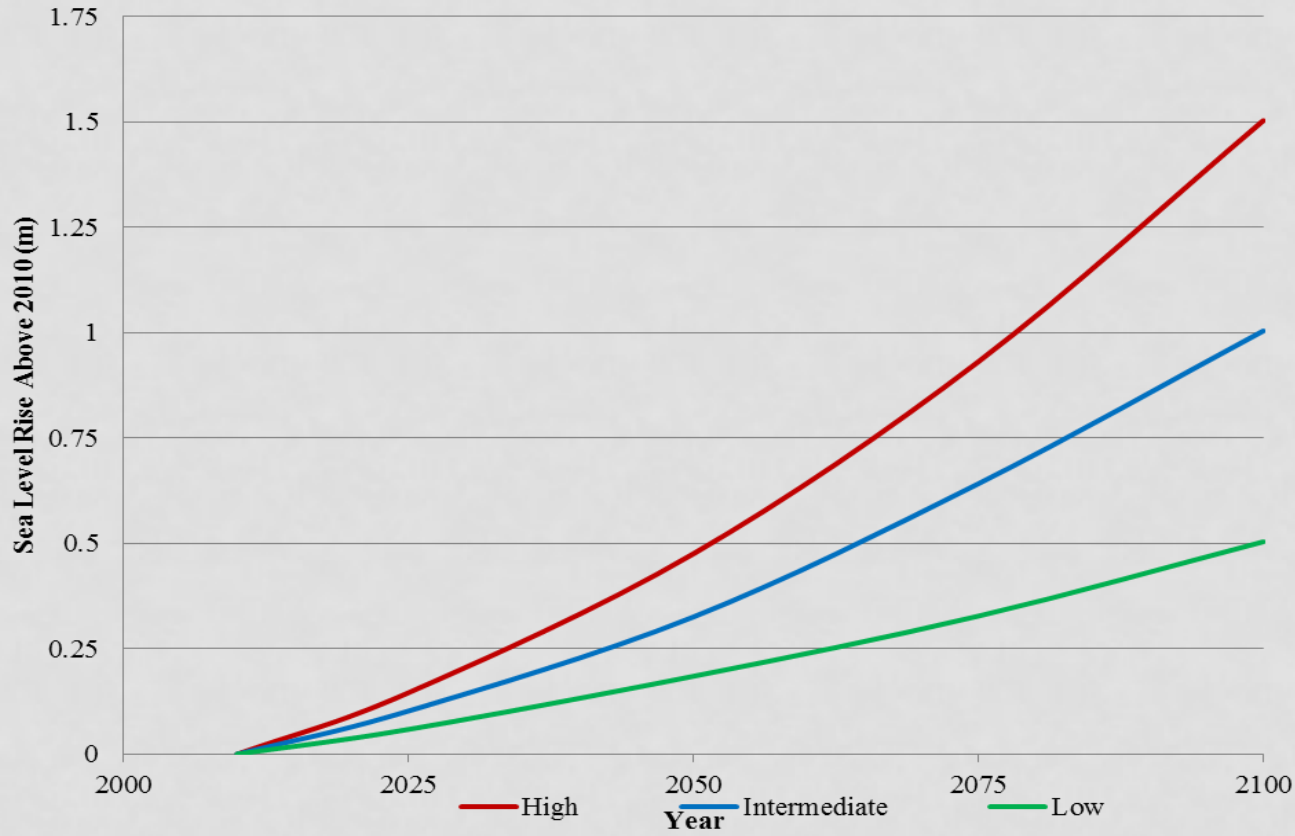
# DELAWARE'S SEA LEVELS ARE RISING



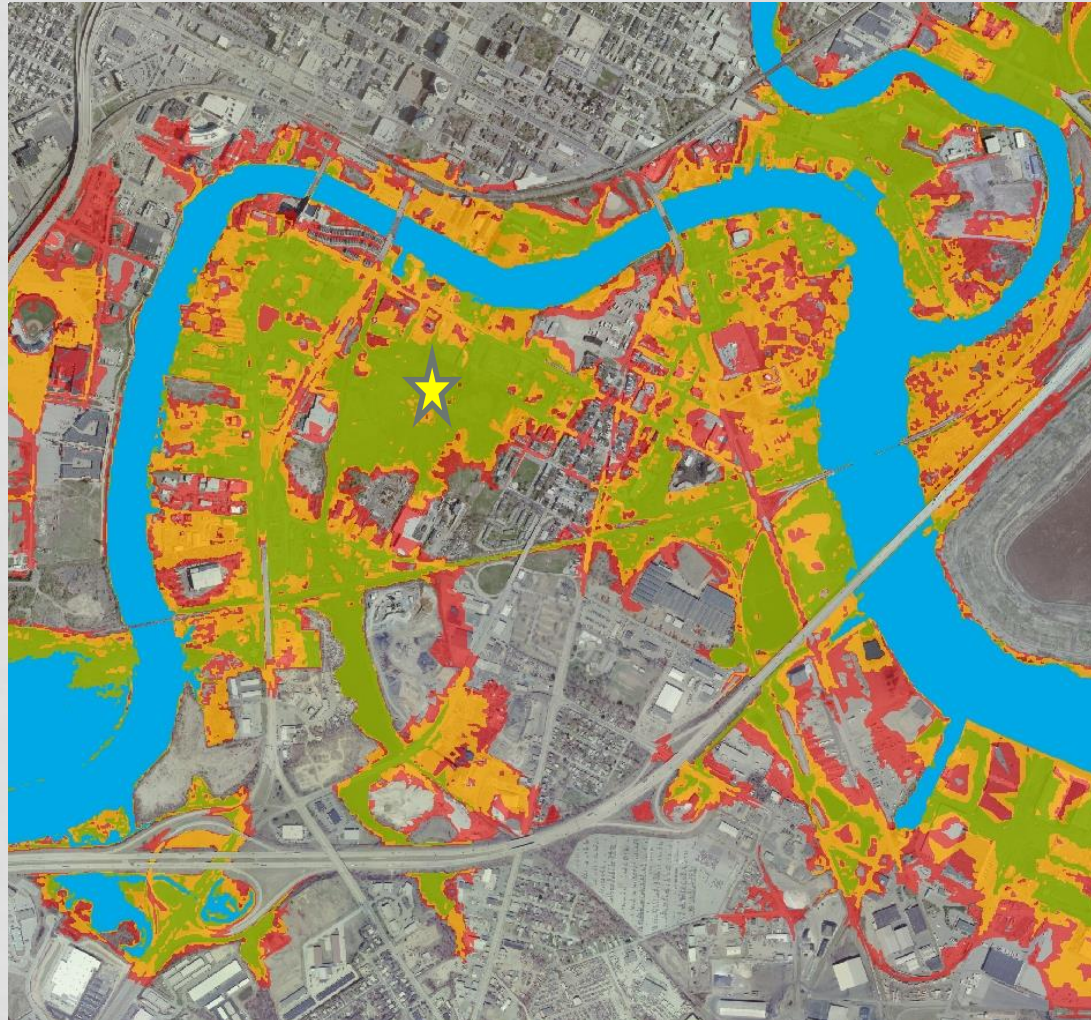
**Global rate = 1.7 mm/yr**

# THE RATE OF SEA LEVEL RISE WILL INCREASE IN THE FUTURE

## DNREC Sea Level Rise Scenarios

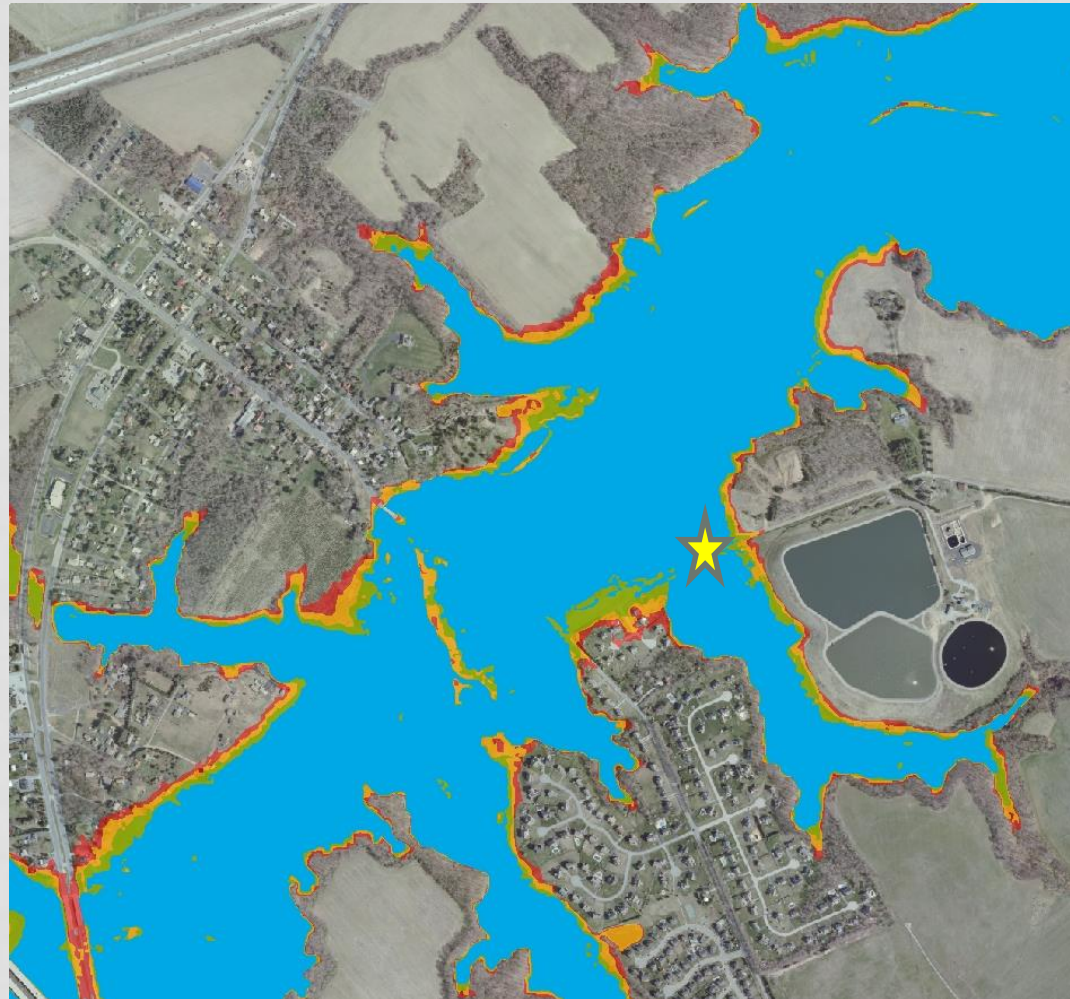


# SEA LEVEL RISE SCENARIOS SOUTH WILMINGTON





# SEA LEVEL RISE SCENARIOS ODESSA



# SEA LEVEL RISE SCENARIOS ST. JONES RESERVE



# SEA LEVEL RISE SCENARIOS DEWEY BEACH



# BUT WHAT CAN WE DO ABOUT IT?

- **Adapt**

- *Adjust how we live and make decisions to deal with changing conditions*

- **Mitigate**

- *Reduce greenhouse gases into air*
  - *Burn less fossil fuel*
  - *“trap” carbon*

# LOCAL ACTIONS ARE IMPORTANT

- Decisions made today affect generations
  - Water/wastewater
  - Commercial and residential development
  - Roads and bridges
  - Services
  - Land preservation
  - Energy Use
  - Development Patterns
  - Transportation Choices



Flooding in Milford from Hurricane Irene  
August 2011

# EXECUTIVE ORDER 41 PREPARES THE STATE FOR CLIMATE IMPACTS

- Develop policies and plans
  - GHG Emission Reduction goal
  - Agency Adaptation recommendations
- Take on-the-ground action
  - Avoid new projects in flood prone areas
  - Plan for future flood levels in projects
  - Use green infrastructure where possible
- Assist County and Municipal Governments Prepare



# LOCAL ACTIONS ARE IMPORTANT

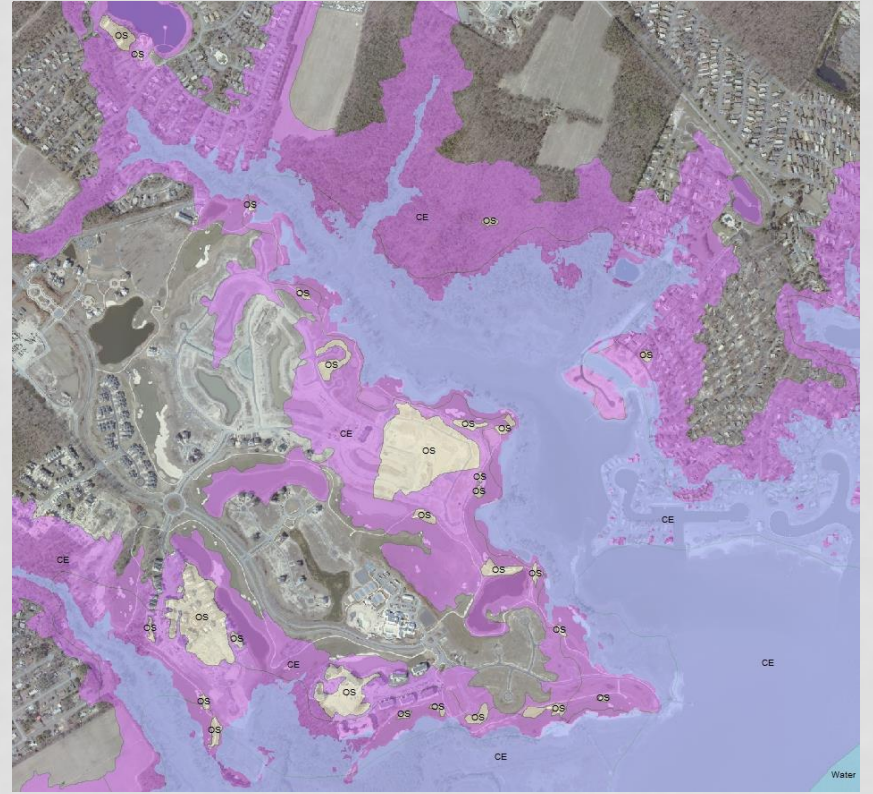
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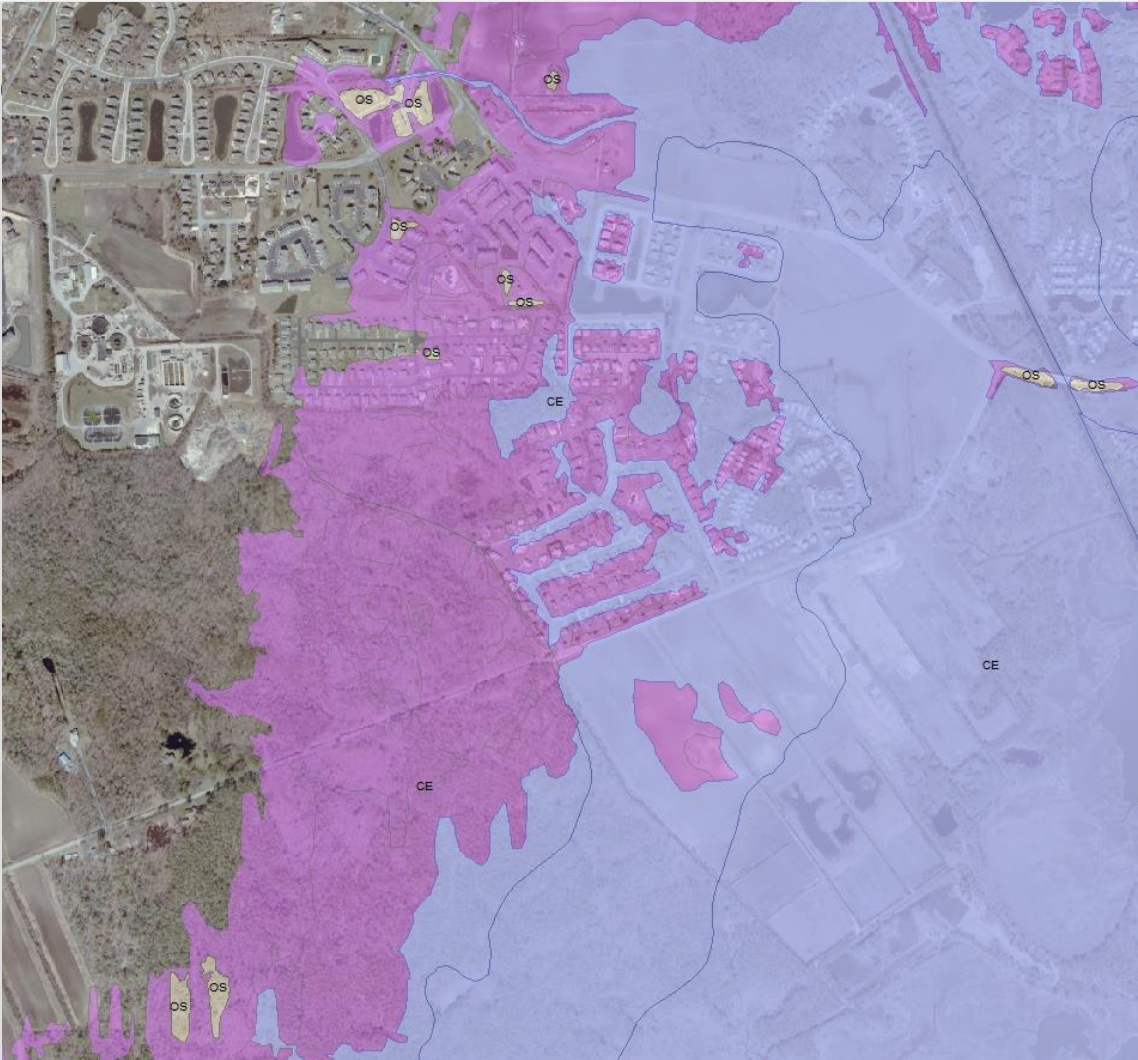
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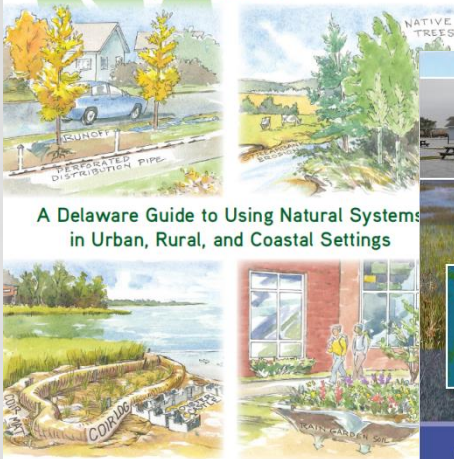


- Future L

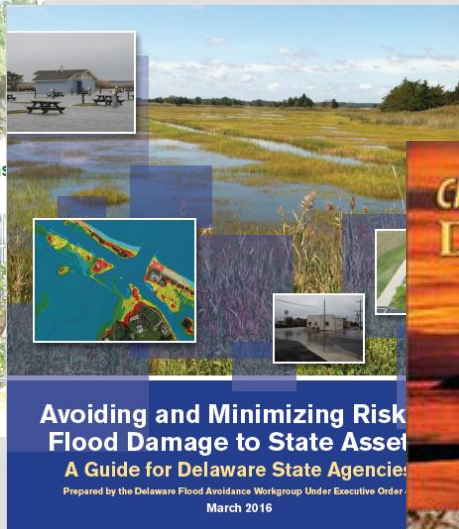


# TOOLS AND RESOURCES

## Green Infrastructure Primer

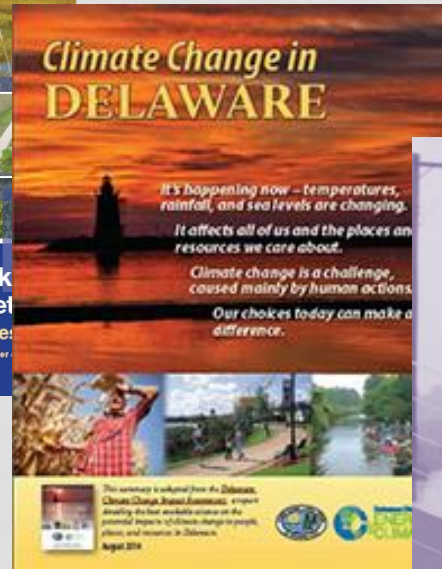


A Delaware Guide to Using Natural Systems in Urban, Rural, and Coastal Settings



Avoiding and Minimizing Risk Flood Damage to State Assets  
A Guide for Delaware State Agencies

Prepared by the Delaware Flood Avoidance Workgroup Under Executive Order  
March 2016



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DELAWARE

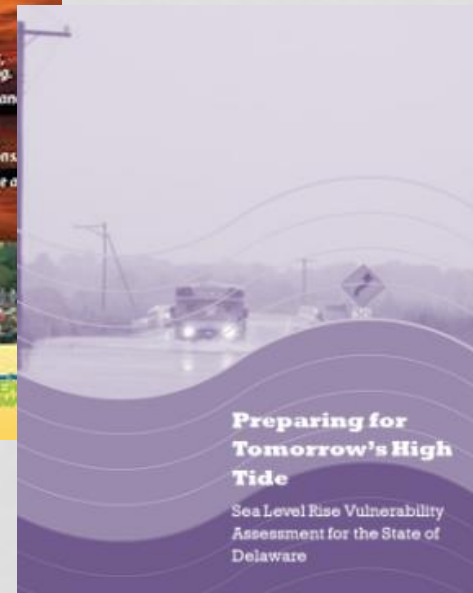
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Our choices today can make a difference.

These resources and more available online:

[www.de.gov/climatechange](http://www.de.gov/climatechange)



Preparing for  
Tomorrow's High  
Tide

Sea Level Rise Vulnerability  
Assessment for the State of  
Delaware

# THANK YOU

For more info:

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- Overlay

- Infrastructure