





The Delaware Climate Action Plan:

Climate Change and Land Use Intersections

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[STAC Meeting – 10/23/26]

Delaware's Changing Climate



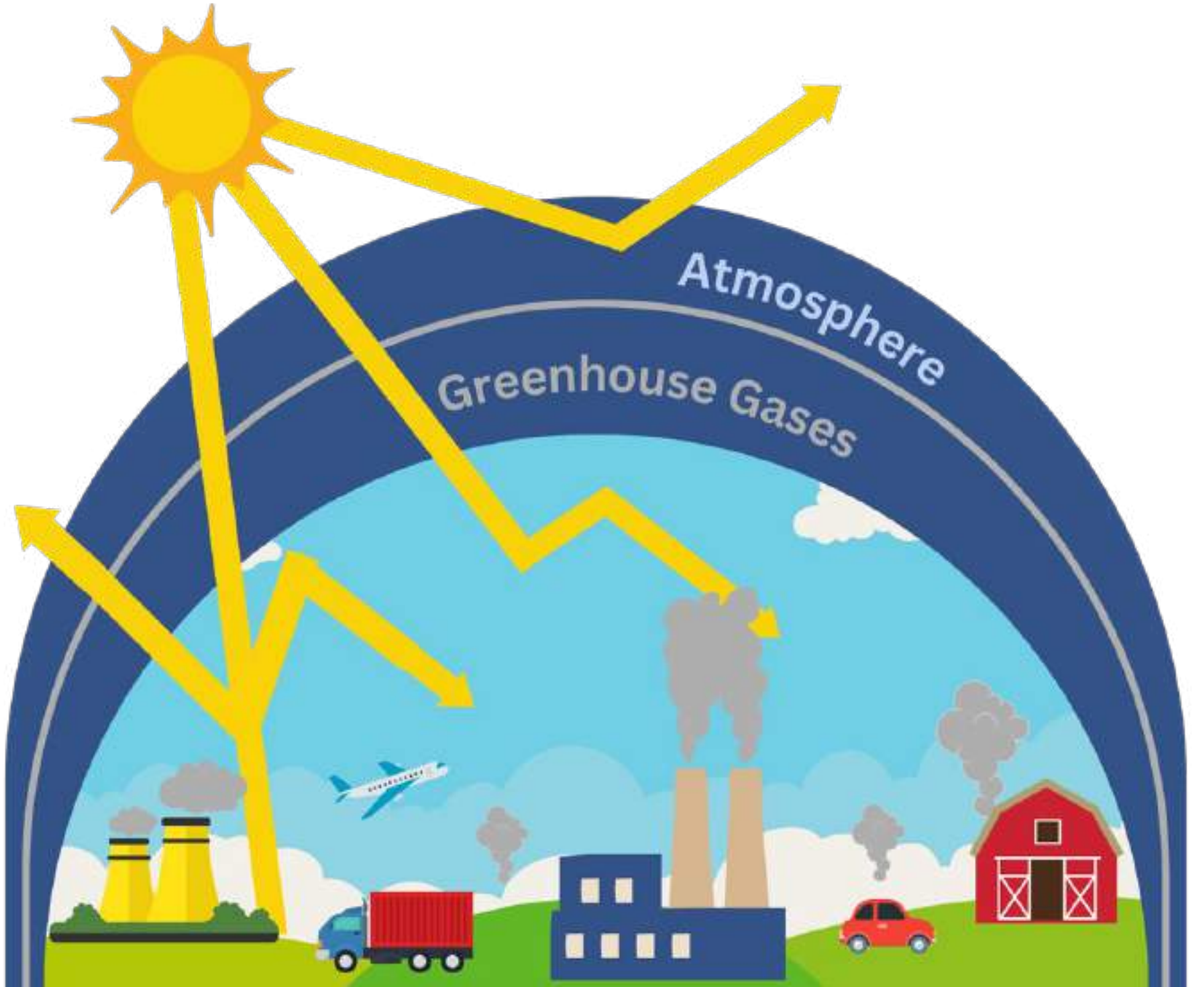
A dune breach at the Indian River Inlet.
Photo credit: DNREC

Why Is The Climate Changing?

Human activities have increased the amount of greenhouse gases in our atmosphere, warming our planet and causing climate change.

In Delaware, the sectors that produce the most greenhouse gas emissions are:

- **Transportation**
- **Industry**
- **Electrical Power**



2022 Greenhouse Gas Inventory

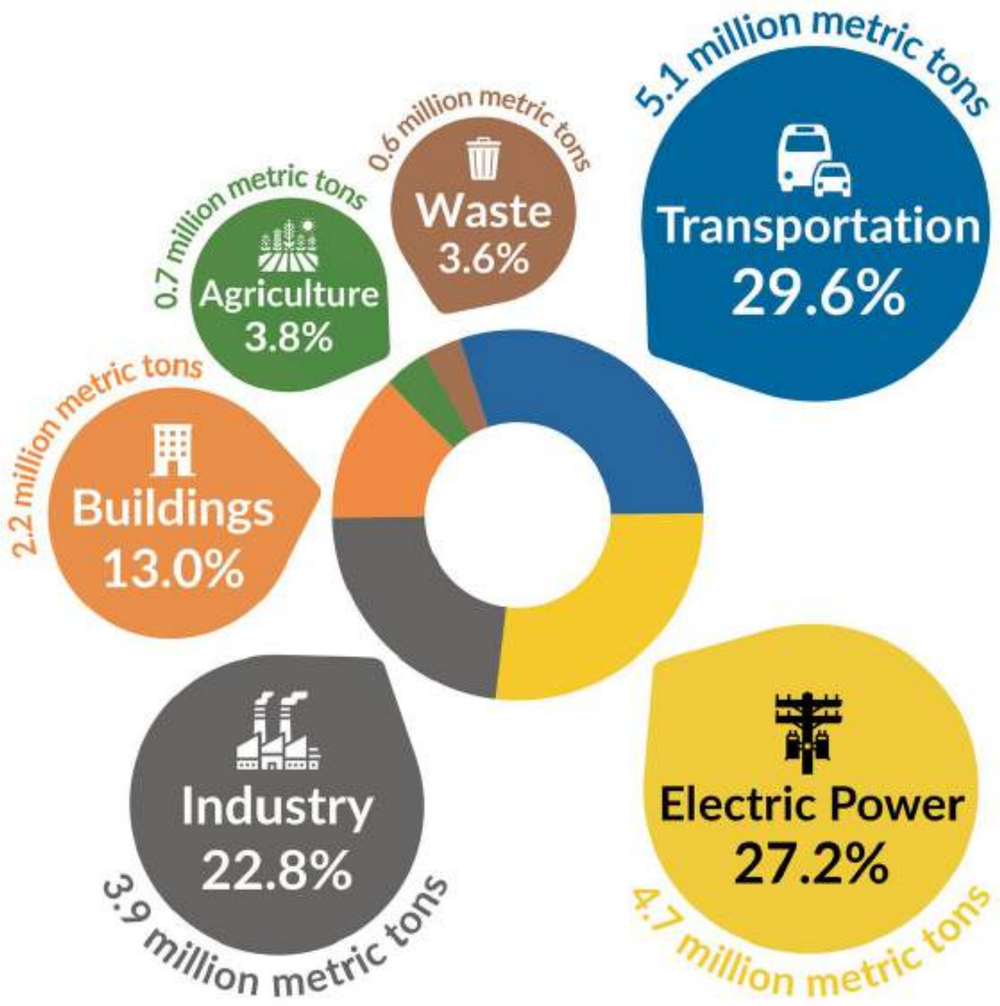


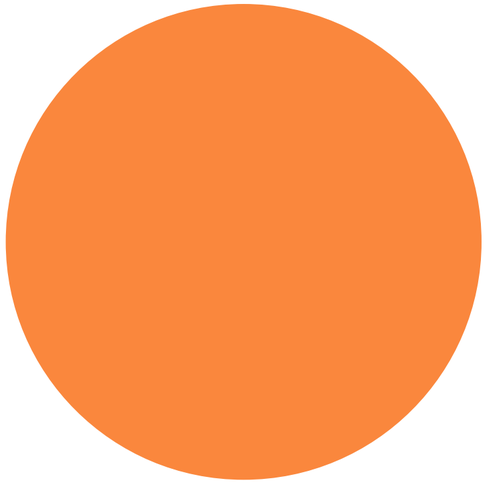
Figure 1. Greenhouse gas emissions by sector in 2022

Note: Electric power represents emissions from in-state electricity generation and out-of-state imports.

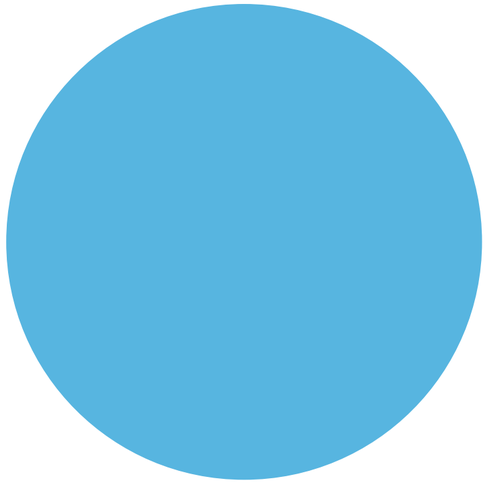
Climate Impacts in Delaware

Climate change in Delaware is **here and now**, with intense storms, heat waves, and flooding emergencies happening more frequently and projected to become increasingly common in the future.

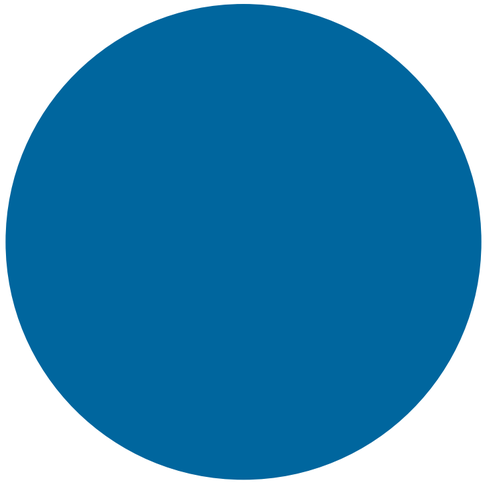
In Delaware, the most prominent impacts of climate change are:



Increased Temperatures



Sea Level Rise



More Frequent Intense Storms

Statewide Climate Change Perceptions

In 2025, Delaware residents were surveyed about their views on climate change, including whether they believe in it and how serious they believe the impacts are.

79%

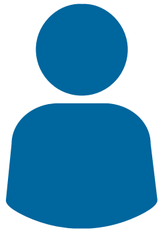
are convinced that climate change is happening



58%

66%

believe the state can take more action to reduce climate change



58%

79%

55%

have personally experienced local impacts of climate change

To view the full survey report, please visit: **de.gov/climatesurvey**

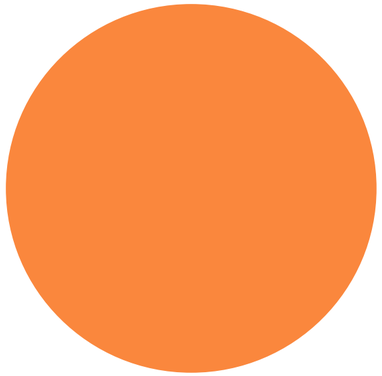
Delaware Climate Action Plan



A tree planting event hosted at the Blackbird Creek Reserve in Townsend, Delaware.
Photo credit:
DNREC

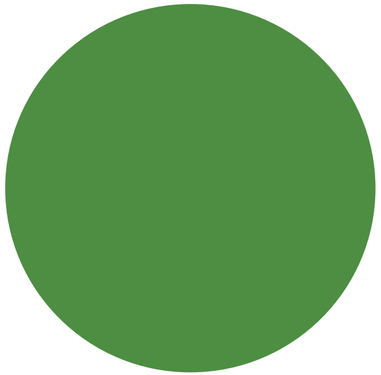
Climate Change Solutions Act of 2023

The Climate Change Solutions Act of 2023 (HB 99) established the framework for statewide climate leadership and action:



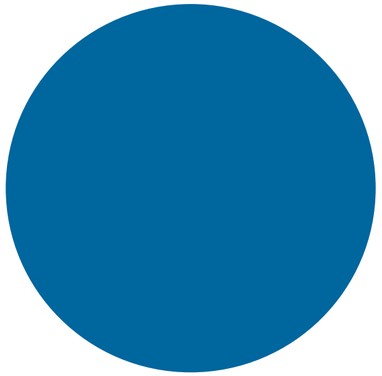
CLIMATE ACTION PLAN

Requires DNREC to publish an updated Climate Action Plan every five years



GHG REDUCTION TARGETS

Established statewide greenhouse gas reduction targets (net-zero by 2050)



CLIMATE OFFICERS

Designated Climate Officers from each cabinet-level state agency

Plus, an implementation report every two years

The 2025 Delaware Climate Action Plan

Published January, 2026, the **2025 Delaware Climate Action Plan** was developed by DNREC's Division of Climate, Coastal and Energy, in collaboration with technical experts, stakeholders and Delaware residents.

It is a practical playbook to:

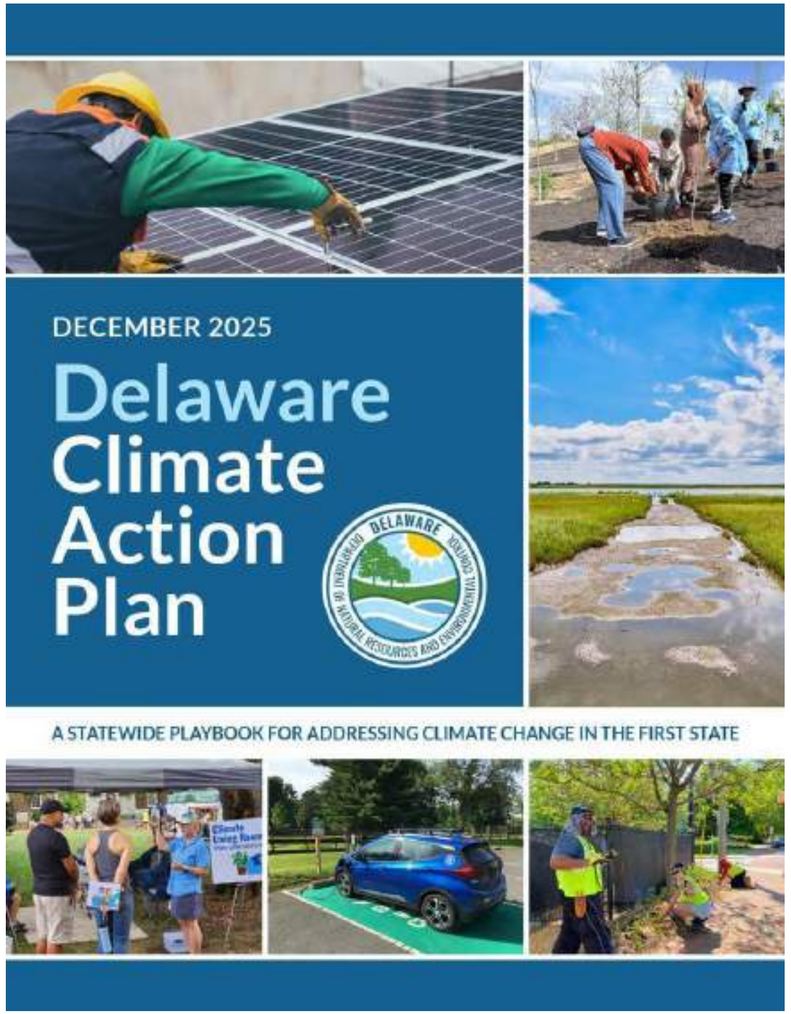
- Reduce greenhouse gas emissions
- Protect communities from the impacts of climate change

The plan includes the following sections:

Transportation | Industry | Energy | Buildings | Waste | Forests & Trees

Oceans & Wetlands | Agriculture | Land Use | Extreme Heat | Emergent Hazards

SLR, Precipitation, & Inland Flooding | Comprehensive Resilience | Workforce Development



Pathway Toward Net-Zero Emissions

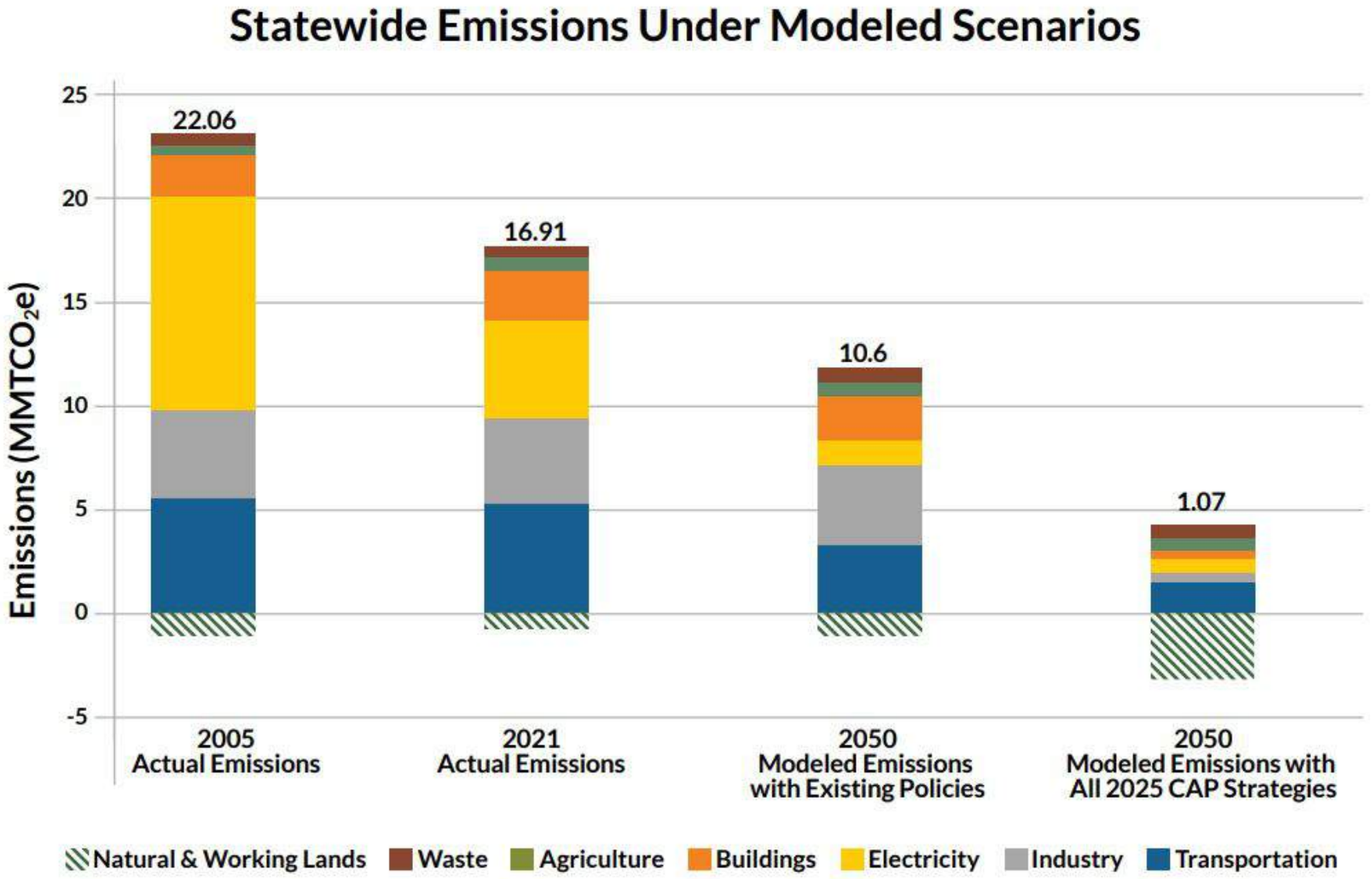


Figure 1. Economy-wide net greenhouse gas emissions under modeled scenarios.

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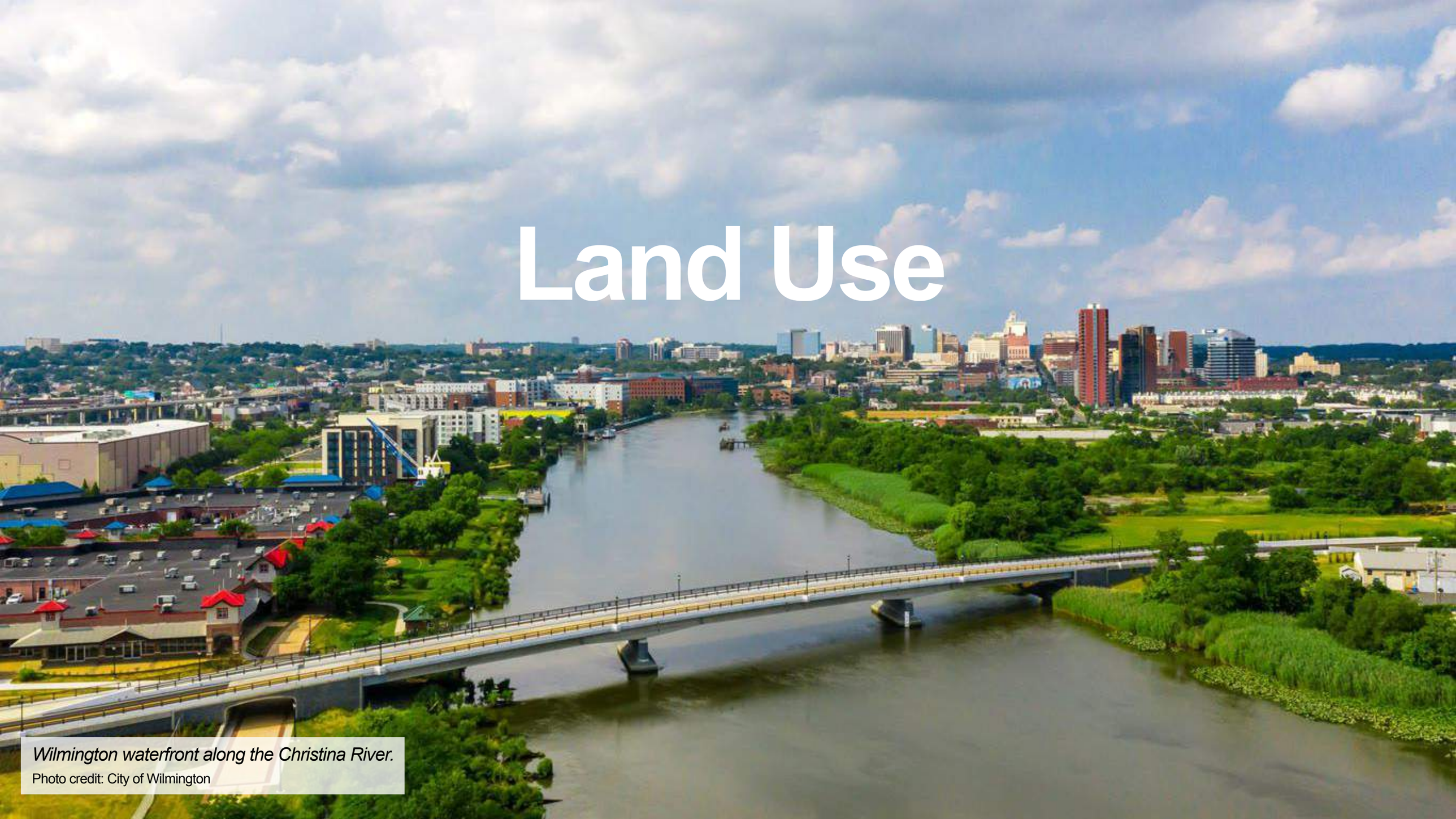
Land Use



Wilmington waterfront along the Christina River.

Photo credit: City of Wilmington

Land Use Goals and Climate Change

Three primary intersections exist between land use choices and climate change:

Intersections



Development patterns and transportation emissions



Preservation of ag and natural lands for sequestration and resilience benefits



Avoidance of development in high-risk areas

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Construction & Land Use Practices

Delaware is a **“home rule”** state so land use decisions (e.g. zoning laws, master plans, and development regulations) are made at the municipal / county level.

There is **no uniform building code** across the state.

- Certain standardized regulations for specific trades like plumbing and energy systems are enforced.

We are seeing **record levels of new construction**, particularly in Sussex county.

- Ranks third among all U.S. coastal counties regarding the number of homes built in risky locations. Ocean at the Door: New Homes and the Rising Sea

Current Challenges

1. Lack of consistency means there's no single statewide standard for housing density, parking, forest preservation, buffers and floodplains.

2. Suburban development patterns increase car dependency and emissions from transportation.

3. Loss of farmland, forests and wetlands reduces resilience opportunities and mitigiation opportunities to store and sequester carbon dioxide.

4. Continued development in or near floodplains



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Emerging Opportunities

1. Promote dense, connected, multimodal-friendly communities

2. Remove barriers to infill development

3. Preserve Delaware's farms, forests and wetlands

4. Avoid new development in flood-prone areas



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CAP Actions for Sustainable Land and Water Use



Protect and enhance forests, ag lands and wetlands.

Enact riparian buffer laws.

Preserve and acquire land for marsh migration.

Incorporate future climate condition in the Beach Preservation Act.

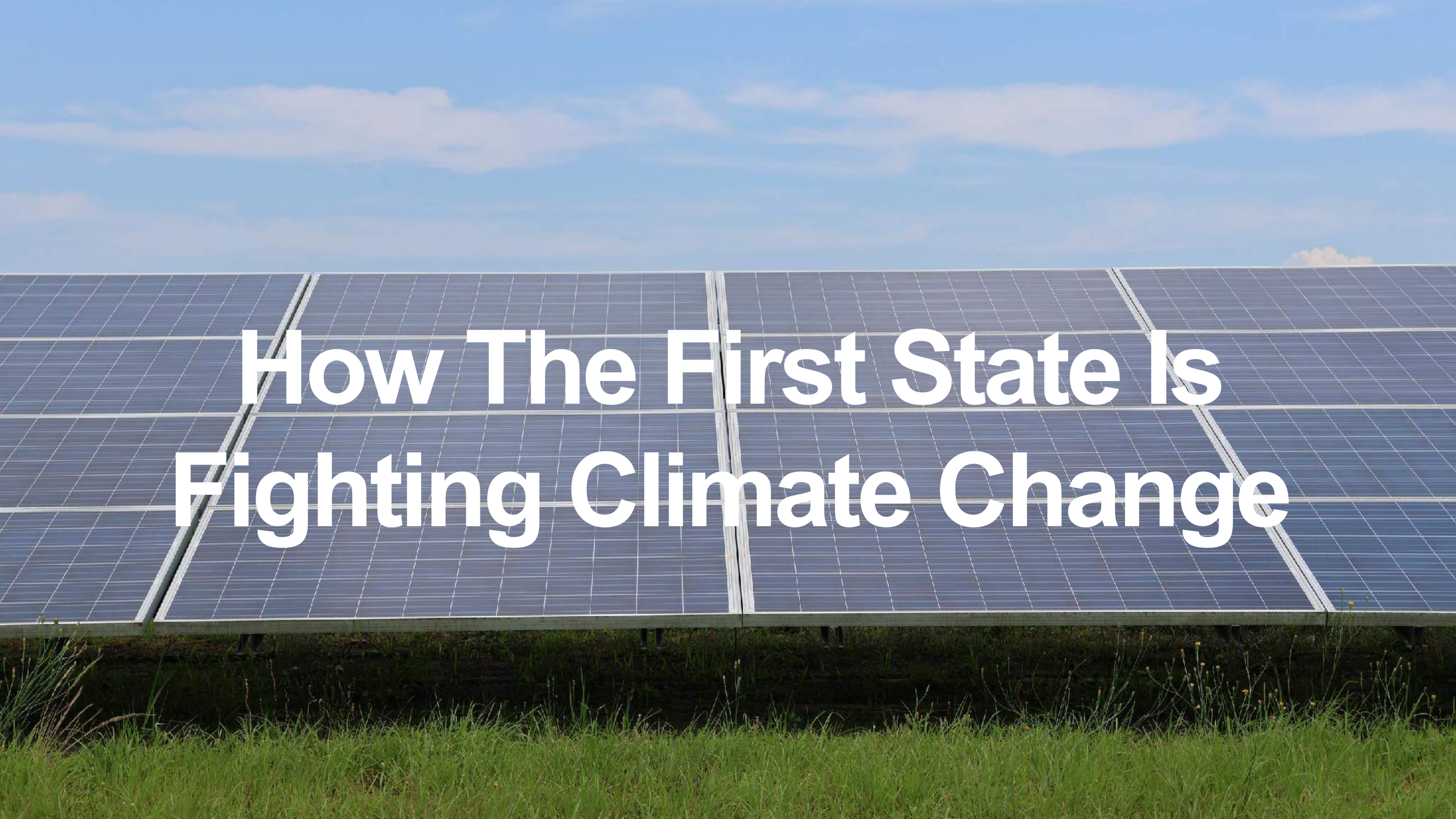
Develop county drought indicators and metrics.

Research/monitor effects of coastal acidification.

Protect and maintain water infrastrucuture.

Protect homes and buildings from flooding.

Support building designs to reduce heat.



How The First State Is Fighting Climate Change

Land Conservation & Resilience

Land Conservation & Resilience

LEGISLATIVE ACTION

FRESHWATER WETLANDS PROTECTION ACT (SB9)

Establishes Delaware's first comprehensive state program to **protect freshwater wetlands**, while creating a **clearer permitting** process.

SUSSEX COUNTY FOREST PRESERVATION (NO. 4085)

Establishes **mandatory tree retention and mitigation rules** for new development. Effective this December, developers must **preserve at least 30%** of existing forested land in designated **growth areas** and **50% in rural or unzoned** parts of the county.



TEDI program native tree planting | **Credit: DNREC**

Land Conservation & Resilience

PROGRAMS, PROJECTS, AND

DELAWARE AGRICULTURAL LANDS PRESERVATION PROGRAM

The Delaware Agricultural Lands Preservation Program has permanently **preserved roughly 30%** of all available farmland in Delaware.

DELAWARE FOREST ACTION PLAN

The Delaware Forest Service developed a 10-year framework with strategies for state owned urban and rural landscapes, specific financial assistance, and volunteer workforce programs to achieve sustainability goals.

- Since 2024, over 250,000 trees added to Delaware's landscapes.

THE TREE FOR EVERY DELAWAREAN INITIATIVE (TEDI)

The state’s TEDI Program surpassed 500,000 plantings toward a **goal of reaching 1 million trees planted** by 2030.

Land Use Planning

CLIMATE CHANGE CONSIDERATIONS IN COMPREHENSIVE PLANS (SB237)

Requires local governments and municipalities to **consider the impacts of climate change** in their comprehensive planning.

ZONING AND LAND USE REFORM (SJR8)

Created pilot program to help jurisdictions with **zoning reform to accelerate housing** quantity and diversity.

HOUSING FOR EVERY DELAWAREAN ACT (SB23)

Requires jurisdictions to **plan for affordable housing** and requires zoning changes.

ESTABLISHMENT OF A DISASTER RECOVERY FUND (SB 310)

The fund will provide resources for **short-term recovery needs** following an extreme event, allowing Delawareans to more quickly access help for housing assistance, repair and reconstruction of homes and other short-term needs.

Opportunities

DISASTER HOUSING MAPPING WORKSHOP

Free Half-Day Workshop

- Learn about hazards affecting your municipality
- Identify must vulerable communities
- Locate potential interim housing sites

Contact:

vanessa.cullen@delaware.gov

RESILIENT COMMUNITIES PARTNERSHIP

- Helps municipalities plan and prepare for hazards
- Free technical assistance
- Small scale grants for restoration and resilience planning

Contact:

jordana.cutajar@delaware.gov

THANK YOU!

Does anyone have any questions?

jordana.cutajar@delaware.gov

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Extra Slides

Future Temperature Projections



Averaging 59°F

2024 was the warmest year on record globally

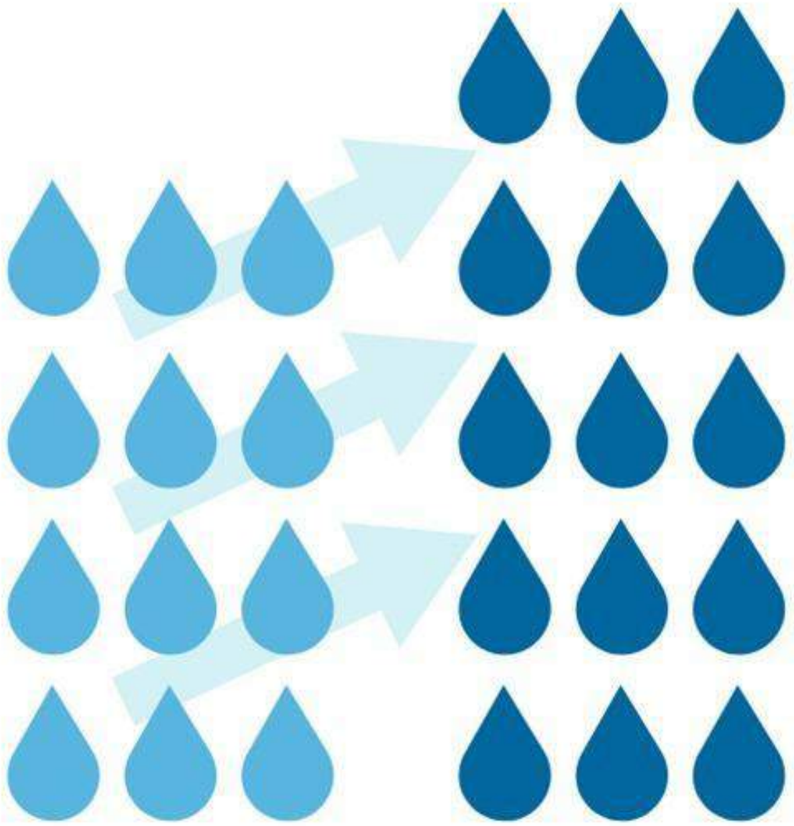
+3 to 4 °F

in average temperature by mid-century

+5 to 9 °F

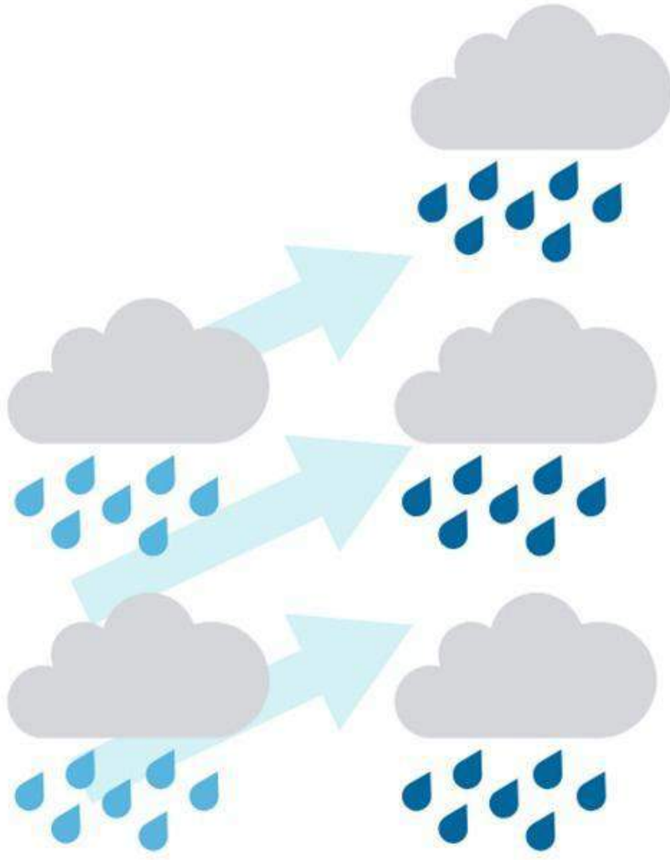
in average temperature by end of century

Future Precipitation Projections



44 inches
historically

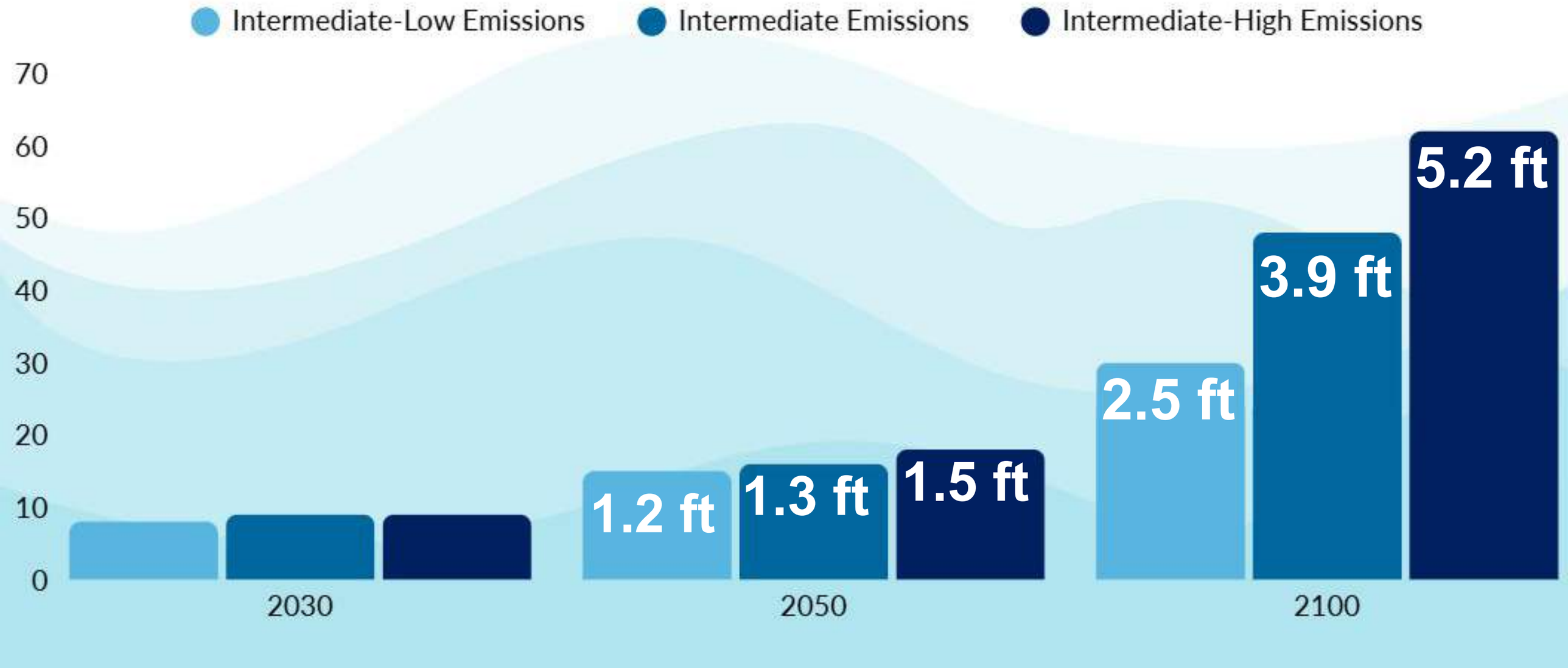
46-48 inches
by 2100



12 days
historically

13-14 days
by 2100

Future Sea Level Rise Projections



These Changes Are Having Many Impacts Across Delaware

INFRASTRUCTURE DAMAGE

Damage from extreme storms, flooding and extreme heat to roads, buildings and green infrastructure.

and green infrastructure.

ENERGY SYSTEM STRESS

Changes in energy burdens for customers and power disruptions from storms and flooding.

LAND LOSS

Loss of natural habitats and agricultural lands along with saltwater intrusion into soil and irrigation wells.

COST INCREASES

Damage from extreme storms, flooding and extreme heat to roads, buildings and green infrastructure.

HEALTH RISKS

Increase in negative health impacts like asthma, heat stress, and insect-borne diseases, like Lyme disease.

These examples only cover some of the impacts from climate change happening now and in the future.

Climate Action Has Co-Benefits



Less flooding



Cleaner air



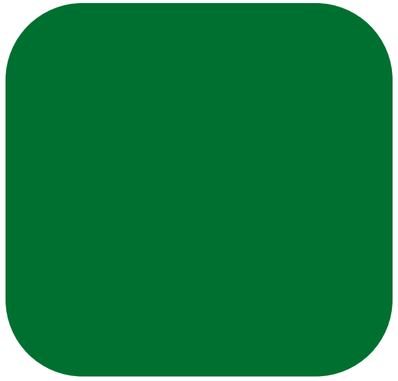
Walkable, bikeable communities



More good-paying, green jobs



Less disease spread



More trees and green space



Improved housing quality



Improved mental health and wellbeing