



Environmental Literacy **SUMMIT**

*Preparing our Schools for a
Changing Landscape*

November 1, 2023



Environmental Literacy

Having the knowledge, skills, and disposition to solve problems and resolve issues individually and collectively in a way that creates and maintains environmental and social well-being.



ENVIRONMENTAL LITERACY GOAL

Enable students in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed



STUDENTS ● ● ●

Hands-on student experiences (MWEEs)

SCHOOLS ● ● ●

Sustainable school buildings, grounds, & operations

PLANNING ● ● ●

Supportive policies and metrics at state & district level



OUR CORE PRINCIPLES

SYSTEMIC

Reaches the entire student population in one or more grades within a school district

EQUITABLE

Accessible to all students with thoughtful differentiation

SUSTAINABLE

Embedded into school district curriculum and supported with district resources

SCHOOL DISTRICT LEADERSHIP IS ESSENTIAL!

HOW IS IT GOING?

ENVIRONMENTAL LITERACY INDICATORS

Check out your state folders!

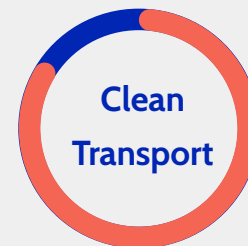
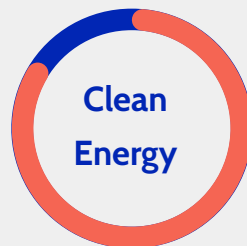


BUILDING GREEN CAREER PATHWAYS



Preparing students for jobs in the clean economy
&
Integrating environmental sustainability across
all career pathways

HIGH IMPACT ACTIONS FOR SUSTAINABLE SCHOOLS



AGENDA

- 9:00 Welcome
- 9:30 Changing Conditions in the Chesapeake Bay Region
- 9:45 Prince George's County Panel
- 10:20 Break
- 10:30 Building Green Career Pathways
- 12:00 Networking Lunch
- 12:45 High Impact Actions for Sustainable Schools
- 2:15 Beyond 2025: The Future of the Chesapeake Bay Agreement
- 2:30 Breakout Discussions
- 3:00 Report Outs & Next Steps
- 3:30 Adjourn





**Jabari Walker,
Bowie State University**

**Secretary Josh Kurtz,
Maryland DNR**



MILTON M. SOMERS
MIDDLE SCHOOL

**Dr. Monica Goldson,
Maryland State Board
of Education**





**Tom Di Liberto,
NOAA Climate Scientist
and Public Affairs
Specialist**

Climate and the Chesapeake

Tom Di Liberto

*NOAA Scientist &
Communications Specialist*



Q: What is Weather?

A: The current state of the atmosphere in a particular time and place.



Image Source: [NOAA Photo Library](#)



Q: What is Climate?

A: The long-term average of weather in a selected geography.

Image Source: [NASA](#)

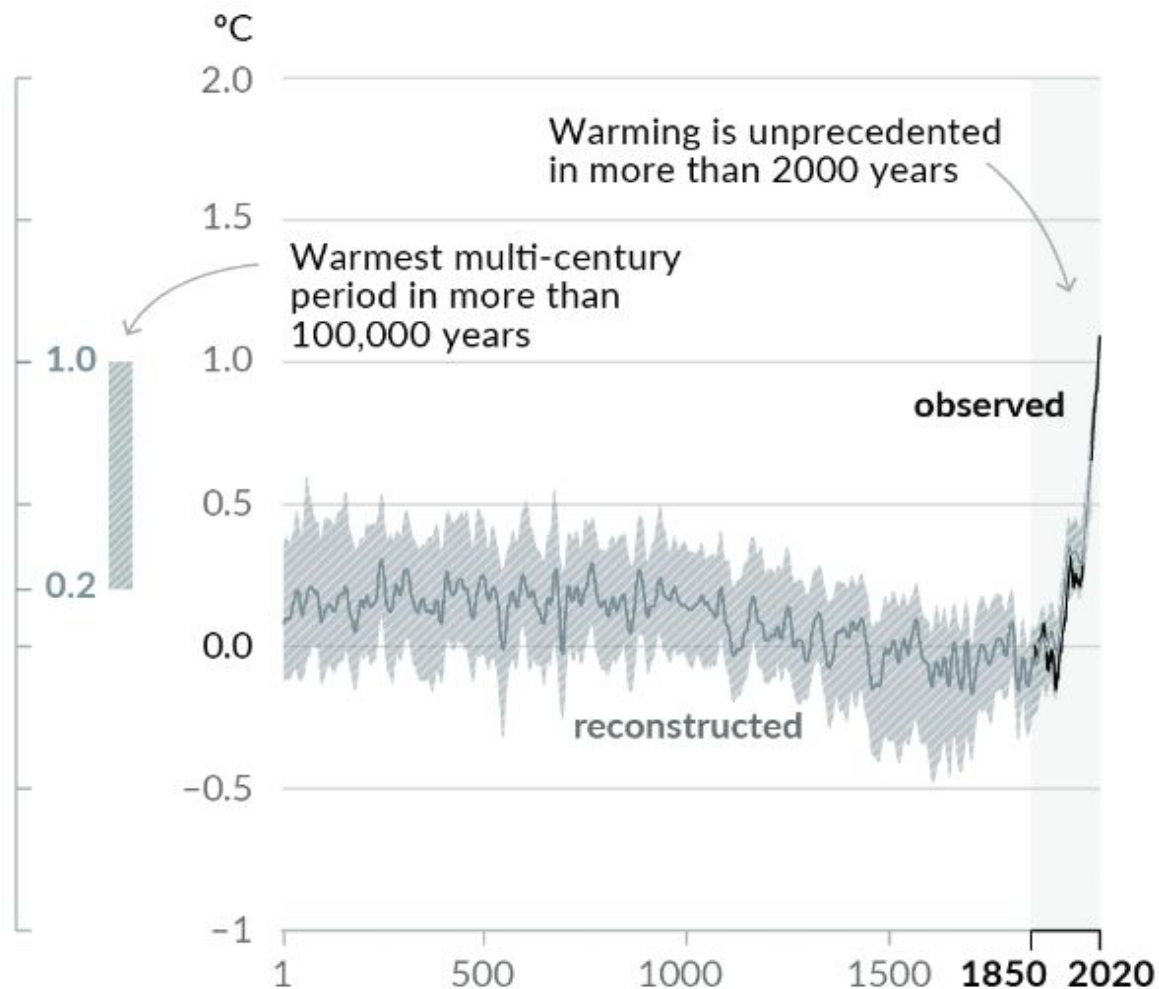


Observed and Projected Climate Changes

Big Questions: How has the climate changed so far?
How do we know? How do experts expect it to change
in the future?

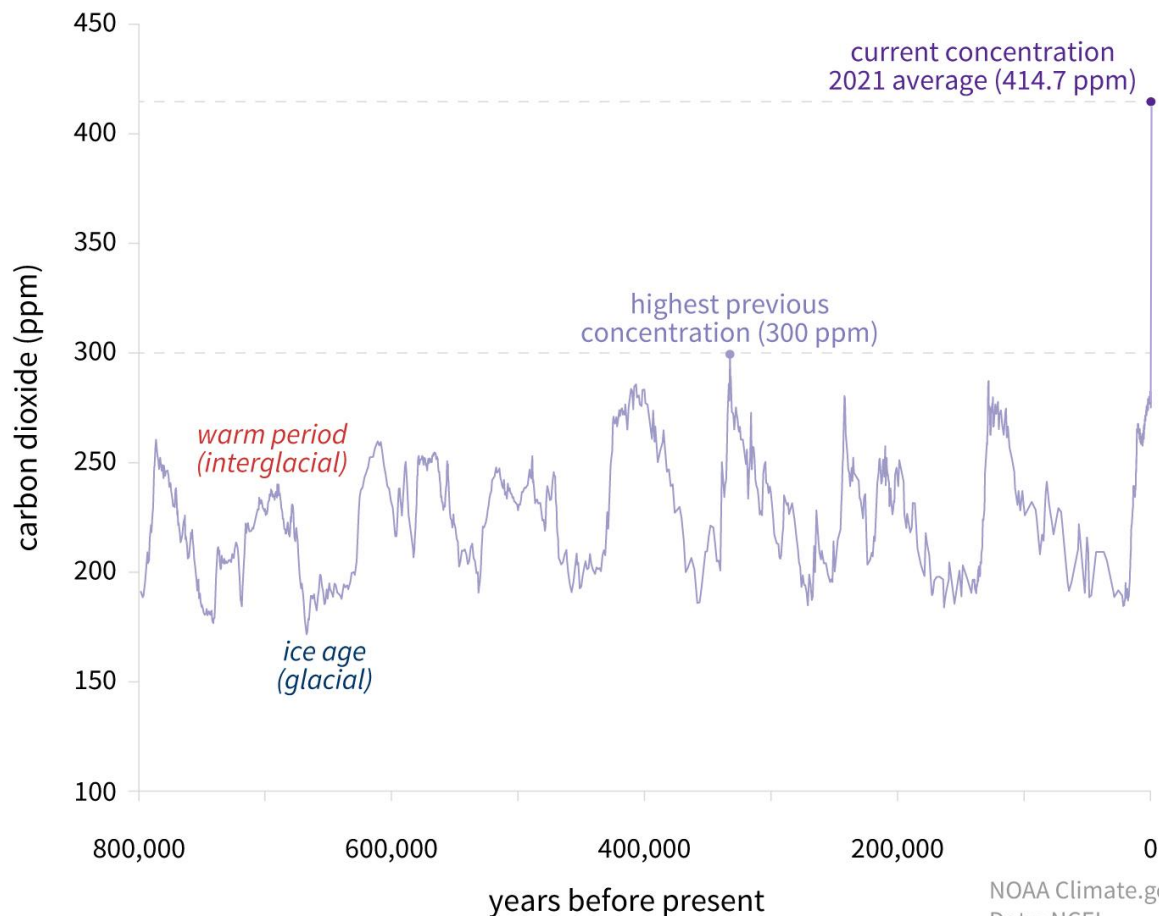


Why Is Earth Warming So Rapidly Today?



A Partial History of CO₂ on Earth

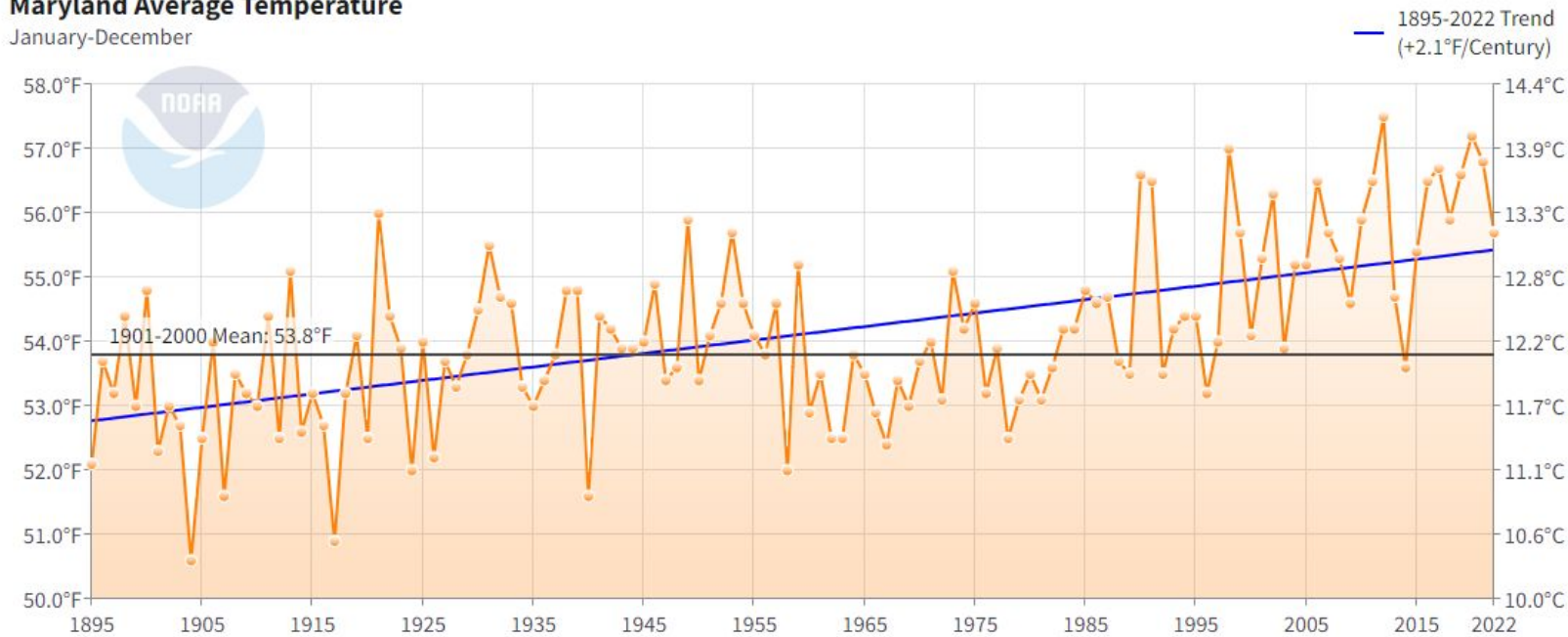
CARBON DIOXIDE OVER 800,000 YEARS



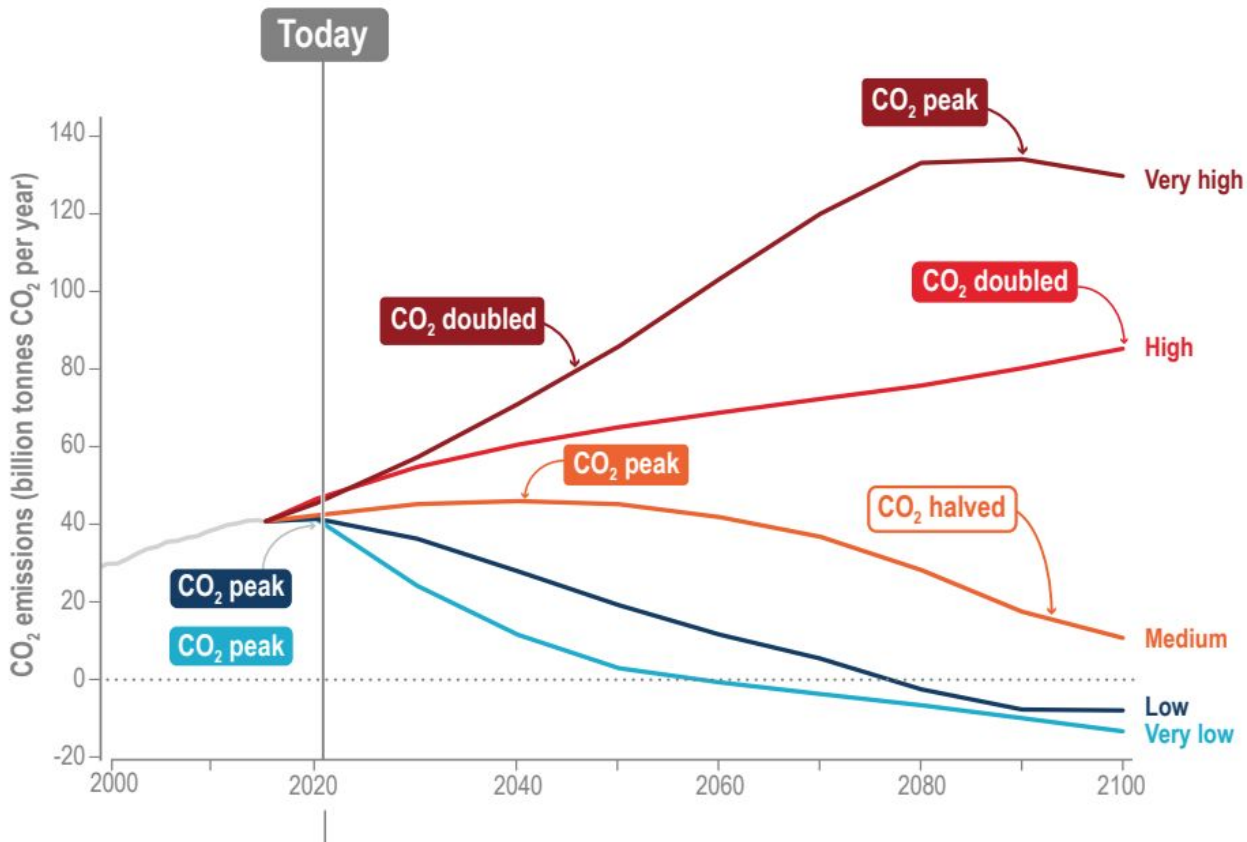
Maryland annual temperature trend

Maryland Average Temperature

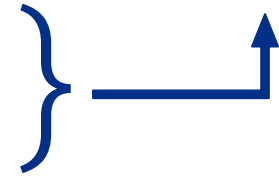
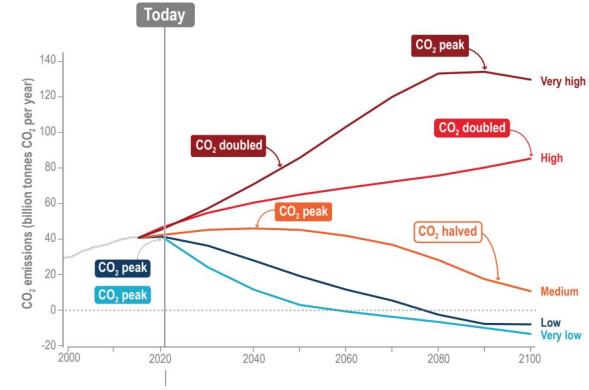
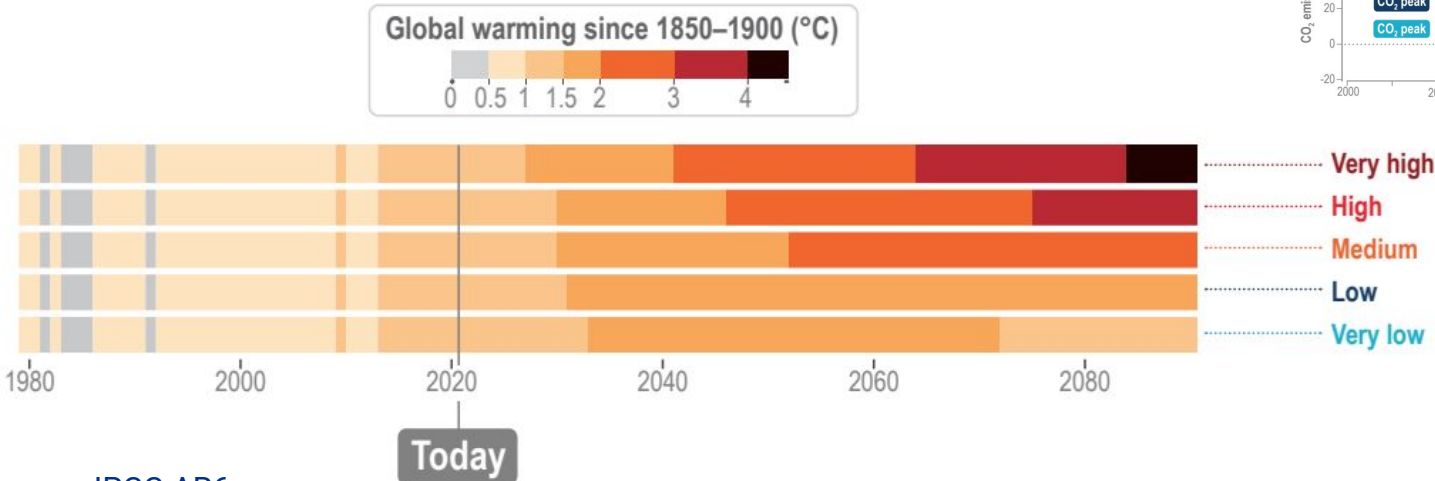
January-December



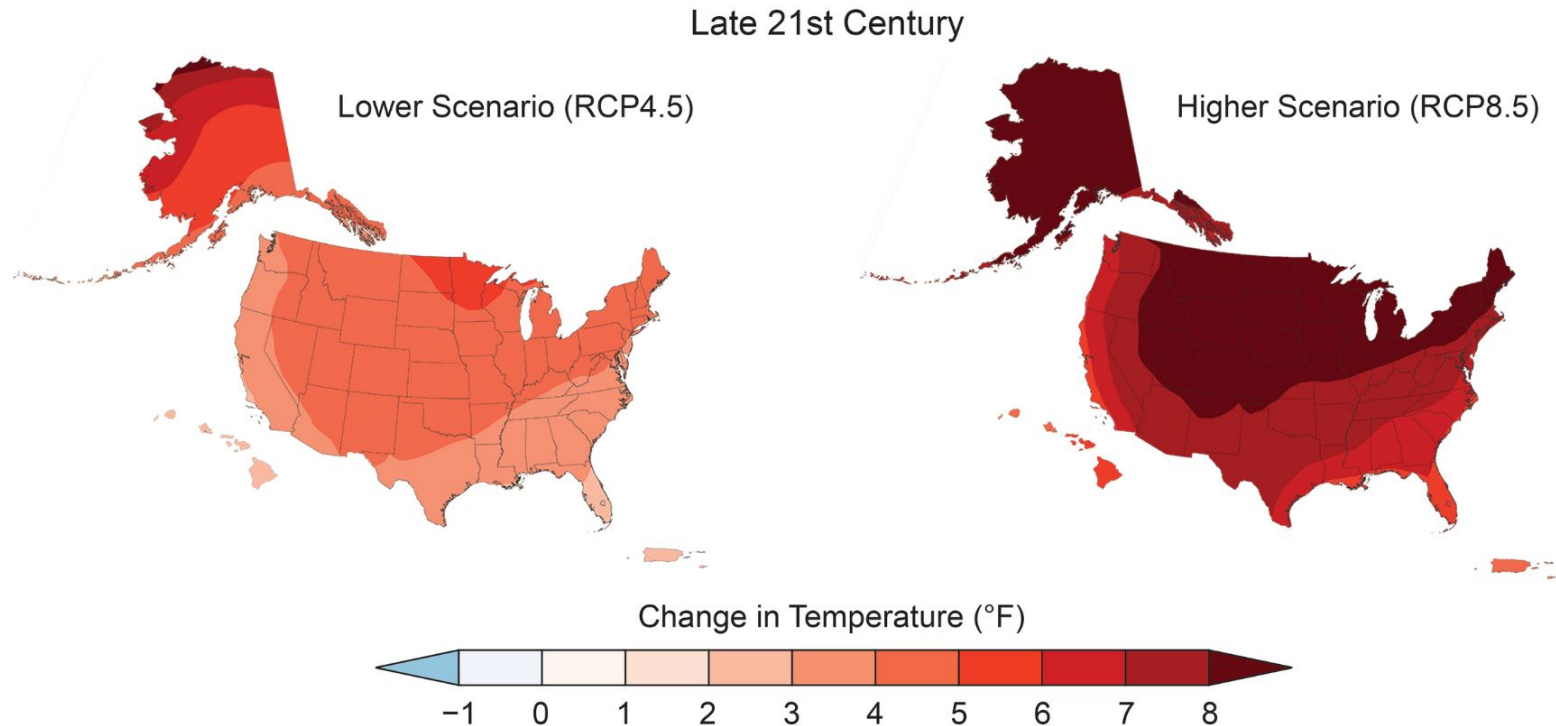
Possible Future Scenarios of CO₂ Levels



Global Temperature Projections

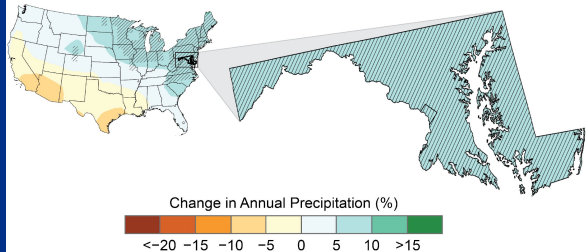


Projected warming by 2100

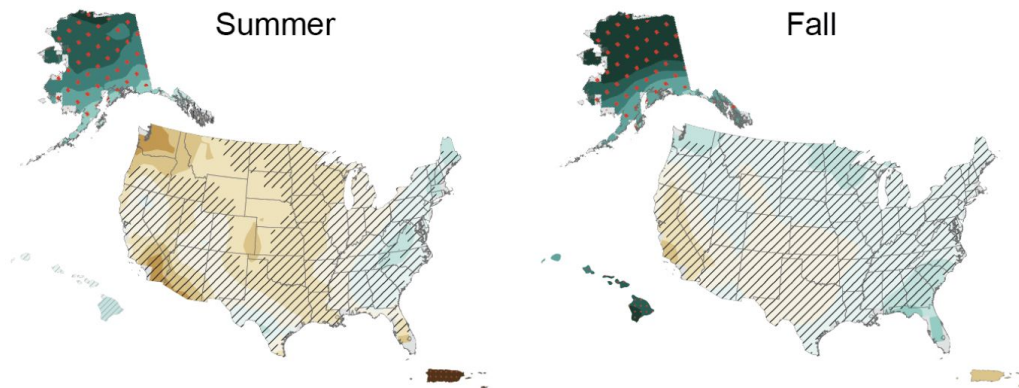
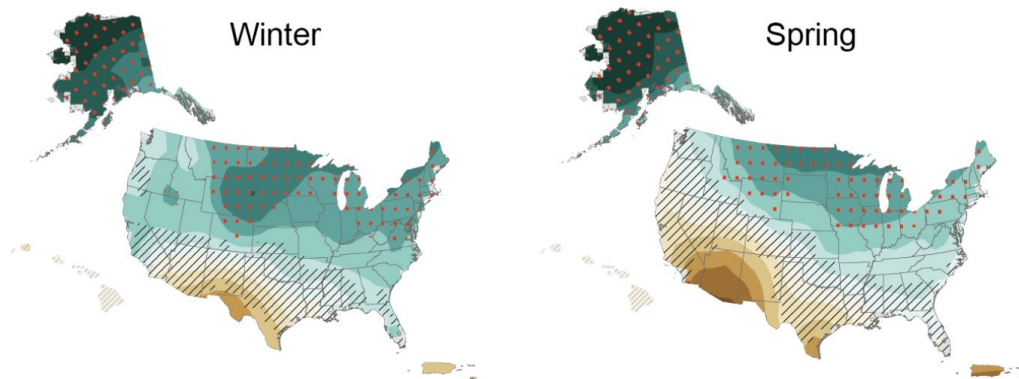


Projected precipitation shifts by 2100

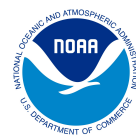
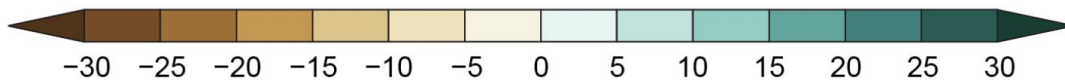
Projected Change in Annual Precipitation



Late 21st Century, Higher Scenario (RCP8.5)



Change in Precipitation (%)

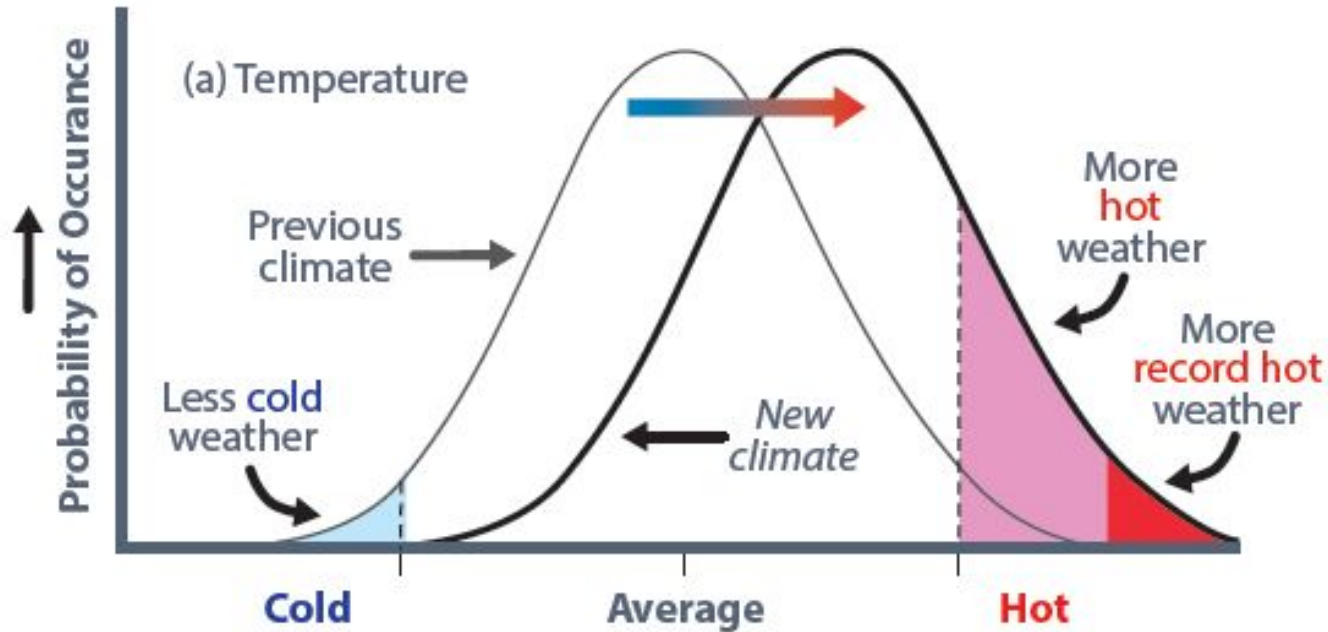


Climate Change Impacts

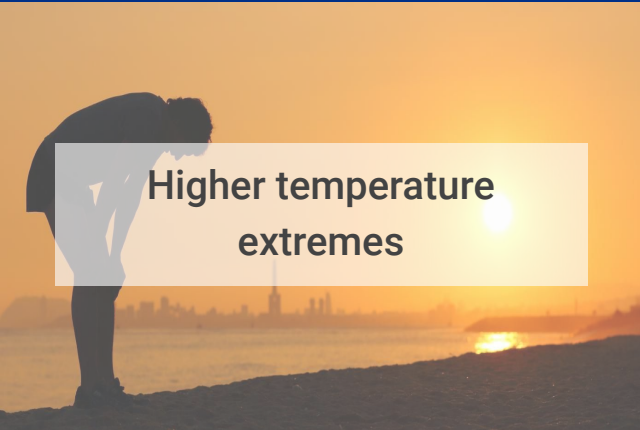
Big Questions: How is our world being impacted? Will I be affected? What does climate change look like where I live?



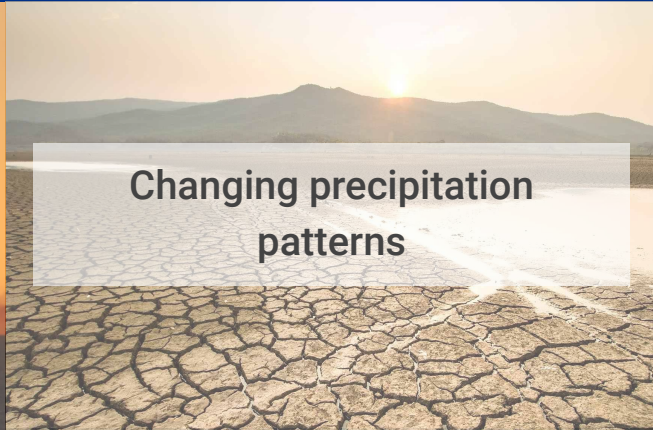
Why the shift in extremes?




We're already experiencing a warmer world



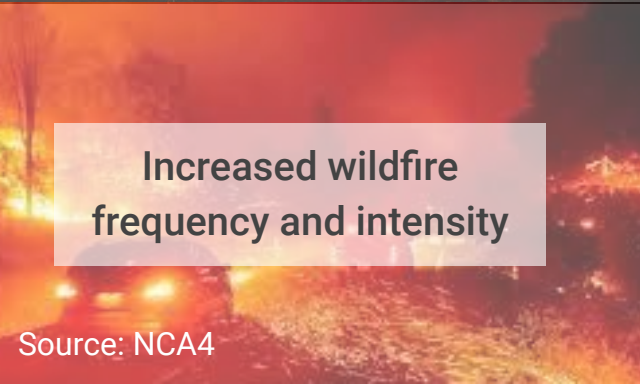
Higher temperature extremes



Changing precipitation patterns



Increased rainfall intensity



Increased wildfire frequency and intensity



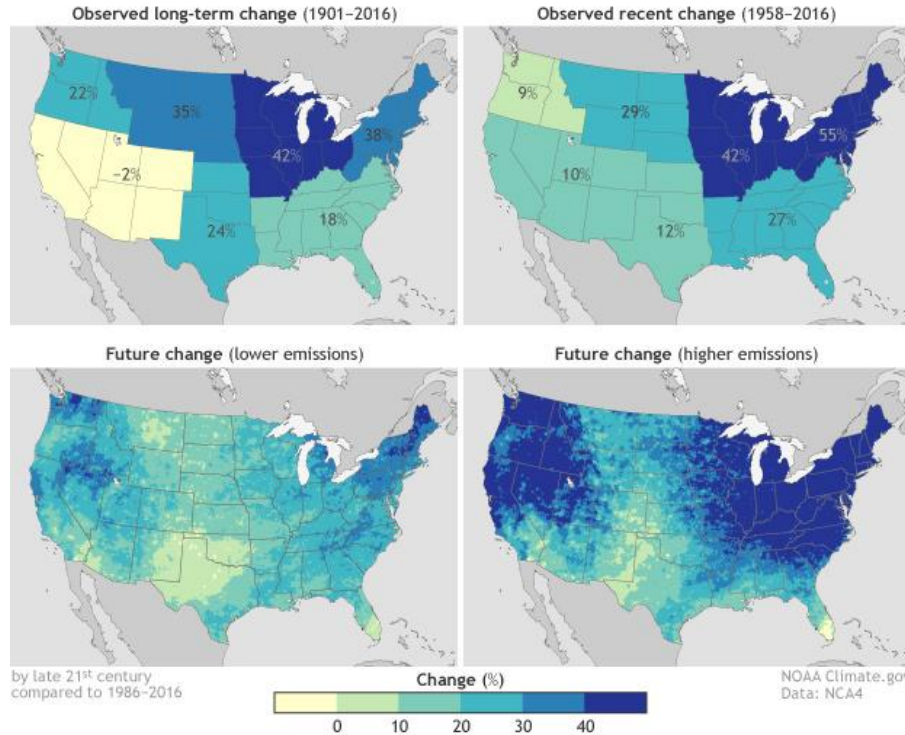
Stronger storms



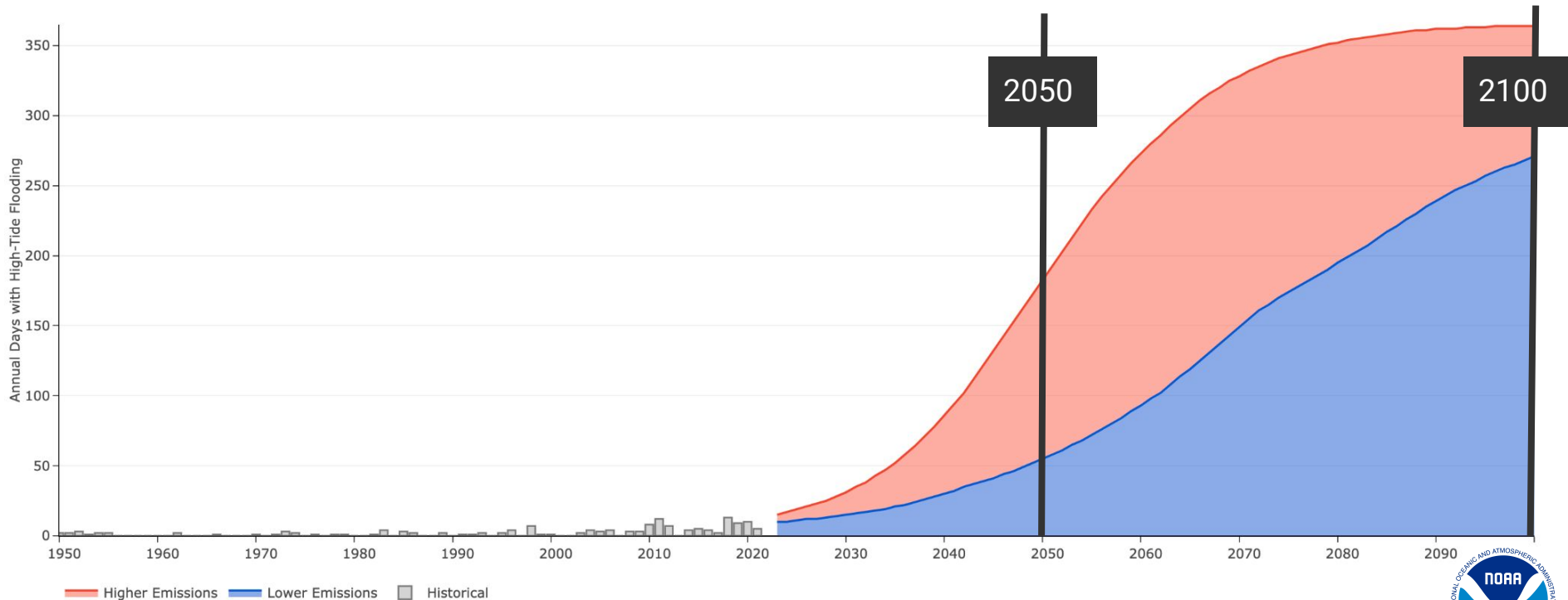
Rising sea levels

Increasing heavy precipitation

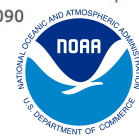
Change in extreme precipitation across the United States



How We Experience Climate Impacts: High-tide Flooding in Baltimore



Source: NOAA Climate Explorer





Source: NOAA Sea Level Rise Viewer

COMMUNITIES OF COLOR

Some communities of color living in risk-prone areas face cumulative exposure to multiple pollutants.

Adaptation plans that consider these communities and improve access to healthcare help address social inequities.

OLDER ADULTS

Older adults are vulnerable to extreme events that cause power outages or require evacuation.

Checking on elderly neighbors and proper emergency communication can save lives.

CHILDREN

Children have higher risk of heat stroke and illness than adults.

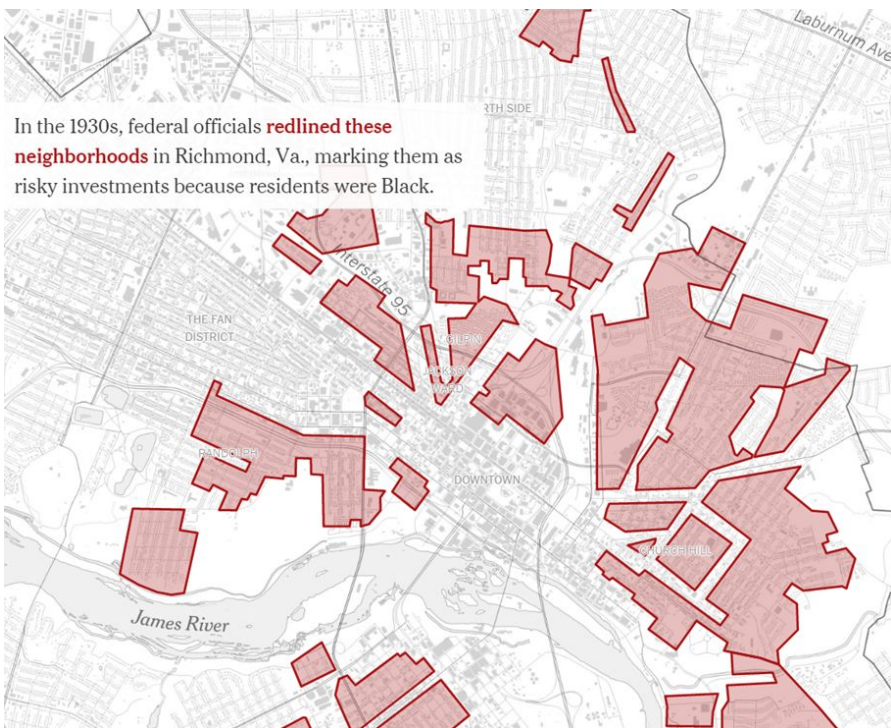
Adults can lessen risk by monitoring exertion and hydration.

LOW INCOME COMMUNITIES

Low income families are at risk of physical and mental illnesses during flooding and in crowded shelter conditions.

Comprehensive disaster management can improve resiliency for people with limited resources.

Climate impacts are not experienced equally



Source: New York Times, "How Decades of Racist Housing Policy Left Neighborhoods Sweltering," August 24, 2020.

How We Respond

Big Questions: At this stage, what actions can be taken to mitigate and adapt to climate change and its impacts? Why do we need to take action?



Q: How can we avoid the worst impacts of climate change?

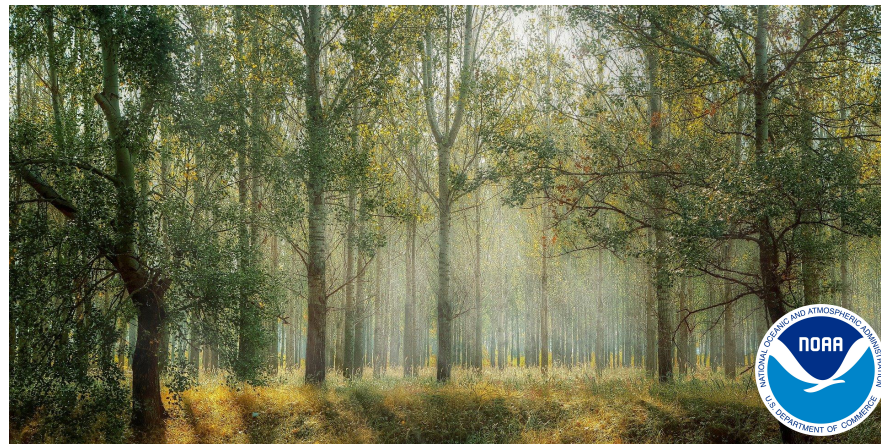
A: Mitigation and adaptation

Image Source: NOAA



Mitigation Actions With the Largest Impact by 2030

1. Deploying solar energy
2. Conserving existing ecosystems
3. Deploying wind energy
4. Carbon sequestration through agriculture
5. Restoring ecosystems
6. Fuel switching in industry
7. Electric and fuel efficient cars, trucks, and buses
8. Shifting to sustainable diets
9. Efficient building codes
10. Improving forest management



Examples of Adaptation Strategies

Water

- Water conservation
- Increasing permeable surfaces

Built Environment

- Planting urban trees
- Changing development patterns

Ecosystems

- Prescribed fires
- Habitat restoration

Health

- Investing in public health
- Building cooling centers

Transportation

- Raising or moving infrastructure
- Building evacuation routes

Energy

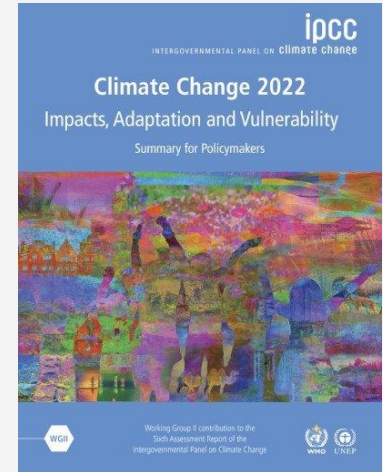
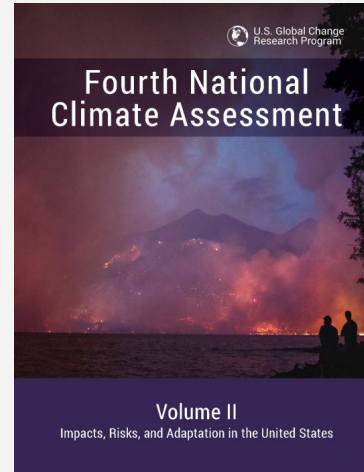
- Renewable energy
- Microgrids and batteries

Marine

- Relocating away from coasts
- Building living shorelines
- Oyster restoration



Where can I go to learn more?



climate.gov
toolkit.climate.gov
nca2018.globalchange.gov
ipcc.ch



Key Takeaways

1. Scientists agree: humans are causing our world to warm at an unusually rapid rate.
2. Climate change is increasingly harming human health, the economy, built environments, and natural ecosystems.
3. Climate change impacts everyone, but its impacts are generally experienced first and worst among disadvantaged and underserved communities.
4. **We can avoid the worst impacts of climate change – we're already working on it, but we need to accelerate our efforts.**



Questions?

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tom.diliberto@noaa.gov

Follow us!

@noaclimate on Instagram

@NOAAClimate on Twitter

@NOAA Climate.gov on Facebook



PRINCE GEORGE'S COUNTY

IDEAS IN ACTION

Facilitator:

Tom Ackerman

Chesapeake Bay Foundation

Panelists:

Donald Belle

Prince George's County Public Schools

Jean-Paul Cadet

Prince George's County Public Schools

Adriana Caldarelli

Prince George's County Department of Environment



BUILDING GREEN CAREER PATHWAYS

Jon Wickert

Career & Technical Education &
STEM Initiatives,
Delaware Department of Education



Session Goals

- Learn from leaders about career & workforce development programs that support emerging needs as we transition to a carbon-neutral future
- Develop a shared understanding of how decisions are made within states and opportunities to engage in this process
- Identify strategic actions that will result in more robust opportunities for students

Session Agenda

National perspective on career/workforce development opportunities and programming:

Luke Rhine – US ED Office of Career, Technical and Adult Education

Panel: Career Programming Exemplars

- **Dan Hinderliter – Advance CTE**
- **Mary C. Keller – MD Department of Labor**
- **Michael Piaskowski – PA Department of of Conservation & Natural Resources**

State Breakout Discussions

Climate Policies, Plans and Jobs

Pennsylvania - PA Climate Action Plan (2021)

- Update aging stormwater infrastructure to be more resilient to climate change

Maryland - Climate Solutions Now Act (2022)

- 100% Clean Energy by 2035

Delaware - Climate Change Solutions Act (2023)

- Climate change officers in cabinet-level departments

District of Columbia - Keep Cool DC (2022)

- Design for Heat - new buildings and development decrease UHI effect

Virginia - VA High Performance Building Act (2021)

- New state buildings designed, constructed, verified, and operated to comply with the high performance building certification program

West Virginia - Clean Cities Program


- Deploys technologies and practices including idle-reduction equipment, electric-drive vehicles, fuel economy measures, and renewable and alternative fuels

BUILDING GREEN CAREER PATHWAYS

Luke Rhine

Ofc of Career, Technical & Adult Education
U.S. Department of Education





Connecting High School, Higher Education, and Workforce Systems

Luke Rhine
Deputy Assistant Secretary,
Office of Career, Technical, and Adult Education



Agenda

Investing in America

Connecting Education and Workforce

Building Partnerships

Taking Action

Investing in America



[Investing in America](#) is mobilizing historic levels of public and private sector investments across the United States, creating new, good-paying jobs.

- **Bipartisan Infrastructure Law (BIL)** allocates \$1.3 trillion across 350 distinct programs focused on infrastructure, transportation, climate and the environment, and broadband - see the [Guidebook](#) and [Build.gov](#) to sort and filter programs.
- **CHIPS and Science Act (CHIPS)** allocates roughly \$280 billion in new funding to bolster US semiconductor capacity, catalyze R&D, create regional high-tech hubs, and create a more inclusive STEM workforce - see the [Factsheet](#).
- **Inflation Reduction Act (IRA)** allocates \$370 billion to support clean energy, climate mitigation and resilience, agriculture, and conservation-related investment programs - for program specific details see the [Guidebook](#) - and [Open Funding Opportunities](#).

Education and Workforce



Multiple federal funding streams to support education - to - employment system development, designed to work alongside state and local investments.

- **Every Student Succeeds Act (ESSA)** allocates \$29.4 billion to states to implement nine (9) main title programs impacting state standards and assessment, school accountability, school and student supports, and other programs.
- **Career & Technical Education (Perkins)** allocates \$1.4 billion to states to support secondary (middle and high school) and postsecondary CTE, impacting more than 12 million students nationally.
- **Workforce Innovation & Opportunity Act** allocates \$7.6 billion to states to implement four (4) main title programs impacting adult and dislocated workers, youth programs, adult education and family literacy, employment services, and rehabilitation services.
- **Other funding sources** by federal agency can be reviewed here: [Commerce](#); [Education](#); [Energy](#); [Labor](#); and [Transportation](#).

Types of Partnerships



Examples of different types of career pathways strategies lead by state and municipal leaders to position youth within the center of their education and workforce efforts.

- **Delaware Pathways** is a [partnership](#) across multiple state agencies, the state community & technical college system, multiple community-based organizations, and the state workforce board to create a career pathways system for youth.
- **Long Beach Promise** is a [partnership](#) across the school district, city college, state university, and municipality to ensure that every young person has the support that they need to unlock their full potential.
- **NYC Career Readiness** is a [partnership](#) across city government, community-based organizations, and employers to reimagine the student experience by centering career-connected learning within every high school

Taking Action



Recommendations for education and workforce leaders.

- **Partnerships** includes multi-state partnerships, partnerships across state agencies, and working within municipalities to develop an education to employment strategy
- **Goal Setting** driven by students' needs and economic development efforts, needs to center young people as a core driver of talent development
- **State Plans** focus on Perkins and WIOA state plans, expand to ESSA and others, focus on vision and goals as well as how dollars flow and models of accountability
- **Braided Funding** there is significant flexibility in how states and others can apply federal funds, think about formula and discretionary grant programs, invest differently
- **Shared Data/Information** sharing information and core partners can reduce your operational costs, help to identify shared goals and needs, support student transition



Questions?

Luke.Rhine@ed.gov

01

Dan Hinderliter: Integrating Environmental Literacy Competencies within Career and Technical Education

02

Mary C. Keller: Maryland Works for Wind

03

Michael Piaskowski: Pennsylvania Outdoor Corps

**CAREER PROGRAMMING
EXEMPLARS**

Project Objectives

The DDOE CTE workgroup has partnered with Advance CTE to develop:

1. Environmental literacy competencies for CTE;
2. An environmental literacy framework which includes linkages with other academic content areas and learner levels; and
3. A braided technical assistance and professional learning model for bringing together career awareness and exploration activities, and academic and technical area educators.



Environmental Literacy Competencies for CTE - DRAFT

Career and Technical Education (CTE) prepares learners for the future of the world of work, including the advent and expansion of the green workforce. As Delaware learners of all levels prepare for future careers, they will demonstrate environmental literacy by analyzing, evaluating, and predicting environmental impacts, actions, and outcomes and applying this knowledge to career paths of their choosing.

To be environmentally literate in their chosen career pathway, a CTE learner will be able to:

1. Identify and explore career paths within a chosen industry that improve environmental outcomes for the economy, businesses, communities, and individuals.
2. Explain human-created local and/or global environmental disparities and impacts within a chosen industry and the results on economic, business, community, and individual health and wellness.
3. Demonstrate an understanding of interrelationships between and among components of environmental systems, e.g., atmosphere (air), hydrosphere (water), biosphere (living organisms), pedosphere (soil).
4. Conduct a cost-benefit analysis, with respect to a chosen industry, to evaluate the environmental, social, and economic impact of business, community, and individual decisions.
5. Discern between rigorous environmental scientific research and speculative interpretations using data-driven information.
6. Identify and analyze environmental issues, policy, regulations, and legislation with respect to a chosen industry.
7. Propose new or updated policy, regulation, and/or legislation that supports environmental conservation, energy efficiency, environmental justice, and/or health and wellness in the workplace or community.

Fall Timeline

- **CTE Directors**
 - Focus Group(s) – now!
- **EL Community of Practice (includes some state agencies & employers)**
 - Feedback Session - October
- **CTE Educators**
 - Focus Group(s) – early-mid November
- **CTE Learners**
 - Listening Sessions – early-mid November
- **Employers, Community Members, PS Partners and PS Students**
 - Interviews – mid November to January



CTE Directors Focus Groups

What We've Learned...

WHO we talked to...

- CTE Directors representing 50% of Delaware's school districts.
- Very willing to connect us with additional educators, students, and employers.

HOW we should proceed...

- Engage students and educators in planning for professional learning and implementation.
Compensate!
- Timing and community are critical. Consider bringing stakeholders together after the school year, during statewide and district professional development days, and through ongoing Communities of Practice.
- Exemplars, best practices, and resources must be identified and relevant to the program of study.
- Professional learning should include students, focus on “like-content” areas and be ongoing.



Professional Learning Opps

- Environmental Literacy Community of Practice, CTE Educator cohort building
- Day-long summer workshops
- Delaware Pathways conference
- District PD days

<https://delawarepathways.org/environmental-literacy/>

Maryland Works for Wind

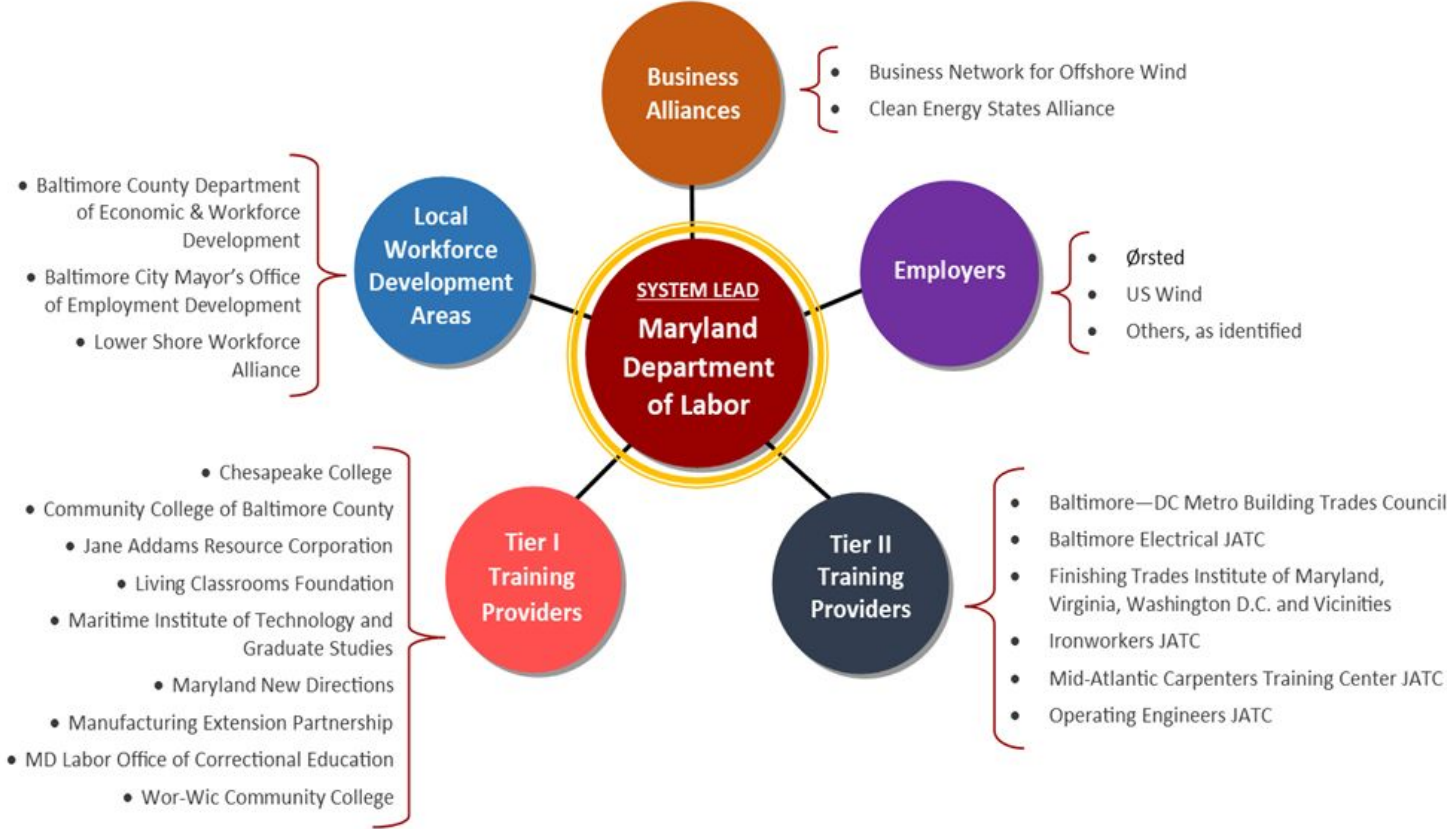
MD Labor responded to the *Good Jobs Challenge*, which is being administered by the United States Department of Commerce's Economic Development Administration (EDA).

Goals:

- **Invest** in high-quality, locally led workforce systems with training in manufacturing, transportation and logistics, and the skilled trades.
- **Expand** career opportunities for more than 3,800 Americans to reach their full potential and secure good-paying jobs; and
- **Produce** a skilled workforce to ensure the United States is prepared to innovate, compete, and succeed in a 21st Century global economy.



Maryland Works *for* Wind—Project Partners



Local Areas

Baltimore County

Career and Apprenticeship
Navigator

Industry and Apprenticeship
Navigator

Baltimore City

Career Navigator

Lower Shore

Career Navigator

- ★ Establish targeted Offshore Wind Awareness campaigns in coordination with public school systems
- ★ Create career pathway guides for manufacturing, transportation and logistics, and skilled trades
- ★ Connect MWW grantees with American Job Center (AJC) resources
- ★ Advertise OSW training and employment opportunities
- ★ Collaborate with Junior Achievement and actively seek youth organizations for partnership opportunities

Pennsylvania Outdoor Corps





pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES



pennsylvania
DEPARTMENT OF LABOR & INDUSTRY



PENNSYLVANIA
Parks & Forests
FOUNDATION





Resources for Supporting Career/Workforce Programming

Dan Hinderliter - Advance CTE

Frank Niepold - NOAA Climate Program Office

Career Pathways Funding Streams

- Federal
 - *Education*: Perkins V, ESSA, IDEA, HEA
 - *Workforce*: WIOA, TANF (HHS), Community Services Block Grant (HHS), SNAP E&T (USDA), Vet Affairs
 - *Infrastructure*: Infrastructure Investment and Jobs Act, IRA
 - *Coronavirus stimulus funds*: ESSER/ARP (9/30/24), GEER
- State
 - State CTE dollars
 - Property or operational costs
 - State legislative grants
- Local, Community Based Organizations
- Private/philanthropic



[Braiding Funding to Support Equitable Career Pathways](#)
(Advance CTE, 2022)

[Unlocking New Federal Infrastructure Funding to Drive Green Workforce Development](#)
(Brookings, 2023)



CLIMATE-READY WORKFORCE FOR COASTAL STATES, TRIBES & TERRITORIES COMPETITION

GOAL

Recruit, train, and place workers in **good jobs** that enhance climate resilience

Letters of
Intent due

Nov. 30

Applications
due

Feb. 13, 2024

Funding

\$ 50 million

Funding

10-20 awards

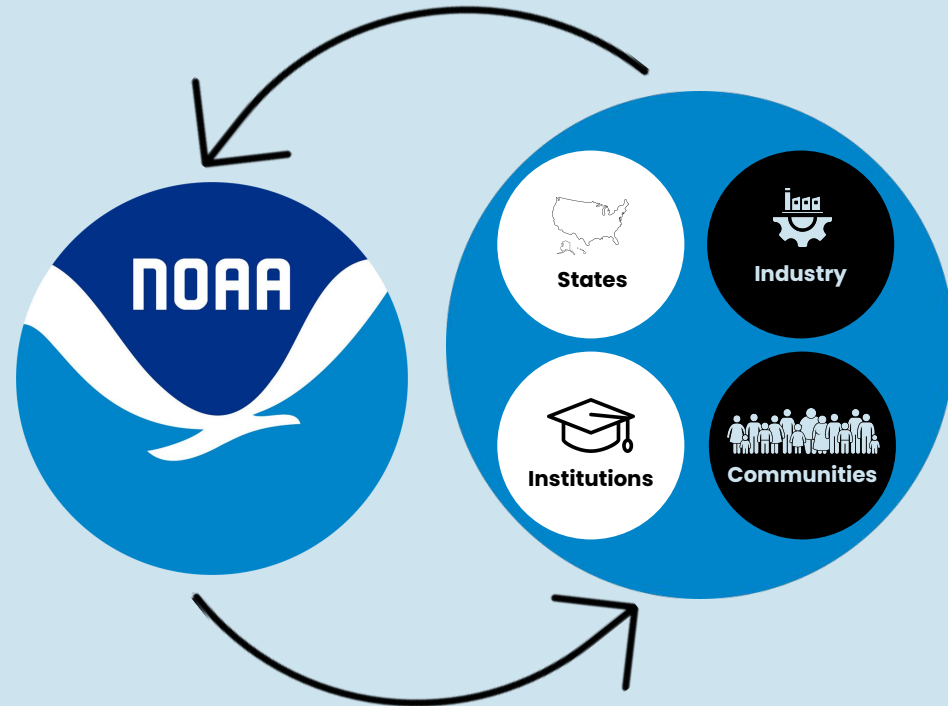
Funding
levels

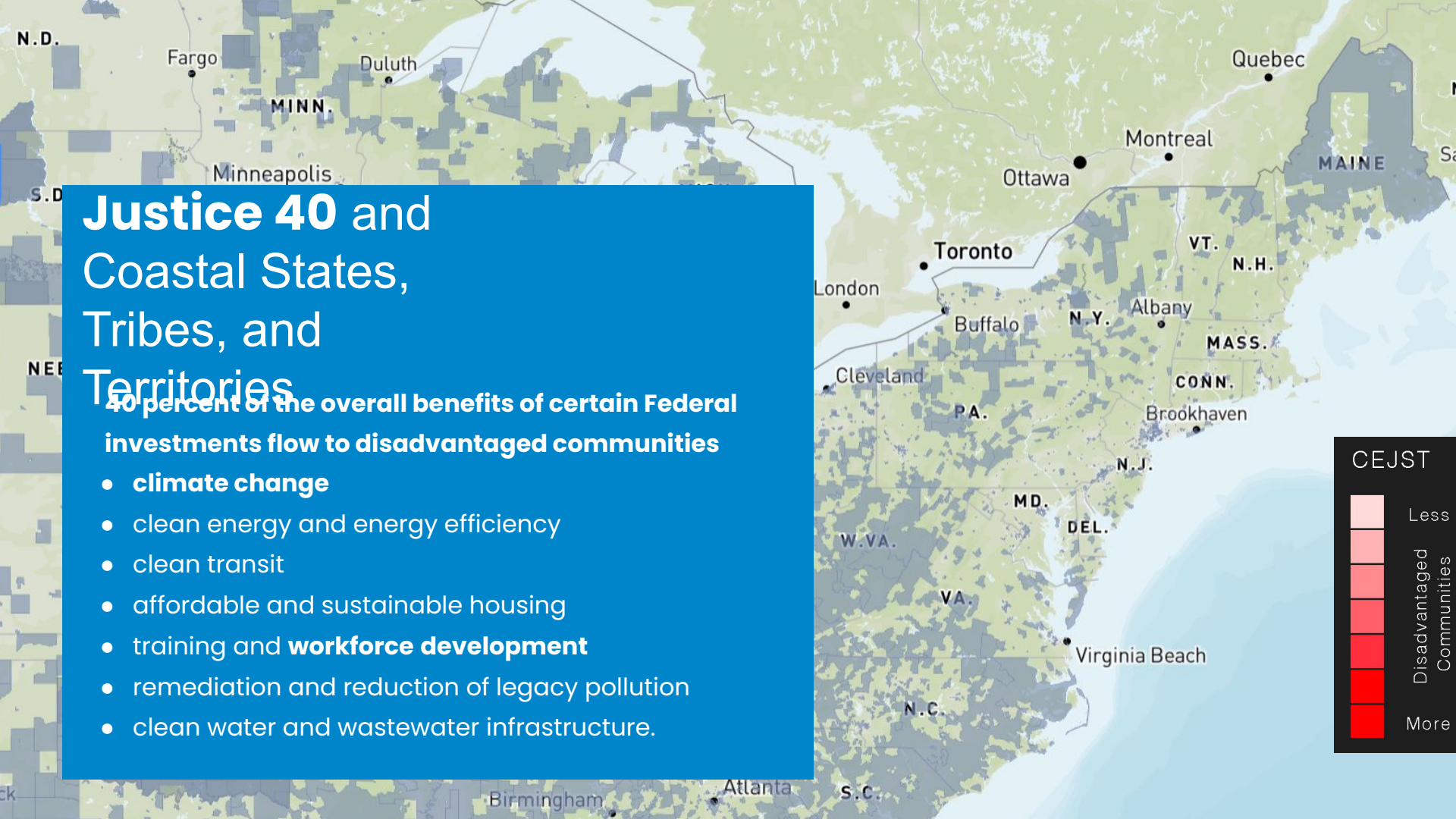
500K - 10M



NOAA CRW Partnership Model

National Sea Grant Office	<ul style="list-style-type: none">• NOFO processing and management• Grants Administration
Climate Program Office	<ul style="list-style-type: none">• Climate Resilience Technical Assistance• Knowledge Sharing Platform• Reporting & Monitoring
Office for Coastal Management	<ul style="list-style-type: none">• Training





Justice 40 and Coastal States, Tribes, and Territories

40 percent of the overall benefits of certain Federal investments flow to disadvantaged communities

- climate change
- clean energy and energy efficiency
- clean transit
- affordable and sustainable housing
- training and **workforce development**
- remediation and reduction of legacy pollution
- clean water and wastewater infrastructure.

CEJST



Questions from The Workforce Session

1. Simplify green pathways for clear comprehension by the Department of Labor and employers.
2. Ensure pathway titles clearly reflect their opportunities without limiting them.
3. Emphasize the distinction between systems and sectors.
4. Promote labor mobility across broader regions, not just within states.
5. Empower environmental literacy educators to collaborate with advanced Career and Technical Education (CTE) specialists.



STATE BREAKOUTS

Main Ballroom:	VIRGINIA WEST VIRGINIA WASHINGTON, DC
Ballroom B:	DELAWARE
Ballroom C:	PENNSYLVANIA
Balt./Columbia:	MARYLAND



Environmental Literacy **SUMMIT**

*We will reconvene
@ 12:45*

*Meet a new friend
and enjoy your lunch*



High Impact Actions for Sustainable Schools

Anisa Heming

Director, Center for Green Schools

U.S. Green Building Council





Center for Green Schools
at the U.S. Green Building Council

WHO WE ARE: Global leader in advancing green schools, providing school districts and education leaders with resources and training to create sustainable, healthy, resilient and equitable learning environments.

WHAT WE DO: We support and train those implementing sustainability within school systems to be the most effective change agents they can be, through professional development, peer networks, research, and advocacy.





Extreme Heat



**Ocean Warming +
Acidification**



Storms



**Sea Level Rise +
Melting Ice**



Habitat



WHAT IS CLIMATE NEUTRALITY?



Second Nature defines climate neutrality as having no net carbon (greenhouse gas) emissions.

This is to be achieved by "minimizing carbon emissions as much as possible, and using carbon offsets or other measures to mitigate the remaining emissions."

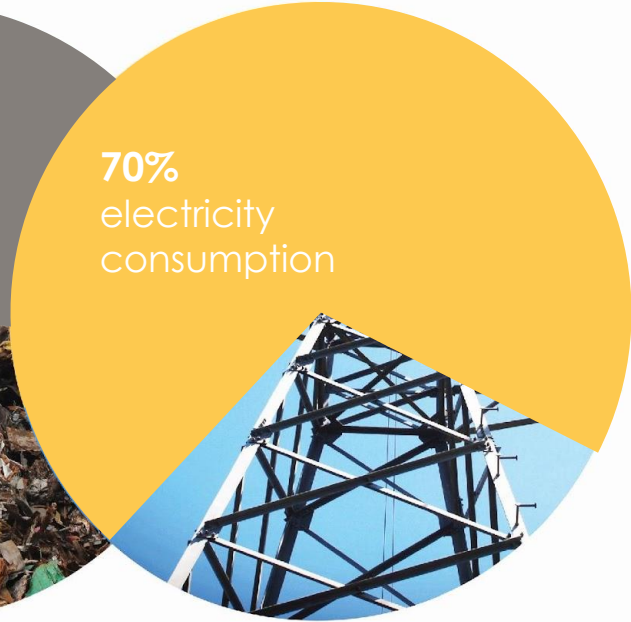
BUILT ENVIRONMENT IMPACTS

12%
water
use

39%
carbon
emissions

65%
waste
output

70%
electricity
consumption



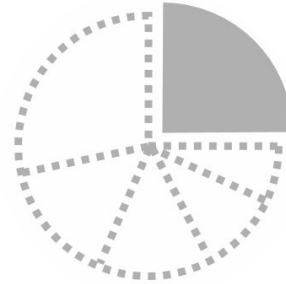


School grounds make up
an area 3 times the state
of Rhode Island

2 million acres of school district land

2nd largest public
infrastructure
investment

\$110 billion
spent on
average each
year from 2009
to 2019



square footage equal
to half of all U.S.
commercial office
buildings



8.1 billion GSF in 100,000+ schools

FEELING WELL



**BIOLOGICAL
AND PHYSICAL
HEALTH**

THINKING WELL



**SHORT-TERM
COGNITIVE AND
MENTAL WELL-BEING**

PERFORMING WELL



**LONG-TERM ACADEMIC
SUCCESS AND
ACHIEVEMENT**



THE WHOLE-SCHOOL SUSTAINABILITY FRAMEWORK

Guiding Principles for Integrating Sustainability Into All Aspects of a School Organization

Stephanie K. Barr, Jennifer E. Cross, & Brian H. Dunbar
Institute for the Built Environment • Colorado State University





DISCOVERY ELEMENTARY

Arlington, Virginia

Net Zero Energy

LEED Zero for Energy

“I think what is most important about this building is that it allows teachers to think about how we learn and how students learn. Curriculum is just something the state gives to us and you can teach that anywhere, but with this space, we can really get creative, and experiment, and shepherd meaningful experiences for students.”

- Dr. Erin Russo, Principal Discovery Elementary School



BOSTON LATIN SCHOOL

Boston, Massachusetts

Registered for LEED Operations + Maintenance certification







NOTICE
CHEMICAL
SPILL
CLEAN-UP
KIT

SAFE
KIDS



A BOLDER VISION FOR SCHOOL BUILDINGS

School buildings are an opportunity to model what a sustainable future looks like—for our children, their families, and their communities.

They have direct impact on:

CLIMATE CHANGE

HEALTH

EDUCATION



HIGH IMPACT ACTIONS FOR SUSTAINABLE SCHOOLS PANEL

Facilitator:

Kristen Keim

Generation 180

Generation180 inspires and equips individuals to take action on clean energy in their homes and communities.

01

**Prince William
County Public
Schools**

Jeanne Jabara

02

**Woodland
Hills School
District**

Eddie Wilson

03

**Lynchburg City
Public Schools**

Hope Watts

04

**Baltimore County
Public Schools**

Kelley Holocker

**SUSTAINABLE
SCHOOLS
EXEMPLARS**



Andrea Falken

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U.S. Department of Education

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Infrastructure and Sustainability Initiative

<https://www2.ed.gov/about/inits/ed/infrastructure-sustainability/index.html>

Promotes equitable access to healthy, safe, sustainable, 21st century school facilities, and environmental sustainability education.

- Recognizes and highlights successes through our recognition award and tour.
- Collaborates with stakeholders, other agencies, and states.
- Disseminates resources and increases national awareness through newsletter and social media.



U.S. Department of Education Green Ribbon Schools Recognition Awards

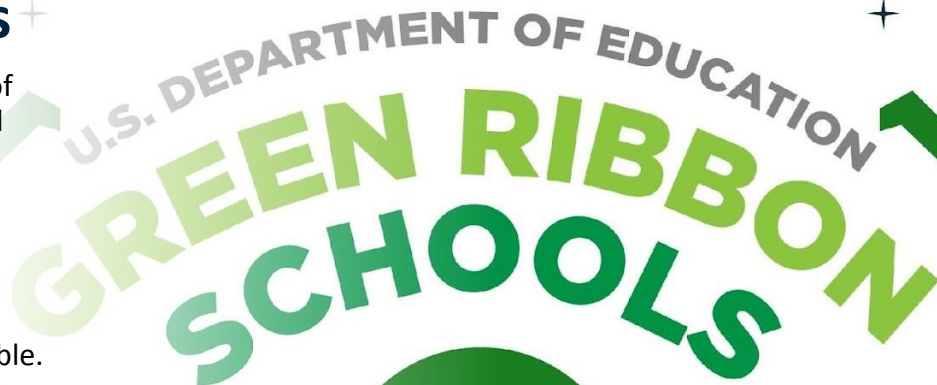
Federal recognition at the intersection of school facilities and grounds, health and wellness, and sustainability education.

States nominate to ED annually.

Schools, districts, postsecondary, early learning, public, private, charter all eligible.

Honorees announced around Earth Day and invited to send representatives to a summer ceremony in DC.

Since 2012, ED has recognized over 700 honorees from 46 different nominating authorities.

The logo features the text "U.S. DEPARTMENT OF EDUCATION" in a grey, sans-serif font, arched over the top. Below it, "GREEN RIBBON" is written in a large, bold, light green font, and "SCHOOLS" is written in a large, bold, dark green font. The entire text is set against a background of a green ribbon graphic that forms a stylized house shape. A green circle with a white leaf icon is positioned at the bottom center. The background is decorated with several white four-pointed stars of varying sizes.

U.S. DEPARTMENT OF EDUCATION
GREEN RIBBON
SCHOOLS



U.S. DEPARTMENT OF EDUCATION GREEN RIBBON SCHOOLS PILLARS AND ELEMENTS

Pillar 1 REDUCE ENVIRONMENTAL IMPACTS

Energy
Water
Waste
Transport
Emissions



Pillar 2 IMPROVE HEALTH AND WELLNESS

Environmental Health
Physical Activity
Nutrition



Pillar 3 ENVIRONMENTAL AND SUSTAINABILITY EDUCATION

Green Career Pathways
STEM
Outdoor Learning





School Infrastructure Programs

<https://oese.ed.gov/offices/school-infrastructure-programs-sip/>

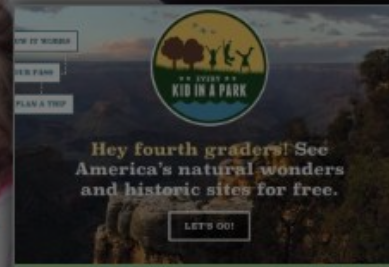
Two new grants focused on ensuring that school facilities and grounds provide safe, healthy, sustainable, and equitable learning environments.

Grant:	Supporting America's School Infrastructure Grants (SASI)	National Center on School Infrastructure (NCSI)
Purpose	Increase the capacity of States to support high-need LEAs and schools in leveraging other available Federal, State, and local resources to improve school facilities and environments for all students.	Establish a technical assistance center for school infrastructure that will support SASI grantees and high-need districts across the nation.
Type	Discretionary	Cooperative
Award Amounts	8-12 state grants, a total of \$40 million	One grant, \$2 million a year for up to 5 years.
Timeline	Grantee announcements in Fall 2023	

The Green Strides School Sustainability Resource Hub

Start here to find free resources

FEATURED TOOLS



Renew America's Schools

Competitive grant program for energy improvements at public school facilities

Funding

\$500M (\$100M over five years, FY22-FY26), until expended, through competitive grants.



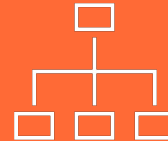
Qualifying Energy Improvements

Improvements, repairs, or renovations that reduce energy costs or lead to improved teacher and student health and achieve energy savings.



Eligible Entities

Consortia of local educational agency and one or more schools, non-profits, for-profits, or community partners.



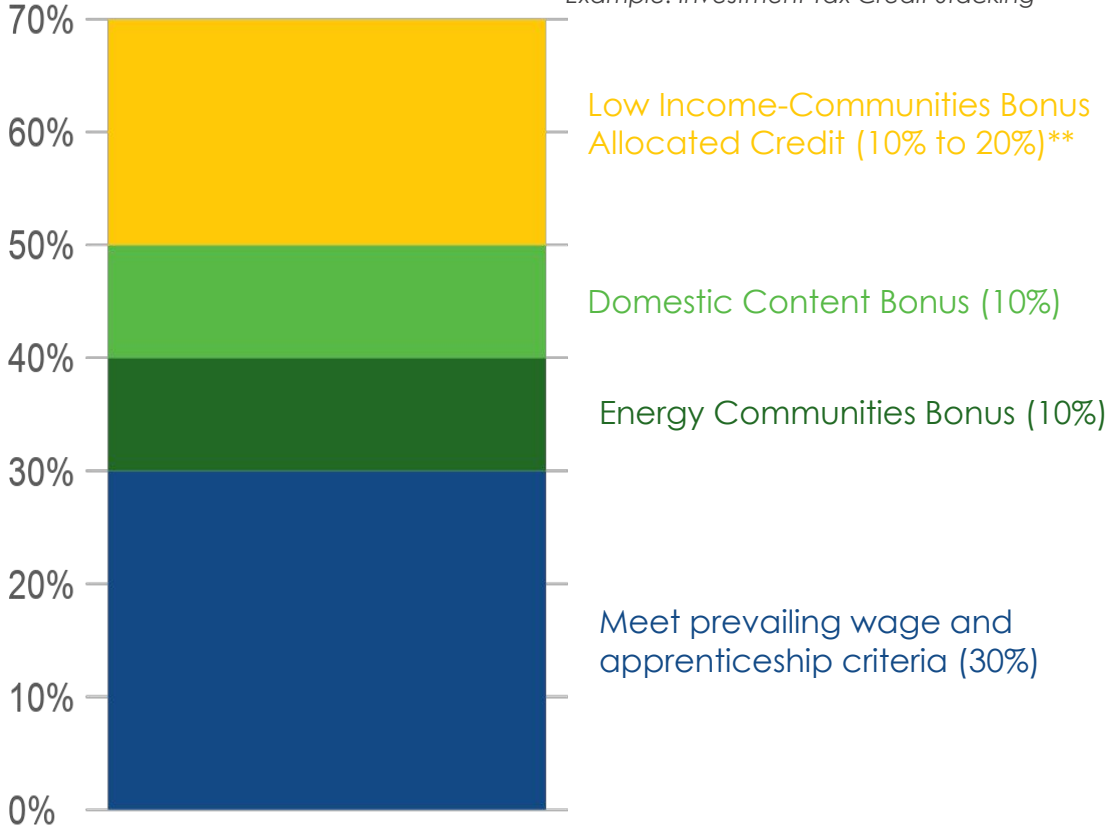
Prioritization

Schools with improvement funding needs, high free and reduced-price lunch percentage or rural locale, and leverage private sector funding through performance contracting.



Tax Credit: IRS Elective Pay (“Direct Pay”)

Example: Investment Tax Credit Stacking



Receive a direct cash payment from the IRS for installing clean energy technologies:

- Fuel | Solar | Geothermal | Small Wind | Energy Storage | Biogas | Microgrid Controllers | Combined Heat and Power Properties

Tax credit bonuses can stack with the underlying tax credit creating significant opportunity for eligible projects.

Example: 1 MW community solar facility costing \$1 million could earn a **70% tax credit** worth \$700,000 if eligible for all applicable tax credit and bonuses

EPA Air Quality Resources for Schools

- Clean School Bus Program: \$5 billion in grant funding to replace diesel school buses with electric buses.
- Indoor Air Quality Tools for Schools Action Kit shows schools how to carry out a plan to improve indoor air problems at little- or no-cost.
- Up to \$37.5 million to address greenhouse gas emissions and indoor air pollution in K-12 schools located in low-income, disadvantaged, and Tribal communities. Applications will open in winter 2023.
- Community Change Block Grants Program: \$2 Billion for environmental and climate justice activities to benefit disadvantaged communities through projects that reduce pollution, increase community climate resilience, and build community capacity to respond to environmental justice challenges.



Efficient and Healthy Schools Program



The Program...

aims to improve energy performance, reduce carbon emissions, and promote a **healthy learning environment** in schools.

engages **K-12 schools**, especially those serving low-income student populations and in rural areas.

provides **technical assistance** through direct consultations and **recognition** of exemplary school improvements.

Better Buildings Initiative Partnership Pathways



- **Reduce energy intensity use by least 20% within 10-years**
 - Conduct an energy efficiency assessment of building portfolio and complete at least one showcase project and one implementation model. Report data annually to track progress
 - Report results by sharing cost-effective approaches for saving energy and performance data that demonstrate their success
-
- **Reduce GHG emissions (scope 1&2) by at least 50% within 10-years and set an energy efficiency target**
 - Develop emission reduction plan with milestone & report data annually to track progress using standardized framework
 - Share information on strategies implemented and participate in at least one working group to discuss barriers, exchange best practices, and identify solutions



Energy Champions Leading the Advancement of Sustainable Schools (CLASS) Prize

Created in response to **overwhelming need for staff and training** around energy management in schools.

Technical assistance programming **meant to fill a gap and complement Renew America's Schools** funding for capital improvements.

Builds capacity within local educational agencies to **identify and implement energy and health improvements** in their facilities and classrooms.

Provides resources to staff and **trains personnel on operations and maintenance, strategic energy management, project development, funding pathways, and related topics** to deepen bandwidth and knowledge for advancing the fiscal and environmental sustainability of their schools.



Infrastructure and Sustainability



<https://www2.ed.gov/about/inits/ed/infrastructure-sustainability/index.html>



https://public.govdelivery.com/accounts/USED/subscriber/new?topic_id=USED_27

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OUTLINE: FUNDING FOR SCHOOL BUILDINGS

AMERICAN RESCUE PLAN (2021)

- Elementary and Secondary Schools Emergency Relief (ESSER III)

INFRASTRUCTURE INVESTMENT AND JOBS ACT / BIPARTISAN INFRASTRUCTURE LAW (2022)

- Renew America's Schools grant program (DOE), which also funded the CLASS Prize
- *Grants to states to benefit schools:* WIIN Grant Program for school drinking water (EPA)
- *Opportunity to partner with local municipalities:* Energy Efficiency Conservation Block Grants (DOE)
- *Opportunity to partner with state hazard mitigation officer:* Building Resilient Infrastructure & Communities (FEMA)
- *Vehicles only:* Clean School Bus Program (EPA)
- Charging and Fueling Infrastructure Grants (DOT)

INFLATION REDUCTION ACT (2023)

- Clean Energy Tax Credits (IRS)
- 179D Commercial Buildings Energy Efficiency Tax Deduction (IRS)
- Greenhouse Gas Reduction Fund (EPA)
- School Air Quality Improvement (EPA)
- Alternative Fuel Infrastructure Tax Credits (IRS)
- *Opportunities to partner with local municipalities:* Grants for Environmental Justice, Climate Pollution Reduction, and Recycling Infrastructure (EPA)
- *Opportunity to partner with local municipalities:* Climate Resilience Regional Challenge (NOAA)



STATE BREAKOUTS

Main Ballroom:	VIRGINIA WEST VIRGINIA WASHINGTON, DC
Ballroom B:	DELAWARE
Ballroom C:	PENNSYLVANIA
Balt./Columbia:	MARYLAND

BEYOND 2025



Anna Killius

Executive Director
Chesapeake Bay Commission



BEYOND 2025: The Future of the Chesapeake Bay Watershed Agreement

2023 Mid-Atlantic Environmental Literacy Summit



by Anna Killius
Chesapeake Bay Commission

November 1, 2023



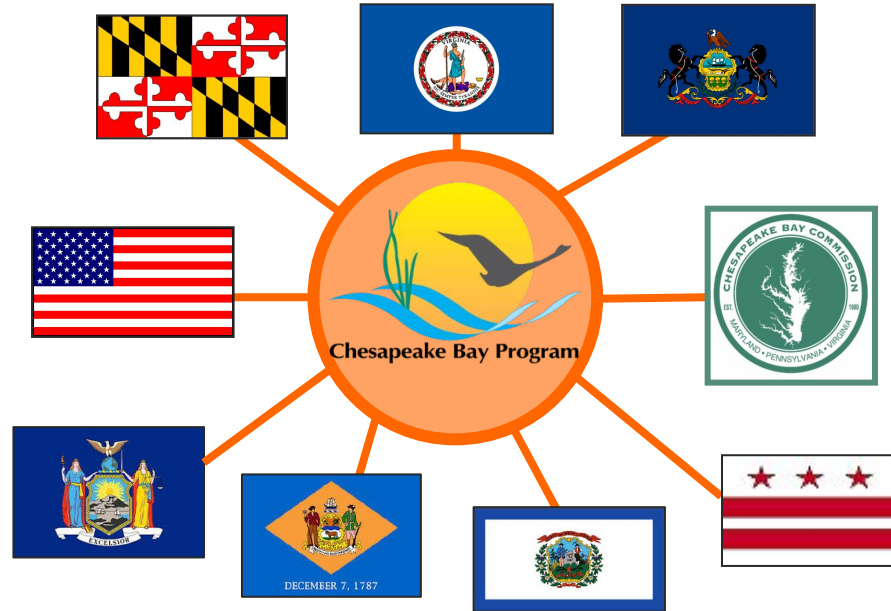
CHESAPEAKE BAY COMMISSION

Tri-State Legislative Commission established in 1980s to:

- Help legislatures evaluate and respond to Bay and watershed concerns;
- Promote intergovernmental cooperation and coordination for resource planning;
- Coordinate regional policy interests with US Congress;
- Signatory to Chesapeake Bay Agreement and full partner of the Chesapeake Bay Program



CHESAPEAKE BAY PROGRAM



2014 CHESAPEAKE BAY WATERSHED AGREEMENT

1 Vision

10 Interrelated Goals

31 Measurable, Time-Bound Outcomes



EXECUTIVE COUNCIL CHARGE

“

Thus, this Executive Council charges the Principals' Staff Committee (PSC) in recommending a critical path forward that prioritizes and outlines the next steps for meeting the goals and outcomes of the Watershed Agreement leading up to and beyond 2025. The PSC is to report back to the Executive Council at our 2023 annual meeting with recommendations on how to best address and integrate new science and restoration strategies leading up to 2025. *At our 2024 annual meeting, the PSC is to prepare recommendations that continue to address new advances in science and restoration, along with a focus on our partnership for going beyond 2025.*

”



REACHING 2025

OUTCOME ATTAINMENT

 OUTLOOK ON COURSE	 OUTLOOK OFF COURSE
Blue Crab Abundance Outcome	Wetlands Outcome
<i>Blue Crab Management Outcome (Completed)</i>	Black Duck Outcome
Oysters Outcome	Brook Trout Outcome
Forage Fish Outcome	Submerged Aquatic Vegetation Outcome
Fish Habitat Outcome	Forest Buffers Outcome
Stream Health Outcome	Tree Canopy Outcome
<i>2017 Watershed Implementation Plans (WIPs) Outcome (Complete)</i>	2025 Watershed Implementation Plans (WIPs) Outcome
Fish Passage Outcome	Diversity Outcome
Water Quality Standards Attainment and Monitoring Outcome	Toxic Contaminants Policy and Prevention Outcome
Local Leadership Outcome	Toxic Contaminants Research Outcome
Protected Lands Outcome	Students Outcome
Land Use Methods and Metrics Development Outcome	Climate Adaptation Outcome
Land Use Options and Evaluations Outcome	 OUTLOOK UNCERTAIN
Public Access Outcome	Healthy Watershed Outcome
Sustainable Schools Outcome	Stewardship Outcome
Environmental Literacy Planning Outcome	
Climate Monitoring and Assessment Outcome	



ENVIRONMENTAL LITERACY GOAL

Student Outcome



Sustainable Schools Outcome



Environmental Literacy Planning Outcome





BEYOND 2025

TWO-PHASED APPROACH

- Step 1 – By EC 2024, Determine the scope and breadth of what will be undertaken to meet the EC Charge and develop a plan to complete that work
 - Use a Steering Committee to develop plan/scope of work for all activities to be undertaken to strengthen Partnership in years ahead
- Step 2 – Execute the plan after EC 2024

GOAL

We will assess **where we are** and **where we want to be** in

reaching our shared vision for the Chesapeake Bay and its

watershed; and identify **a path forward** for the Chesapeake Bay

Program focused on **what we do** and **how we work.**

STEERING COMMITTEE PROPOSED PRODUCT BY EC2024

Where we are

Summary of where we are with the 2014 Watershed Agreement

- Reaching 2025 Report
- CESR, Rising Temperatures, Forest Buffers & Wetlands Conference Reports, SRS meeting report, report, Advisory Committee Recommendations, and more. Crosswalk of common themes.

Where do we want to be

Vision

- Current Partnership Vision – Reaffirm? Refine?

What we do

Impact assessment

- What is the ability of our Partnership to positively impact each goal and outcome?
- Do we have the right outcomes for our goals and the right goals for our vision?

How we work

Assessment of our overall partnership

- Partnership Structure
- Governance and Adaptive Management

Path Forward

Recommendation on what to do with the Watershed Agreement post-2025

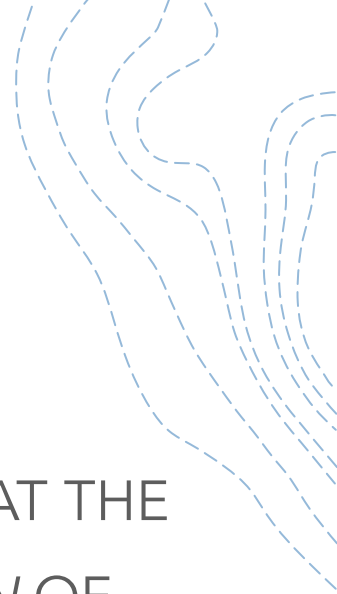
Recommendations on the Partnership

HIGH-LEVEL TOPICS

- Climate
- Health Watersheds
- Clean Water
- Shallow Water Habitats
- People



LOOKING AHEAD AT THE
NEXT GENERATION OF
BAY STEWARDS



CLIMATE & WORKFORCE CHALLENGES

- “Bay of the Future” is not the “Bay of the Past”
- Rising Waters, Rising Temperatures
- Need Innovative Approaches, and the Training and Capacity to Effectuate Change

THANK YOU

Anna Killius

Executive Director

Chesapeake Bay Commission

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2023



All photos by Will Parson/Chesapeake Bay Program



Breakouts: Driving Forces & Next Steps

Main Ballroom = VIRGINIA, WEST VIRGINIA,
DISTRICT OF COLUMBIA

Ballroom B = DELAWARE &
REGIONAL/FEDERAL

Ballroom C = PENNSYLVANIA

Baltimore/Columbia = MARYLAND





Report Out

MARYLAND

DELAWARE

DISTRICT OF COLUMBIA

PENNSYLVANIA

VIRGINIA

WEST VIRGINIA

REGIONAL/FEDERAL





Next Steps

- Send meeting summary and list of participants
- State working groups will work to connect what they heard today with their ongoing work
- CBP Education Workgroup will convene follow-up conversations for each theme area
- We will keep you posted on opportunities to continue to engage around Beyond 2025



Join at menti.com use code 7141 7737

 Mentimeter

What action will you take to advance today's work?

Waiting for responses ...



GO TO
menti.com

ENTER THE CODE
7141 7737

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Thank You!



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