Turner Station Environmental Partners Work Group

Fact Sheet

Work Group Overview

Established in 2024 and consisting of federal, state, local government, nonprofit and private organizations, this work group seeks to improve the environmental well-being of the Turner Station community and its residents through increased collaboration, transparent communication, and community engagement.

Turner Station Environmental Partners

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Work Group Context

What is the Environmental Partners Work Group?

The Work Group is comprised of a diverse team of advocates and partners charged with **coordinating the environmental efforts co-occurring in Turner Station**. Projects range from environmental remediation to community resilience and relate to **Flooding, Legacy Pollutants, Air Quality, and Local Development.**

WORK GROUP OBJECTIVES:

Build relationships between Turner Station environmental partners and with the broader community.

Increase environmental project coordination and transparency.

Enhance collaboration between Turner Station environmental partners towards an aligned vision of Turner Station.

Think expansively and creatively to bring innovative direction and energy to environmental work in Turner Station.

What Are We Monitoring in Turner Station

Four Project Types

Active projects are organized into four categories to better align resources, partnerships, and community coordination efforts. The following pages break down active projects by category, but it is important to recognize that there is significant overlap across these different efforts.

Reducing pollution and improving air health through monitoring, policy & community action.

Implementing solutions to manage stormwater, protect homes & build climate resilience.

Addressing contamination from past industrial activity to restore land & water quality.

Advancing sustainable growth & infrastructure to support a thriving community.

Environmental Projects in Turner Station

Project Type	Project Name	Lead	#
Air Quality	The Community Air Pollution Monitoring Project in Maryland	University of Maryland's The Health, Economic, and Environmental Justice Lab (T.H.E E.J Lab)	1
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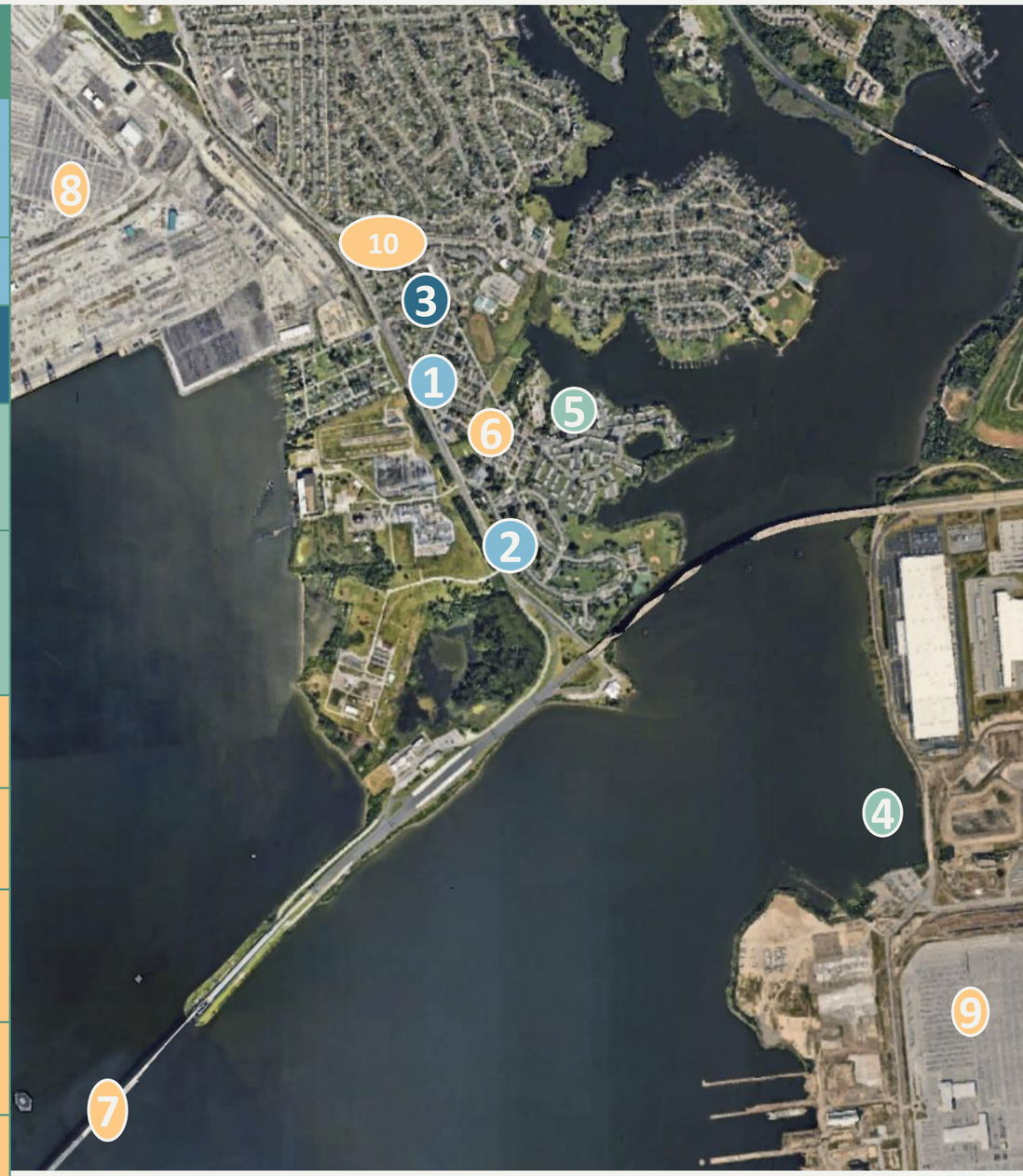

Air Quality

What Are We Monitoring in Turner Station

We are monitoring air quality due to Turner Station’s proximity to industrial areas like Dundalk Marine Terminal and Tradepoint Atlantic. The nearby Broening Highway and I-695 also contribute constant exposure to diesel truck and vehicle exhaust fumes. These sources emit harmful pollutants such as black carbon, PM2.5, and NO2, which can lead to respiratory illnesses, cardiac disease, and premature mortality.

Air Quality
The Community Air Pollution Monitoring Project in Maryland

The University of Maryland's The Health, Economic, and Environmental Justice Lab (T.H.E E.J. Lab) and the Maryland Department of Environment (MDE) have launched a multi-year program in Turner Station. This initiative aims to document and reduce air pollution exposure based on community input and data from air sensor sites.

MDE and UMD CEEJH tables at Turner Station's annual National Night Out event. Photo Credit: Gloria Nelson

Organization Leads

UMD T.H.E. E.J. Lab

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Maryland Department of Environment

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Project Profile

Key Activities (through 2025):

- Community partnerships and training
- Formation of a community steering committee
- Establishment of a technical advisory group
- Community workforce development
- Air sensor data analysis
- Increased awareness of air pollution
- Air pollution monitoring and mitigation
- Policy changes

Parameters:

- Volatile organic compounds
- Black carbon
- Traffic-related air pollutants

This project is designed to enhance community health and environmental justice in Turner Station.

Air Quality
Witness Trees

The Witness Trees project has enhanced community and ecosystem resilience through engagement, capacity building, and habitat restoration. Since fall 2022, a total of 185 trees have been planted at Lyon Homes/Henrietta Lacks Village and Union Baptist Church. Due to their proximity to Broening Highway, these trees will contribute to improved air quality in the community as they mature.

Photo Credit: The Nature Conservancy

Organization Leads

The Nature Conservancy

Andrea van Wyk andrea.vanwyk@tnc.org

Project Profile

Phase 1 (2022):
- Community-led design workshops
- Resident oral histories documented
- 140 trees planted
- 12 public art pieces installed

Phase 2 (2023):
- 10-month strategic planning for Turner Station priorities
- Creation of a 3-year Strategic Roadmap

Phase 3 (2024):
- Partnership with TS Boy and Girl Scout Troops; Funded by Chesapeake Bay Trust and Tradepoint Atlantic
- Youth-led landscape design for an additional 45 native trees and public art elements at Lyon Homes/Henrietta Lacks Village's Central Green

This project fosters trust and collaboration between the community and The Nature Conservancy.

Flooding

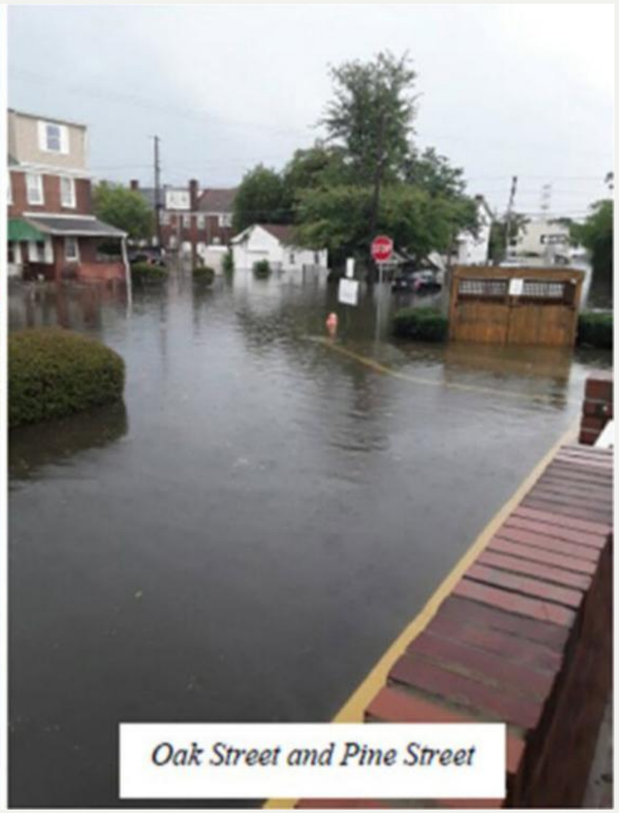
What Are We Monitoring in Turner Station

Turner Station is projected to experience 2.6 to 3.0 feet of flooding from a 10-year storm event by 2050 in its most vulnerable areas. Nuisance high tides on the peninsula are expected to rise 1.6 to 2.6 feet above current levels by 2050 and 2080. With 36% of Turner Station within the 100-year floodplain, the community is already facing sea level rise impacts like shoreline erosion, habitat loss, sunny day flooding, storm-induced coastal flooding, and flooding from Bear Creek backflowing into failing stormwater pipes.

Flooding
Turner Station Climate Resilience Road Map

Baltimore County is utilizing resident collected data as well as computer modeling and engineering to develop a climate resilience plan that identifies potential green and gray infrastructure projects that reduce flooding in the community.

Sollers Point Road and Turner Avenue



Oak Street and Pine Street

Organization Leads

Baltimore County

Beth Denaburg bdenaburg@baltimorecountymd.gov

Project Profile

Goals:

- Evaluate green and grey infrastructure to reduce flooding and tidal surge
- Identify and assess flood attenuation and coastal stabilization opportunities
- Map and quantify options in terms of cost, community, and environmental benefit
- Engage residents to determine preferred implementation options

Outcomes:

- Create a plan for future actions and projects to reduce risks to people and property
- Provide co-benefits such as reduced flooding, environmental restoration, heat reduction, and community engagement in climate resilience

This initiative aims to enhance Turner Station's resilience to climate impacts while involving the community in the planning process

Legacy Pollutants

What Are We Monitoring in Turner Station

We are monitoring air quality due to Turner Station's proximity to industrial areas like Dundalk Marine Terminal and Tradepoint Atlantic. The nearby Broening Highway and I-695 also contribute to constant exposure to diesel truck and vehicle exhaust fumes. These sources emit harmful pollutants such as black carbon, PM2.5, and NO2, which can lead to respiratory illnesses, cardiac disease, and premature mortality.

Legacy Pollutants
Environmental Protection Agency's Bear Creek Superfund Site

The Environmental Protection Agency (EPA) designated Bear Creek as a Superfund Site in 2022 to clean up approximately 60 acres of contaminated sediments. This contamination resulted from more than 100 years of discharges from steelmaking operations on the Sparrows Point peninsula.

Organization Leads

Environmental Protection Agency– Superfund Program

Lisa Trakis Trakis.Lisa@epa.gov

Project Profile

Current Status:

- The EPA's September 2024 Action Memorandum selected the Removal Action, which includes dredging contaminated sediment, capping the Removal Action Area, and disposing of the dredged material in an offsite location
- Pre-design investigations to inform the Removal Action design are in progress

Implementation:

- Spring of 2025: EPA's contractor will conduct surveys of the site on the water and along the shoreline
- Fall of 2025: EPA plans to collect samples from the site
- Approximate pre-design investigation duration: Spring 2025 thru 2026
- The Removal Action design will begin after the pre-design investigations are complete and the EPA evaluates the results

This project aims to remove the most contaminated sediment in the Bear Creek Removal Action Area through dredging and reduce exposure to remaining contaminated sediment through capping.

Legacy Pollutants

Community Healthy: Addressing Regional Maryland Environmental Determinants of Disease (CHARMED)

The CHARMED initiative aims to enhance community-engaged research to improve the health and well-being of vulnerable communities in Maryland.

CHARMED

Community Health: Addressing Regional Maryland Environmental Determinants of Disease

Organization Leads

Johns Hopkins University

Bloomberg School of Public Health

Dr. Ana Rule arule1@jhu.edu

Project Profile

Turner Station Focus:

- Selected due to extensive environmental health concerns

Proposal Includes:

- Two additional air monitoring sensor locations
- Equipment to monitor noise levels
- Analysis of metals to identify specific sources
- Compensation for a community member to coordinate data collection and analysis

Future Plans:

- JHU-EHE submitted a grant for a Superfund Research Center focused on metal pollution
- If funded, the center will collect water and air samples to analyze for metals and organic pollutants
- Measurements will provide key exposure data to estimate cumulative health burdens

This project aims to address environmental health issues and improve the overall well-being of Turner Station residents

Local Development

What we're Monitoring in Turner Station

Local development initiatives in and around Turner Station are seeking to co-develop solutions that address pressing challenges such as food security, local economic development, and improved urban planning. Through intentional collaboration, these initiatives aim to benefit the community.

Local Development
Local Food Local Places (LFLP)

The Environmental Protection Agency partnered with Turner Station through the Local Food Local Places (LFLP) program which provides technical assistance to improve local healthy food access and develop a thriving local food system that supports key community goals.

Turner Station community garden. Photo Credit: The Nature Conservancy

Organization Leads

Turner Station Conservation Teams

Gloria Nelson glorianelson8@verizon.net

Project Profile

Current Efforts:

- The LFLP Steering Committee worked with EPA to identify community issues and opportunities, plan and facilitate a two-day community workshop, and develop an action plan to implement next steps
- In January 2025, Turner Station hosted a two-day workshop to capture the community's vision and values for the future of Turner Station, and brainstorm, prioritize and detail ideas for improved food access in the community
- The Steering Committee is finalizing a community action plan that prioritizes the goals and ideas shared in January and sets up a timeline for implementation from short term to long term. This plan should be available for distribution in spring 2025.

This initiative aims to improve food security and access to healthy food options for Turner Station residents.

Local Development
Key Bridge Rebuild

The Key Bridge Rebuild project aims to reconstruct the Francis Scott Key Bridge and reconnect the I-695 Baltimore Beltway.

View of Key Bridge from Fort Armistead Park in 2015. Photo Credit: Wikipedia

Organization Lead

Maryland Transportation Authority

Melissa Bogdan mbogdan@mdta.state.md.us

Project Profile

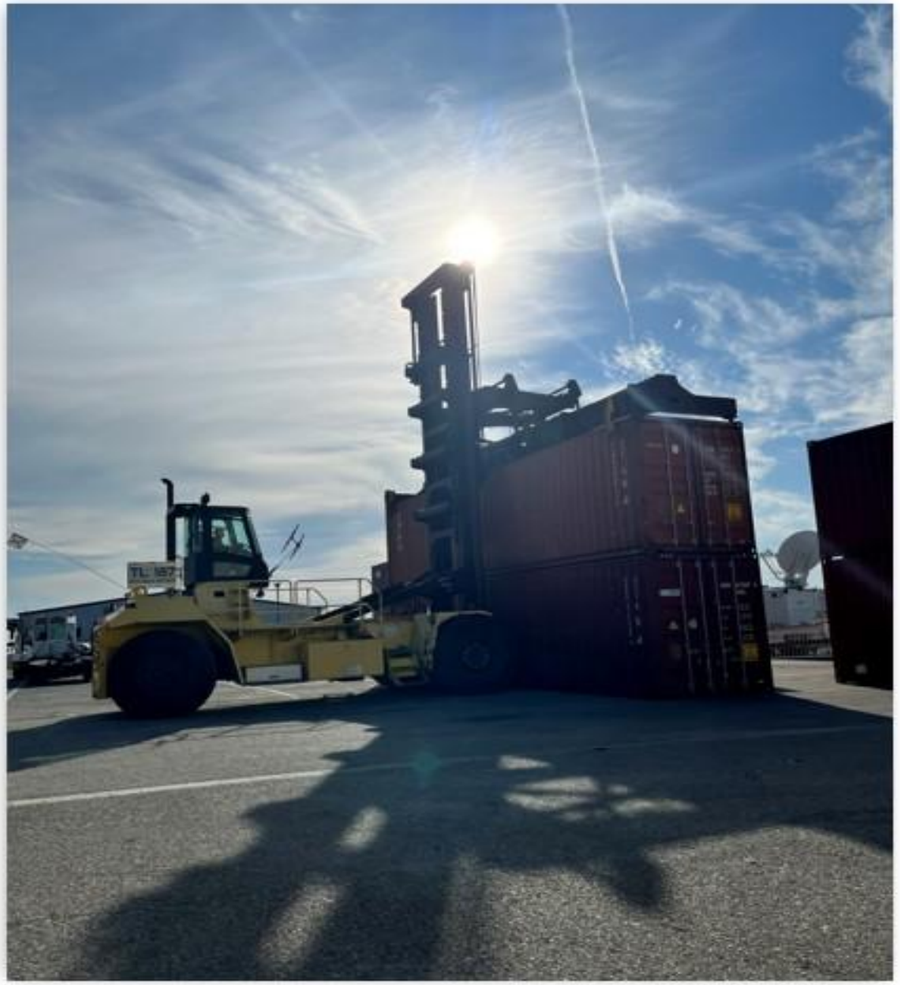
Goals:

- Reconnect communities
- Support economic growth
- Ensure safety and resilience for long-term reliability
- Involve local stakeholders
- Minimize ecological impact

This project is committed to involving the community and maintaining open communication throughout the process.

Local Development
Clean Ports Grant

The project is a transformational opportunity to transition to zero-emissions equipment, upgrade utilities at the Dundalk Marine Terminal, reduce air pollution from diesel vehicles, understand impacts on air quality and reenvision our community engagement process to better serve our surrounding communities.



Organization Lead

Maryland Port Administration

Jessica Shearer jshearer1@marylandports.com

Project Profile

Goals:

- Purchase 220 pieces of electric cargo handling equipment and drayage trucks and associated charging equipment.
- Conduct emissions inventory and develop an emissions reduction plan
- Reenvision community engagement by working with communities to understand what types of engagement are the most useful and meaningful, expand practices across the agency for all types of projects and enhance approaches for sharing information with innovative technologies.

Local Development
Dredged Material Management Program (DMMP)

The Dredged Material Management Program(DMMP) is a 20-year rolling plan that describes the need to regularly remove sediment from the Port of Baltimore's shipping channels and identifies adequate placement capacity and/or alternative management solutions for dredged material.

Organization Lead

Maryland Port Administration

Danielle Fisher dfisher2@marylandports.com

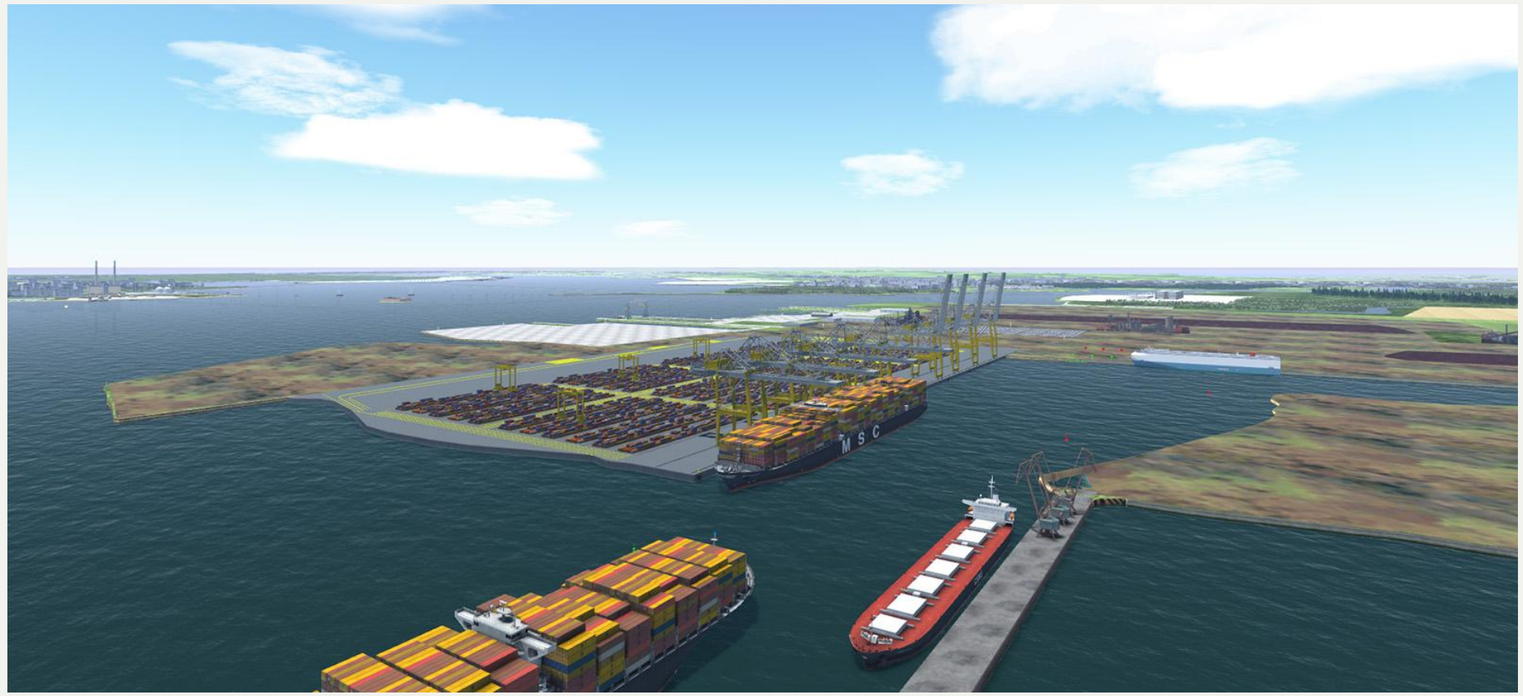
Project Profile

Goals:

- Ensure the safe passage of cargo vessels through the Port of Baltimore's shipping channels.
- Sustainably manage dredged material in a setting that prioritizes environmental stewardship , compliance and engagement with citizens
- Implement long-range capacity planning to project dredging needs, to determine how much space is available for dredge material and explore ways to extend the life of existing placement sites and identify innovative techniques for reusing dredged material.

Local Development
Sparrows Point Container Terminal (SPCT)

This terminal is expected to bring significant benefits to local communities, including the creation of 8,000 direct and indirect jobs, due to the construction, operations, and increase in Baltimore's container handling capacity , therefore ensuring the region is a competitive player in international trade.



Rendering of the Sparrows Point Terminal. Credit: Sparrows Point Container Terminal Website

Organization Lead

Tradepoint Atlantic

Kristin King kking@tradepointatlantic.com

Project Profile

Goals:

- Widen and deepen the Sparrows Point Channel
- Accommodate safe passage of Ultra Large Container Vessels

This project focuses on enhancing Baltimore ports container capacity and ensuring safe navigation for larger vessels. Ultimately driving economic prosperity for the region.

Local Development
Chestnut Park

This community park is located on the south side of Dundalk Avenue near Dollar Tree and is open to the public. Chestnut Park features a walking path and native plants and is protected forever through a conservation easement.

Organization Lead

NeighborSpace of Baltimore County

Phyllis Joris phyllis@neighborspacebaltimorecounty.org

Project Profile

Goals:

NeighborSpace is a nonprofit land trust working to enhance the livability of urban communities in Baltimore County by protecting, restoring, and stewarding land for small parks, gardens, trails, and natural areas. NeighborSpace stewards Chestnut Park in partnership with TSCT.

This initiative aims to increase access to green space and improve local ecosystems to support clean air, clean water, human health, wildlife habitat, and neighborhood improvement.

Project Directory

Turner Station Environmental Projects

Project Type	Project Name	Organizational Lead
Air Quality	The Community Air Pollution Monitoring Project in Maryland	**UMD T.H.E. E.J. Lab** Blean Girma bgirma01@terpmail.umd.edu Clay Thompson cthomp51@umd.edu **Maryland Department of Environment** Noble Smith noble.smith1@maryland.gov
	Witness Trees	**The Nature Conservancy** Andrea van Wyk andrea.vanwyk@tnc.org
Flooding	Turner Station Climate Resilience Road Map	**Baltimore County** Beth Denaburg bdenaburg@baltimorecountymd.gov
Legacy Pollutants	Environmental Protection Agency's Bear Creek Superfund Site	**Environmental Protection Agency – Superfund** Lisa Trakis Trakis.Lisa@epa.gov
	Community Healthy: Addressing Regional Maryland Environmental Determinants of Disease (CHARMED)	**Johns Hopkins Bloomberg School of Public Health** Dr. Ana Rule arule1@jhu.edu
Local Development	Local Food Local Places (LFLP)	**Turner Station Conservation Teams** Gloria Nelson glorianelson8@verizon.net
	Key Bridge Rebuild	**Maryland Transportation Authority (MDTA)** Melissa Bogdan mbogdan@mdta.state.md.us
	Clean Ports Grant Dredge Material Management Program (DMMP)	**Maryland Port Administration** Danielle Fisher dfisher2@marylandports.com Jessica Shearer jshearer1@marylandports.com
	Sparrows Point Container Terminal (SPCT)	**Tradepoint Atlantic** Kristin King kking@tradepointatlantic.com

Appendix/Glossary

Terms to Know

Terms to Know

Climate Change

The long-term changes in Earth's weather patterns, mostly due to human activities like burning fossil fuels. It leads to global warming, more extreme weather, and changes in the environment.

Climate Resilience

The ability of people, communities, and natural systems to cope with and recover from the effects of climate change, such as stronger storms and rising sea levels.

Community Resilience

How well a community can adapt to and recover from difficult situations, like natural disasters or environmental changes, while continuing to thrive.

Biodiversity

The variety of life on Earth, including all plants, animals, and microorganisms. High biodiversity makes ecosystems more resilient and better able to withstand changes.

Environmental Justice

The principle that everyone, regardless of race, income, or background, deserves equal protection from environmental hazards and equal access to a healthy environment.

Air Quality

The cleanliness of the air we breathe. Good air quality is essential for health, while poor air quality, filled with pollutants, can cause serious health problems.

- **Black Carbon**: A type of air pollution made up of tiny particles produced when fossil fuels or biomass are burned. It contributes to climate change and can harm human health.
- **PM2.5**: Tiny particles in the air that are so small they can get deep into the lungs and even enter the bloodstream. They are harmful to health and are often linked to air pollution.
- **Ozone**: A gas that can be found in two places: high up in the atmosphere, where it protects us from the sun's harmful rays, and near the ground, where it's a harmful pollutant contributing to smog.

Water Quality

A measure of how clean or polluted water is. Good water quality is vital for drinking, swimming, and supporting life, while poor water quality can cause health issues and harm ecosystems.

- **Turbidity**: How clear or cloudy water is, often due to particles like dirt or algae. High turbidity can indicate pollution and can affect the health of aquatic life.
- **E. coli:** A type of bacteria that lives in the intestines of humans and animals. Some strains can cause illness, and its presence in water indicates possible contamination with sewage.
- **pH Level**: A measure of how acidic or basic water is. It's important because it affects water quality and the health of aquatic organisms.

Legacy Pollutants

Toxic chemicals that remain in the environment for a long time, often from past industrial activities, and continue to pose risks to human health and ecosystems.

Climate Modelling

The use of computer simulations to predict future climate conditions based on current data. It helps scientists and planners understand and prepare for potential climate impacts.

Sunny Day Flooding

Flooding that occurs on clear days due to high tides, often worsened by rising sea levels. It's a sign of how climate change is affecting coastal areas.

Topography

The shape and features of the land, like hills, valleys, and plains. Topography affects how water flows, where people build, and how vulnerable an area is to flooding.

BMPs (Best Management Practices)

Effective strategies and methods used to manage natural resources and reduce pollution. They are often used in agriculture, construction, and urban planning.

- **Bioretention**: A landscaping method that uses plants and soil to naturally filter and absorb stormwater, reducing pollution and preventing flooding.
- **Nature-Based Solutions**: Approaches that use natural processes and ecosystems to solve environmental problems, like planting trees to reduce air pollution or restoring wetlands to prevent floods.

Terms to Know

Superfund Site

A polluted area that the government has identified as needing cleanup because it poses a risk to human health or the environment.

- Dredge (Superfund): The process of digging up and removing contaminated sediment from water bodies at Superfund sites to protect public health and the environment.
- Dredge (Beneficial Use): The process of removing sediment from water bodies and reusing it for positive purposes, like restoring wetlands or building up beaches.

Tidal Floods

Flooding that happens when high tides cause seawater to flow onto land, affecting coastal areas. This type of flooding is becoming more common due to sea level rise.

Storm Surge

An abnormal rise in sea level accompanying a hurricane or other intense storm, whose height is the difference between the observed level of the sea surface and the level that would have occurred in the absence of the cyclone. Storm surge is usually estimated by subtracting the normal or astronomic tide from the observed storm tide.

King tide

A King Tide is a popular, non-scientific term people often use to describe exceptionally high tides that occur during a new or full moon.

Dredging

The removal of sediments and debris from the bottom of lakes, rivers, harbors, and other water bodies.

Fetch

This refers to the distance over which the wind blows across a body of water. This influences the size and energy of a wave, with longer fetches resulting in a larger, higher energy wave. Fetch can impact dredging operations, especially in areas where the seabed is being disturbed, or equipment is operating near the water surface.