

December 2020

Freight in Greater Philadelphia

DVRPC – PPTF Meeting

Michael Ruane
Manager, Office of Freight & Aviation



Office of Freight & Aviation Planning

Promote freight and aviation considerations in the planning process to encourage the development and preservation of safe, efficient multimodal transportation systems that maximize Greater Philadelphia's position in the global economy

Improve **visibility + availability** of freight and aviation data

Educate planners and the public

Encourage **smart, multimodal** transportation systems

Inform transportation infrastructure investment





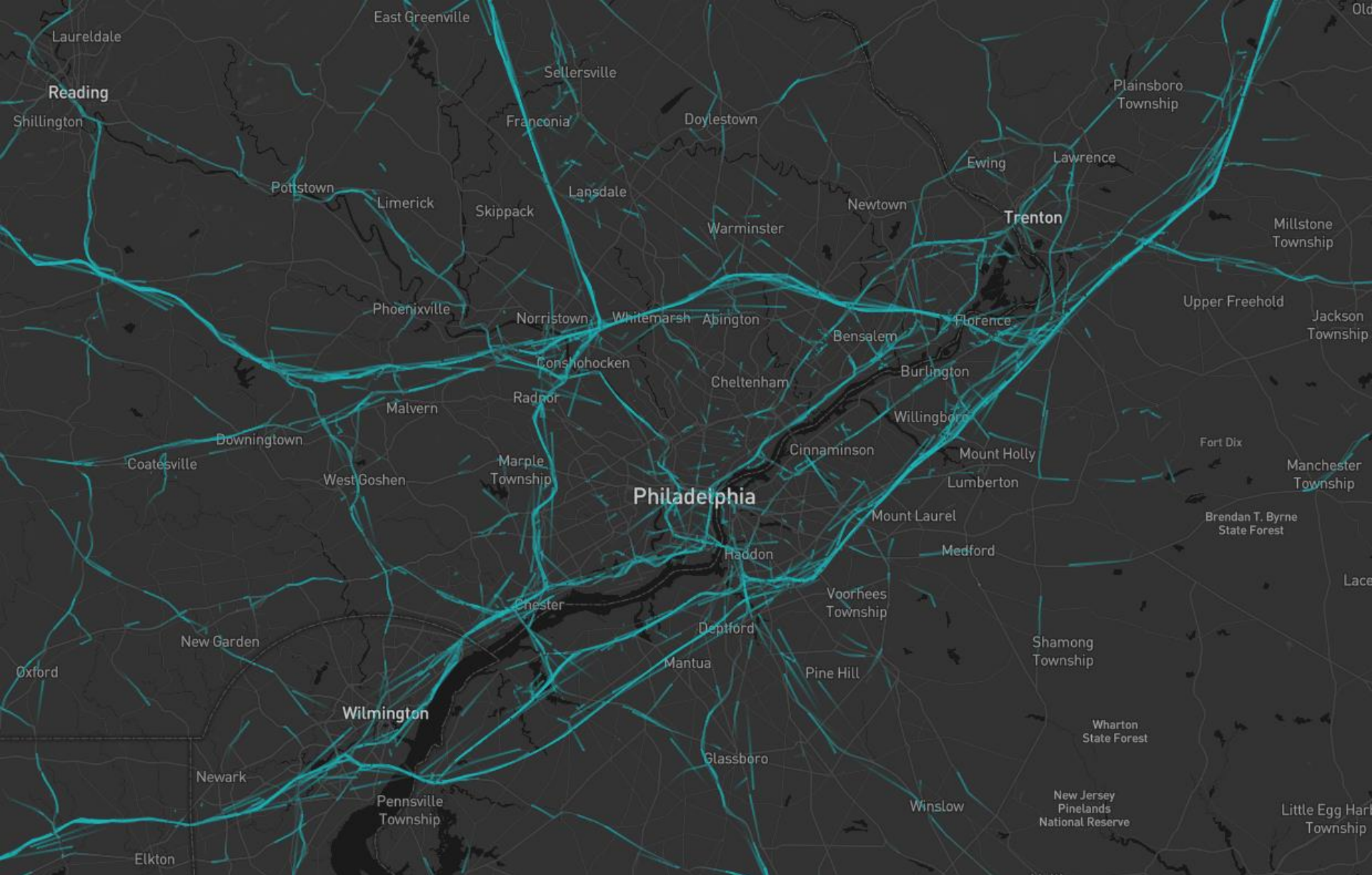












Typologies Overview

An analysis of each of the freight centers, grouping them by economic, transportation, and development activity resulted in classification into five typologies:



International Gateway



Heavy Industrial



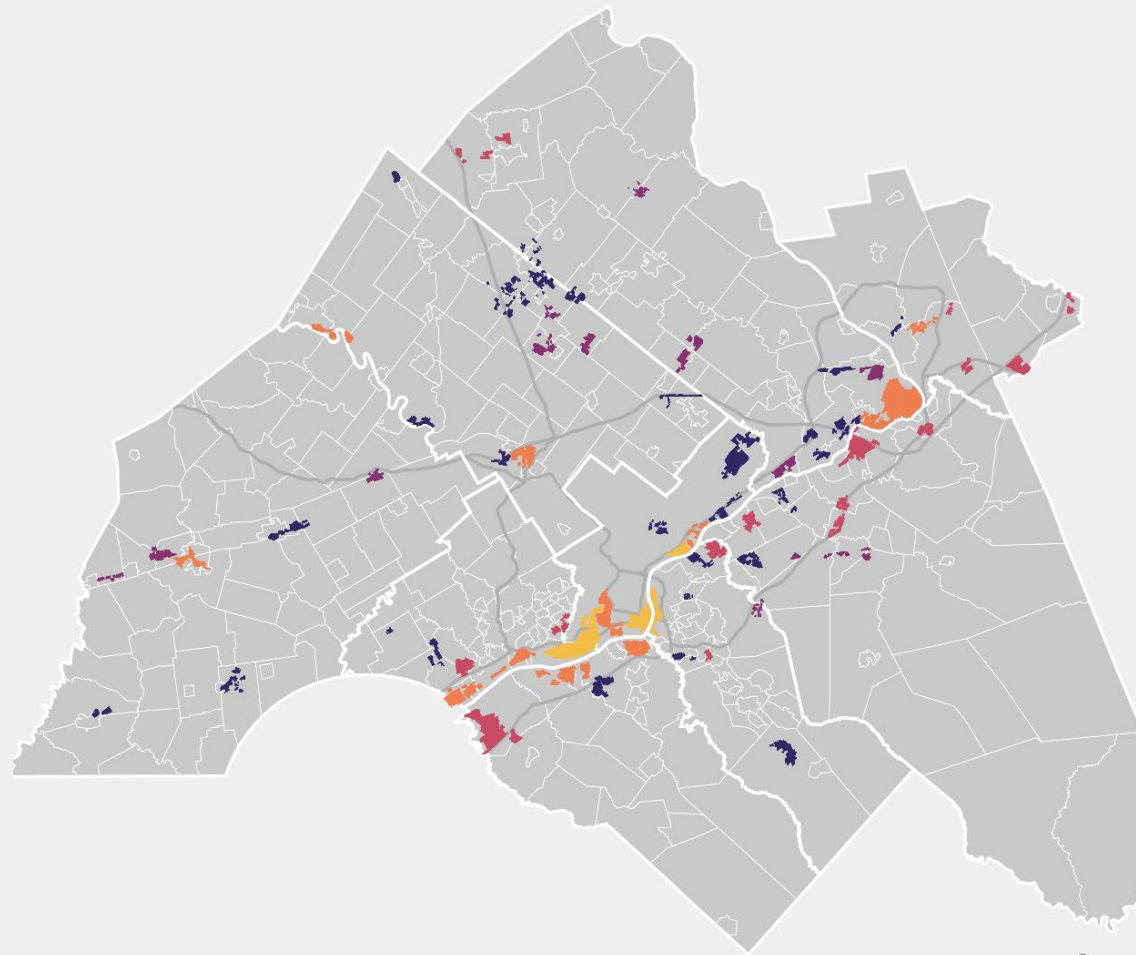
Distribution & Logistics

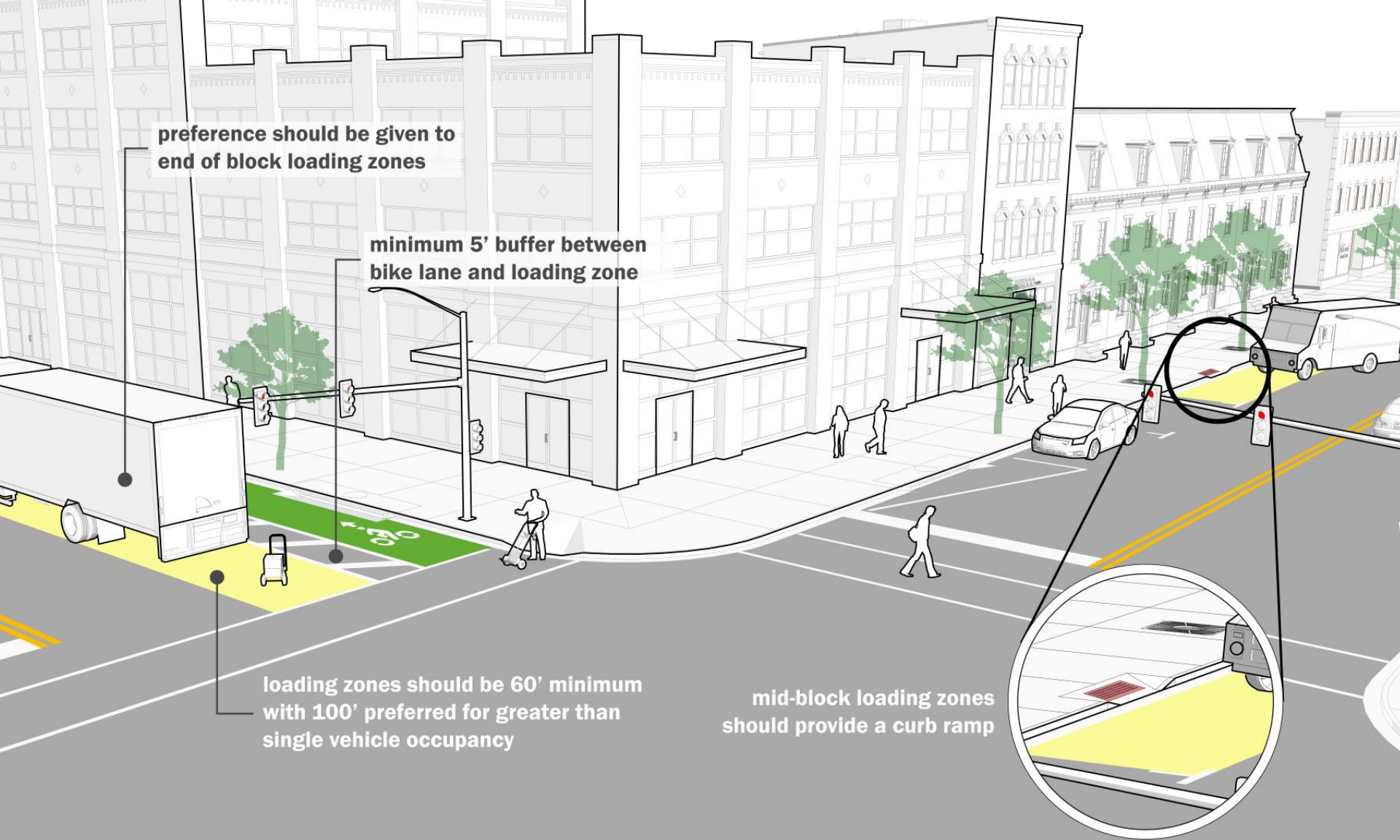


High Tech Manufacturing



Local Manufacturing & Distribution



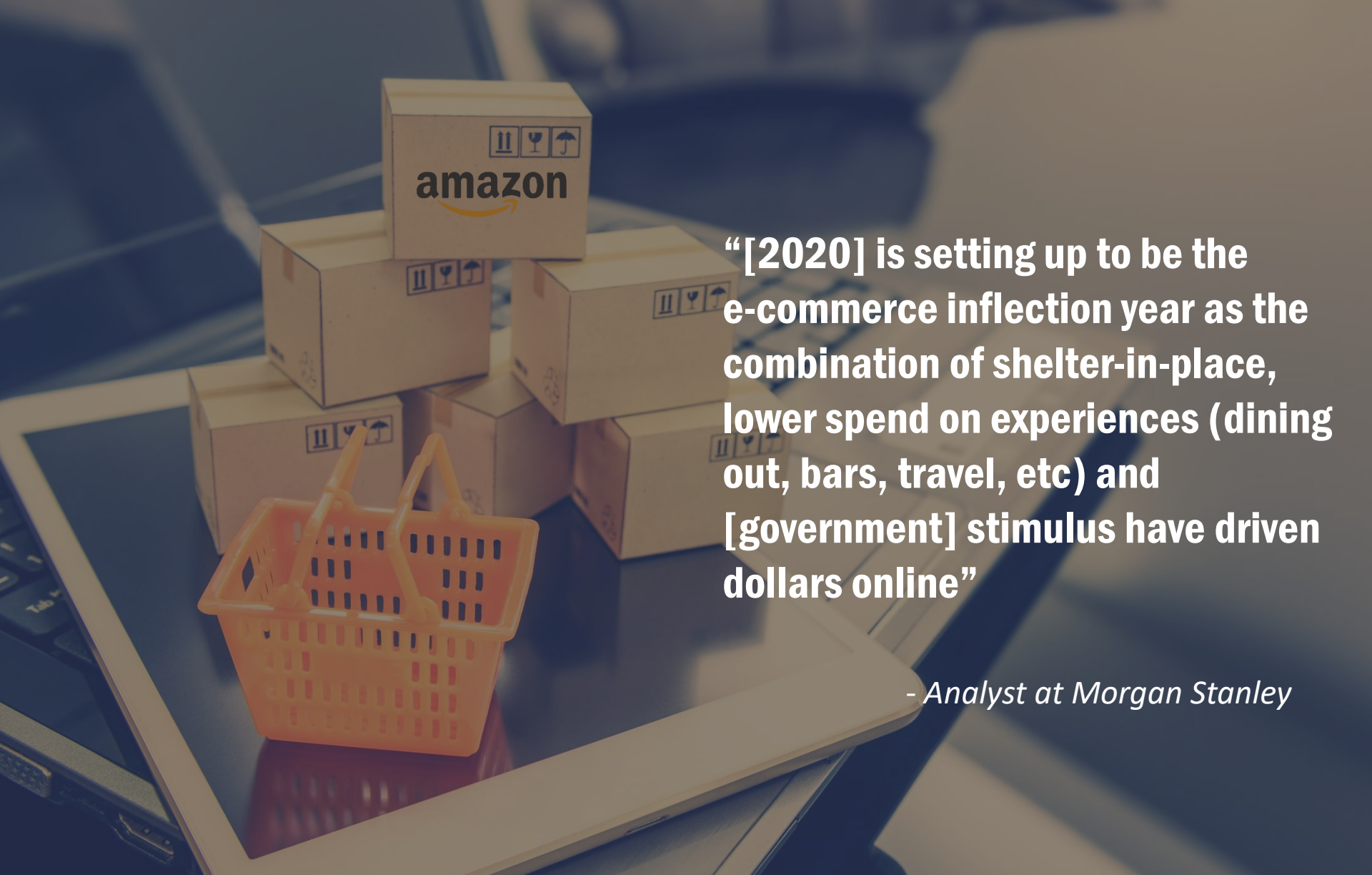


preference should be given to end of block loading zones

minimum 5' buffer between bike lane and loading zone

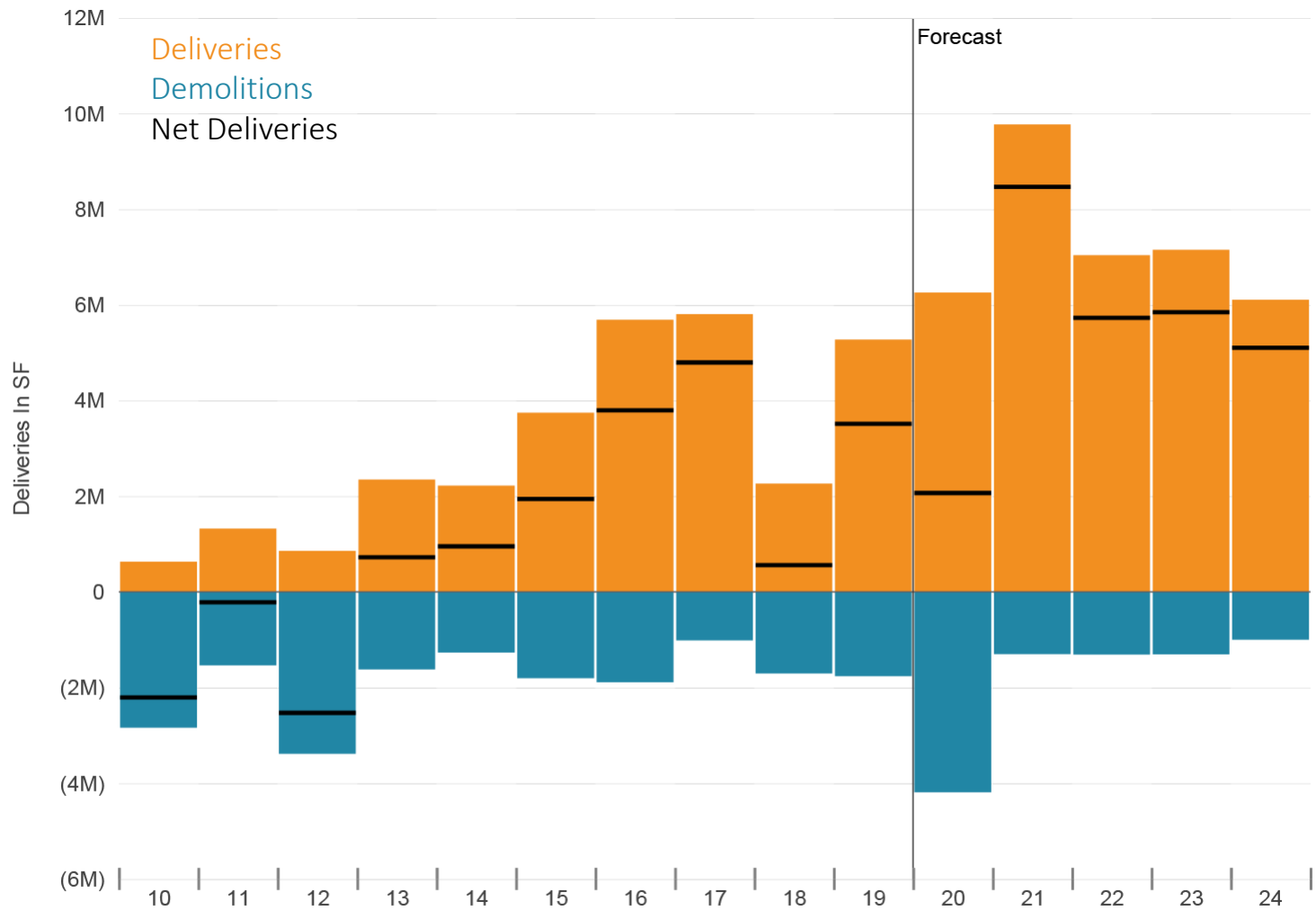
loading zones should be 60' minimum with 100' preferred for greater than single vehicle occupancy

mid-block loading zones should provide a curb ramp



“[2020] is setting up to be the e-commerce inflection year as the combination of shelter-in-place, lower spend on experiences (dining out, bars, travel, etc) and [government] stimulus have driven dollars online”

- Analyst at Morgan Stanley



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11/30/2020

Thank You!

Michael Ruane

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Goods Movement and Air Quality

Reducing Impacts on the Environment



Sean Greene
*Manager, Air Quality
Programs*

December 17, 2020
Public Participation Task Force

Air Pollution in Greater Philadelphia

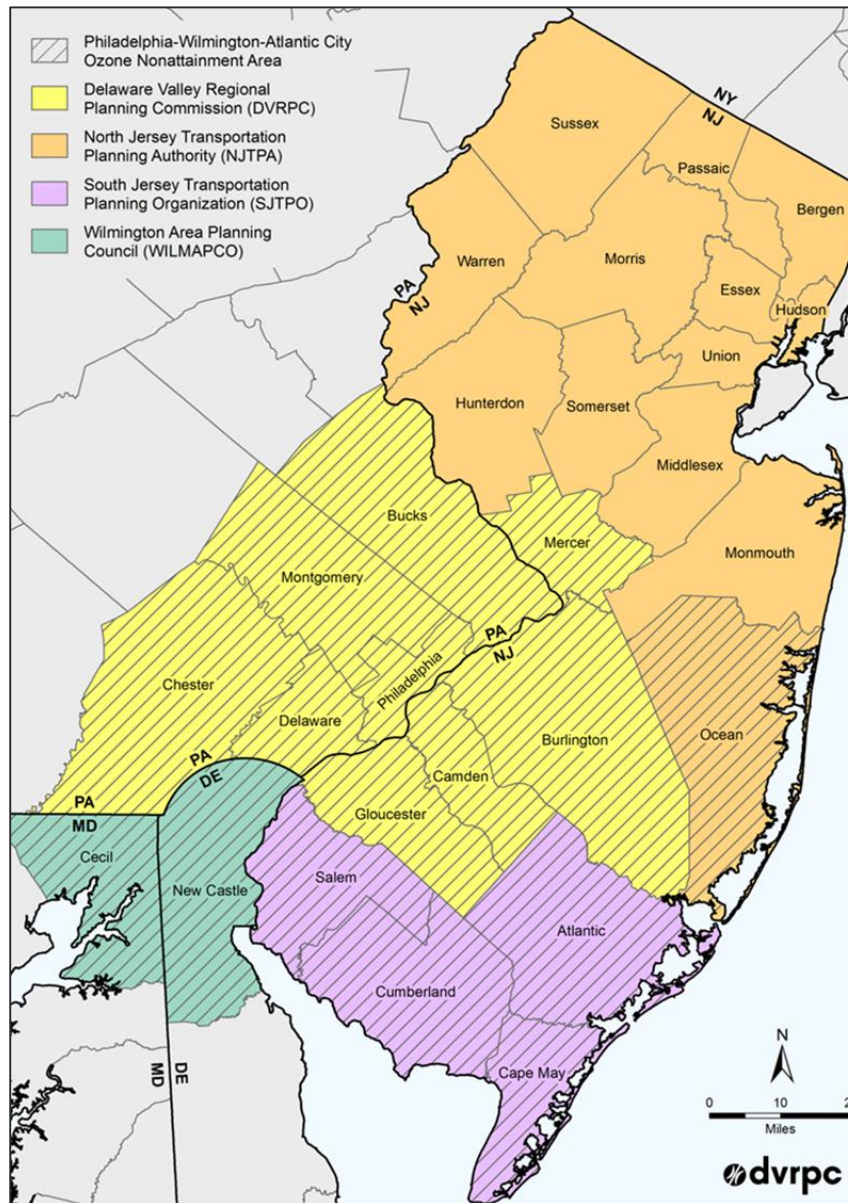
Ozone

- ✓ Classified as a Non-attainment Area
- ✓ Ozone damages lungs tissue, aggravates respiratory problems, and damages vegetation
- ✓ Summertime problem (~15 high ozone days/yr.)

Fine Particle Pollution (PM_{2.5})

- ✓ Classified as a Maintenance Area
- ✓ PM_{2.5} Impairs lung function, aggravates respiratory and pulmonary conditions
- ✓ Year-round issue (~2-3 high PM_{2.5} days/yr.)
- ✓ Can also be a localized issue

Air Quality Non-Attainment Area



Sources of Air Pollution

National

- ✓ Point sources – Factories, power plants etc.
(28% NO_x, 4% VOC, 14% PM_{2.5})
- ✓ Area sources – dry cleaners, auto body shops
(10% NO_x, 48% VOC, 9% PM_{2.5})
- ✓ Mobile sources
 - ❖ On-road (38% NO_x, 14% VOC, 3% PM_{2.5})
 - ❖ Non-road (21% NO_x, 11% VOC, 3% PM_{2.5})

Transportation is a higher % in Greater Philadelphia.

NO_x + VOC = Ground-level Ozone

Freight Sources of Emissions



Emissions From Goods Movement

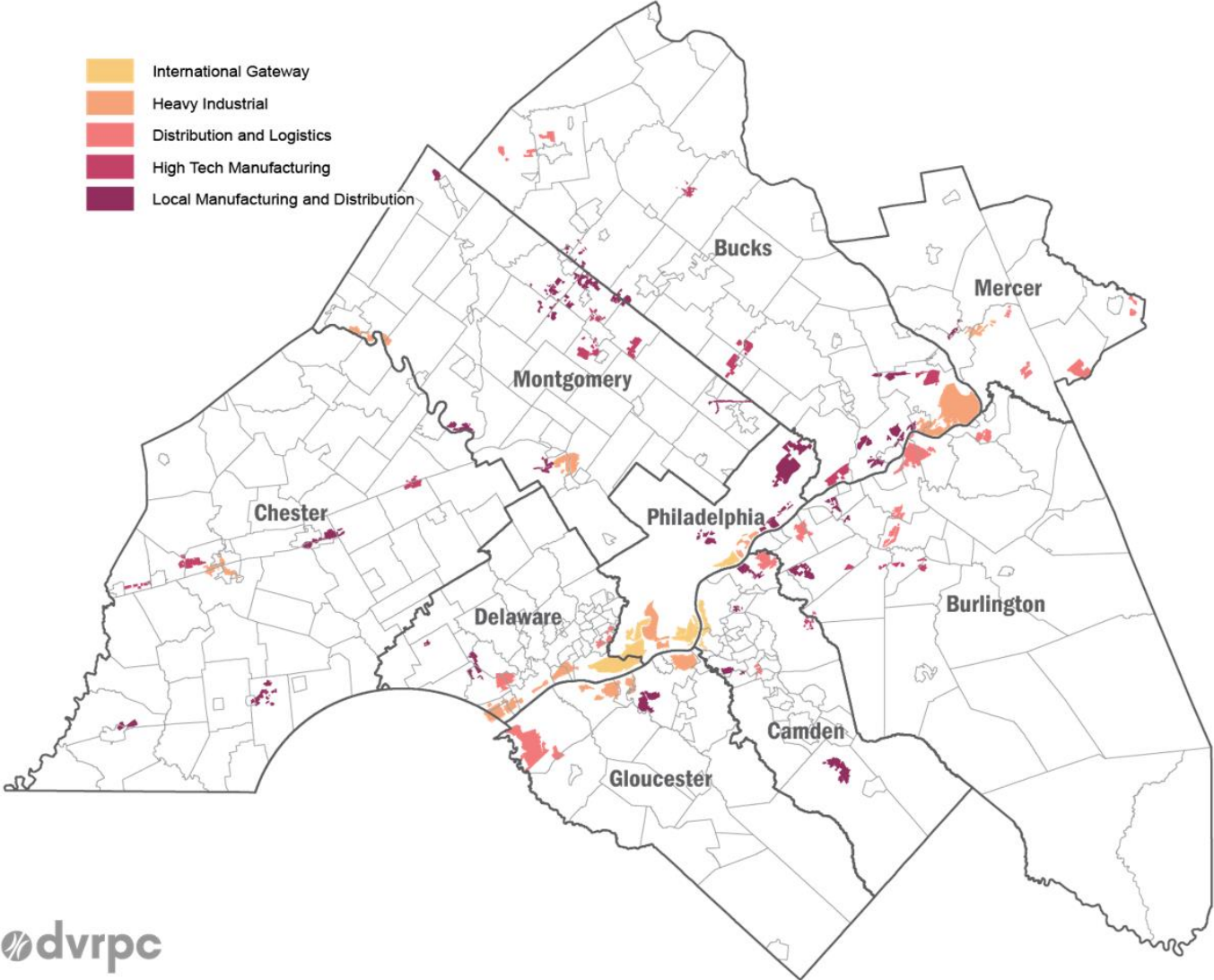
Freight responsible for 29% of GHG Emissions Nationally

- ✓ Trucks – 78%*
- ✓ Pipelines – 9%
- ✓ Rail – 7%*
- ✓ Ships – 3%
- ✓ Air – 3%

* Modes that DVRPC programs can impact.

Source: Bureau of Transportation Statistics 2018

Map of Freight Centers



Who Lives Near Goods Movement Centers?

According to EPA:

- ✓ At least 13 million people lived in-close proximity to freight facilities.
- ✓ Studies found that a disproportionate number were low-income, African American, or Hispanic. (Source: *National Port Conversation*, US EPA 2014)
- ✓ DVRPC 2015 Study of Ports in region found similar results (*Impacts of Diesel Emissions from Ports on Local Communities*, DVRPC 2015)

... Why Does it Matter?

These communities bear the environmental and health impacts from these facilities.

- ✓ Higher asthma rates, generally poorer health outcomes, missed work and school days.
- ✓ More traffic congestion, air pollution, noise, quality of life issues. (Source: *National Port Conversation*, US EPA 2014)

How Can Planning Help?

Limitations

- ✓ No regulatory authority & limited funding.

Collaboration and Cooperation

- ✓ Grant programs and application assistance.
- ✓ Conduct studies that provide implementable solutions.
- ✓ Facilitate conversations that create synergies.

Examples

Support grant applications to reduce diesel emissions

- ✓ Driving PA Forward Program (VW Funds)
- ✓ MARAMA Dray Truck Replacement Program
- ✓ Federal CMAQ funding
 - locomotive repowers, port cargo handling equipment, traffic operations improvements



Examples

Studies that provide implementable recommendations

- ✓ *Impacts of Diesel Emissions from Ports on Local Communities (2015)*
- ✓ *Truck Wayfinding in the City of Chester (2018)*
- ✓ *Trenton Health and Air Quality Project (2021)*



Examples

Participate in Conversations that Create Synergies

- ✓ Goods Movement Task Force
- ✓ *Vibrant Ports Healthy Ports Workshop*
- ✓ Camden Collaborative



How can you help?

Participate in local government

- ✓ Land-use decisions are local
 - Plan for goods movement facilities and truck routes
- ✓ Encourage participation in grant programs to improve congestion and reduce emissions

Reduce your emissions from goods movement

- ✓ Consolidate your orders
- ✓ Avoid rush deliveries
- ✓ Use Alternative Delivery Locations

Thank You!
Questions? Comments?



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For more information please visit,
<http://www.dvrpc.org>



Delaware River Basin Commission

DRBC Update

Kristen Bowman Kavanagh
Deputy Executive Director

Delaware Valley Regional Planning Commission
Public Participation Task Force
December 17, 2020



The Delaware River Today



Photo: Greg Breese, USFWS



Photo: Justin Curtis



Photo: Delaware River Sojourn



Photo: <https://camdenwd.weebly.com/>

Delaware River Basin Commission

Created by Compact in

- Five Equal Members:

- Delaware



- New Jersey



- Pennsylvania



- New York



- Federal Government



- Four Governors are the Commissioners

- Commissioner may select alternates

- Federal Commissioner is Commanding General, USACE, NAD

- Majority rules in most voting

- Meets quarterly

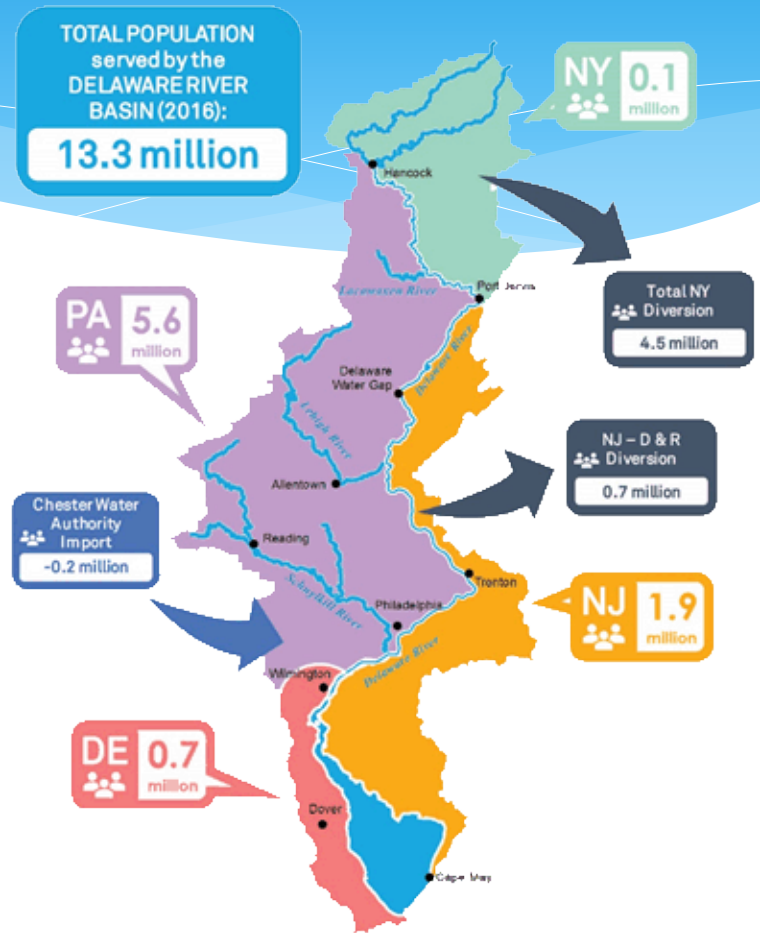
Note: New York City and Philadelphia are “advisors” and not members

DRBC Core Water Resource

Management Responsibilities

- **Water QUANTITY** - Adequate, sustainable and resilient flow.
- **Water QUALITY** - Clean and healthy.

Partnering to achieve for the Basin what individual members could not accomplish alone.



“A river is more than an amenity,
it is a treasure”

Fast Facts:

- Main stem is **330 miles long**
- Forms an interstate boundary over its entire length
- **Drains 13,539 square miles** in 4 states
- **13.3+ million people** (about 5% of the U.S. population) rely on the waters of the Delaware River Basin
- Water **withdrawal** in the Basin = **6.4 billion gallons/day**
- **Significant Exports:** NYC (up to 800 MGD) and NJ (up to 100 MGD)
- Longest, un-dammed U.S. river east of the Mississippi
- **Contributes over \$21B** in economic value

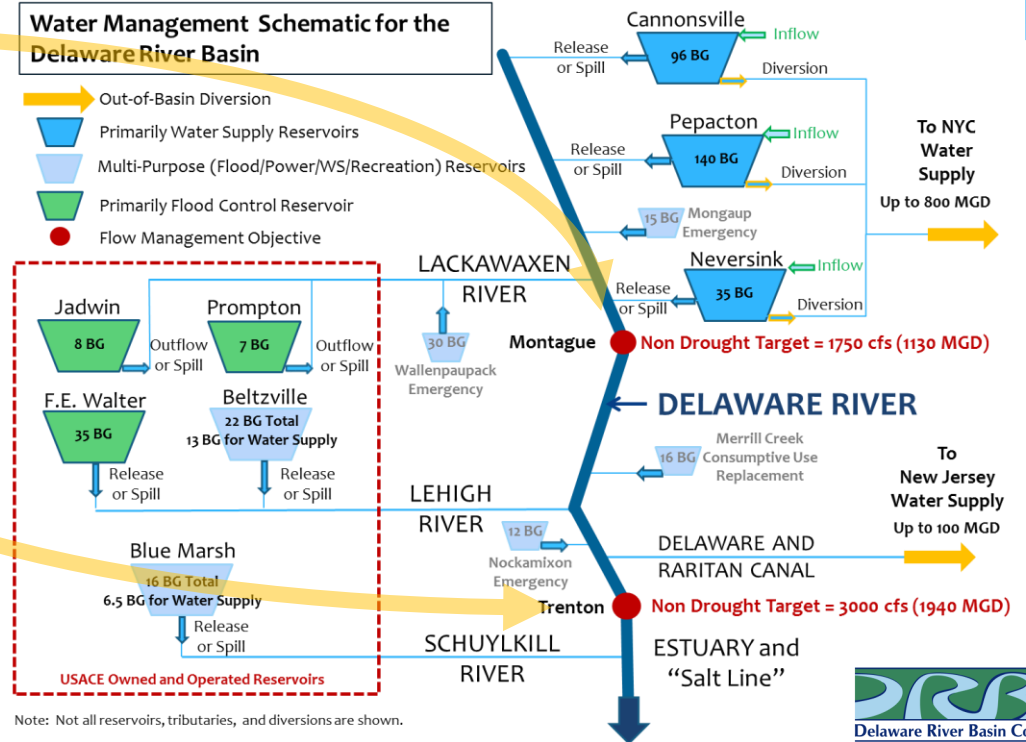


Complex Flow Management



Water Management Schematic for the Delaware River Basin

- Out-of-Basin Diversion
- Primarily Water Supply Reservoirs
- Multi-Purpose (Flood/Power/WS/Recreation) Reservoirs
- Primarily Flood Control Reservoir
- Flow Management Objective



CLIMATE CHANGE

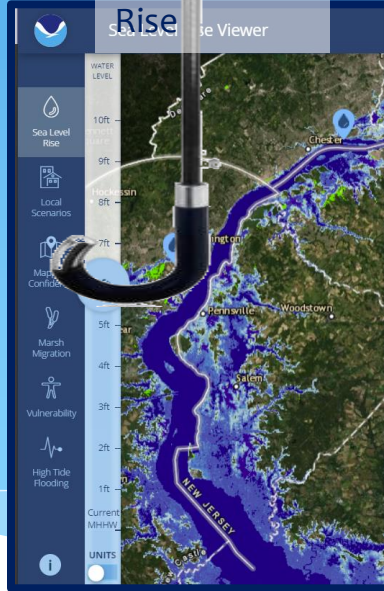
Habit



High-Tide
Flooding



Sea Level
Rise



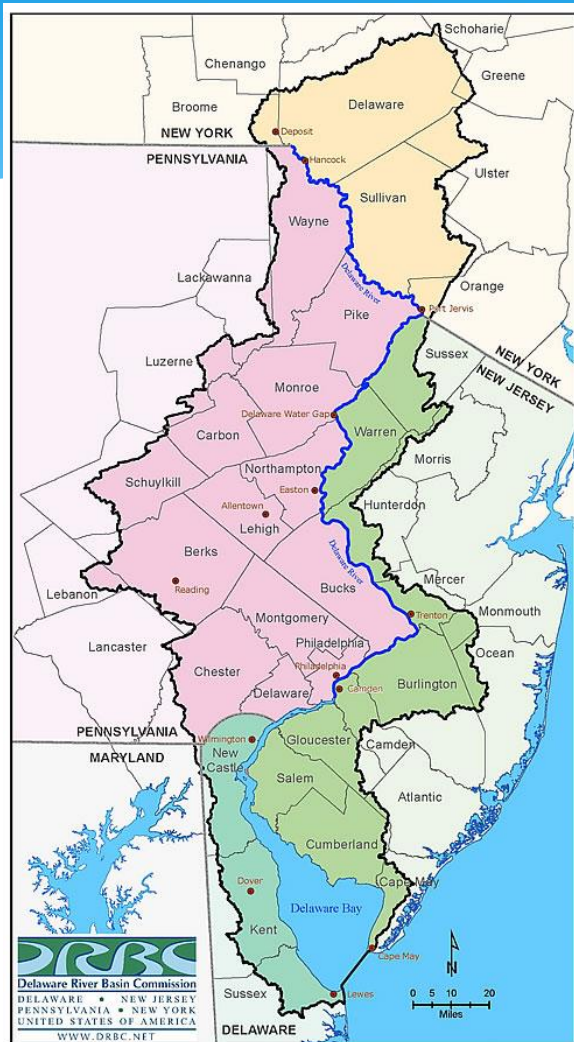
Snowpack and
Ice



Droug
ht



Right to Left, Top to Bottom: AGU.org; NOAA, Phila.gov, Sea Grant Delaware, S. Mullholland, NOAA SLR Viewer, USGS, NYCDEP



Freshwater Hydrologic Climate Considerations:

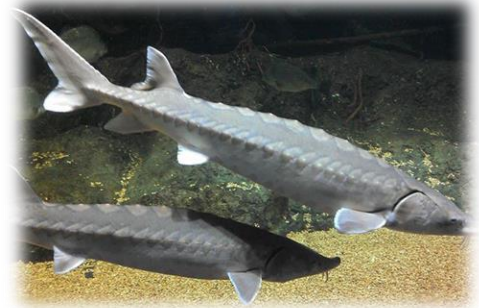
- Precipitation
- Flow
- Temperature
- Evapotranspiration
- Snowpack

Salt Water Climate Considerations:

- Sea Level Rise

Designated Uses

- * “What do we want to use this water body for?”
- * CWA “Fishable / Swimmable” goals
- * Examples:
 - * Public water supply (drinking water)
 - * Aquatic Life
 - * Water based recreation
 - * **Fishing / fish consumption**
 - * Industrial water supply
 - * Agriculture water supply

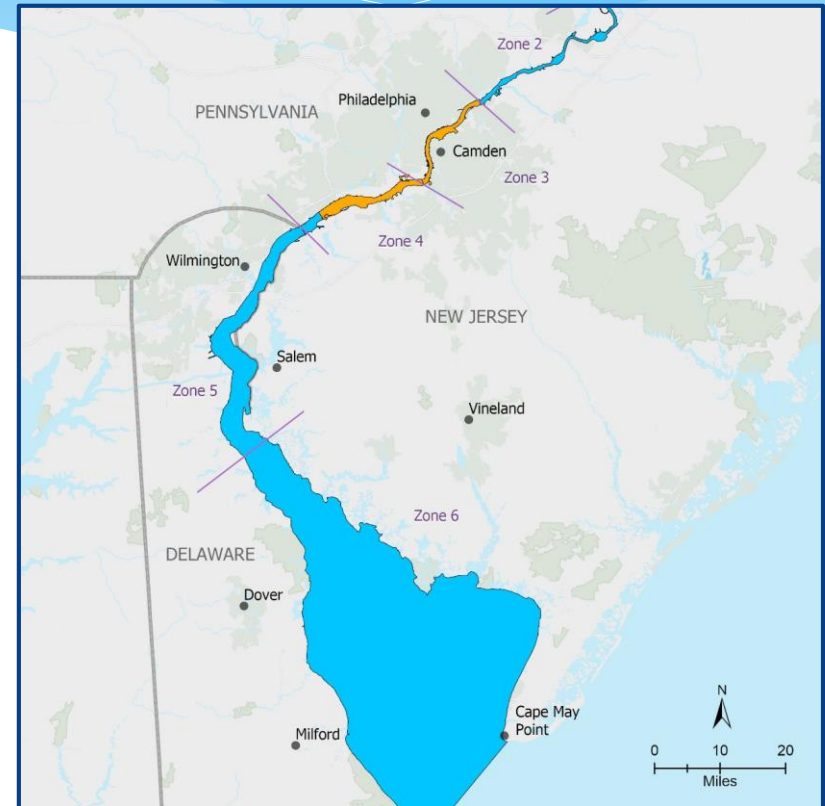


Current Recreational Uses / Criteria in Delaware Estuary (DRBC WQ Regs)



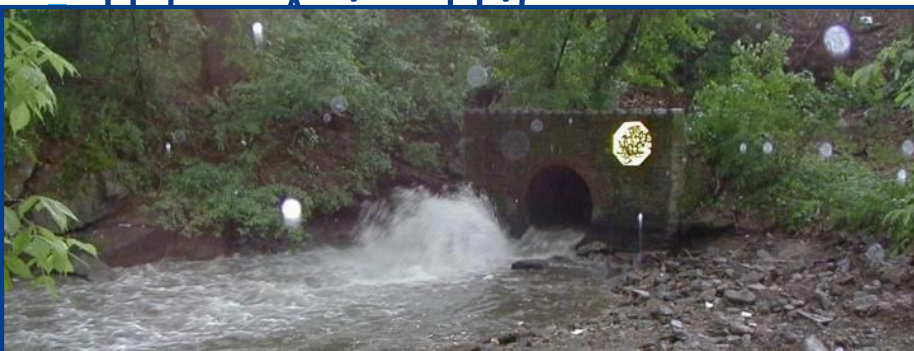
| Zone | Use | Fecal Coliform | Enterococcus |
|---------|--------------------------------------|------------------------------------|--------------|
| | | Geometric mean colonies per 100 mL | |
| 2 | Recreation | 200 | 33 |
| 3 | Recreation – Secondary Contact | 770 | 88 |
| Upper 4 | | | |
| Lower 4 | Recreation | 200 | 33 |
| 5 | | | 35 |
| 6 | | | |

<http://www.nj.gov/drbc/library/documents/WQregs.pdf>



Possible Sources of Bacteria?

- **Combined Sewer Overflows**
 - Sanitary sewage and storm water in same pipes
 - Legacy systems (100+ years) in our oldest, largest communities
- **Other Urban Runoff (MS4s)**



http://archive.phillywatersheds.org/watershed_issues/stormwater_management/combined_sewer_system

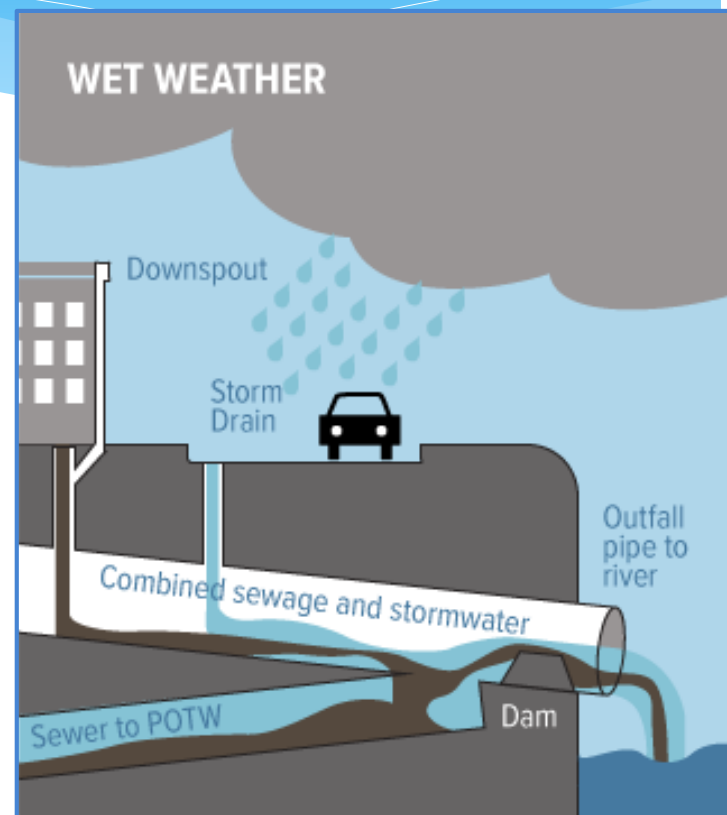
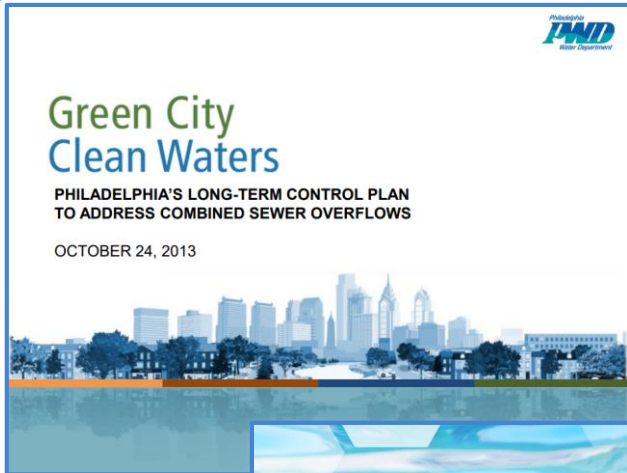


Image credit: Jersey Water Works

Reducing Bacterial Loads?



Philadelphia
PHMD
 Water Department

Green City Clean Waters

**PHILADELPHIA'S LONG-TERM CONTROL PLAN
 TO ADDRESS COMBINED SEWER OVERFLOWS**








OCTOBER 24, 2013



- CSO Long Term Control Plans
- MS4 Permitting
- Stormwater management
- Capture & disinfect more combined sewage

Camden County Municipal Utilities Authority:

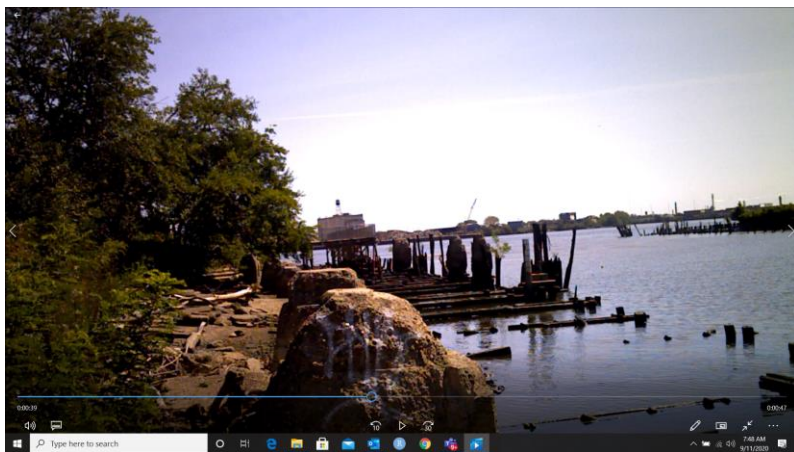
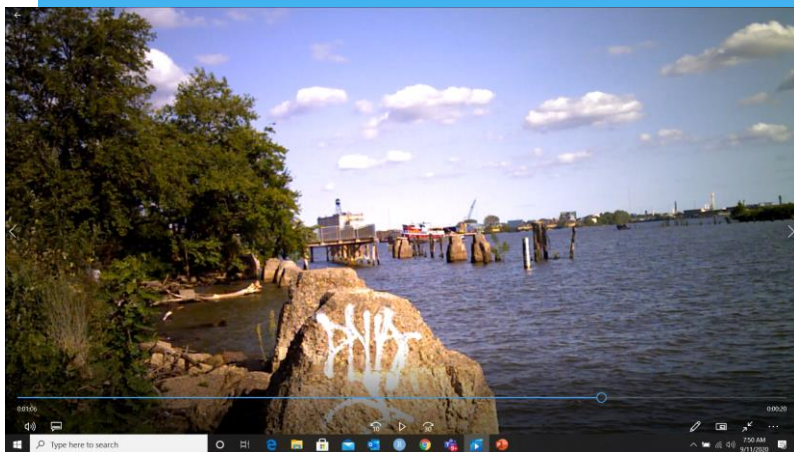
A Wet Weather Case Study of Incorporating Community Interests into Effective Infrastructure Decision-Making

| | | | | | | | |
|---|------------------|---------|-------|---------|----------------|--------|--|
|  <p>Jurisdictions:</p> <ul style="list-style-type: none"> • City of Camden • City of Gloucester • Camden County  <p>CCMUA: a county-wide public wastewater utility.</p>  <p>Wastewater System</p> <table border="1"> <tr> <td>Residents served</td> <td>510,000</td> </tr> <tr> <td>Lines</td> <td>125 mi.</td> </tr> <tr> <td>Plant capacity</td> <td>58 mgd</td> </tr> </table> | Residents served | 510,000 | Lines | 125 mi. | Plant capacity | 58 mgd |  <p>Receiving water: Delaware River</p>  <p>Revenues: ~\$100 million/annually</p>  <p>Average number of Combined Sewer Overflows annually: 70</p>  <p>LTCP required to be in place by 2020</p> <p>CCMUA Goal: 2018</p> |
| Residents served | 510,000 | | | | | | |
| Lines | 125 mi. | | | | | | |
| Plant capacity | 58 mgd | | | | | | |

- Happening now
- Long Term Proposition
- More reduction requires more \$\$\$

Other Hazards Challenges

- Beaches have an elaborate protocol for monitoring, beach closures, re-opening
- Busy shipping ports; security concerns
- Hazardous currents
- Debris, pilings, junk



Stakeholder and Public Input, Outreach and Collaboration

- Public input, engagement, partnership, and outreach
- Science, engineering, planning and input through Advisory Committees:
 - ✓ Water Quality (WQAC)
 - ✓ Water Management (WMAC)
 - ✓ Toxics (TAC)
 - ✓ Monitoring (MACC)
 - ✓ Regulated Flow (RFAC)
 - ✓ Flood (FAC)
 - ✓ Climate Change (ACCC)

www.drbc.gov

EAC's In Action:

The Value of EAC's



What is an EAC: Environmental Advisory Council

- ▶ An official arm of the municipal government
- ▶ 3-7 members appointed members
- ▶ Advisor to governing boards
- ▶ Provide objective, in-depth analysis about environmental resource issues
- ▶ Provide information in the decision making processes of environmental ordinances
- ▶ EAC's are created through a municipal ordinance

Enabling Legislation: ACT 148

▶ Specific Powers

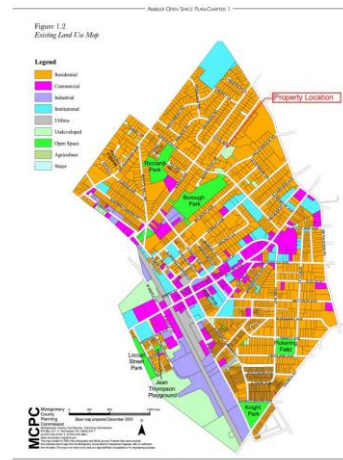
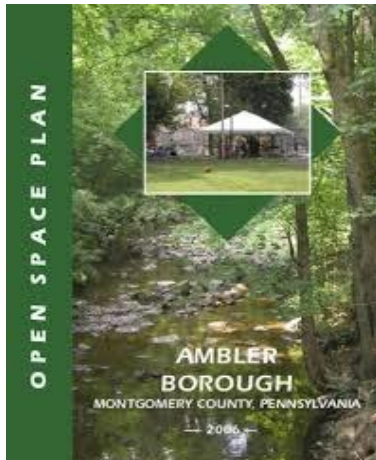
- ▶ Identify environmental issues and recommend plans and programs
- ▶ Make recommendations for the use of open land areas.
- ▶ Promote a community environmental program.
- ▶ Index all open space (public and private)
- ▶ Advise local government agencies on the acquisition of property.

Elements of an EAC

- ▶ **Municipal Governance**
 - ▶ Building and maintaining positive relationships is essential
- ▶ **Mandated Responsibilities**
 - ▶ Agenda, Meeting minutes, Annual report
- ▶ **Membership & Terms**
 - ▶ 3 year commitment
 - ▶ Best if one member is from planning commission
- ▶ **Funding**
 - ▶ Act 148 enables appropriation of funds
- ▶ **Budget**
 - ▶ Essential to cover operating costs (\$500- \$1000)
 - ▶ Grows with increasing responsibility and demonstration of successful programs

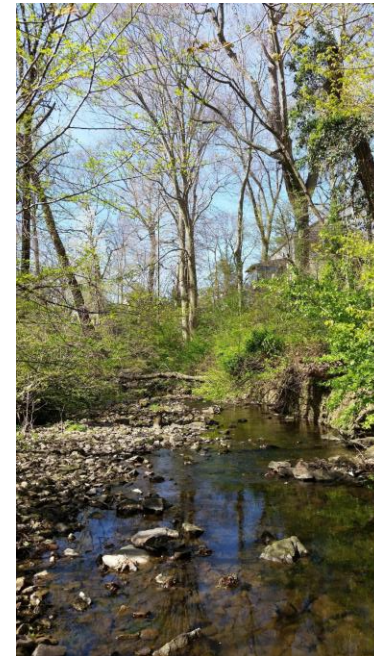
Ambler EAC in Action: Update of Open Space Plan

- ▶ Recommended an update of [Ambler's 2006 Open Space Plan](#)
- ▶ Collaborated with Planning Commission and Montgomery County Planning Commission
- ▶ Final draft accepted by Borough Council in April 2020



Ambler EAC in Action: Land Acquisition

- ▶ Worked with developer to purchase 1 of 4 lots on a steep sloped, environmentally sensitive piece of land
- ▶ Raised over \$40,000 of the \$75,000 asking price
- ▶ Assured land was deeded as Permanent Open Space
- ▶ Obtained maintenance plan for space
- ▶ Continues to explore options for BMP's of this space



Ambler EAC in Action: Review plans and make suggestions

- ▶ Densely developed community with minimal new development
- ▶ Work with Code Enforcement to identify avenues for outreach
- ▶ Meet with property owners and encourage implementation of BMP's in plans
 - ▶ Zaccone Motors: porous pavement and tree trenches
 - ▶ House Rebuild: permeable pavers
 - ▶ Infill housing: street trees
 - ▶ Septa parking lot: new trees and rain garden



Ambler EAC in Action: Stormwater Management Program

- ▶ Wrote and acquired Growing Greener Grant \$206,000
- ▶ Implementing and managing this essential program
- ▶ Helps municipality to meet MS4 requirements
 - ▶ Minimum Control Measures
 - ▶ Public education and outreach
 - ▶ Public involvement and participation
- ▶ Provides funding for homeowners to put in place
 - ▶ Rain Gardens, permeable pavers, rain barrels, and down spout planter boxes



Ambler EAC in Action: EarthFest

- ▶ Plan and execute an annual community wide EarthFest in April
- ▶ Vendors, kids activities, business participation
- ▶ Electronics Recycling



Ambler EAC in Action: TreeVitalize

- ▶ PHS TreeVitalize manages plant one million
- ▶ Planted 58 trees in 2019 and 39 trees in 2020 in public and private spaces
- ▶ Worked with Septa to get 6 new trees planted at Ambler train station in Spring of 2019 and working on a rain garden for Spring of 2021



Ambler EAC in action: Work with High School students on environmental projects

- ▶ Connie Liu: Plastics Awareness
- ▶ Charlotte Wachter: Biodegradable take out containers
- ▶ Rebecca, Tori, and Kayla: Rain Barrel building and installation
- ▶ Thomas: Recycling and O
- ▶ Chan: Current Recycling f
- ▶ Elena: Upcycling



Ambler EAC in Action: Develop outreach on environmental issues

▶ Emerald Ash Borer

- ▶ Developed brochure
- ▶ Identified Ash Trees in Ambler, provided education

▶ Spotted Lantern Fly

- ▶ Social media campaign
- ▶ Monitoring our parks

▶ Stormwater

- ▶ Workshops for grant
- ▶ Municipal education on MS4

▶ Ready for 100

- ▶ Created momentum for Energy Transition Plan
- ▶ Continue to provide support and alert Borough to opportunities



Environmental Advisory Councils EAC's

- ▶ Volunteers
- ▶ Provide valuable resources and information
- ▶ Work with, not against municipalities
- ▶ Create a sense of community
- ▶ Work with other EAC's and local environmental organizations

- ▶ QUESTIONS???