

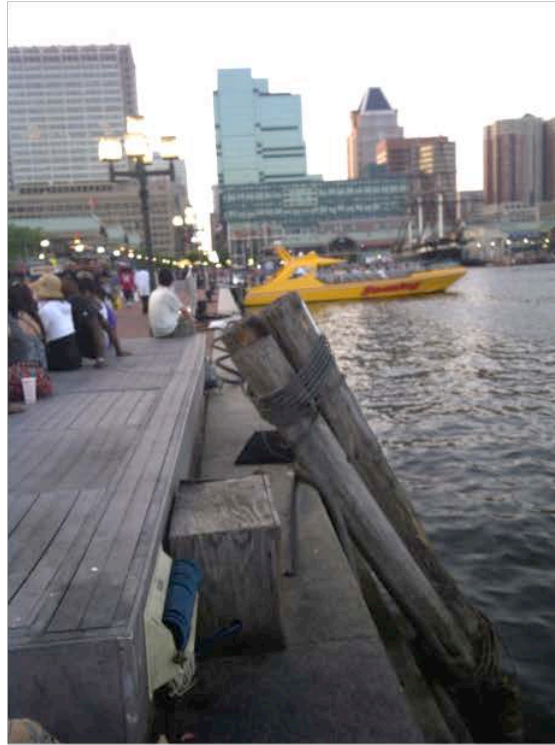
## Waterfront Partnership of Baltimore

Adam Lindquist

Healthy Harbor Coordinator

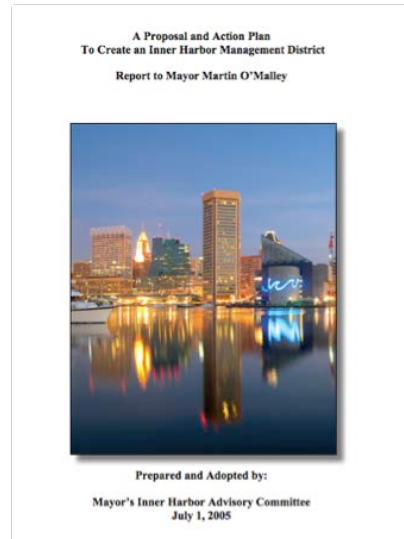
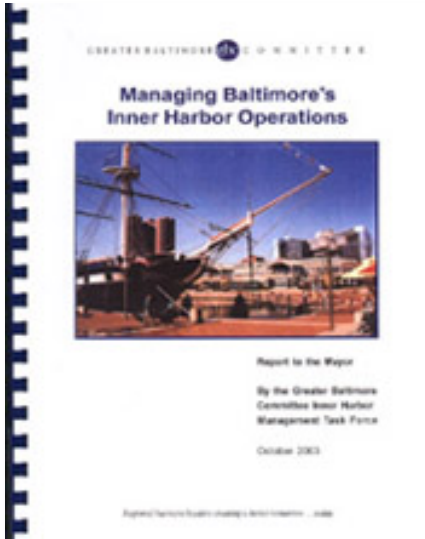
[Adam@WaterfrontPartnership.org](mailto:Adam@WaterfrontPartnership.org)

# Waterfront Partnership History



The creation of Waterfront Partnership was driven by aging and poorly maintained infrastructure in the Inner Harbor.

# Waterfront Partnership History



## Great Baltimore Committee

2003 Report

Managing Baltimore's Inner Harbor Operations

## Inner Harbor Advisory Committee

2005 Report

A Proposal to Create an Inner Harbor Management District

## Key Board Members

### Private

- Mike Hankin, Brown Advisory
- Van Reiner, Maryland Science Center
- Mike Beatty, Harbor Point Development
- Zed Smith, Cordish Company

### Public

- Assistant Deputy Mayor
- Director of Public Works
- Director of Recreation and Parks
- Director of Transportation
- Police Commissioner

# Waterfront Partnership Boundaries

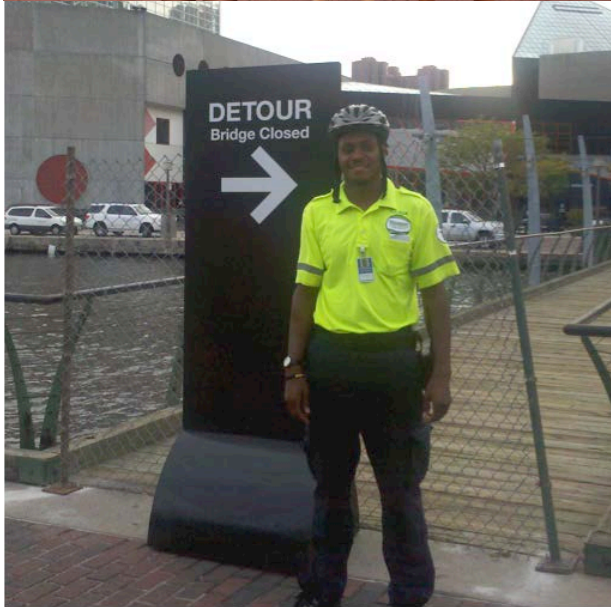


# Waterfront Services



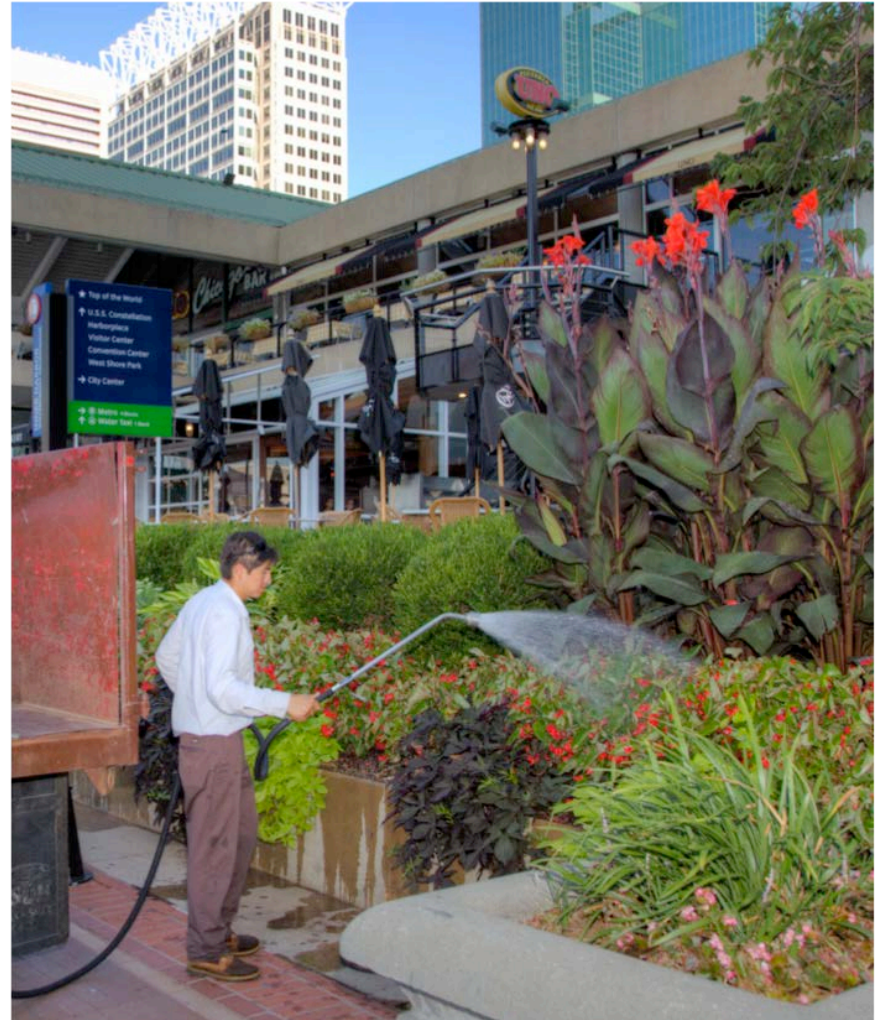
**Clean Team**

# Waterfront Services



**Safety & Hospitality Guides**

# Waterfront Services



**Green Team**

# Waterfront Services



Harbor Harvest 2010



Charm City Yoga



Milkshake at Harbor Harvest 2011



**Marketing**



# Waterfront Services



**Walter Sondheim Fountain**

# Waterfront Services



**Pierce's Park**





*A cleaner, greener future for our neighborhoods, streams, harbor and Bay.*

**A Plan to make Baltimore Harbor  
Safe for Swimming and Fishing by 2020**













# Why is the Harbor Polluted?



TRASH

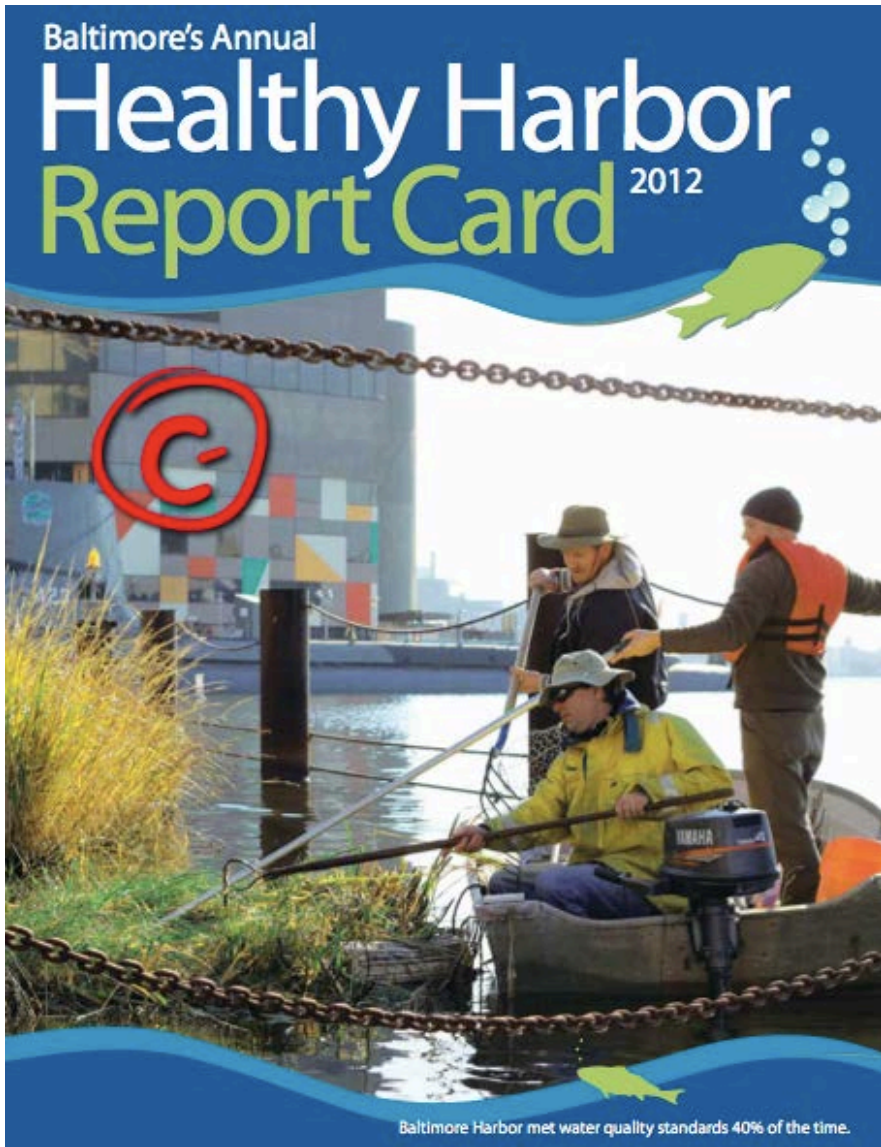


BACTERIA

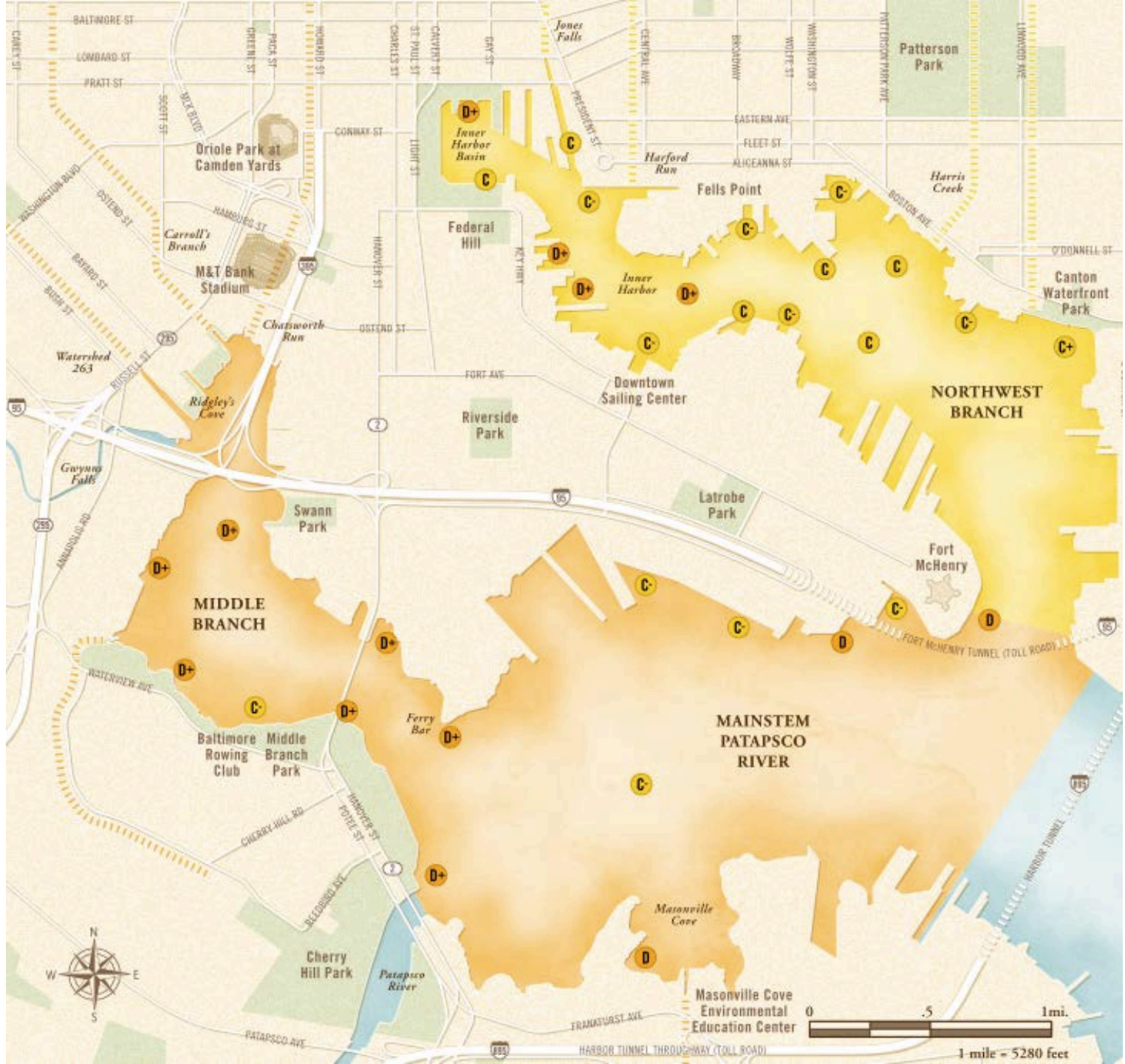


POLLUTED  
STORMWATER  
RUNOFF

# Healthy Harbor Report Card

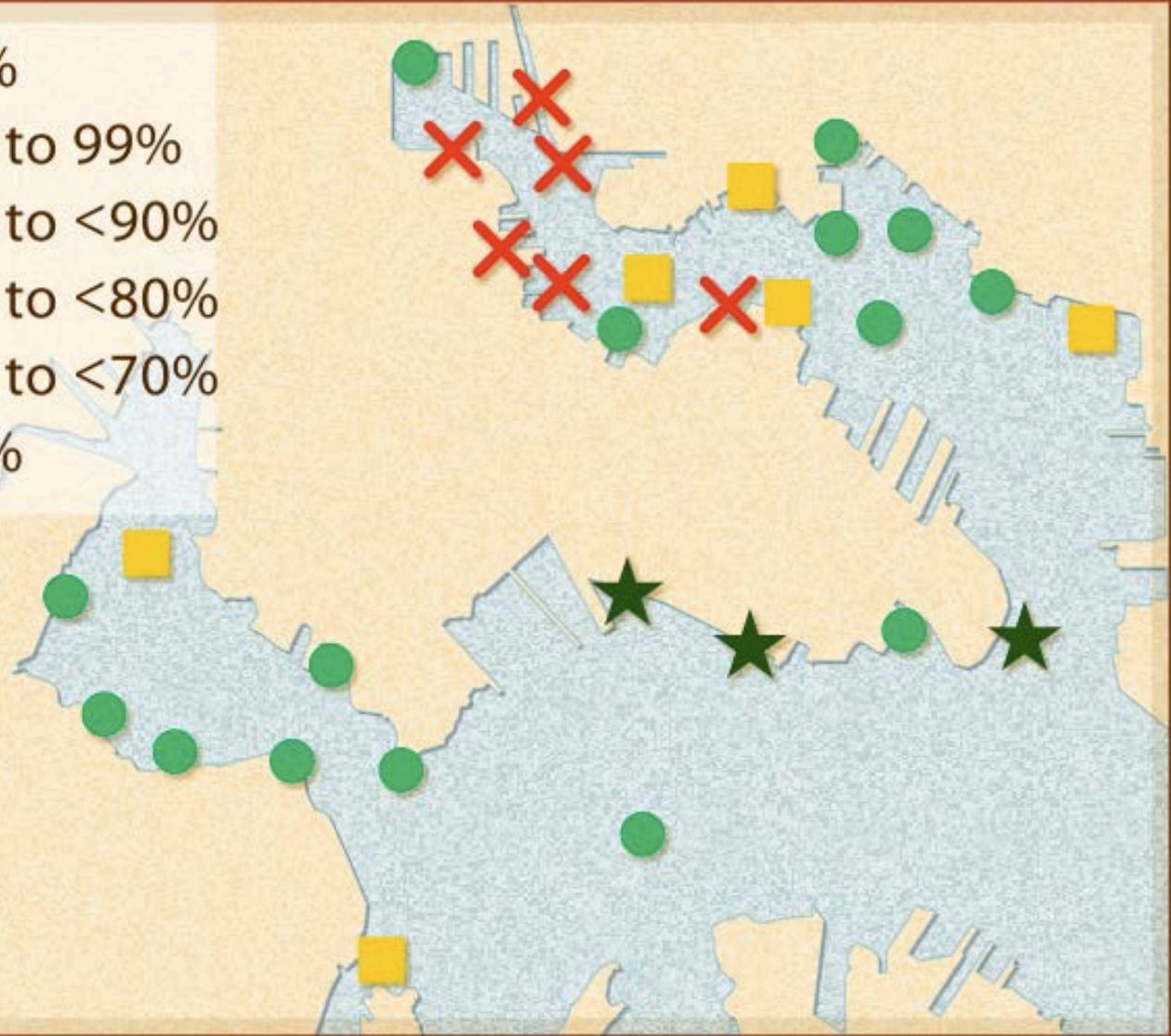


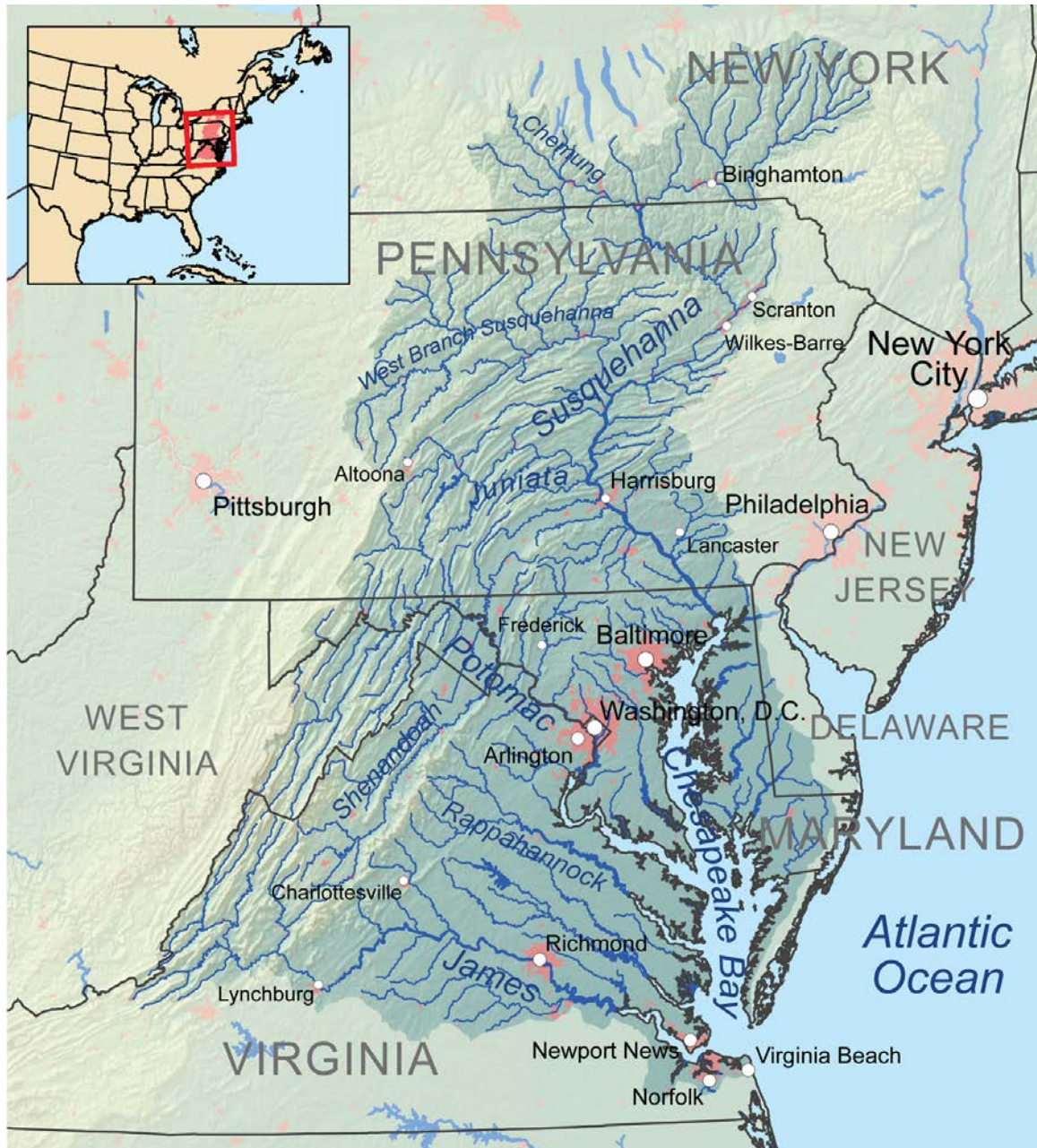
Indicator of Health:	2012 Grade
Chlorophyll a .....	D-
Dissolved Oxygen .....	C-
Water Clarity .....	D+
Total Nitrogen .....	C-
Total Phosphorus .....	C+
<b>Overall Baltimore Harbor Grade .....</b>	<b>C-</b>
Inner Harbor Region .....	C-
Middle Branch Region .....	D+
Mainstem Patapsco Region .....	D+



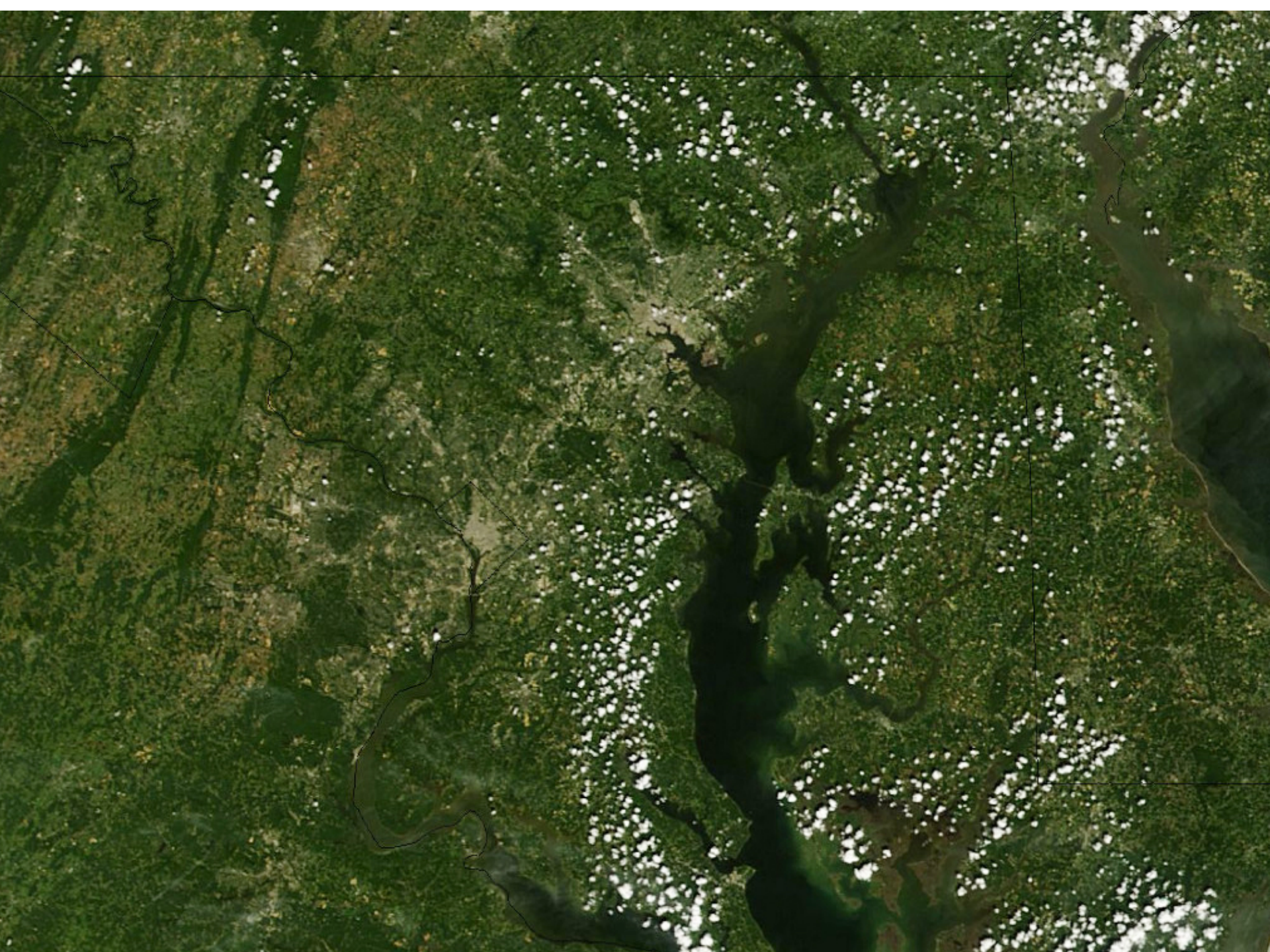
# Bacteria (Enterococci) Scores

percentage of time water sample met the swimming standard













WATERFRONT  
PARTNERSHIP  
OF BALTIMORE, INC.



# HEALTHY HARBOR

## BALTIMORE

Creating a Cleaner, Greener Future  
For Our Neighborhoods, Streams & Harbor

# Strategies for Addressing Bacteria



**There is no poop fairy.**

**Please clean up after your dog.**

Dog waste doesn't biodegrade like wild animal waste. It sticks around for a long time. Meanwhile, it contains harmful bacteria, pollutes groundwater, and smells disgusting on the bottom of a shoe. Please help keep parks, trails and neighborhoods free of poop piles by packing out your dog's waste.

*A message from Jefferson County Animal Control  
and your local park district.  
Visit <http://animalcontrol.jeffco.us>*

jefferson county sheriff



# Strategies for Addressing Trash



# Strategies for Addressing Polluted Stormwater

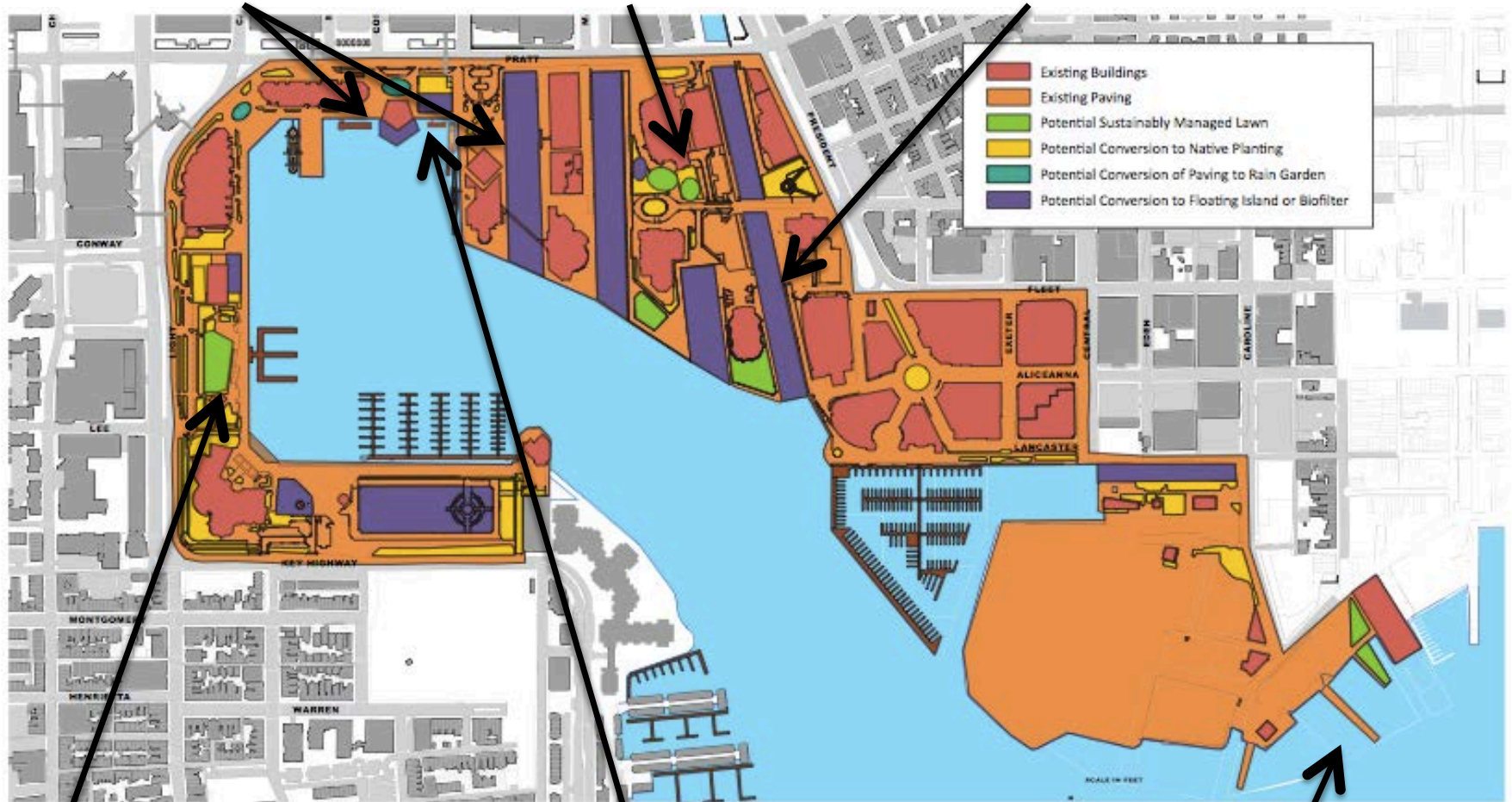


# Harbor as a Living Laboratory Learning Center

Floating Wetlands

Pierce's Park Rain Gardens

Jones Falls Water Wheel



Potential Green Roofs

Potential Rain Gardens

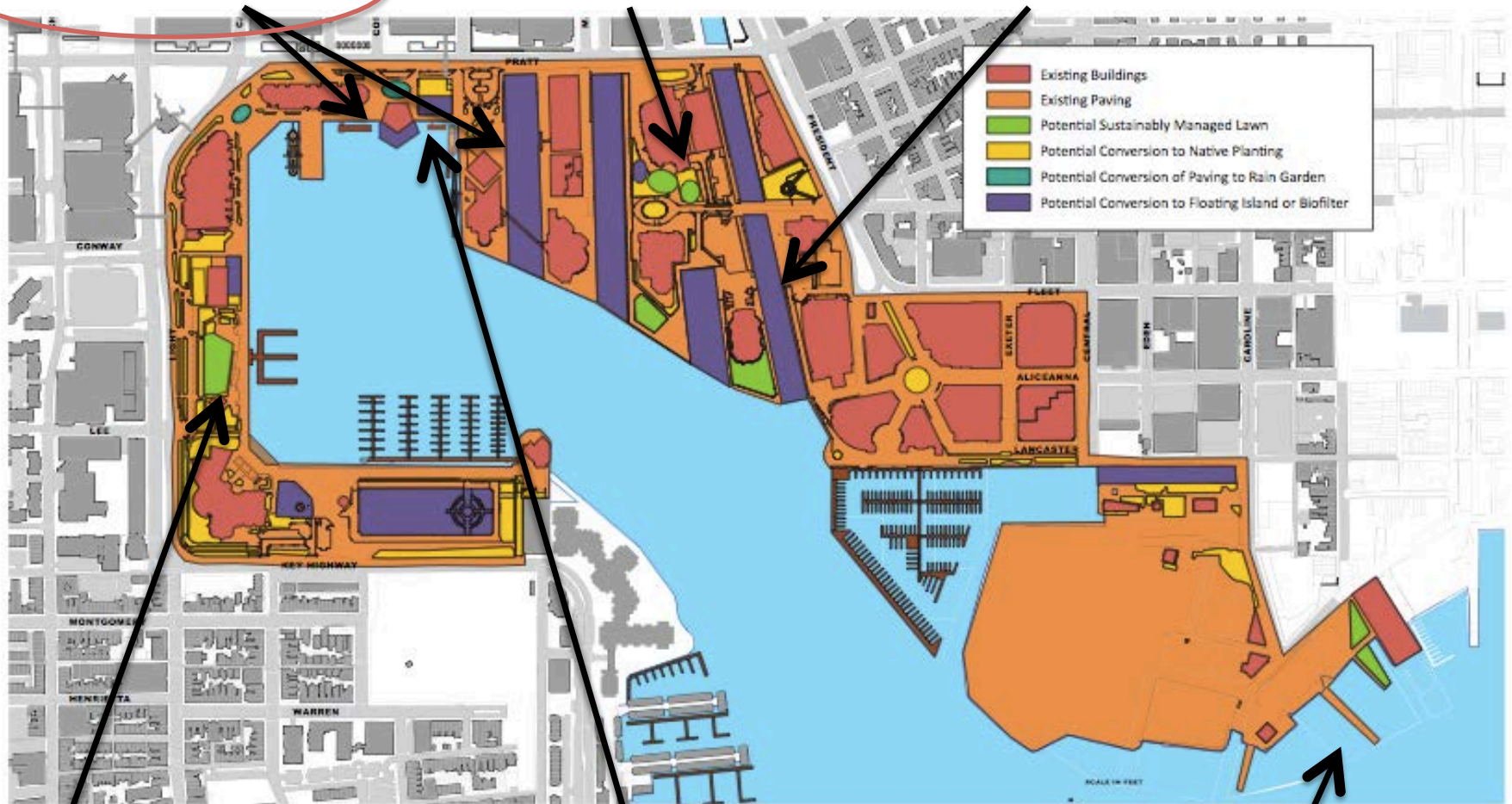
Chase Pier  
Waterfalls & Wetlands

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Chase Pier  
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# Floating Wetlands



# Floating Wetlands





# Floating Wetlands







# Floating Wetlands Interpretive Sign



## Native wetland plants



saltmeadow hay  
*Spartina patens*



marsh hibiscus  
*Hibiscus moscheutos*



smooth cordgrass  
*Spartina alterniflora*

## A closer look

- 1 Wetland plants thrive on these floating islands, providing habitat above and below the surface of the water for birds, pollinators and aquatic life.
- 2 Seeds from the native plants get dispersed in the water and by birds. Floating wetlands become a native seed bank for the region!
- 3 Used, plastic bottles are sandwiched between "media" (like coconut fiber) in which the wetland plants will grow. The bottles provide buoyancy for the wetland and a good use for trash.
- 4 Fish and other aquatic creatures find habitat and refuge in the plant roots, where shade, shelter, and food abound.
- 5 Wetland plant roots remove polluting nutrients from the water and use them to grow.

A living community called "biofilm" develops on the roots and media. It is teeming with microorganisms and young bivalves, which actively filter and clean the water.



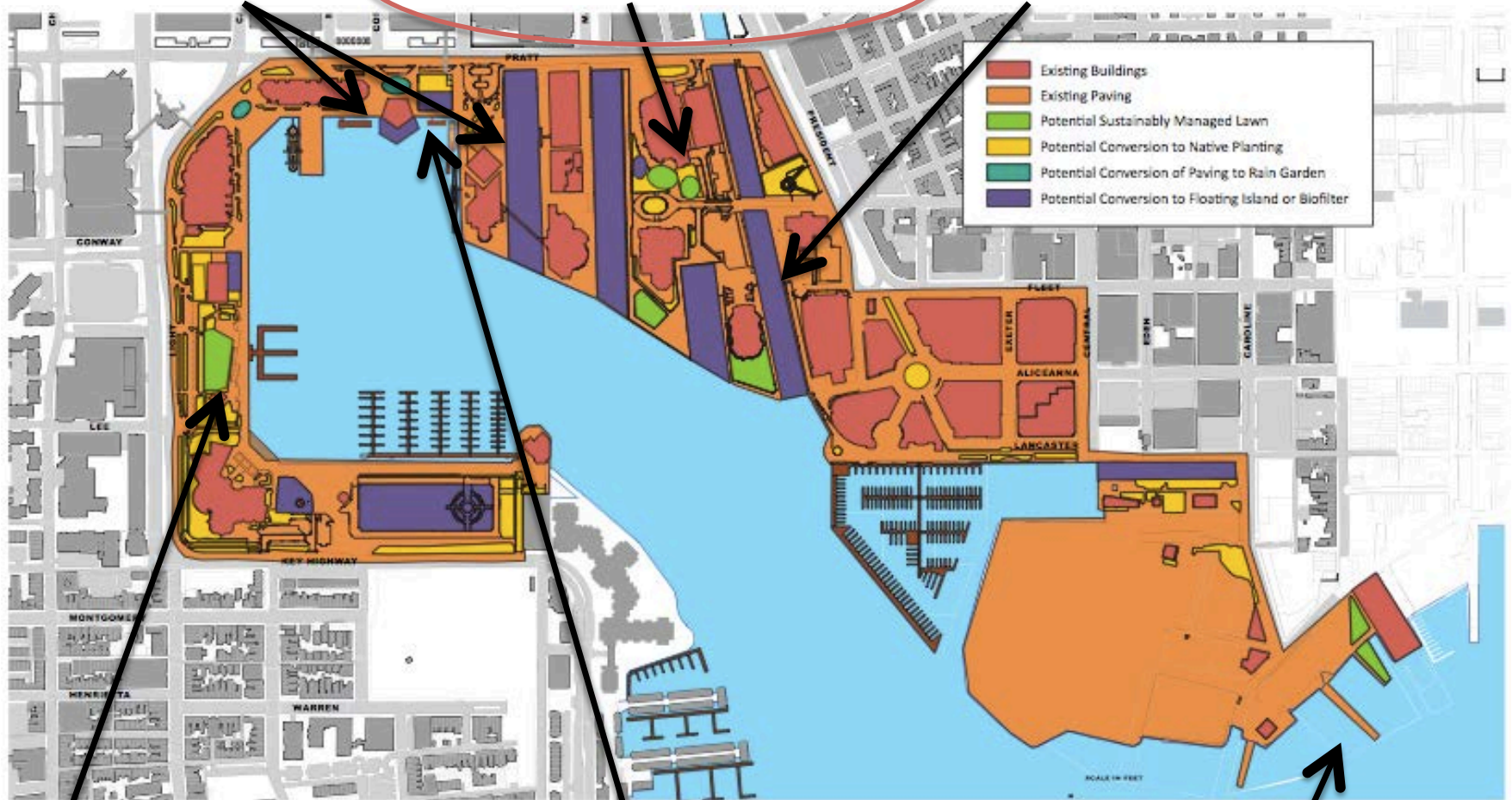
Harvesting the floating wetlands, December 2012

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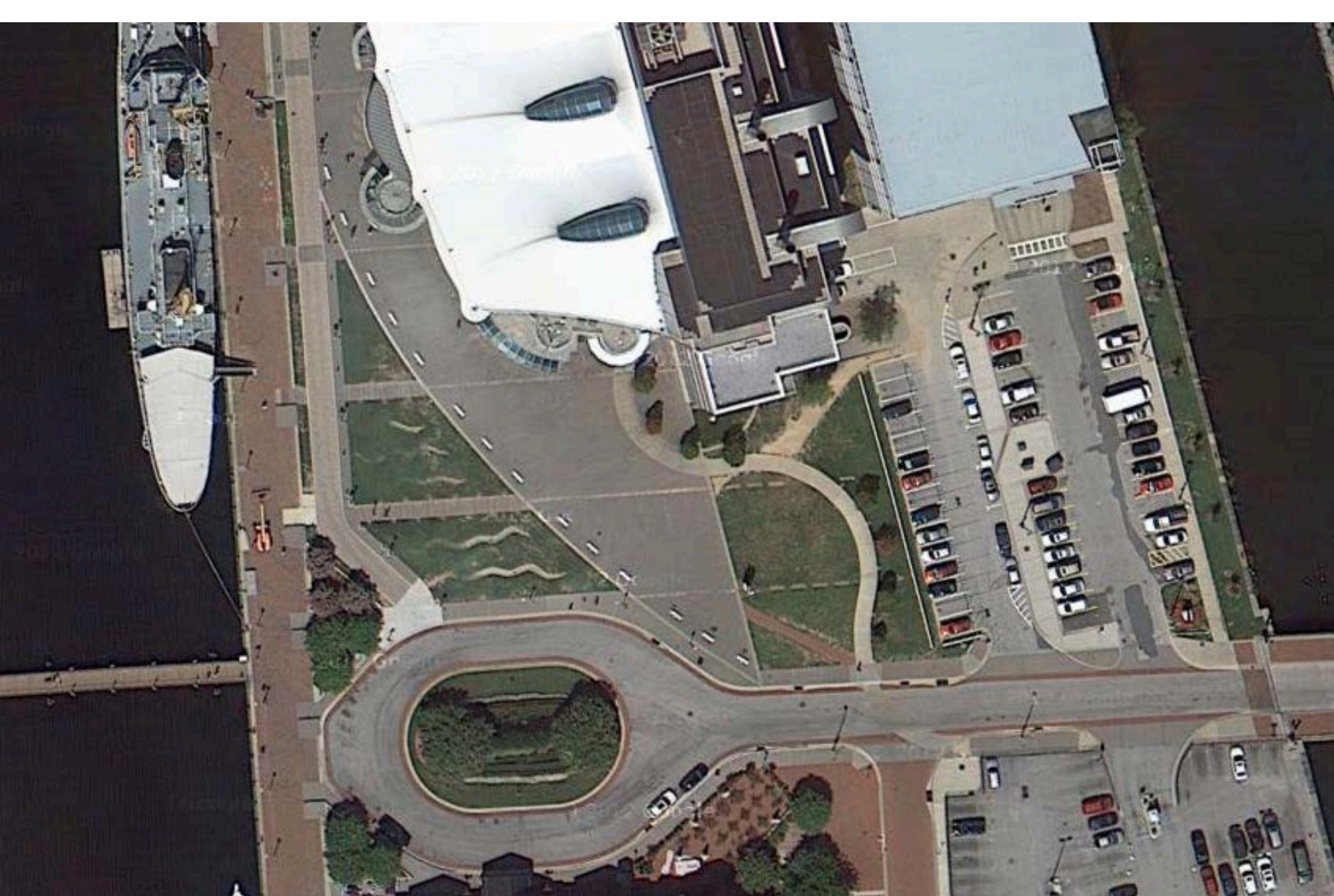
# PIERCE'S PARK

## PIERCE'S PARK

Governor Martin O'Malley  
Treasurer Nancy K. Kopp  
Comptroller Peter Franchot  
Department of Natural Resources  
Program Open Space  
Mayor Stephanie Rawlings-Blake

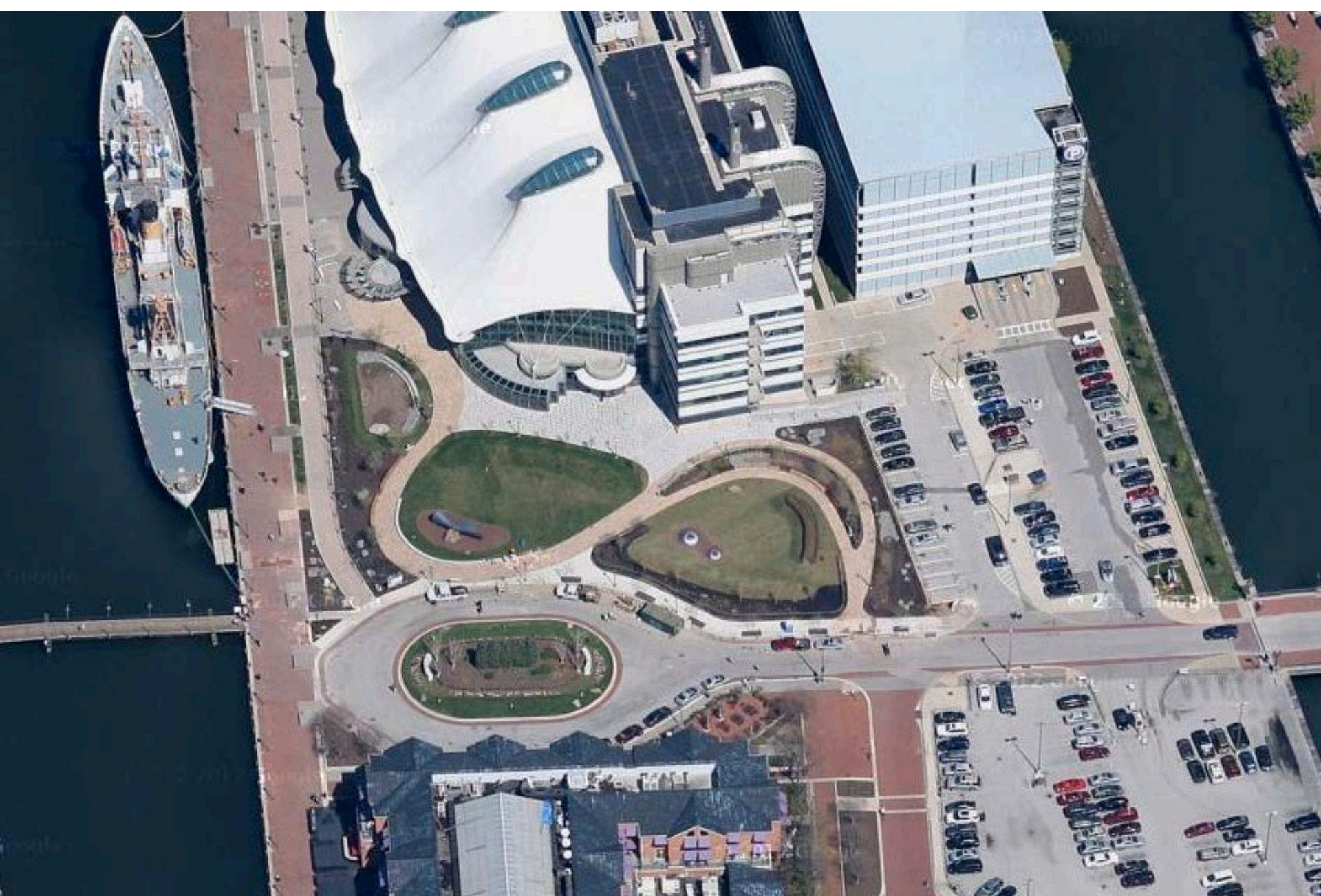
P. Flanagan & Sons, Inc.  
Priority Construction Corporation  
Rally Electrical Services, Inc.





Pierce's Park site before construction





Pierce's Park site after construction







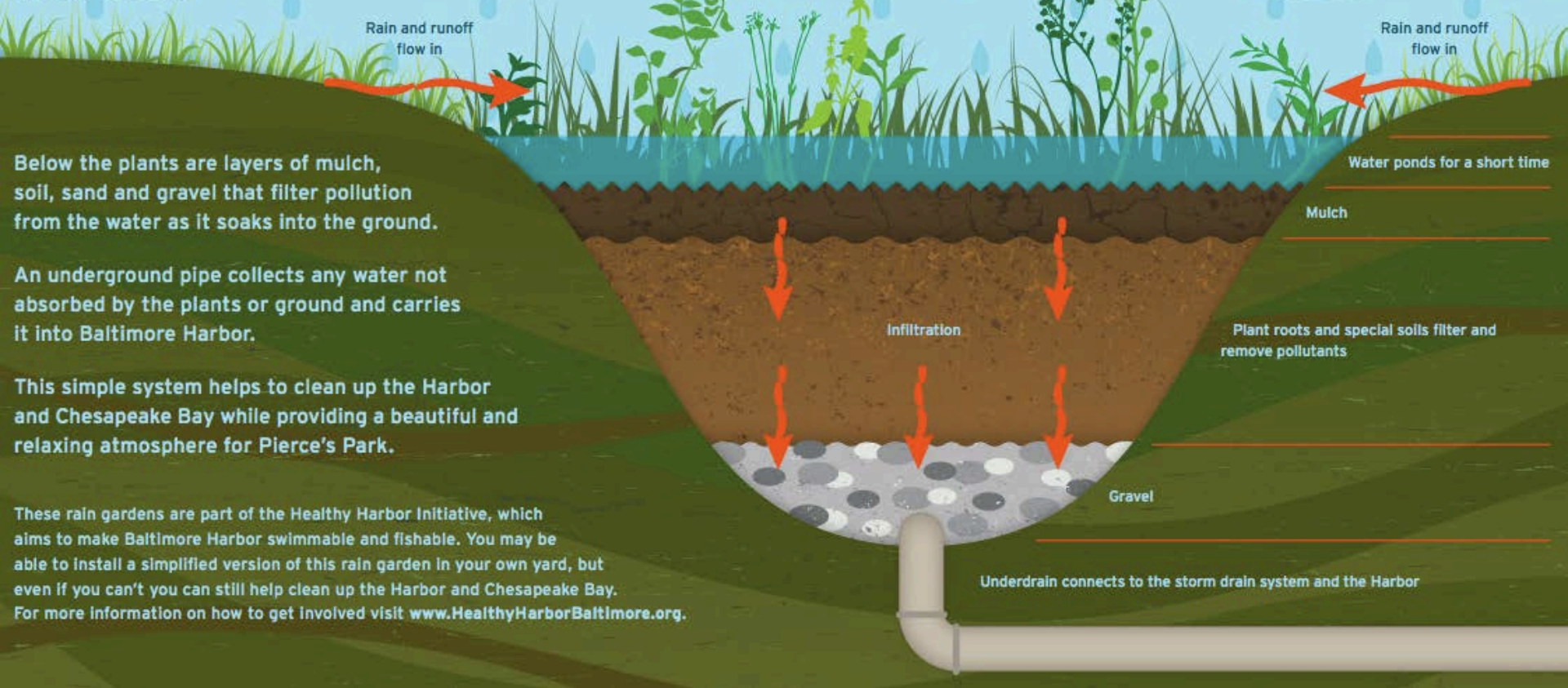


One of four large rain gardens in Pierce's Park

# PIERCE'S PARK RAIN GARDENS



**What is a rain garden?**  
A rain garden is a **special kind of garden** that is designed to collect rainwater. It is planted with **species of plants native to our region** that love to absorb the rain.



Below the plants are layers of mulch, soil, sand and gravel that filter pollution from the water as it soaks into the ground.

An underground pipe collects any water not absorbed by the plants or ground and carries it into Baltimore Harbor.

This simple system helps to clean up the Harbor and Chesapeake Bay while providing a beautiful and relaxing atmosphere for Pierce's Park.

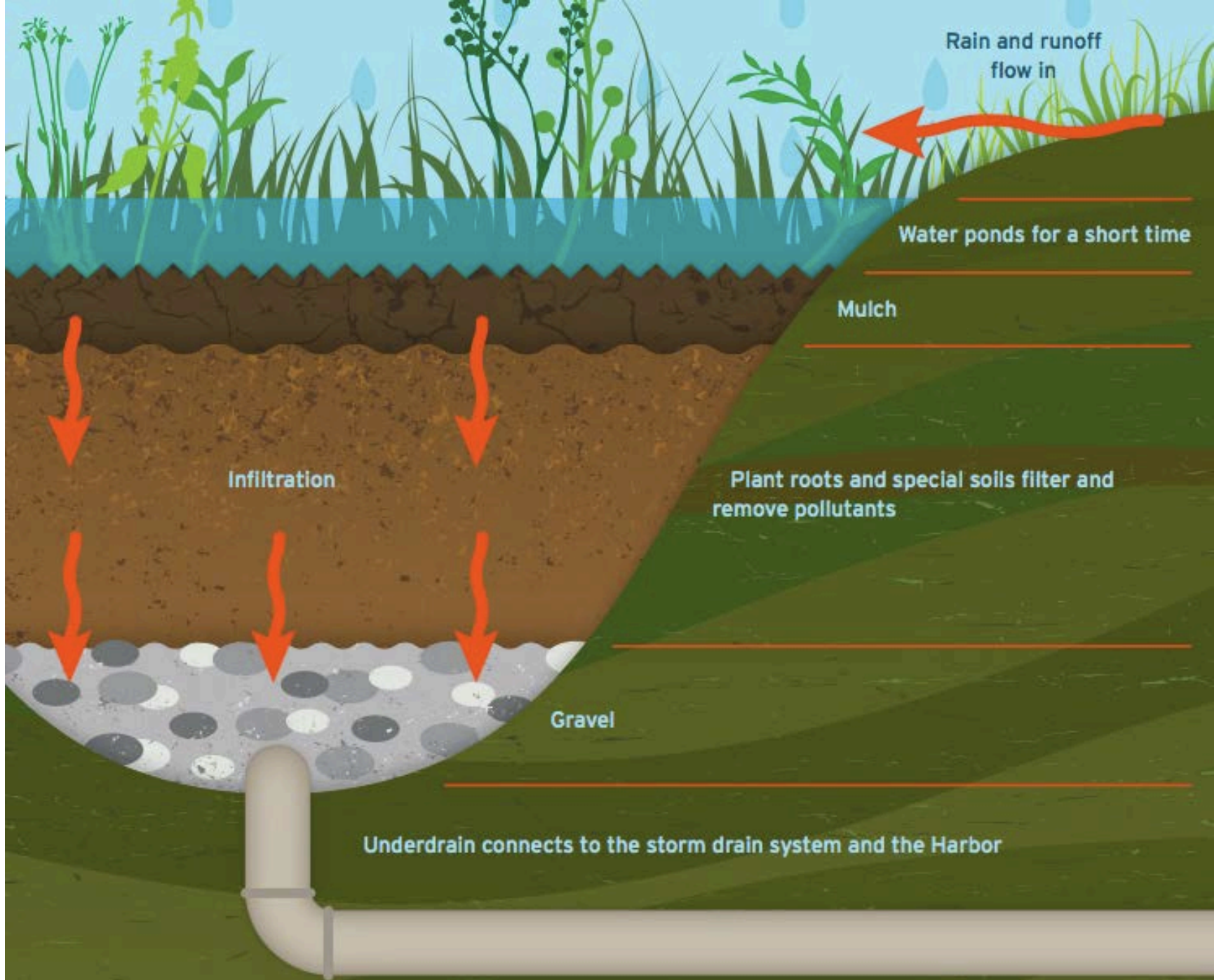
These rain gardens are part of the Healthy Harbor Initiative, which aims to make Baltimore Harbor swimmable and fishable. You may be able to install a simplified version of this rain garden in your own yard, but even if you can't you can still help clean up the Harbor and Chesapeake Bay. For more information on how to get involved visit [www.HealthyHarborBaltimore.org](http://www.HealthyHarborBaltimore.org).

Water ponds for a short time  
Mulch

Plant roots and special soils filter and remove pollutants

Gravel

Underdrain connects to the storm drain system and the Harbor



Rain and runoff flow in

Water ponds for a short time

Mulch

Infiltration

Plant roots and special soils filter and remove pollutants

Gravel

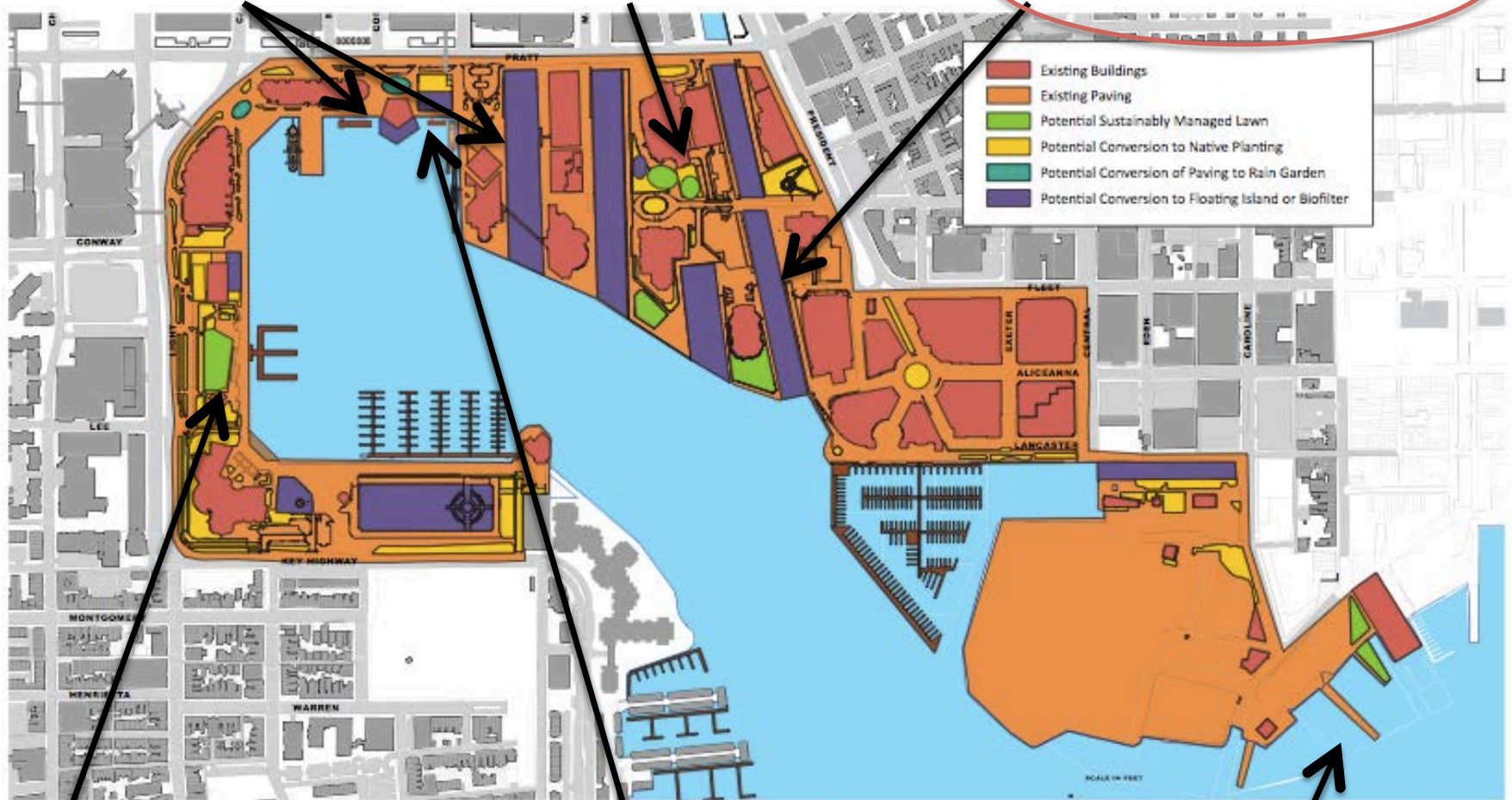
Underdrain connects to the storm drain system and the Harbor

# Harbor as a Living Laboratory Learning Center

Floating Wetlands

Pierce's Park Rain Gardens

Jones Falls Water Wheel



Potential Green Roofs

Potential Rain Gardens

Chase Pier  
Waterfalls & Wetlands

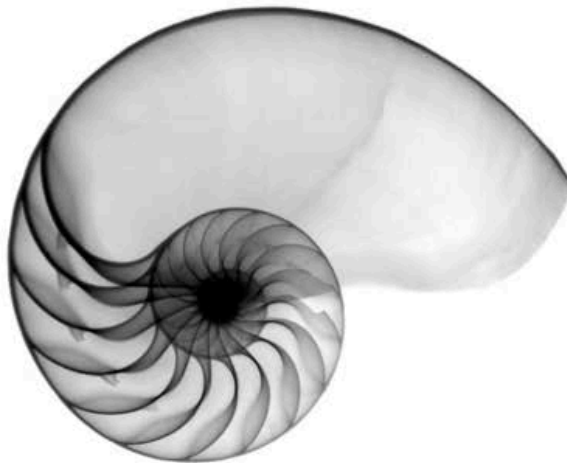
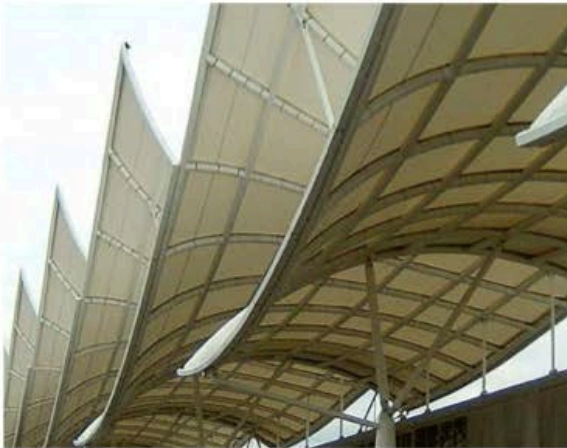


# Jones Falls Water Wheel



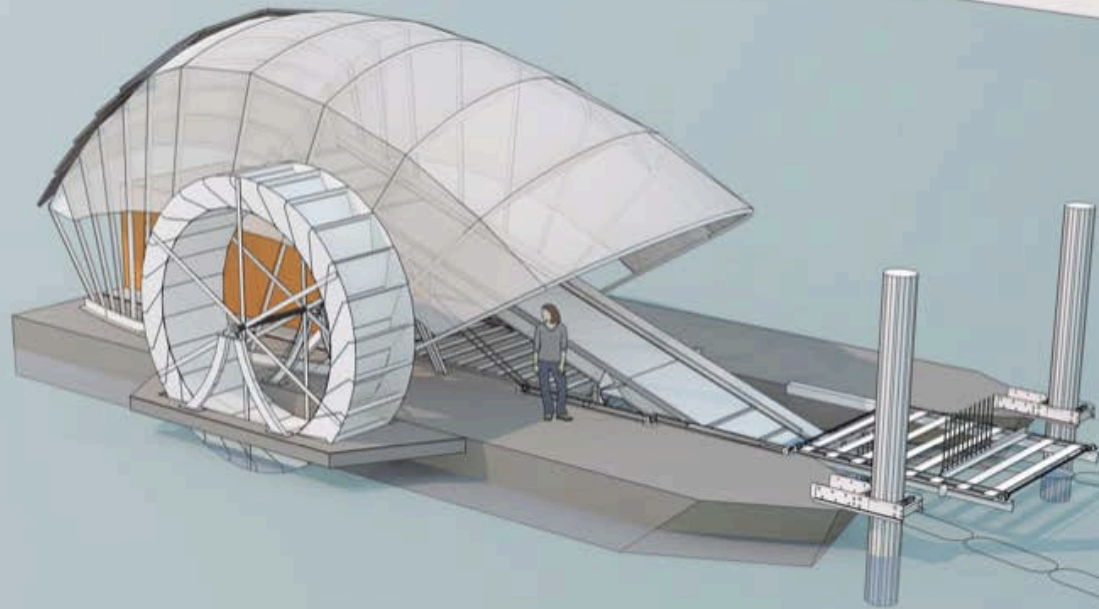
The original Water Wheel is no longer in use because it was determined to be too small for the amount and size of debris coming down the Jones Falls.

# Jones Falls Water Wheel

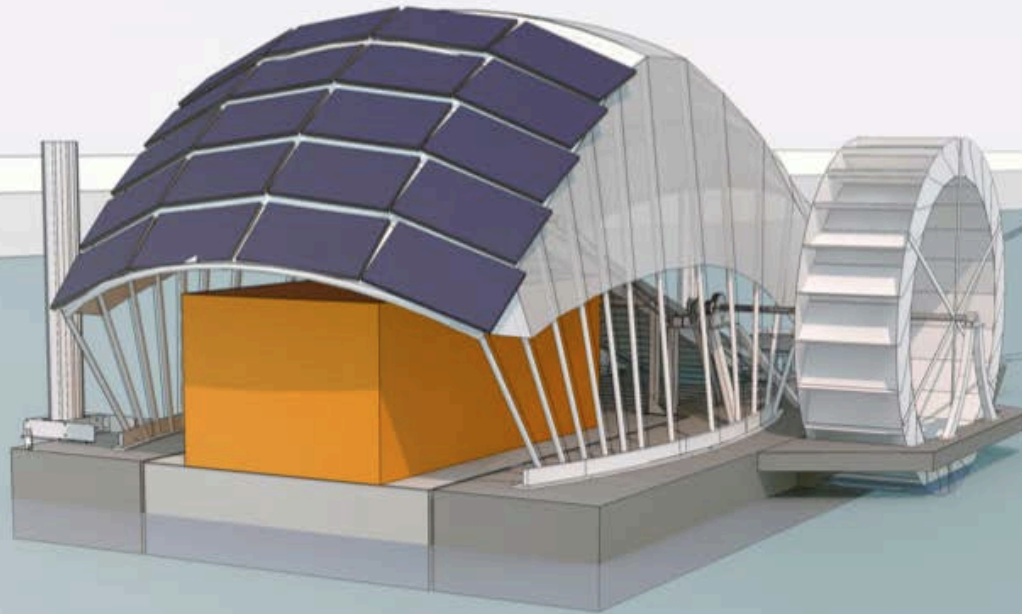


Design inspiration for a new Water Wheel

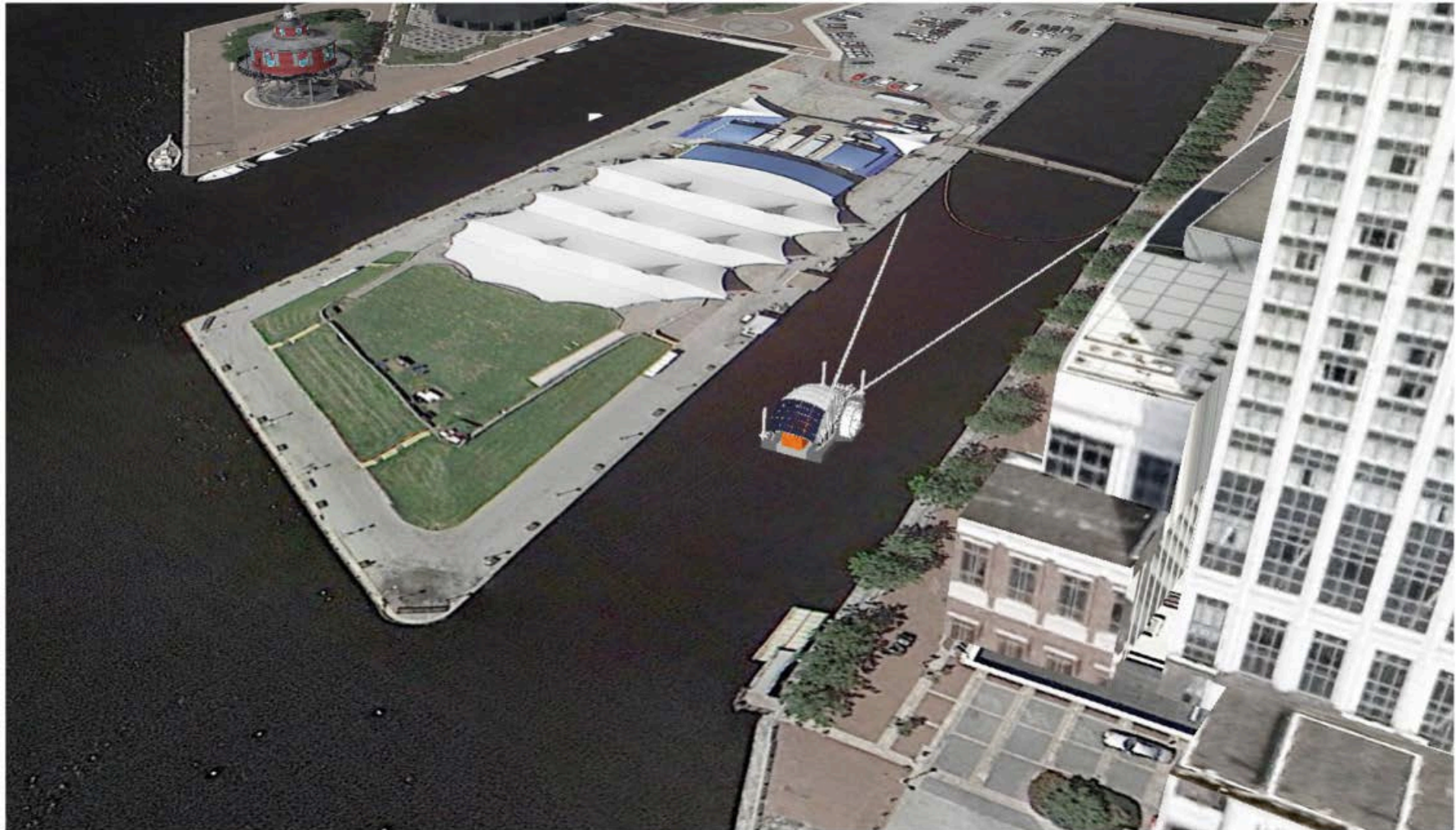
# Jones Falls Water Wheel



# Jones Falls Water Wheel



# Jones Falls Water Wheel



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Chase Pier Waterfalls & Wetlands

An aerial photograph of a harbor area. In the center, a large grey ship with two large white funnels is docked. To the left, a marina is filled with many white sailboats. The water is blue with several smaller boats and motorboats scattered throughout. In the background, there are industrial buildings and a large blue crane. In the foreground, there are modern brick buildings, a parking lot with many cars, and a long, narrow pier extending into the water. The sky is clear and blue.

# Chase Pier Wetlands & Waterfalls

# Chase Pier Wetlands & Waterfalls



Current conditions



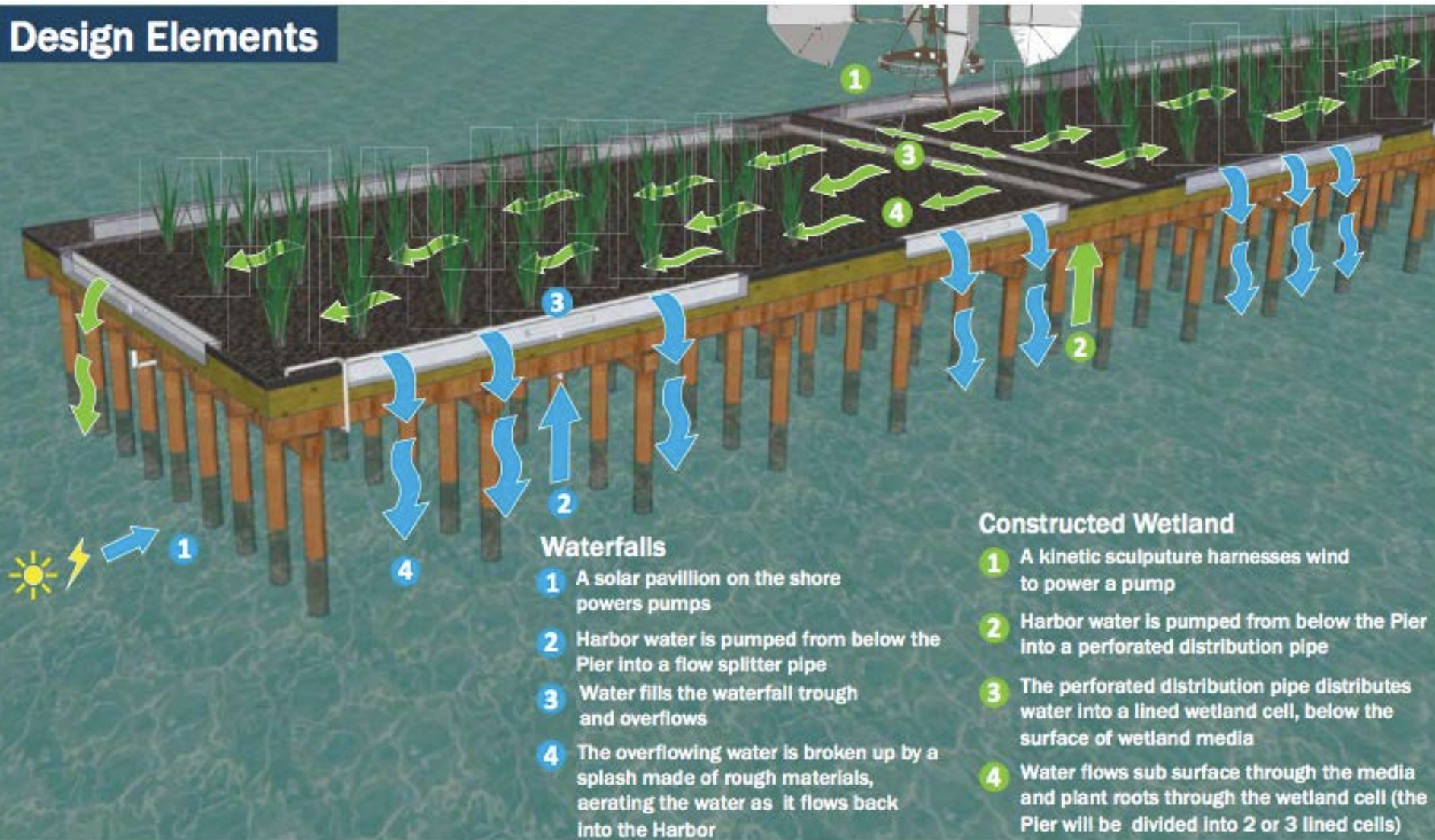
# Chase Pier Wetlands & Waterfalls



Proposed project

# Chase Pier Wetlands & Waterfalls

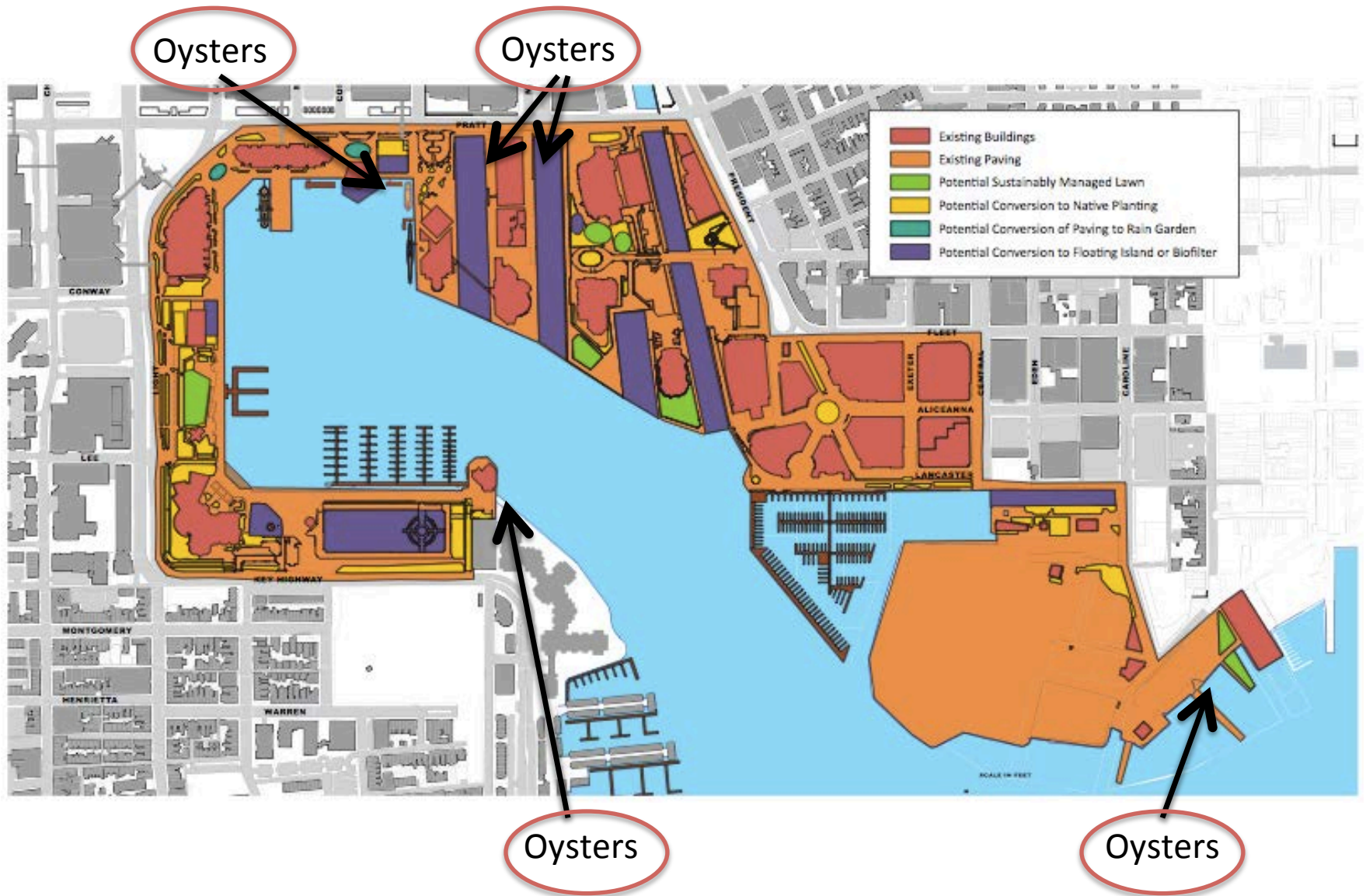
## Design Elements



# Chase Pier Wetlands & Waterfalls



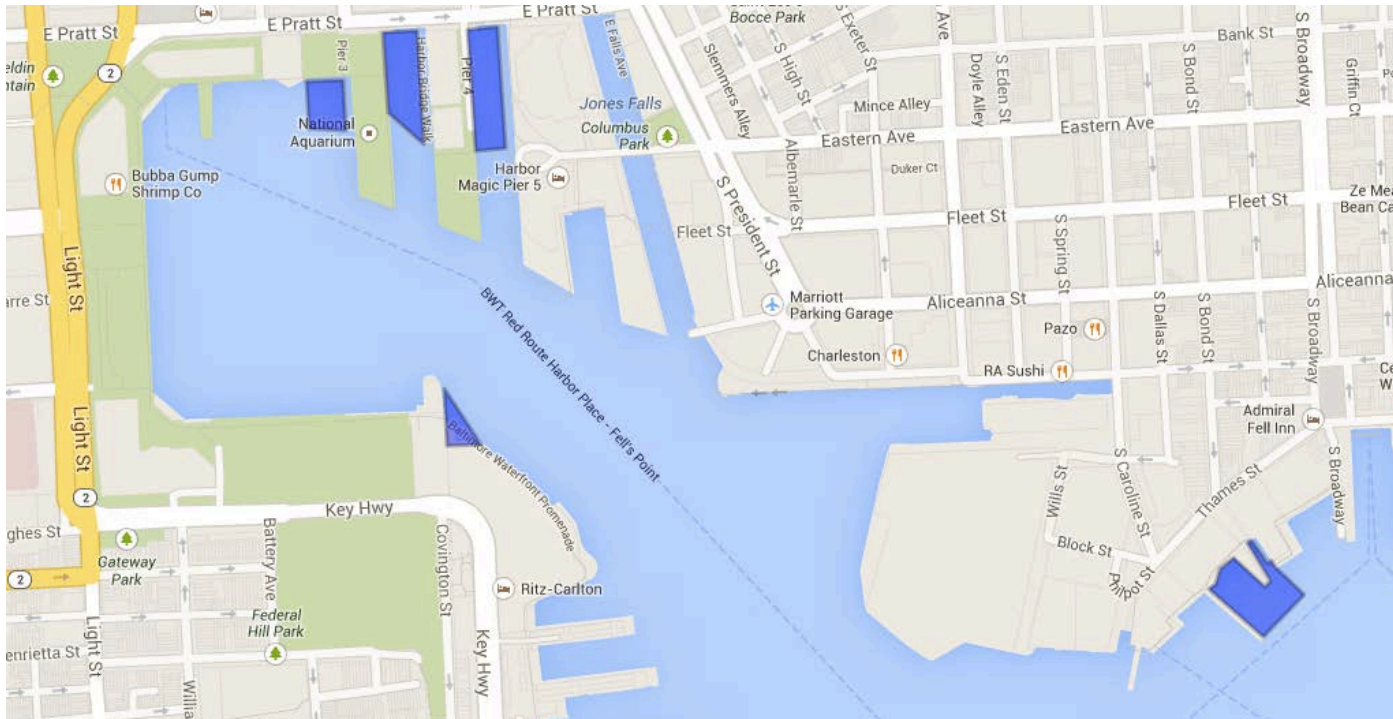
# Harbor as a Living Laboratory Learning Center



# Inner Harbor Oyster Gardening



CHESAPEAKE BAY FOUNDATION  
*Saving a National Treasure*



# Healthy Harbor Upstream activities

# Spread the word through signage



It Doesn't Take A Miracle To Create A  
Clean Community Or A Healthy Harbor  
It Takes Us.

*Please scoop your pet's poop*

**HealthyHarbor**


A cleaner, greener future for our neighborhoods, streams, harbor and Bay.

**We're Creating Our Own Ripple Effect.**  
healthyharborbaltimore.org

**Belair Edison  
Is Creating A  
Cleaner, Greener  
Future.**

**HealthyHarbor**

A cleaner, greener future for our neighborhoods, streams and harbor.  
A Waterforce Partnership Initiative

**We're proud to be a Clean Water Community** 

**It Doesn't Take A Miracle  
To Make A Healthy Harbor.**

**It Takes Us.**

*We SCOOP our  
pet's poop -  
please SCOOP yours*

**HealthyHarbor**

A cleaner, greener future for our neighborhoods, streams and harbor.

**We're Creating Our Own Ripple Effect.**

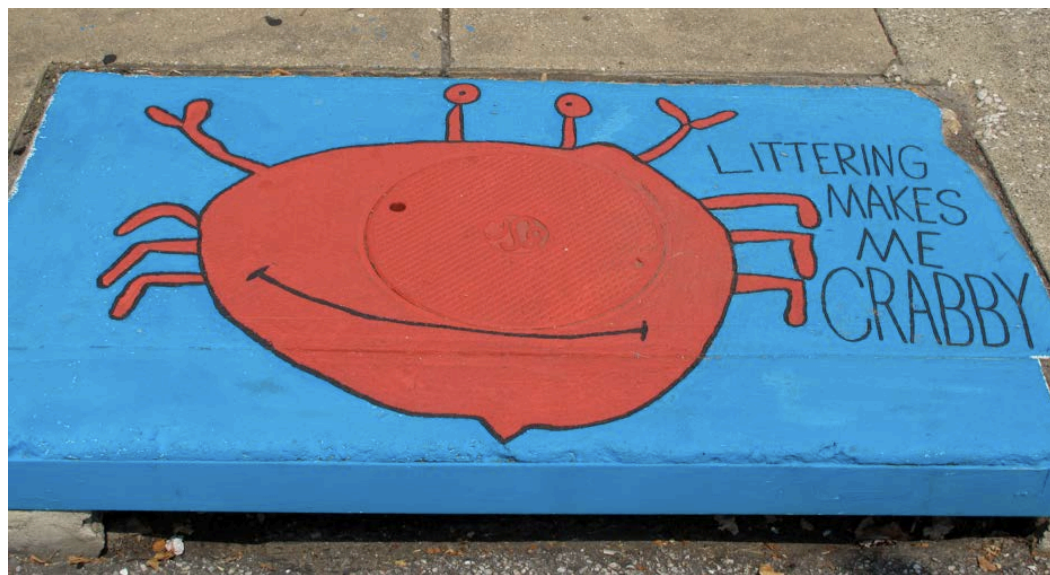
# Stencil a storm drain





# Stencil a storm drain







# Communication

- **Healthy Harbor Steering Committee**
  - Co-chaired by Waterfront Partnership and Department of Public Works
  - nonprofits, businesses, City and State government
- **Trash Work Group**
  - Waterfront Partnership
  - Blue Water Baltimore
  - Parks & People
  - Surface Water Management
  - Housing and Code Enforcement
  - Solid Waste
- **WatershedStat**
  - Lead by the Mayor's CitiStat team



Thank you!

Questions?

Adam Lindquist  
Waterfront Partnership of Baltimore  
[Adam@WaterfrontPartnership.org](mailto:Adam@WaterfrontPartnership.org)