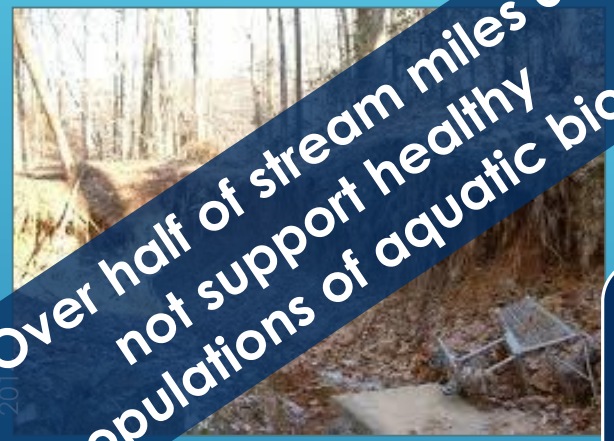
URBAN STORMWATER: A PERFECT STORM FOR CHANGE

Green Streets, Green Jobs, Green Towns

TRANSFORMATIONAL PARTNERSHIP$ CREATING RESILIENT COMMUNITIE$

Dominique Lueckenhoff, Deputy Director
Water Protection Division
EPA Region III

"Only Major Growing Source of Water Pollution" – U.S. EPA



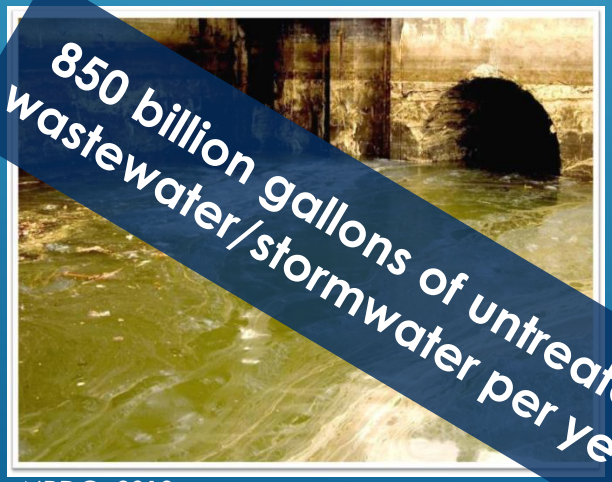
Over half of stream miles do not support healthy populations of aquatic biota

Forestsforwatersheds.org, 2013

Extreme rain events doubled in Midwest over last 50 Years

Boston Globe, 2013

- Water Quality Impairments
- Flooding
- **Urban Stormwater Runoff**
- Combined Sewer Overflows
- Ecological Impacts



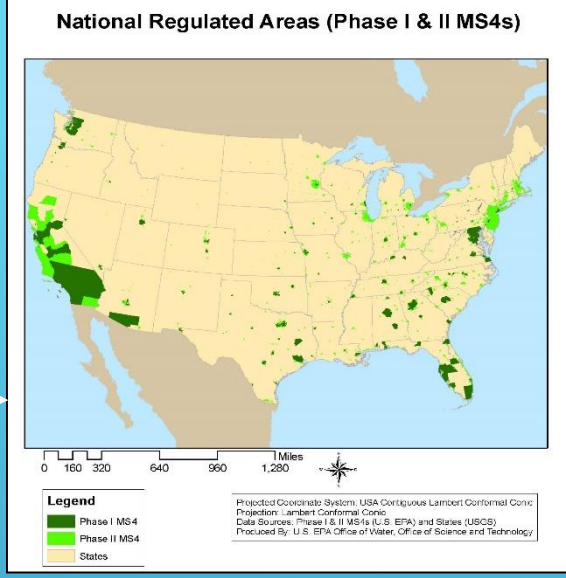
850 billion gallons of untreated wastewater/stormwater per year

NRDC, 2013

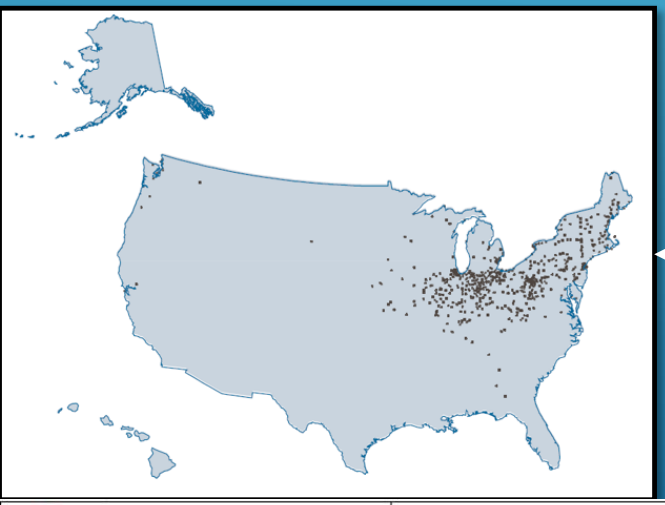
2014 had 8th worst dead zone in Chesapeake Bay – 1 mi^3

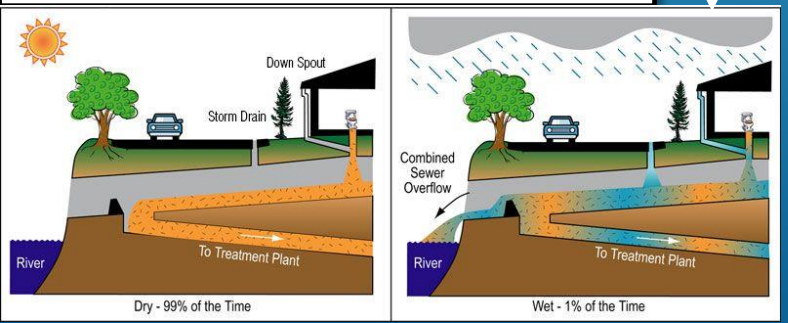
Chesapeake Bay Foundation, 2014

THE REGULATORY CONTEXT - STORMWATER/WET WEATHER



- **Regulated Entities**
  - **7,500** communities regulated municipal separate storm sewer systems (MS4s) in the U.S.
  - **772** combined sewer systems in the U.S.
- **Growing interest** and public demand for green stormwater infrastructure





TRADITIONAL STORMWATER MANAGEMENT

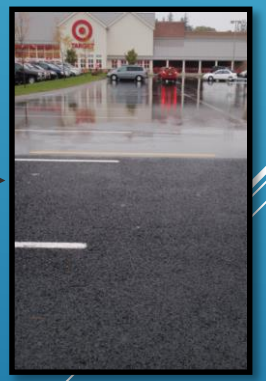
Collect

Convey

Detain

Green Stormwater Infrastructure

Infiltrate



Retain

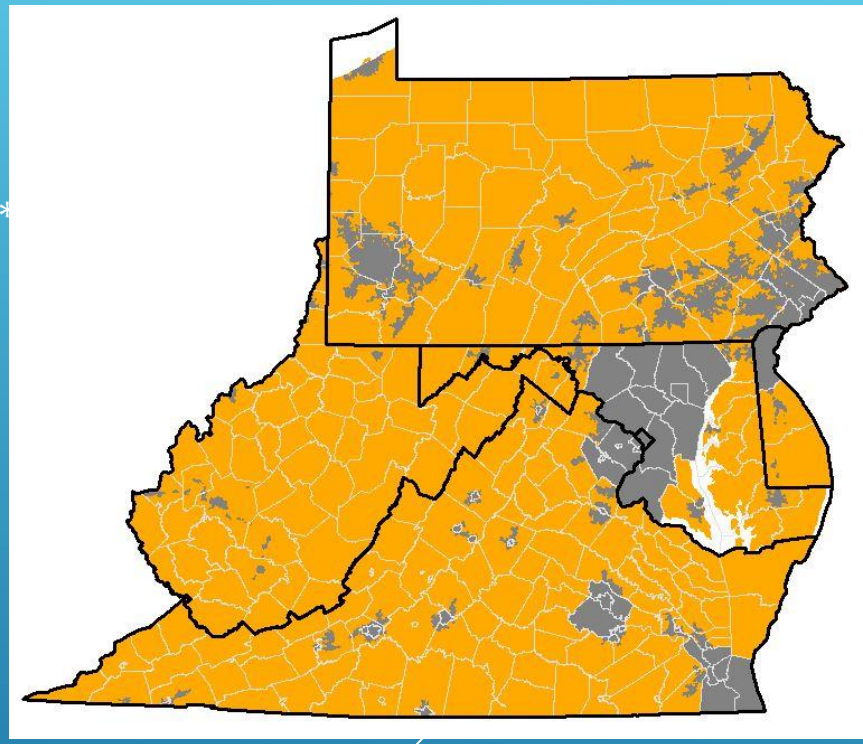
A DRIVER OF CHANGE…THE CHESAPEAKE BAY TMDL

- TMDL load caps established in 2010
- GOAL: Practices in place by **2025** to achieve allocated reductions (-25%)
  - Multi-jurisdictional (6 States + DC)
- State Watershed Implementation Plans (WIPs)
  - Urban Sector targets assigned
  - 2 year Milestones + Accountability
- MS4 permits written to align with TMDL

REGULATORY DRIVERS - MS4 PERMITS

- **EXAMPLES:**
  - **MD – 20% restoration of regulated impervious surface area in permit term**
    - Prince George's County, MD
      - 8-15,000 impervious acres to be retrofitted – MS4 ~ $1.2-2.25B*
    - Montgomery County, MD
      - 4,300 impervious acres to be retrofitted – MS4 ~ $645M*

      *Assumes cost of urban retrofit of $150,000/impervious acre
  - **DC** - On-site retention performance standard – **90% storm capture (1.2") for new or redevelopment;** Enforceable Green provisions
    - 415 impervious acres to be retrofitted – MS4 ~ $6.2M*
    - $100M of GI pledged in CSS areas – CSO = Total of 106.2M



OTHER DRIVERS

- Growing urbanized acres & increased localized flooding
- High rates of non-attainment of standards in urban streams
- Low rates of compliance with traditional SW permit requirements
- Growing regulatory demands to IMPROVE water quality – not just hold the line – TMDLS (For Chesapeake Bay and local waters

OTHER DRIVERS

- High cost to retrofit the Built environment – demanding multiple, TBL benefit solutions
  - Community benefits – Safety, Recreation, Aesthetics, etc
  - Economic development – Business/Jobs, etc.

- Move to large-scale, green solutions

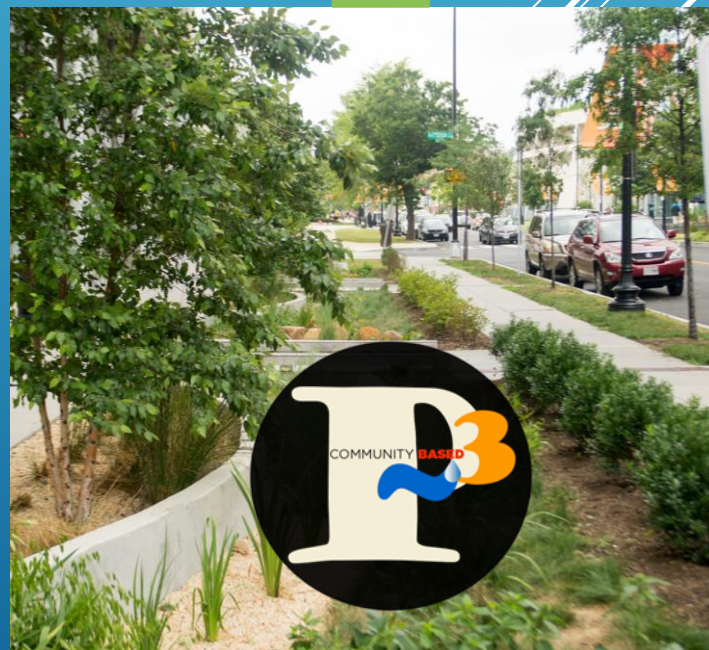
THE PERFECT STORM

- **"Faster, Cheaper, Greener" Solutions for Communities**
  - Green Infrastructure (GI)
  - New Financing tools
  - Retrofit Cost Reduction
- Compliance and Beyond

EPA's Commitment to Support Innovation

- Sustainable Financing: Promoting **Community-Based Public Private Partnerships**
- Better MS4 Permits – Measureable, Enforceable
  - Linked to TMDL performance/WQ Improvement
- GI: "Green Streets, Green Jobs, Green Towns"
- Watershed Based Approaches to MS4
- Use of 3rd Party Delivery Systems – self audits

Green Infrastucture
Urban Stormwater Retrofits



CHEAPER GREENER FASTER
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Green Infrastructure Driven
Urban Stormwater Retrofit
INITIATIVE

FASTER, CHEAPER, GREENER SOLUTIONS!

FIRST CBP3 DEMONSTRATION PROJECT! – R3

USEPA Press Release
January 10, 2014

EPA, MDE, Prince George's County Announce Public, Private Partnership Model to Accelerate Green Stormwater Controls and Support Local Job Creation

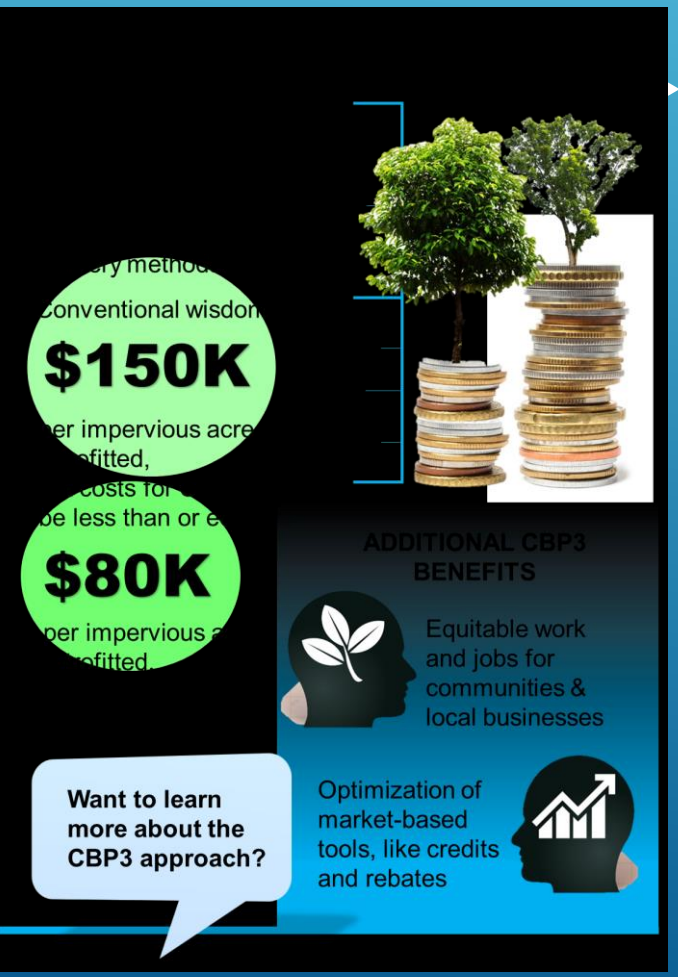
(WASHINGTON – January 10, 2014)

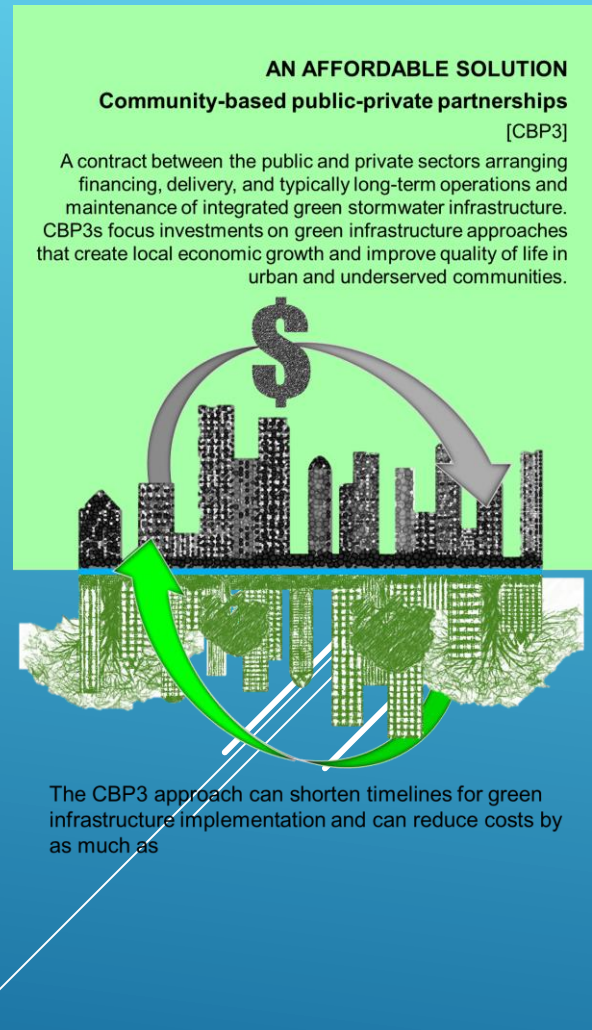
The U.S. Environmental Protection Agency, Maryland Department of Environment (MDE) and Prince George's County today announced a $100 million initiative to demonstrate how community-based, public-private partnerships can spur green infrastructure-driven stormwater controls, while creating thousands of local jobs and boosting economic growth.

EPA and MDE have joined forces with Prince George's County to provide technical and regulatory support for developing and implementing the Prince George's County Urban Stormwater Retrofit Public-Private Partnership Demonstration Pilot. ...

NEED FOR CBP3 | THE CBP3 ADVANTAGE

- Status quo investments not getting us there
- CBP3 changes status quo
  - Harness private sector
  - Large-scale investments
  - Community benefits top priority
  - Maintenance is key
  - Highest-value, not cheapest solutions





CBP3 CONSIDERATIONS FOR PUBLIC/MUNICIPAL LEADERS

- **CBP3 is <u>not</u> privatization**
  - Leverages best of public/private
- **Public can – and should - define the goals of a CBP3 program**
  - Through RFQ process…..
- **CBP3 augments staff/program**
- **CBP3 allocates risk appropriately**

Community Based Public-Private Partnerships (CBP3s) and Alternative Market-Based Tools for Integrated Green Stormwater Infrastructure: A Guide for Communities) at: http://www.epa.gov/sites/production/files/2015-12/documents/gi_cb_p3_guide_epa_r3_final_042115_508.pdf