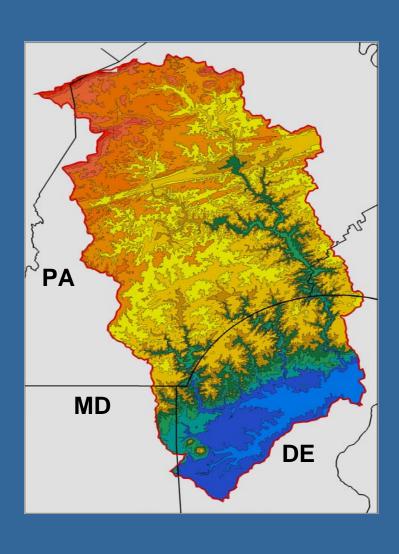
Christina Basin Partnership Clean Water is Good Business!!

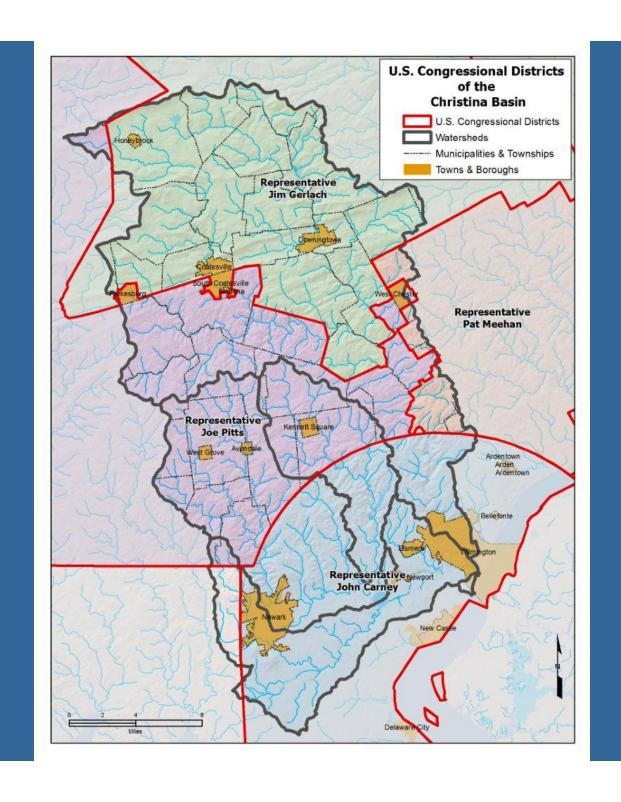


Jerry Kauffman

University of Delaware Water Resources Agency Newark, DE

Jan Bowers

Chester County Water Resources Authority West Chester, PA



Christina Basin

- Only interstate watershed in Delaware River Basin
- Provides 100 mgd drinking water for 600,000 people
 - 60% of Delaware state and 58% of Chester Co. population
- Trout streams in PA and Delaware
- Kennett Square, PA region mushroom capital of the world
- \$330 million/yr agriculture industry revenues Chester Co., PA
- Wilmington largest U.S. banana port, 1 million tons per year
- World's famous gardens at Longwood, Hagley, and Winterthur
- Corporate headquarters for DuPont, Gore, Disney in Delaware
- 49 municipalities, 5 counties, 3 states

Delaware River Basin

NEW YORK **PENNISYLVANIA NEW JERSEY** MARYLAND DELAWARE

Christina River Basin



Christina Basin Demographics (2009)

<u>State</u>	Area (sq.mi.)	<u>Population</u>	<u>Jobs</u>
DE	157	335,000	233,000
PA	399	260,000	115,000
MD	8	2,500	1,200
Total	640	597,500	344,200

Source: U.S. Census Bureau, U.S. Bureau of Labor Statistics

What do these have in common ...?

ArcelorMittal

Astra Zeneca

Aqua PA

Downingtown Mun. Wtr Auth

DuPont

Gore

Iron Hill Brewery

Longwood Gardens

PA American Water Co.

Sartomer USA

Starbucks

The Philadelphia Independence

Victory Brewing Co.

Wawa

Located in Christina Basin... and rely on CLEAN WATER for their business !!

Christina Basin Clean Water Partnership

Policy Committee DRBC, USEPA, Del. DNREC, Pa. DEP Coordinating Committee Del. Co-coordinator: DNS, WRA Pa. Co-coordinator: CCWRA, CCCD Task Force Chair: BVA

Partner Organizations

Pennsylvania

- Chester County Conservation District (CCCD)
- Chester County Health Department
- Chester County Planning Commission
- Chester County Water Resources Authority (CCWRA)
- Pennsylvania Department of Conservation and Natural Resources (Pa. DCNR)
- Pennsyvlania Department of the Environment (Pa. DEP)

Interstate

- Brandywine Conservancy
- Brandywine Valley Association (BVA)
- Delaware River Basin Commission (DRBC)
- · Partnership for the Delaware Estuary
- Red Clay Valley Association (RCVA)
- United States Department of Agriculture Natural Resources Conservation Service (NRCS)
- United States Environmental Protection Agency (USEPA)
- United States Geological Survey (USGS)
- United States National Park Service (NPS)
- White Clay Creek Watershed Association
- White Clay Creek Wild and Scenic Watershed Management Committee

Delaware

- Christina Conservancy
- · City of Newark
- City of Wilmington
- Delaware Department of Natural Resources and Environmental Control (DNREC)
- Delaware Nature Society (DNS)
- New Castle Conservation District
- University of Delaware, Institute for Public Administration, Water Resources Agency (WRA)

Ad Hoc Committees (as needed)

Christina Basin Clean Water Partnership *Mission*

Protect and restore the Brandywine, White Clay, Red Clay, and Christina Creeks in Delaware, Maryland, and Pennsylvania to fishable, swimmable, and potable status by 2020

The Christina Basin: An Economic Engine Since 1638

- 1638 First permanent European settlement in Delaware Valley
- 1777 Battle of the Brandywine, largest battle of the Revolution
- 1802 DuPont Brandywine mills, hydropower > Niagara Falls
- 1945 BVA, the USA's first small watershed organization
- 1995 DRBC, EPA, DE, and PA form Christina Basin Partnership
- 2000 White Clay Cr. Nat'l. Wild & Scenic, first W & S watershed
- 2006 EPA and States issue Clean Water Act TMDLs
- 2008 CB finishes \$1 million EPA TWG, tops 170 US watersheds
- 2009 Improving water quality, but sediment, N and PCBs concerns
- 2010 41,000 people move to Christina Basin since 2000.
- 2011 Over 30 organizations in Christina Basin Partnership

Christina Basin Partnership

- Proactively Improving Water Quality -

Planning

- TMDLs developed
- Local land use plans/ordinances
- Watershed restoration plans

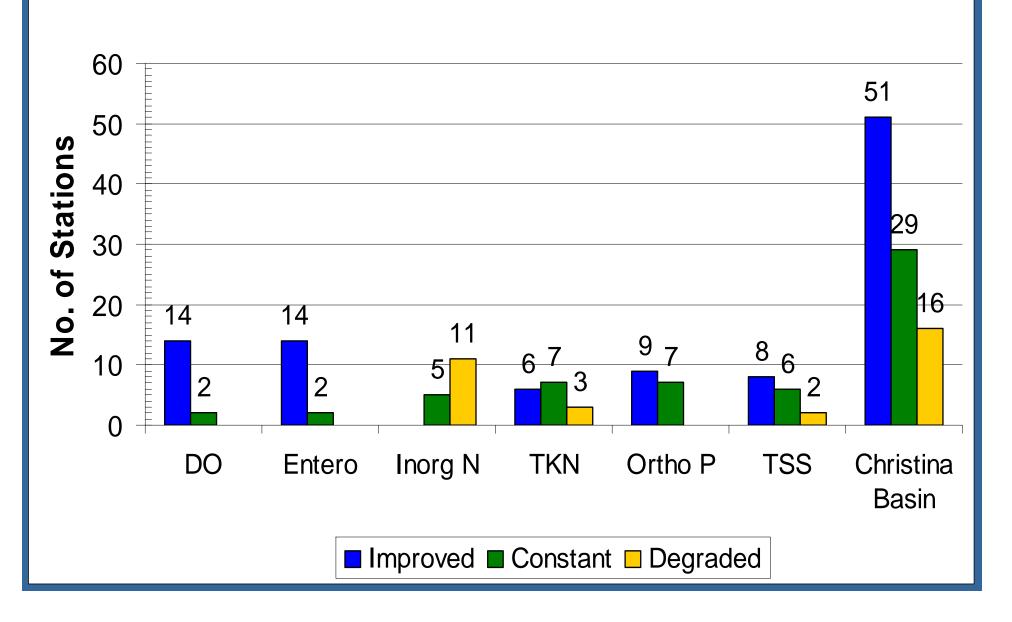
State Programs

- NPDES Municipal MS4 permits
- TMDLs point source and MS4 permits
- PA Act 167 Stormwater Program

Project Implementation

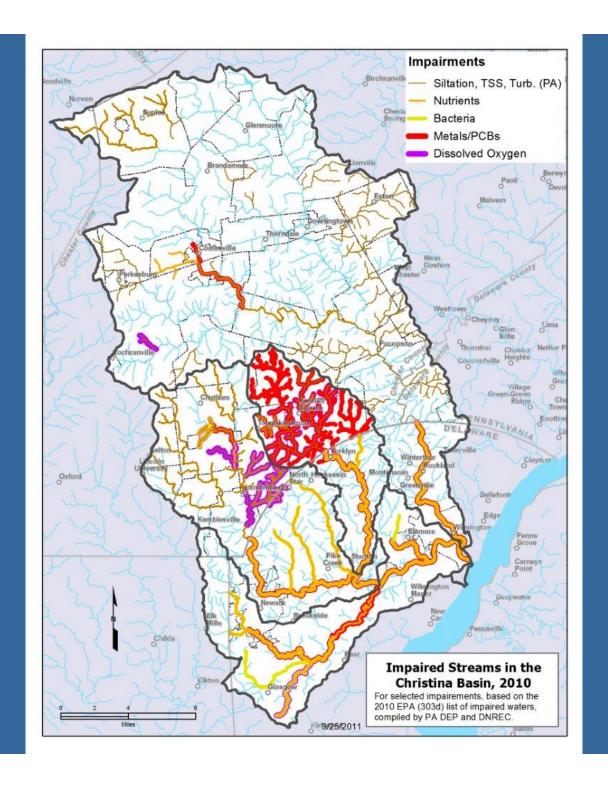
- Agricultural BMPs installation
- Urban stormwater retrofits installation
- Residential rain gardens/rain barrels
- Open space preservation
- Reforestation





Christina Basin ... but MUCH MORE is needed ...

- 34% of streams remain impaired for:
- Sediment, nitrogen, phosphorus
- Increased growth
- Increased land development
- Increased demand for clean water













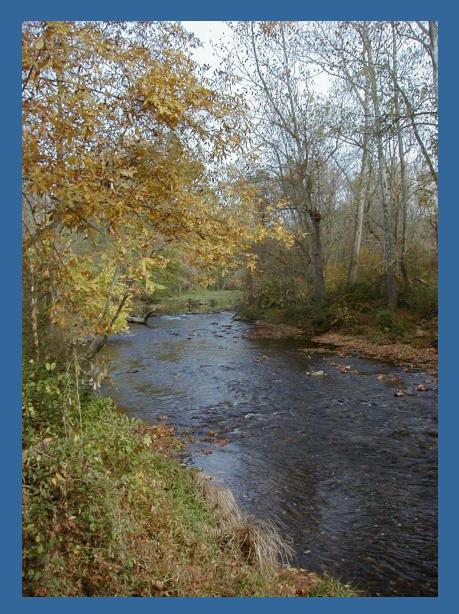












Our Choice ...

CLEAN STREAMS

- Benefits for Community, Real Estate, and Businesses
- Maintain costs of water supply and wastewater treatment
 - No new TMDLs

OR

POLLUTED STREAMS

- Impacts to Businesses, Real Estate and Communities
 - Increased costs for water supply and wastewater treatment
 - More TMDLs and Regulations

Streams and Stormwater – a New Paradigm

- Streams the "new" municipal "infrastructure"
- Be creative
- Be cost-effective AND "pollutant-focused"
- Local governments working together with
 - land owners, neighboring municipalities, conservation organizations, state/federal/river basin agencies
- Christina TMDL Implementation Plan
 - 25 PA municipalities in partnership for economies of scale for restoration planning and project funding

Christina Basin Partnership

- ... we can't do it alone ...-

Funding

 Leveraged \$3 local/landowner match for every \$1 of Federal/State funding

Funding Programs

- EPA Targeted Watershed Grant \$1 million
- EPA 319 Grants
- PA Growing Greener Grants
- PA PennVest / ARRA Grants
- USDA/NRCS PL 566 Funding
- U.S. Geological Survey Cooperative Water Program
- Chester County VPP and Open Space Grants
- Non-profit / Philanthropic Grants



