

# Uncertain Future of the Delaware River Basin

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Delaware River Basin  
Commission



# Delaware River Watershed Facts

- ❑ Over 15 million people (about 5% of the U.S. population) rely on the waters of the basin
- ❑ Drains 13,539 mi<sup>2</sup> , or 0.4 of 1% of the continental U.S. land area
- ❑ Longest undammed river east of the Mississippi
- ❑ Daily water withdrawal in the DRB = 8.7 BGD





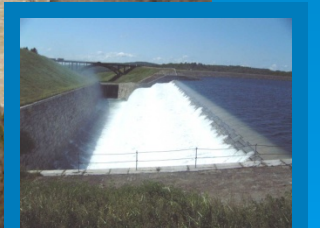
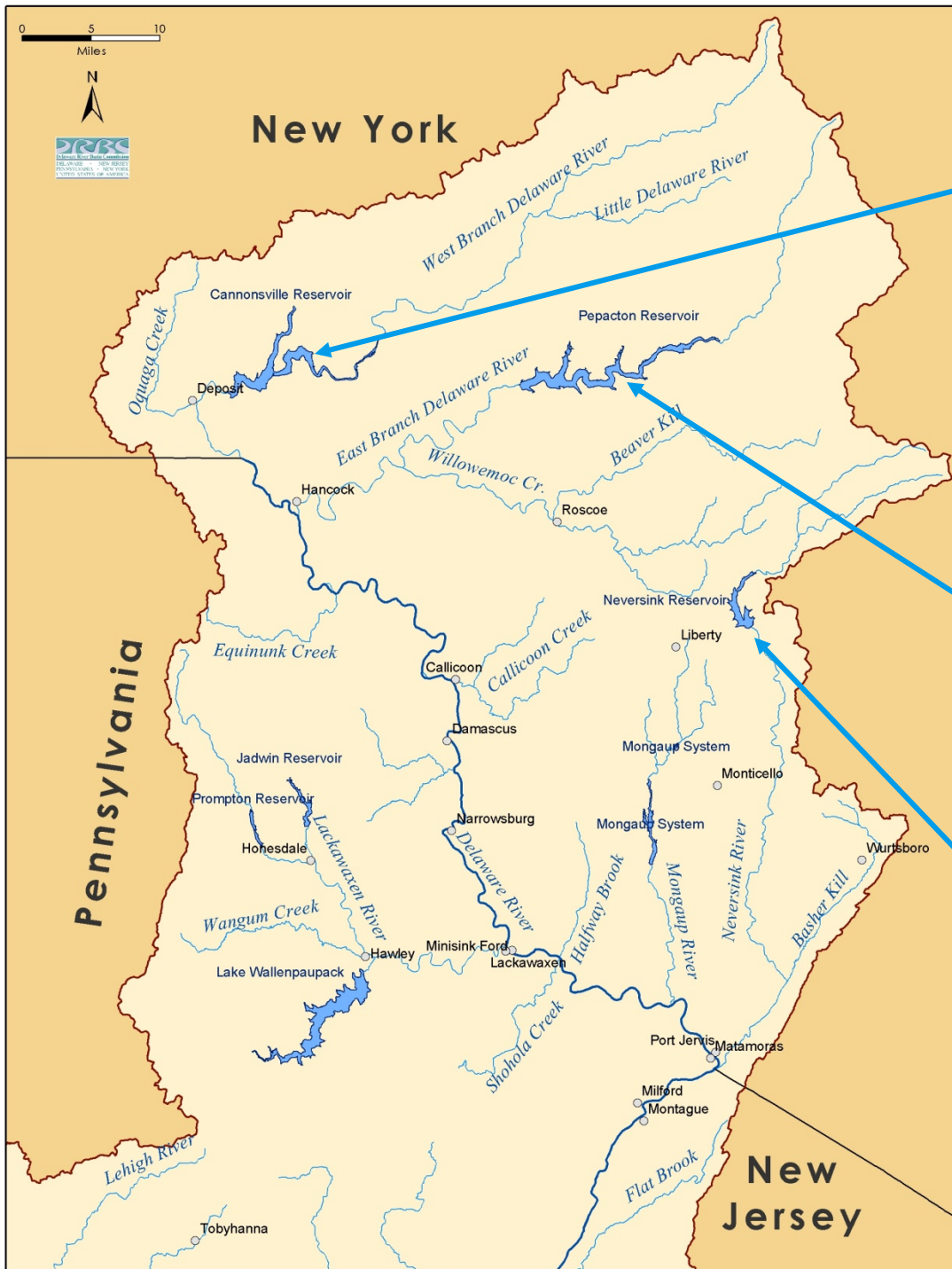
## Delaware River Port Complex – Largest Fresh Water Port











Delaware

Photos Courtesy NYC DEP



**Salt Line**  
(250 mg/l, 7 day avg)

**Water Supply Intakes**  
RM 110

**1960's Maximum**

**Normal**  
**R.M. 77**

MONTH	AVG. MID-MONTH LOCATION
Jan	68
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Data for determination provided by the U.S. Geological Survey and Kimberly Clark Corp.



## Delaware River Basin



## Operating Plans

➤ New York City Delaware Basin Reservoirs drive the Basin wide Operating Plan.

- Cannonsville
- Pepacton
- Neversink

➤ Two Corps of Engineers Reservoirs drive Lower Basin Operating Plan

- Beltzville
- Blue Marsh

➤ Merrell Creek Reservoir





# Flood Mitigation





# Fish Consumption Advisories





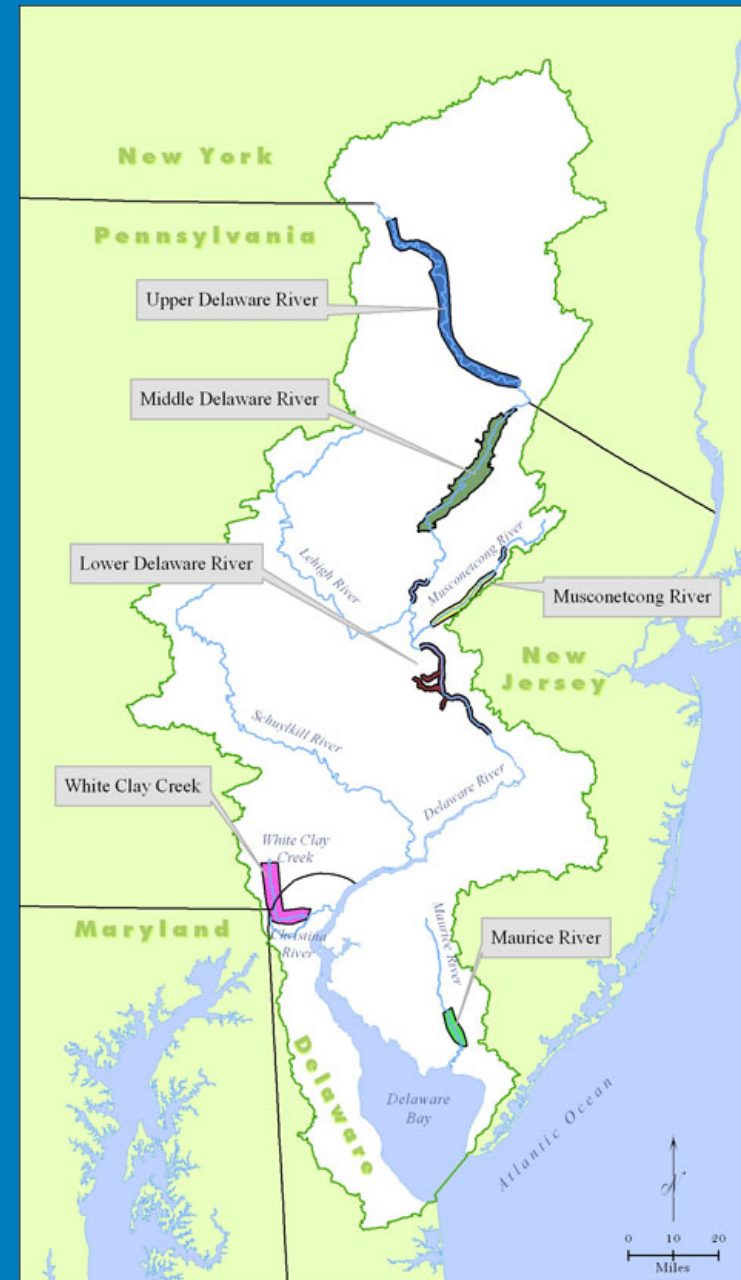
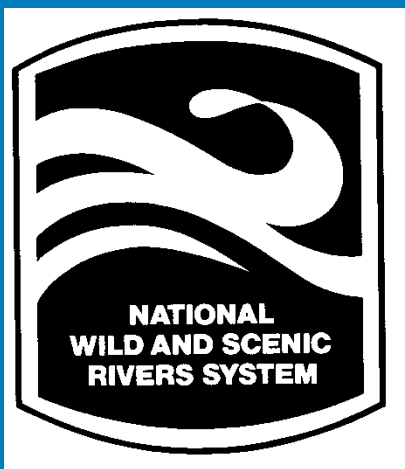
# PCBs and Nutrients

- PCBS – Uniform Criterion, Implementation Plan, Stage 2 – TMDL, Assessment of last 10 year of progress.
- Nutrients: 5 – 10 x Chesapeake, not symptoms
  - Focus – dissolved oxygen levels
  - Monitoring and assessment
  - Nutrient Strategy, Expert Panels, WQAC



The U.S. has 3.5 million miles of rivers. The National Wild and Scenic Rivers System includes 11,434 miles of this total, or just over one-quarter of one percent.

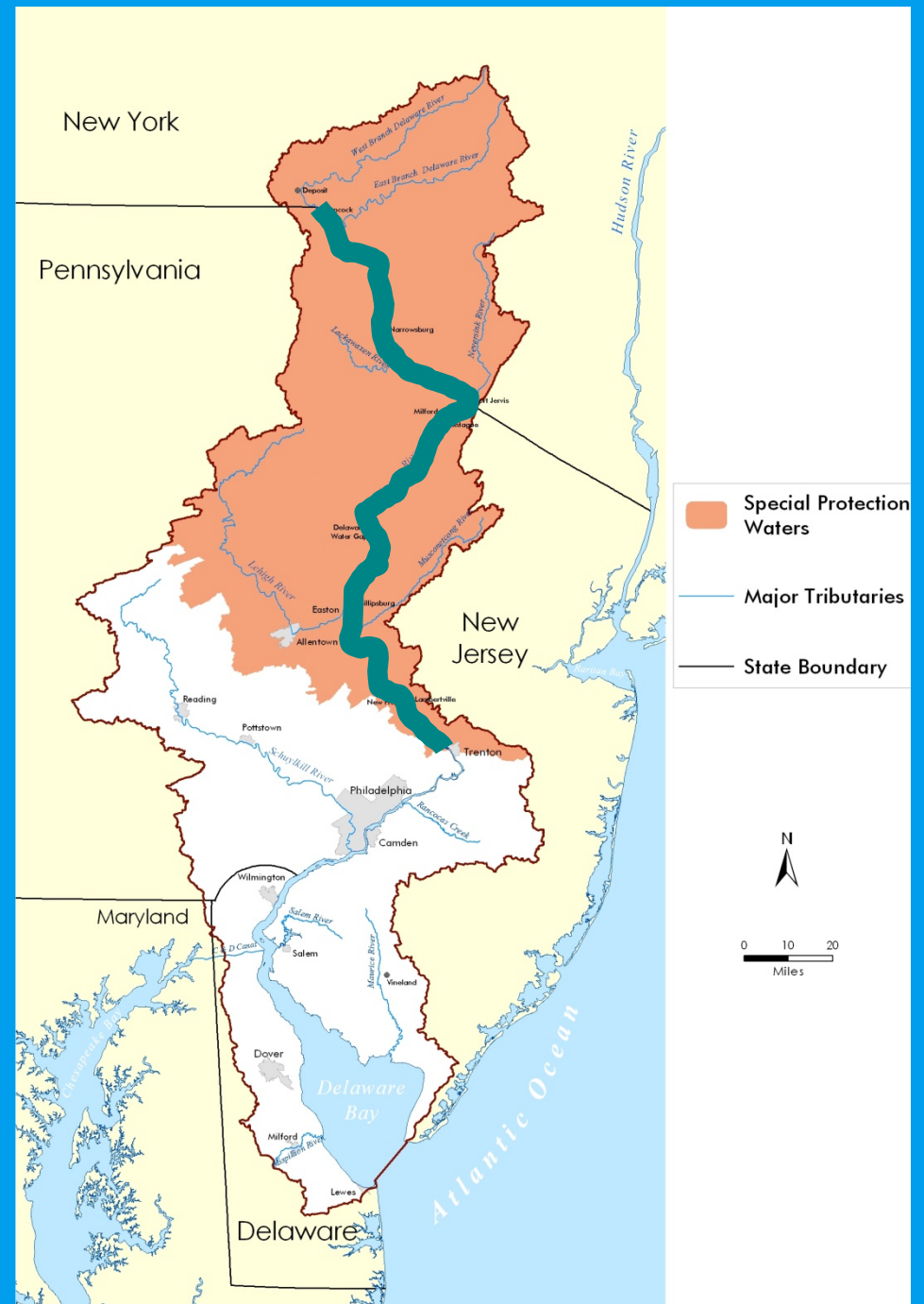
Three-quarters of the non-tidal Delaware River (about 150 miles) has been included in the National Wild and Scenic Rivers System.





# Water Quality

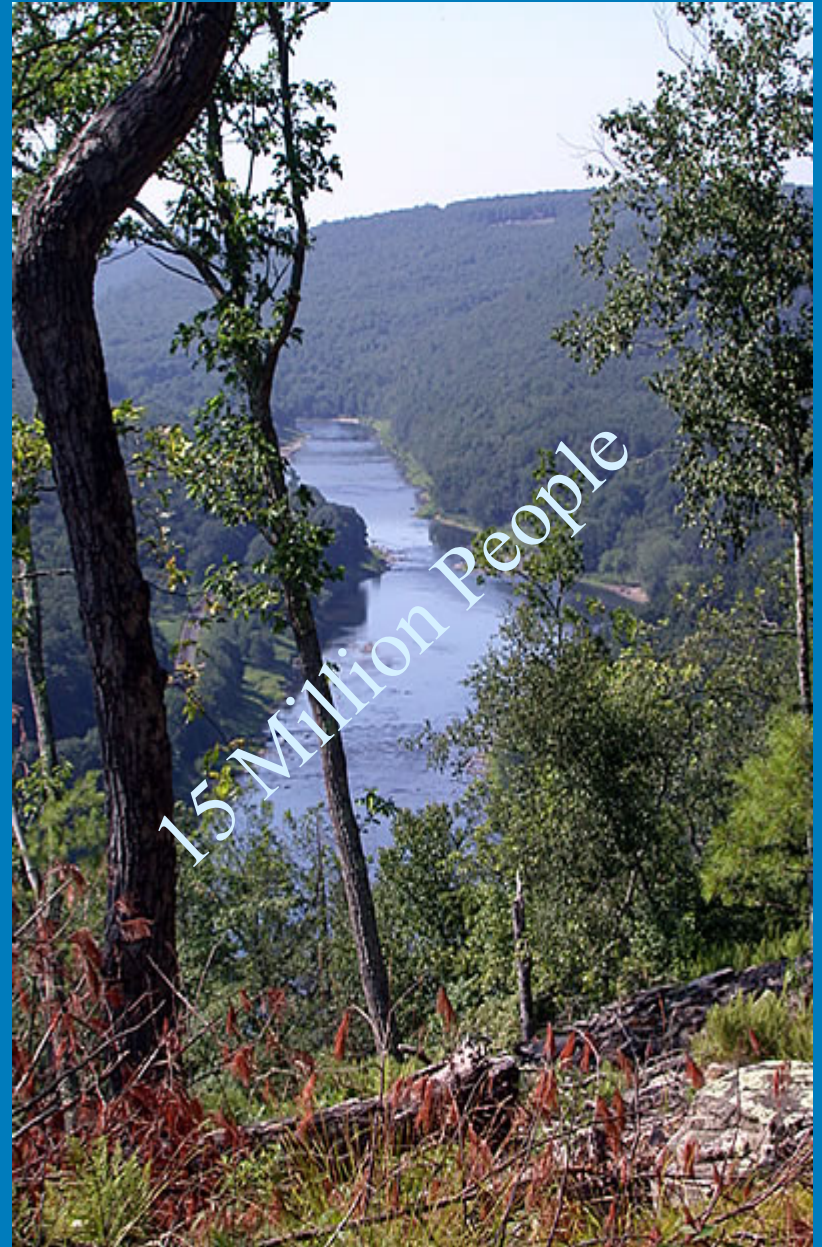
- ❑ Federal Wild and Scenic River Designation –  $\frac{3}{4}$  of non-tidal river
- ❑ Total non-tidal river and its watershed designated DRBC Special Protection Waters
- ❑ Mainstem = longest stretch of anti-degradation waters in U.S.
- ❑ No measurable change in water quality





# Vulnerability of Headwaters

- **Headwaters are the most sensitive areas of a watershed**
- **Existing contiguous forest is critical to water quantity and quality**
- **Philadelphia Source Water Protection Analysis**
  - **#1 – Change in Delaware River Headwaters**





**Legend:**

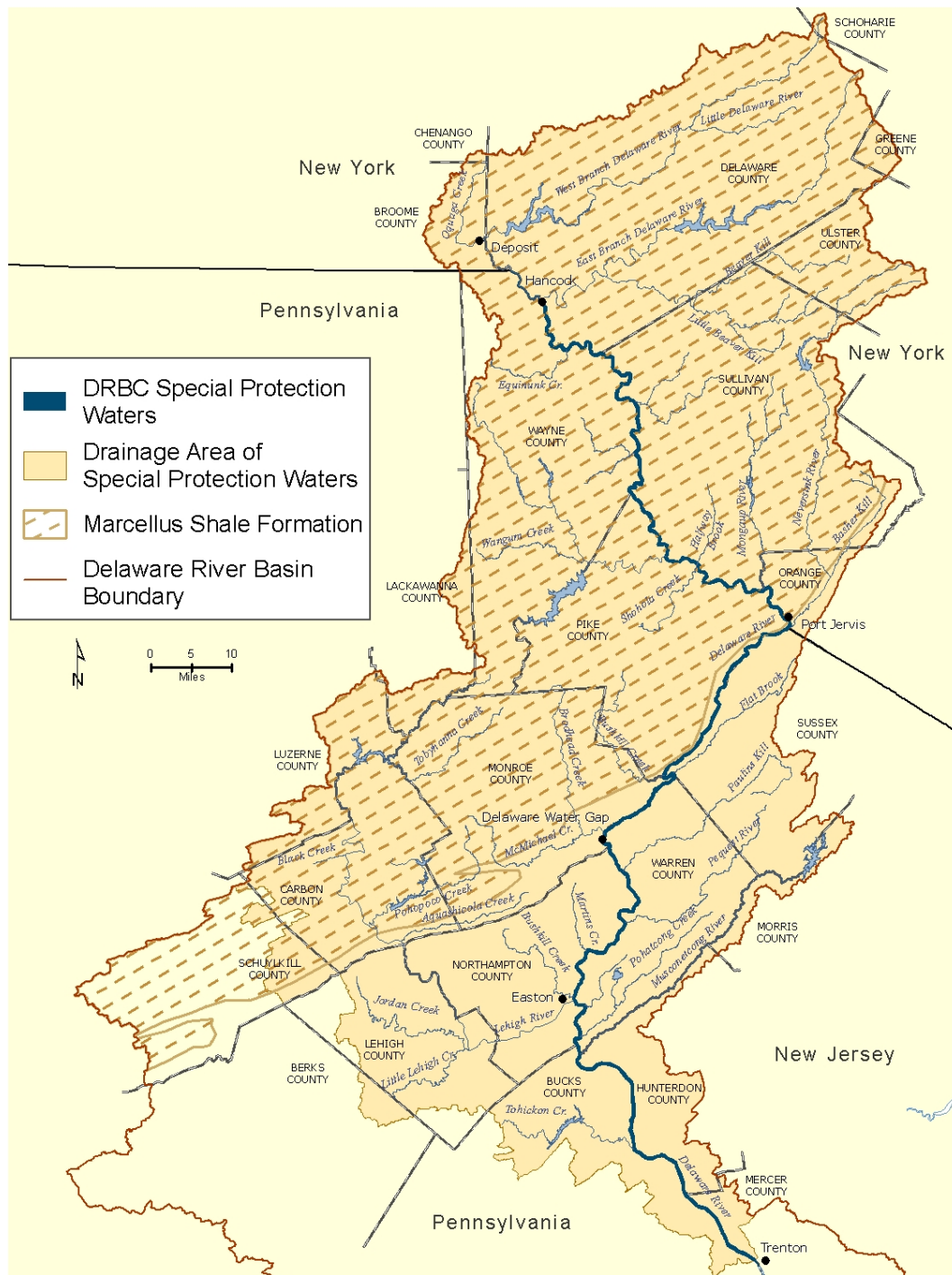
- Underlain by Marcellus (Orange)
- Marcellus Outcrop (Dark Brown)

# Concerns

1. Water Withdrawals, Use, and Tracking
2. Well Pads and Ancillary Infrastructure
3. Wastewater Tracking and Disposal







# Marcellus Shale and Special Protection Waters

36% (4,937 mi<sup>2</sup>) of the Delaware Basin is underlain by the Marcellus Shale

# Regulation Development

- May, 2010 - Commissioners requested staff to develop draft regulations
- December, 2010 – Draft Regulations Posted
  - Started Public Review process with hearings
- April, 2011 – Comment period Closed –
  - 69,000 comments
- Latest Version of Regulations
  - posted November, 2011
- Law Suits

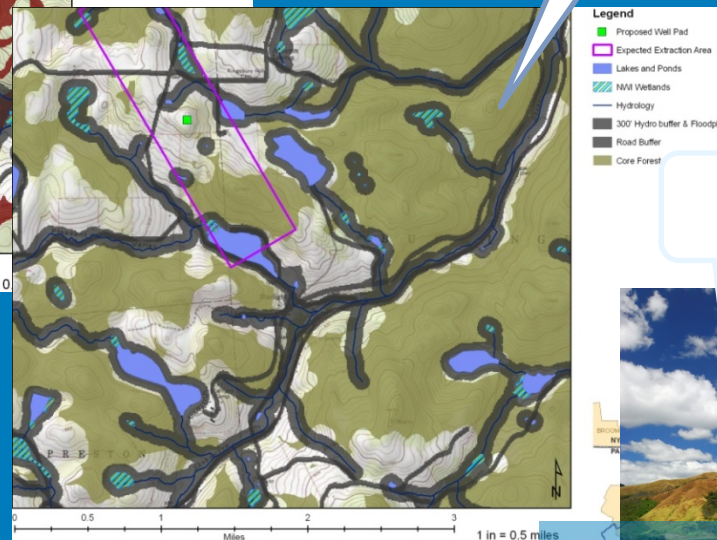
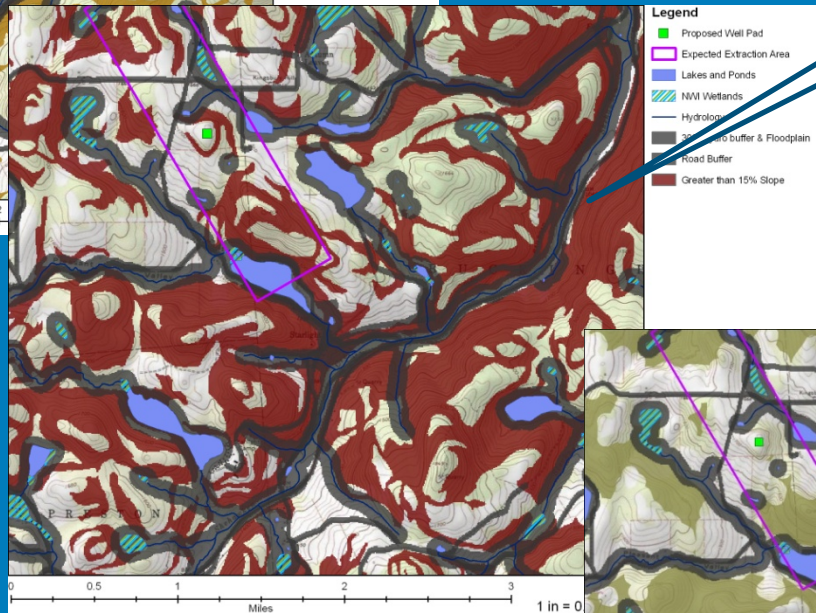
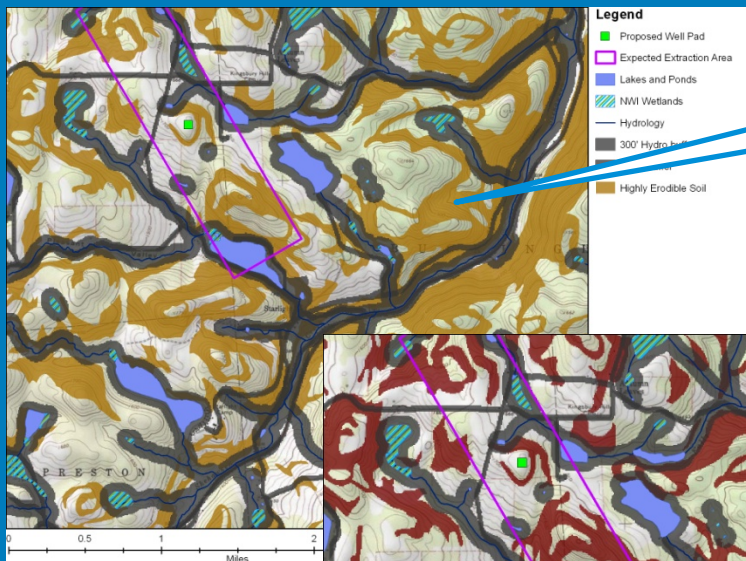


Highly  
Erodible  
Soils

Steep  
Slopes

Core Forest

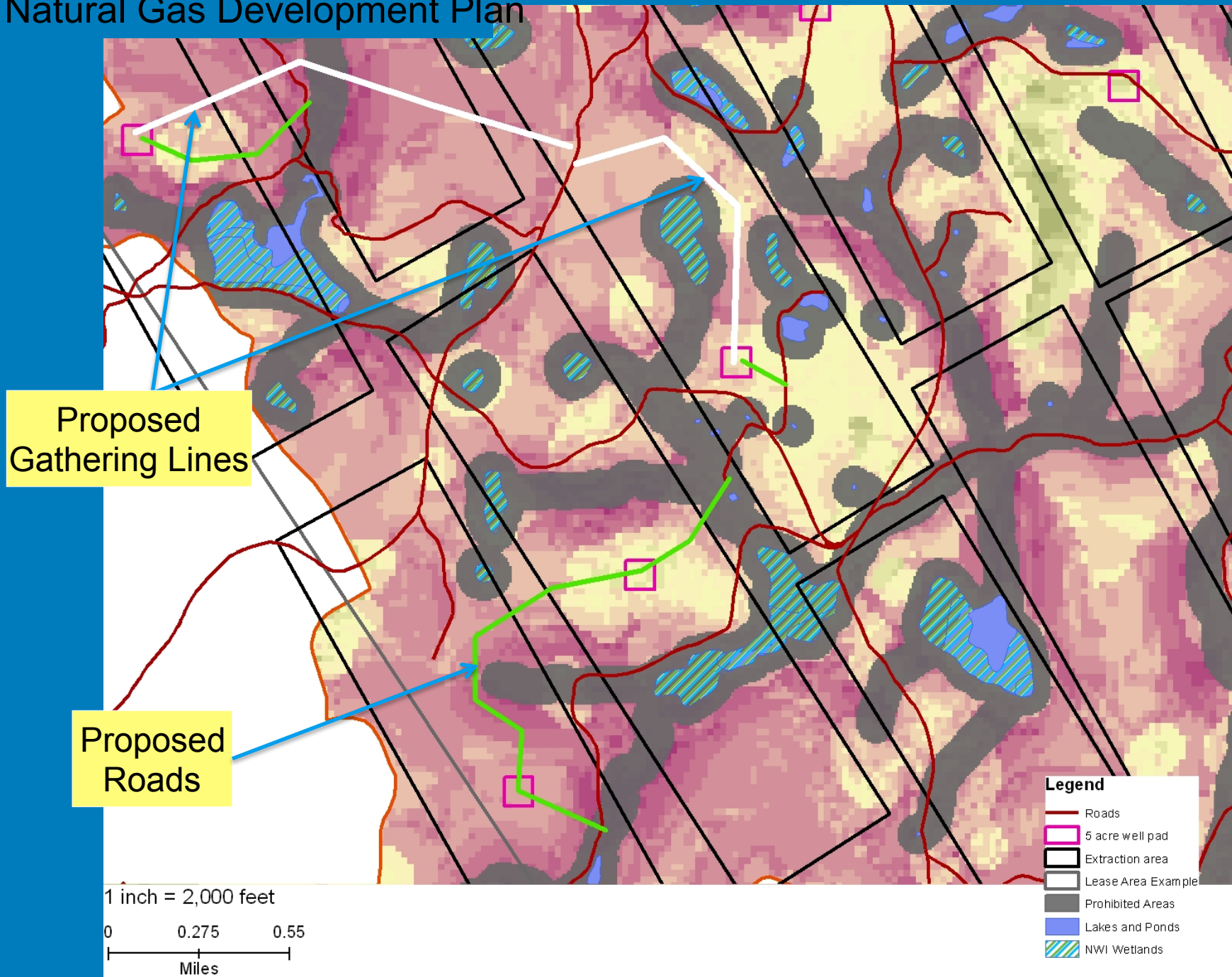
Other  
Layers



Headwater Watersheds  
Hydric Soils  
Forested Riparian  
Corridor  
Reg. Resource Mgt. Area

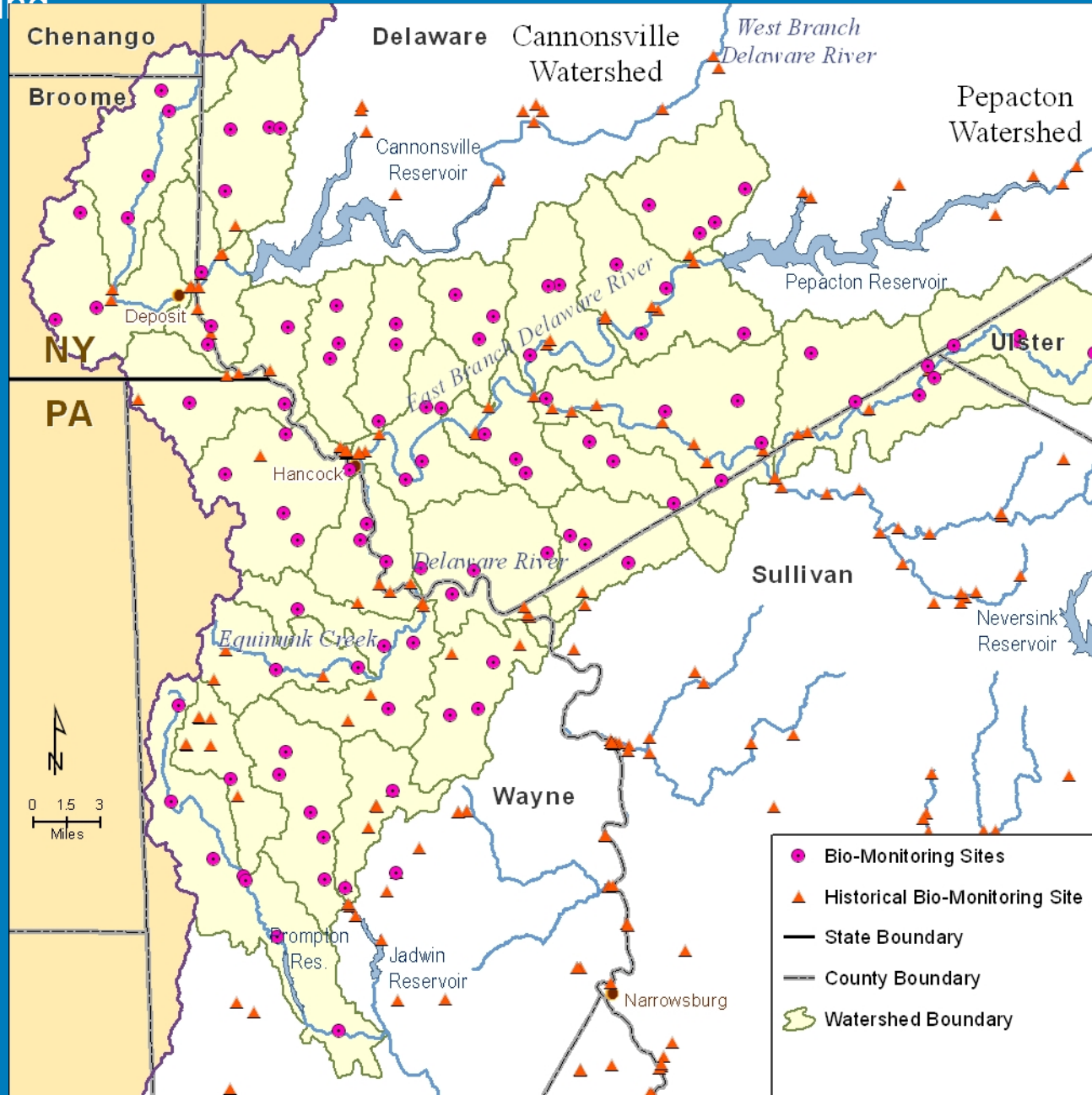
These layers are combined in GIS  
to create High Value Water  
Resource Landscape

# Natural Gas Development Plan





# Wayne and Delaware County Sub-Watersheds for Spring / Summer 2011 Biomonitoring



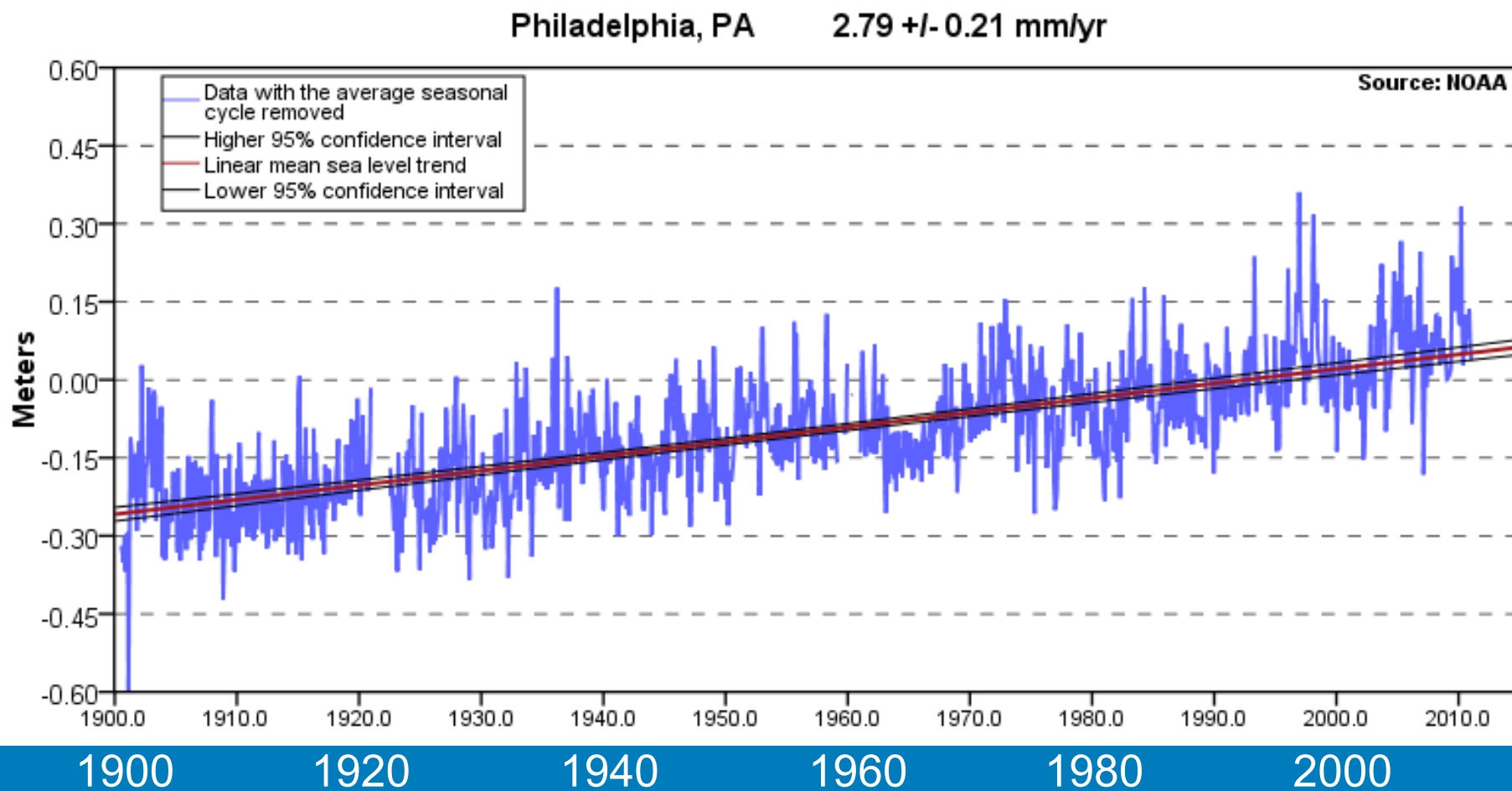


# **Issues knocking on our door**

**Sea Level Rise  
More Intense Storms  
Summer Droughts**



# Water-level change at Philadelphia



Source: NOAA (2011)

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(250 mg/l, 7 day avg)

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# Will We Have Enough Water?

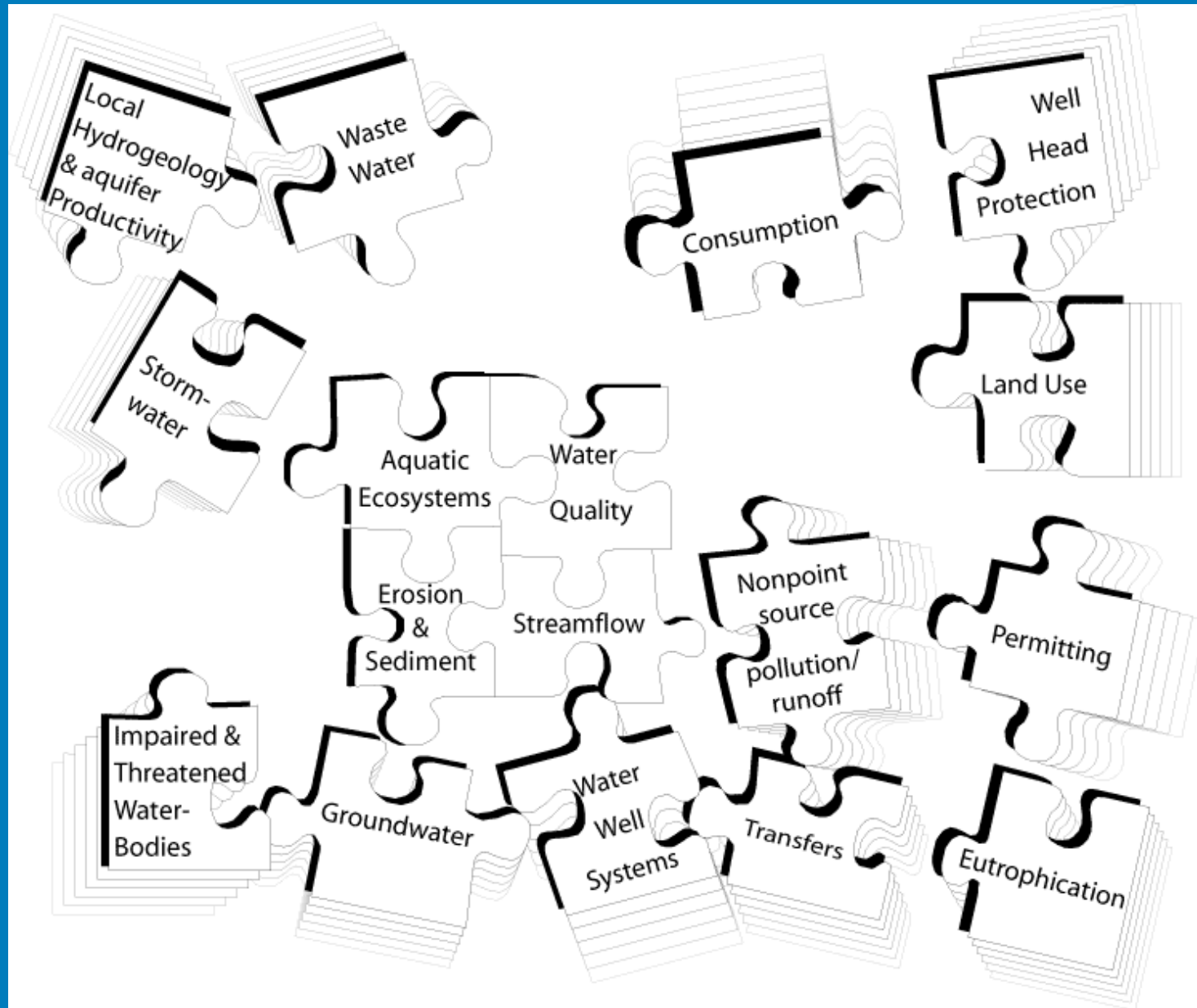
- Population – Change and Location
- Energy Generation – Water Footprint
- Ecological Flows
- Natural gas Development?
- Point and Non-Point Pollution
- Climate Change
  - Sea level rise, intense storms, droughts



Totally  
Shared  
Waters

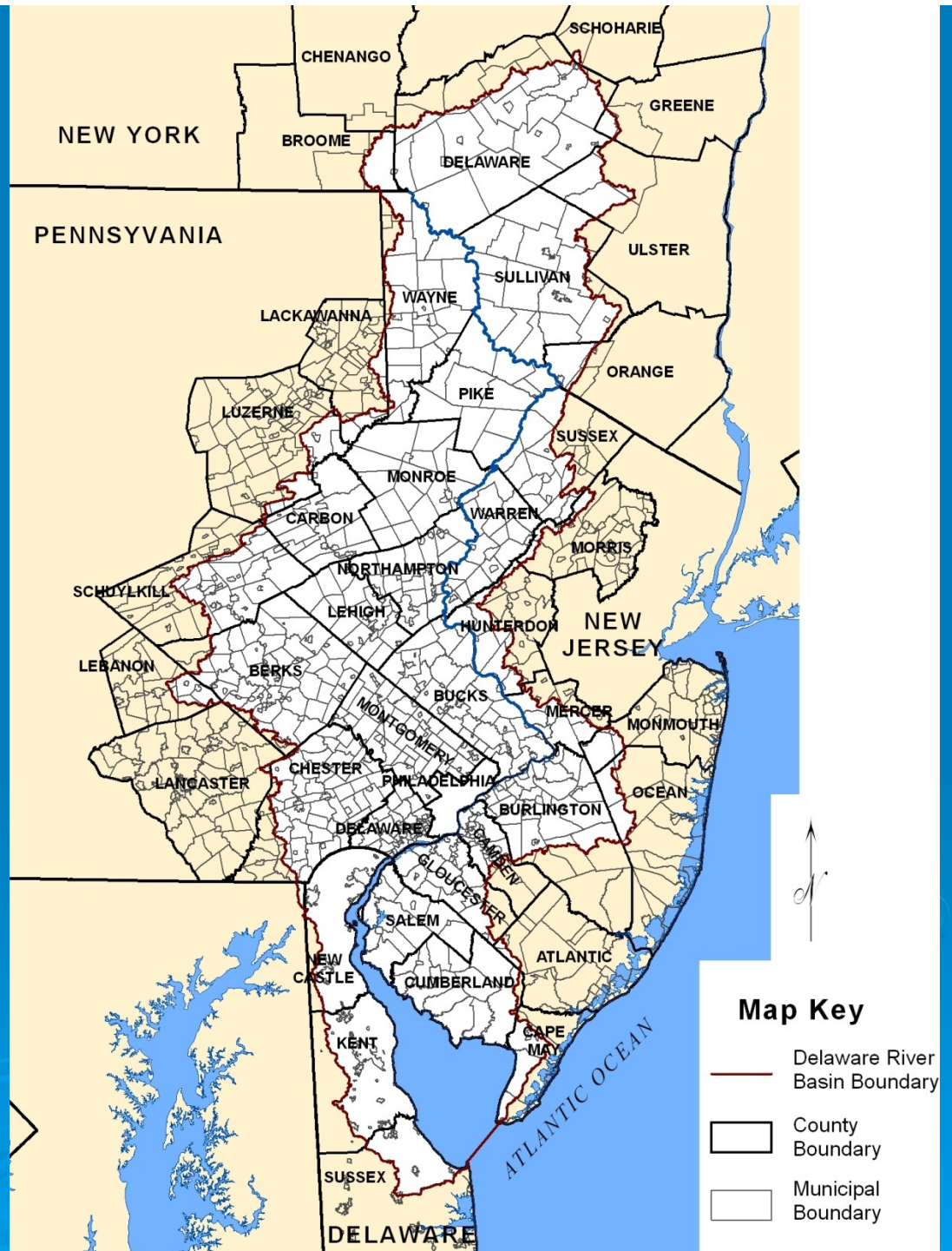


# Interconnected Water Resources



# The Need for Basin-Scale Planning

- 4 States
- 25 Congressional Districts
- 42 Counties
- 838 Municipalities





# Delaware River Basin Commission



# Commitment to Resolve Disputes

- Committed to work through the Commission
- The States mutually agreed – for the 100-year duration of the Compact – to waive and relinquish any right or privilege to apply for modification of the 1954 Supreme Court Decree



# DRBC Advisory Committees

- ☐ Flood
- ☐ Flow Management Technical
- ☐ Information Management
- ☐ Monitoring
- ☐ Toxics
- ☐ Water Management
- ☐ Water Quality

# DRBC's Charge

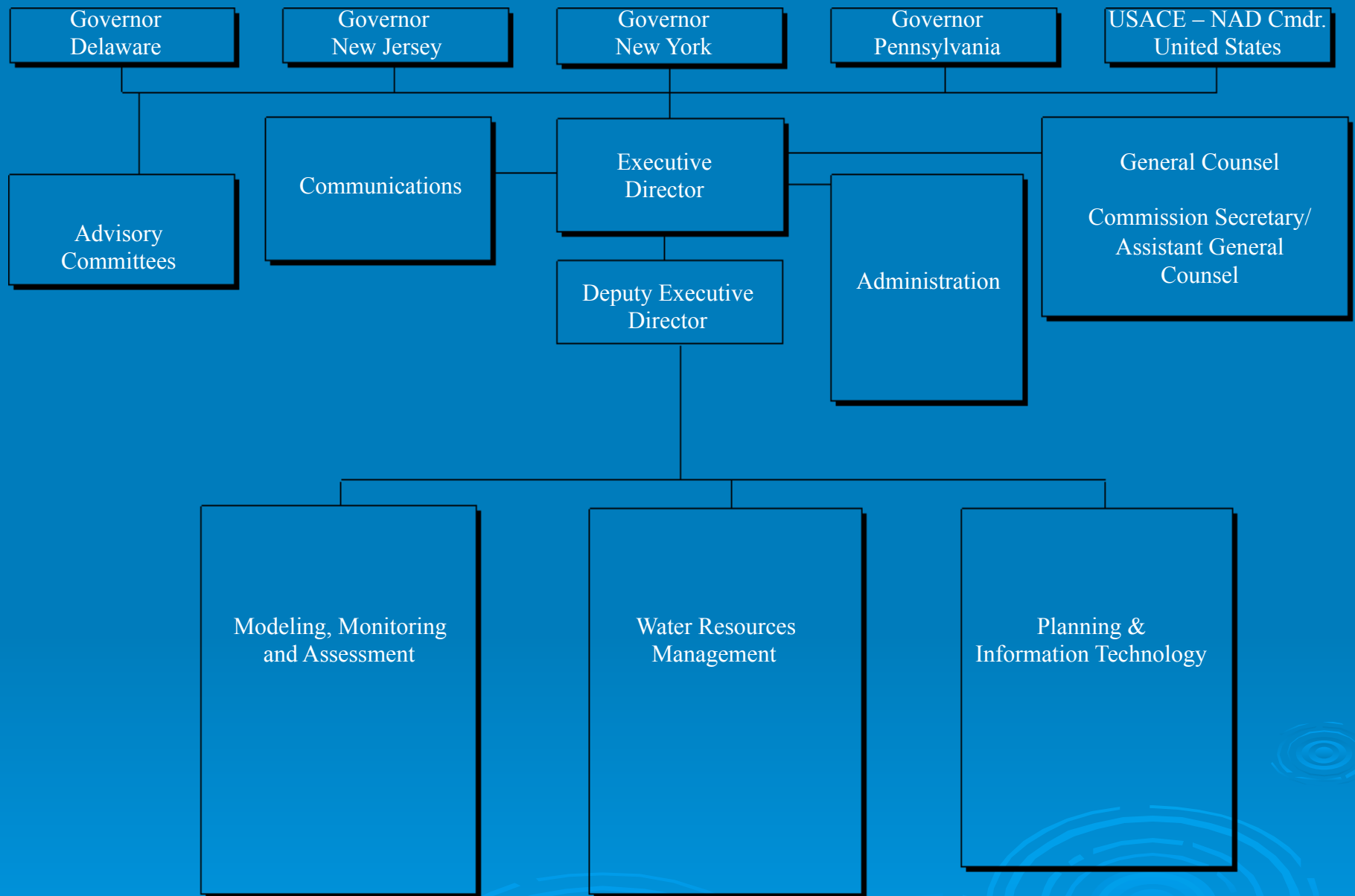
- Manage water resources w/out regard for political boundaries
- Regulate water quantity (equitably allocate, maintain streamflow) and water quality
- Plan and Develop (e.g., Basin Plan 2004; State of the Basin Report 2008; stored water)
- Coordinate between federal, state & local governments and private entities w/ role in managing water resources
- Educate the Basin community about water resources





# DRBC Value Added

- Manages the watershed holistically
- Provides a voice for individual states and federal agencies on use of the shared resources
- Evaluates benefits and costs of any proposals to all parts of the basin
- Fills in gaps where states do not have authority (water withdrawal)
- Creates a uniform baseline of regulations for the shared waters
- Cost effective allocation of funds



## DRBC Organizational Chart





# Budget History

- 3 Commissions in President's Budget
  - DRBC, SRBC, ICPRB
- Until 1996 – DOI represented the President, good payment history
- 1996 – Congress cut RBCs out of budget, named USACE as Federal Rep.
- One payment in 16 years – 2009
- Owed to DRBC – \$715,000 annual,
  - over \$10M cumulative



# Budget and Fair Share Allocation

➤ ~ \$5M plus Special Projects

➤ Fair Share Allocation

- PA 25%
- NJ 25%
- Federal 20%
- NY 17.5%
- DE 12.5%



# DRB Compact – 13.3

- “The respective signatory parties covenant and agree to include the amounts so apportioned for the support of the current expense budget in their respective budgets next to be adopted, subject to such review and approval as may be required by their respective budgetary processes.”

# 2007 WRDA

- *(b) Authorization to Allocate – The Secretary [of the Army] **shall** allocate funds to the Susquehanna River Basin Commission, Delaware River Basin Commission, and the Interstate Commission on the Potomac River Basin to fulfill the equitable funding requirements of the respective interstate compacts. (Emphasis added).*
- Section 5019 of the Water Resources Development Act of 2007 (P.L.110-114)

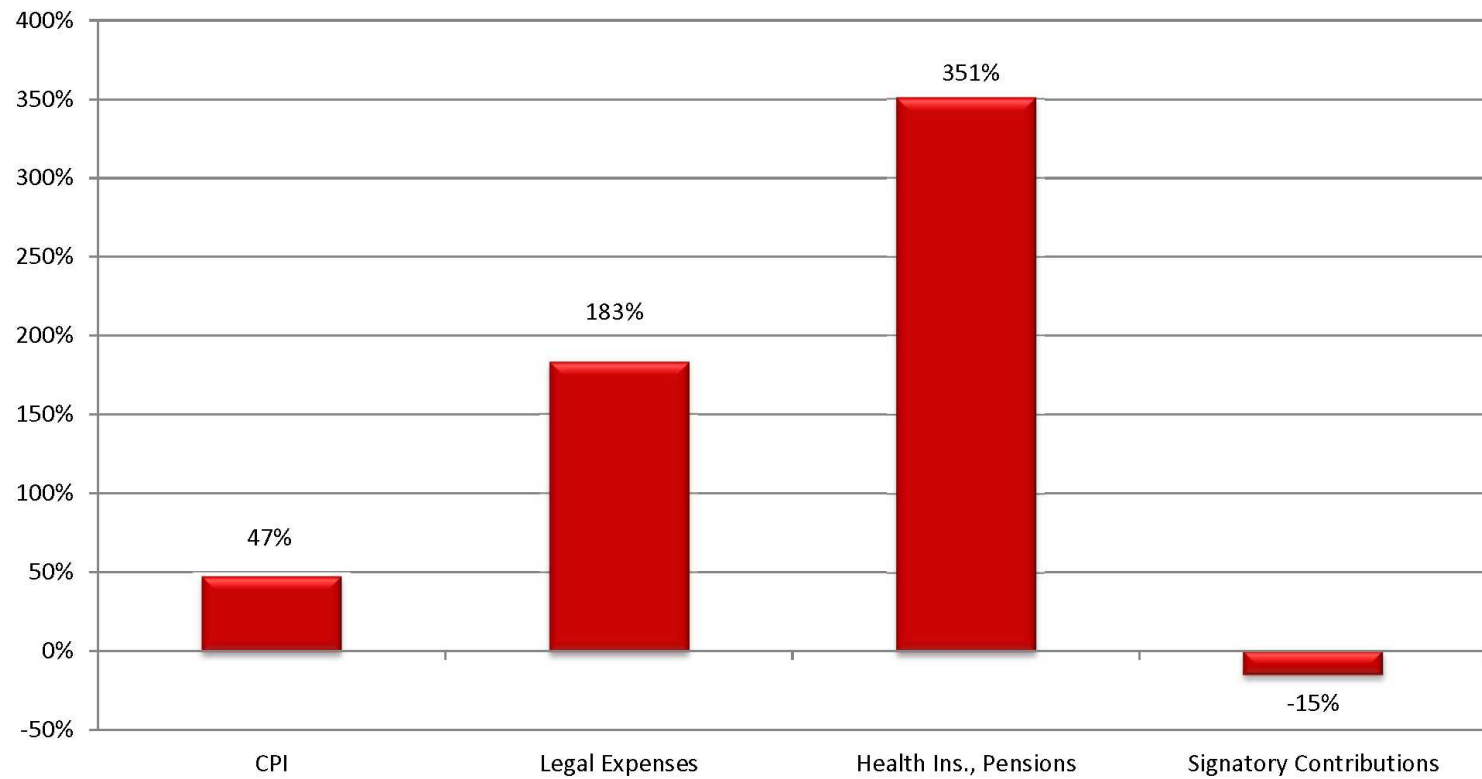


# DRBC Adopted Budget – FY 2012

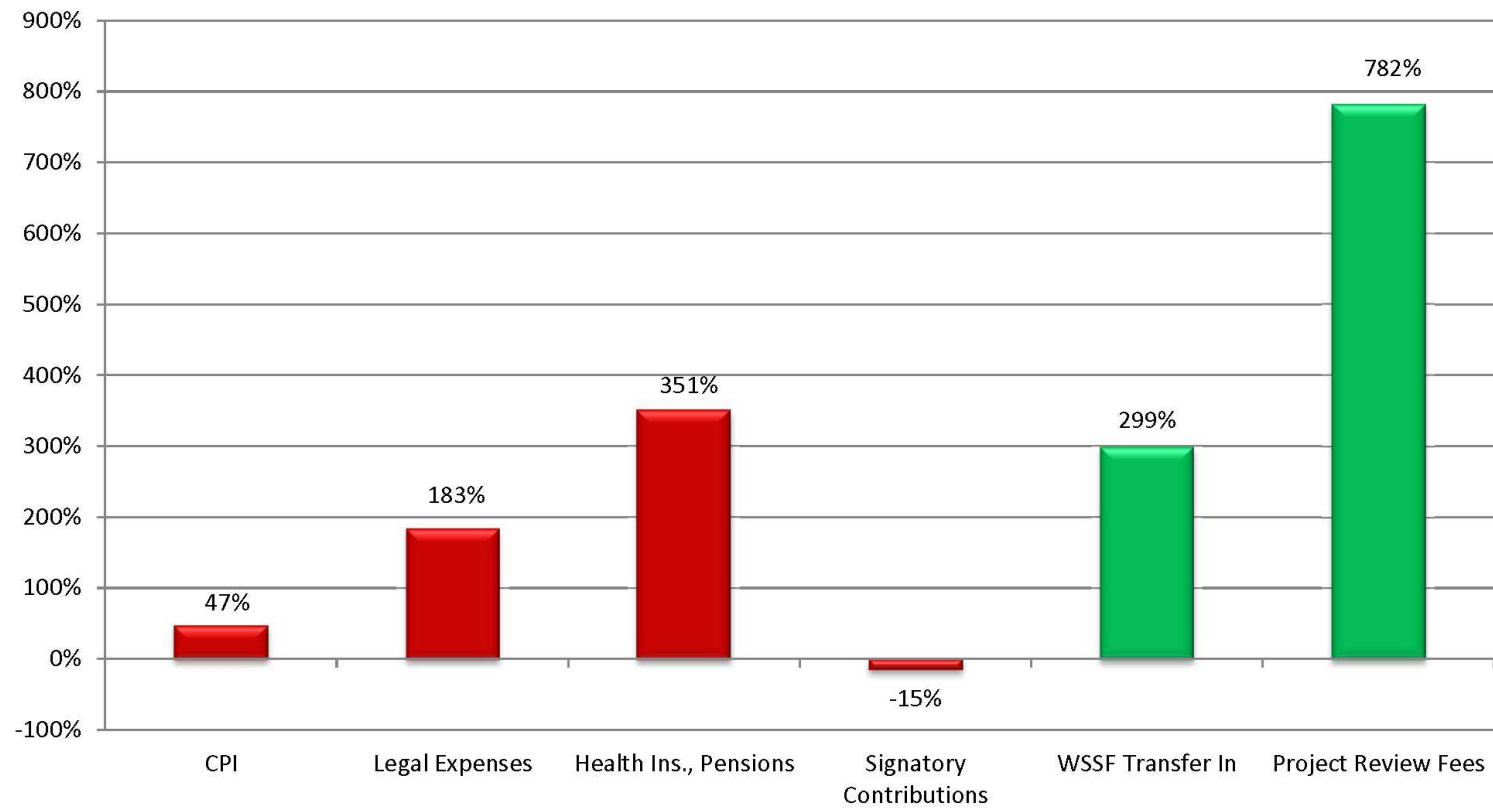
	Fair Share Allocation	Actual FY 2012	Difference
Delaware	\$447,000 (12.5%)	\$447,000	\$0
New Jersey	\$893,000 (25%)	\$893,000	\$0
New York	\$626,000 (17.5%)	\$355,000	(\$271,000)
Pennsylvania	\$893,000 (25%)	\$493,000	(\$400,000)
United States	\$715,000 (20%)	\$0	(\$715,000)

WSSF = Water Supply Storage Facilities Fund

### % of Change FY 1996 to FY 2012



### % of Change FY 1996 to FY 2012





# Trouble in FY2014

- No more silver bullets
- Equity at redline, loss of project review fees,
- Slipping State commitments
- Compact limits ability to tax or raise revenues
- Projected \$1 million deficit
- RIF of 10 staff members (out of 40)

# River Basin Commissions – Most Cost Effective Solution

- Sharing of resources
  - Federal Gov't paying for 1/5 of services ( if they paid!)
- Minimized Legal Challenges – e.g. – ACF
  - Increasing due to reduced services
- Coordination of work efforts in Basin
- Strong Stakeholder Involvement
- Staff expertise that complements that of states
- Think Like a River!



QUESTIONS?

[www.DRBC.net](http://www.DRBC.net)



# Why was the Delaware River Basin Commission (DRBC) Created?

- Water supply shortages and disputes over the apportionment of the basin's waters;
- Severe pollution in the Delaware River and its major tributaries; and
- Serious flooding.

# Drivers of the Formation of the DRBC

- Tired of Long Supreme Court Litigation and Threats from Individual States
- Supreme Court Allocation
- Allowed Parties to Revisit Allocation
- Priority Projects Identified,
  - Need For Planning By All Parties –
  - No Renegades!
- WRA- DRB Commissioned Study

Provision is made in all three of the compacts for federal appropriations to support the operational expense budgets of each of the commissions. Federal funding support was included in the President's proposed budget and provided annually to the three commissions until FY1997 when Congress suspended their appropriations. Ten years later, Congress included the following provision in