Delaware River Basin Commission

Water and Energy in the Delaware River Basin

Steve Tambini

Executive Director

December 9, 2022

Delaware River Basin Commission

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Our Delaware River Basin

13,300,000 people served + 13,539 square miles + 2,000 tributaries + 868 municipalities

+ 330 miles of river + 42 counties + 4 states = 1 Delaware River Basin

DELAWARE RIVER BASIN

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WWW.DRBC.NET
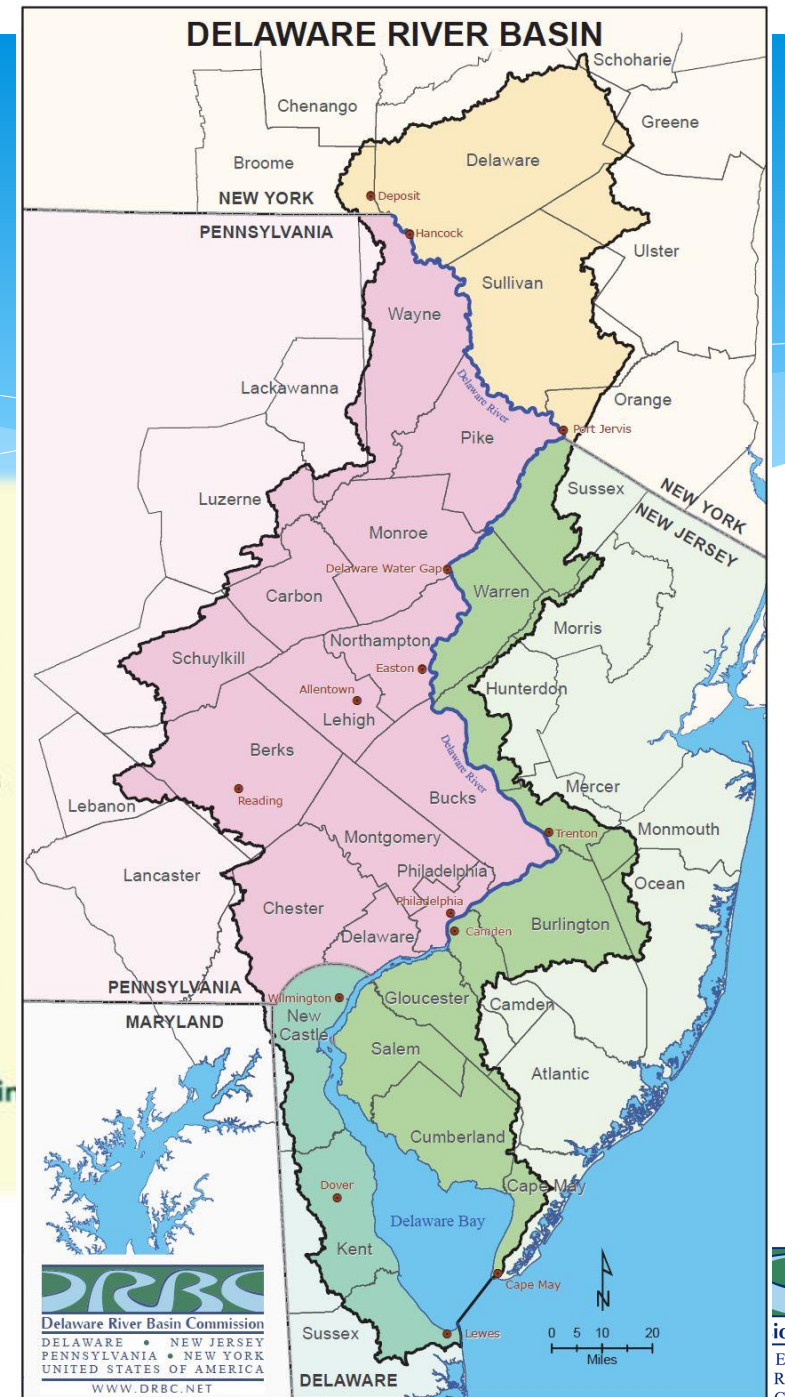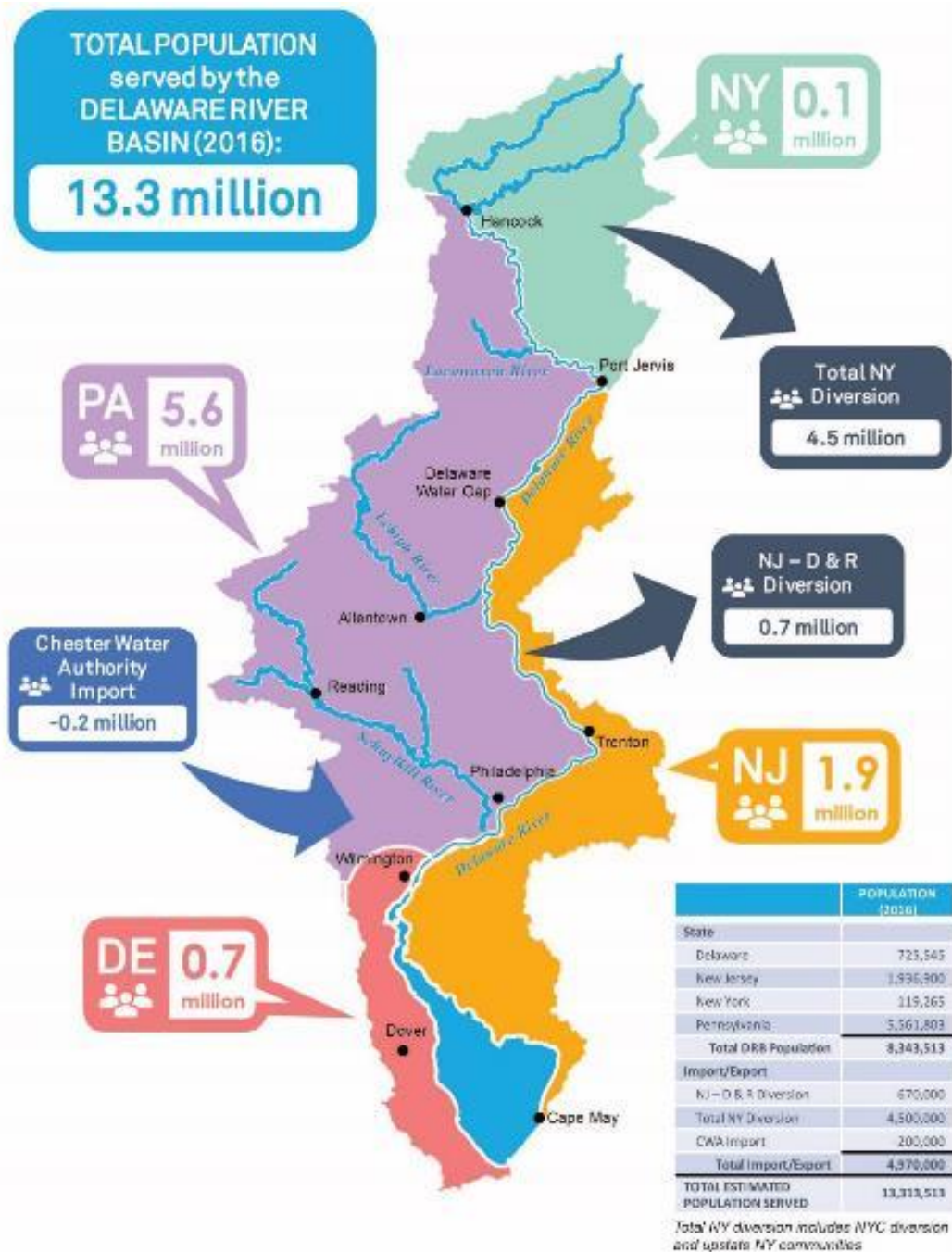
The Delaware River Basin

- ~13 million people (about 4% of the U.S. population) rely on its waters

- Provides half the drinking water to NYC

- Drains 13,539 square miles of watershed in 4 states.

- 6.4 billion gallons are withdrawn every day

- Contributes over $21B in economic value

The Delaware River Basin "Today"

It Used to Look Like…

Slaughterhouses discharging in 1928 (PWD Historic Collection)

Bridgeport Canal up from Schuylkill River in 1928 (PWD Historic Collection)

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And Sometimes It Looked Like…

Easton-Phillipsburg free bridge in 1955 (lehighvalleylive.com file photo)

Delaware River at Trenton in 1965 (DRBC photo)

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Why a Delaware River Basin Commission?

Before DRBC:

- Water supply shortages and disputes

- Severe pollution

- Devastating floods and droughts

- Disjointed planning and management

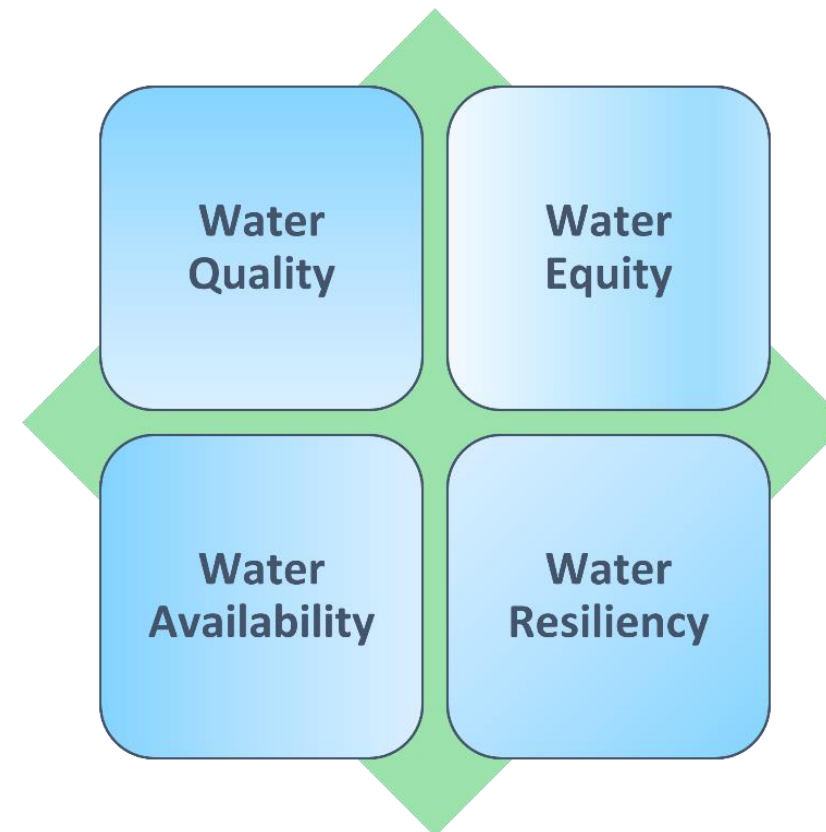- Recognition of joint responsibility for national treasure

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Delaware River Basin Commission Structure and Mission

Five Equal Members:

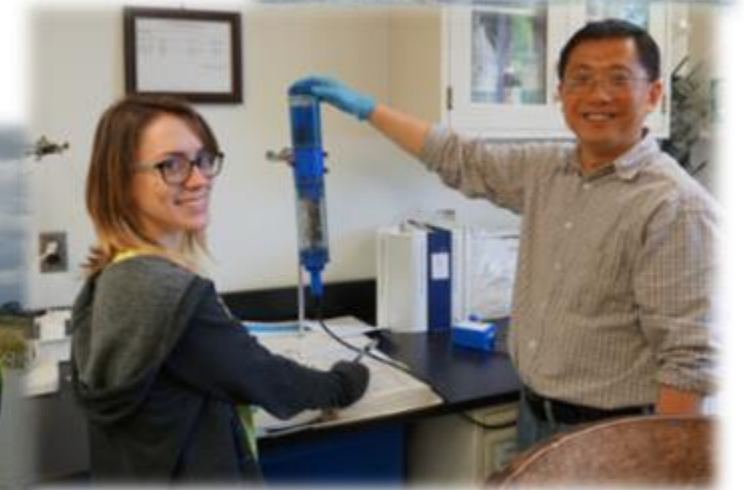- Delaware
- New Jersey
- Pennsylvania
- New York
- Federal Gov.

Manage, Protect, and Improve the Basin's Water Resources

Water Quality	Water Equity
Water Availability	Water Resiliency

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DRBC Staff and Budget

- Professional Planners, Engineers and Scientists

- 39 Budgeted Staff (12% Vacancy Rate)

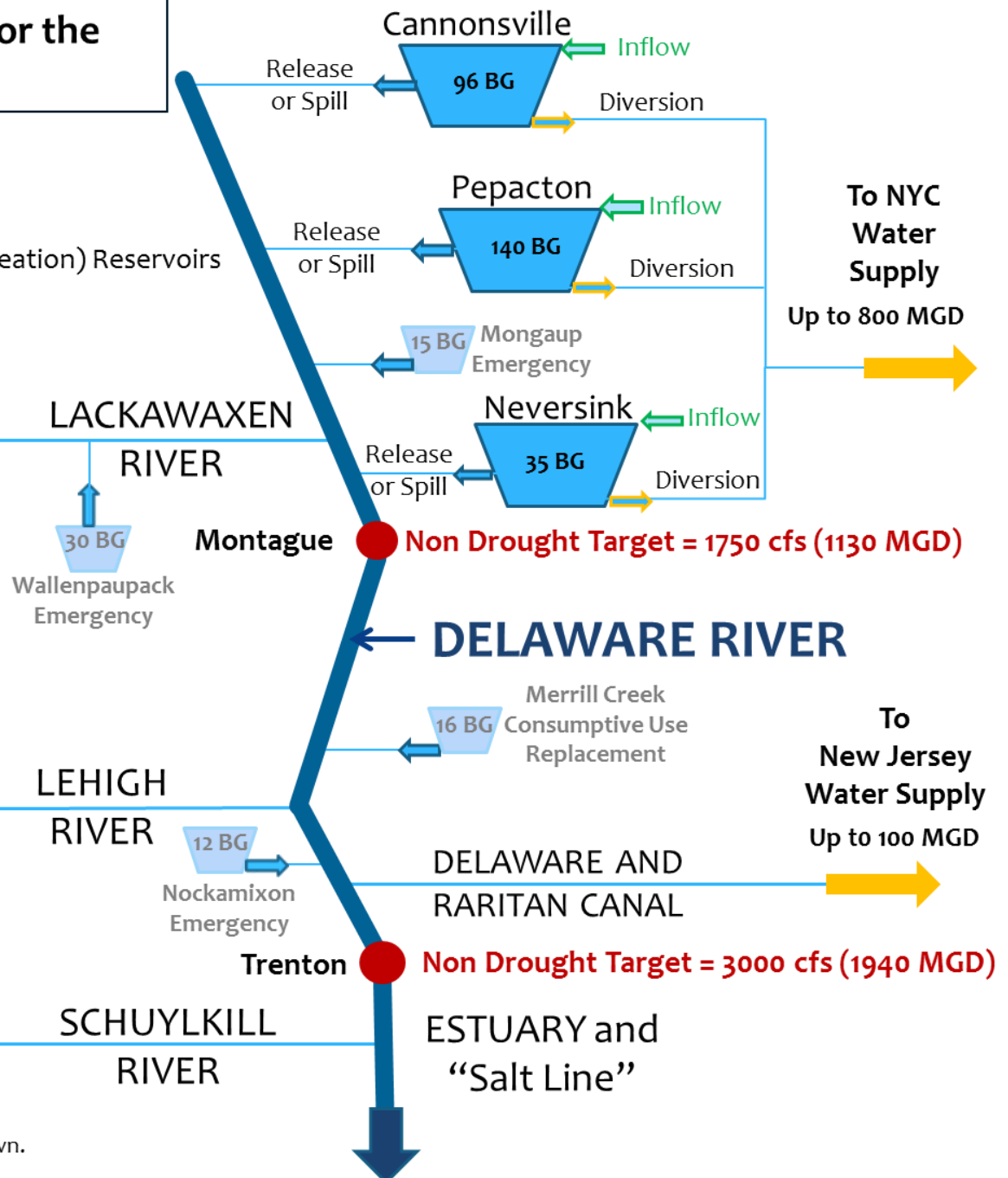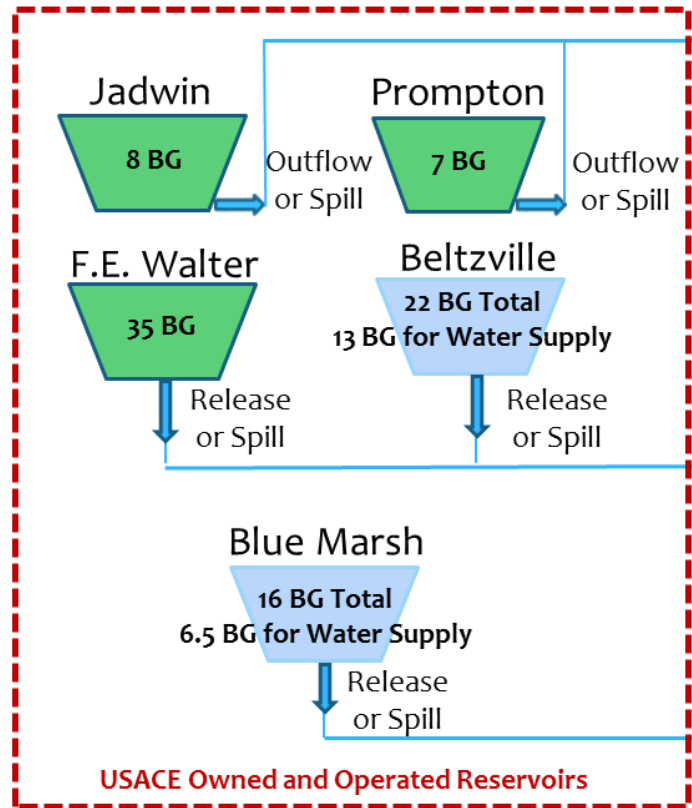- FY2023 Budget = $7 million

- Located in West Trenton, NJ since 1974

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Flow

- **What we manage and why**
- **Will there be enough**
  - Climate Change
  - Salinity
  - Drought
  - User demand

Water Management Schematic for the Delaware River Basin

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

Cannonsville — 96 BG — Inflow — Release or Spill — Diversion

Pepacton — 140 BG — Inflow — Release or Spill — Diversion

To NYC Water Supply — Up to 800 MGD

Mongaup — 15 BG — Emergency

Neversink — 35 BG — Inflow — Release or Spill — Diversion

LACKAWAXEN RIVER

Jadwin — 8 BG — Outflow or Spill

Prompton — 7 BG — Outflow or Spill

Wallenpaupack Emergency — 30 BG

Montague — Non Drought Target = 1750 cfs (1130 MGD)

F.E. Walter — 35 BG — Release or Spill

Beltzville — 22 BG Total — 13 BG for Water Supply — Release or Spill

DELAWARE RIVER

Merrill Creek Consumptive Use Replacement — 16 BG

To New Jersey Water Supply — Up to 100 MGD

LEHIGH RIVER

Nockamixon Emergency — 12 BG

Blue Marsh — 16 BG Total — 6.5 BG for Water Supply — Release or Spill

DELAWARE AND RARITAN CANAL

Trenton — Non Drought Target = 3000 cfs (1940 MGD)

SCHUYLKILL RIVER

ESTUARY and "Salt Line"

USACE Owned and Operated Reservoirs

Note: Not all reservoirs, tributaries, and diversions are shown.

Schuylkill River Watershed

- Largest tributary (HUC8) watershed in the Delaware River Basin.

- Drains 1,911 square miles (all in Pennsylvania)

- Drains ~14% of the Delaware River Watershed.

- Average annual water withdrawals = 403 MGD

- DRBC manages ~500 water withdrawal and wastewater discharge dockets in the watershed (26% of all DRBC dockets)
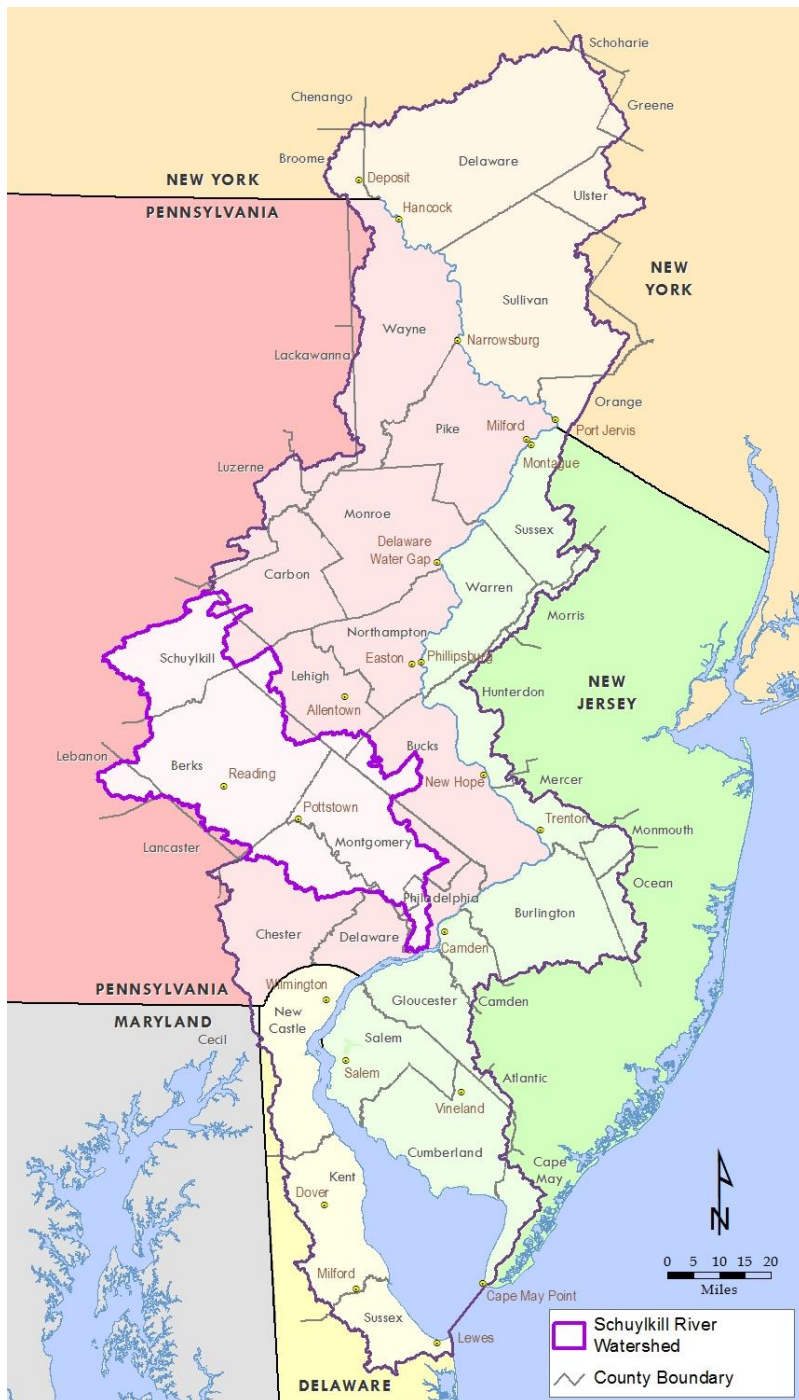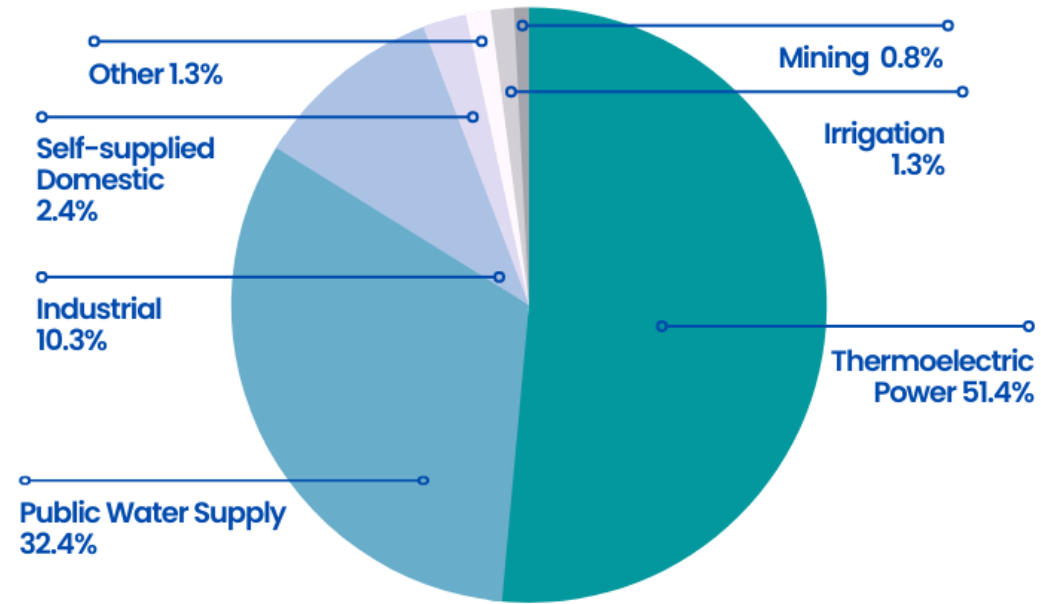
The DRBC and the Schuylkill

- DRBC has the authority to allocate all water withdrawals above 100,000 gpd

  ➤ PADEP only reviews Public Water Suppliers

- DRBC manages consumptive use "make up" water for power producers

- DRBC operates SE Ground Water Protected Area on behalf of PA

  ➤ Withdrawals >10,000 gpd

  ➤ Potentially stressed areas, stressed areas; limits on withdrawals

- DRBC "owns" volume in Blue Marsh Reservoir

- DRBC has basin wide WQ standards.

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Water and Energy: Schuylkill Snapshot

Consumptive Withdrawals by Sector
Schuylkill River Watershed

- Other 1.3%
- Self-supplied Domestic 2.4%
- Industrial 10.3%
- Public Water Supply 32.4%
- Mining 0.8%
- Irrigation 1.3%
- Thermoelectric Power 51.4%

Based on average by sector 2013-2017

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Delaware River Basin Commission Water and Energy: Schuylkill Snapshot

- Limerick Generating Station

- DRBC Docket Water withdrawals
  - Schuylkill River up to **58.2 MGD**
    - **44.0 MGD** consumptive
    - **14.2 MGD** non-consumptive
  - Perkiomen Creek via Delaware River Diversion up to **42 MGD**
  - Consumptive Use Replacement Requirement
    - Flow target at Pottstown <560 cfs
   - 1:1 gallon replacement

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Definitions

Withdrawals = All

Consumptive Use = the water ... lost to the atmosphere from cooling devices, evaporated from water surfaces, exported from the Delaware River Basin, or any other **water use for which the water withdrawn is not returned to the surface waters of the basin** undiminished in quantity.

1 million gallons per day (**MGD**) = 1.55 cubic feet per second (**cfs**)

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Delaware River Basin Commission Water and Energy: Schuylkill Snapshot
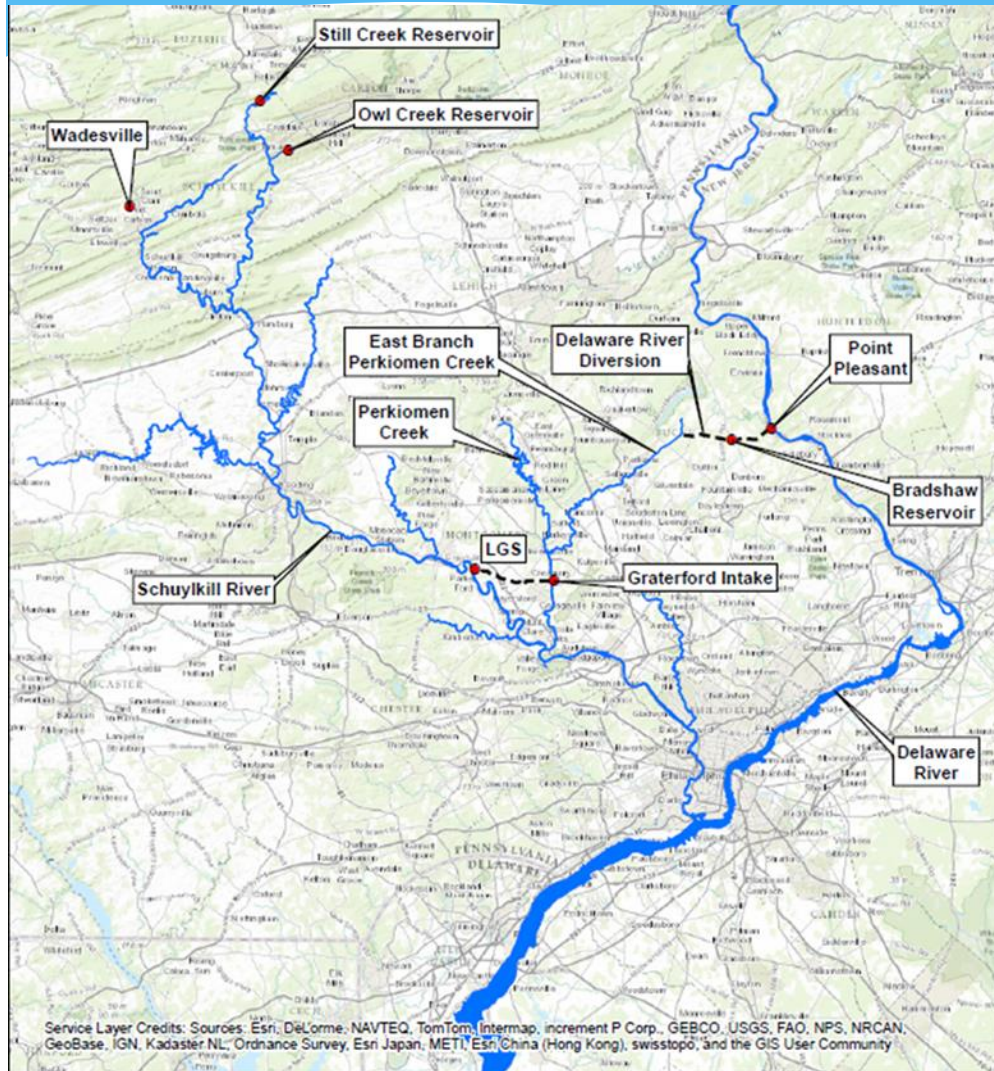
- DRBC - Limerick Water Augmentation Sources
  - Wadesville Mine Pool (up to **14.4 MGD**)
  - Still Creek Reservoir (up to **36 MGD**)
  - Owl Creek Reservoir (up to **8 MGD**)
  - Perkiomen Creek
  - Delaware River via Diversion

Delaware River Basin Commission Water and Energy: Schuylkill Snapshot

- Schuylkill River Restoration Fund
  - Grew out of docket condition, 2006 start
  - Ecological restoration fund seeded
  - Partnership is key: SRG, NGOs, water utilities, DRBC, other government agencies

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Stay in Touch!

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- Beth Brown, Director of External Affairs & Communications

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- DRBC Interest Form

  https://www.state.nj.us/drbc/contact/interest/

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