

# Delaware River Basin Commission

## DRBC Storage Feasibility Study

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Friends of the Upper Delaware River  
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# Welcome to the Delaware River!

## Fast Facts:

- Main stem is **330 miles long**
- Forms an interstate boundary over its entire length
- **Drains 13,539 square miles** in 4 states
- **13.3+ million people** (about 4% of the U.S. population) rely on the waters of the Delaware River Basin
- Water **withdrawal** in the Basin = **6.4 billion gallons/day**
- **Significant Exports:** NYC (up to 800 MGD) and NJ (up to 100 MGD)
- Longest, un-dammed U.S. river east of the Mississippi
- **Contributes over \$21B** in economic value



# Delaware River Basin Commission

## Founded by Compact in 1961

### ■ Five Equal Members:

➤ Delaware



➤ New Jersey



➤ Pennsylvania



➤ New York



➤ Federal Government

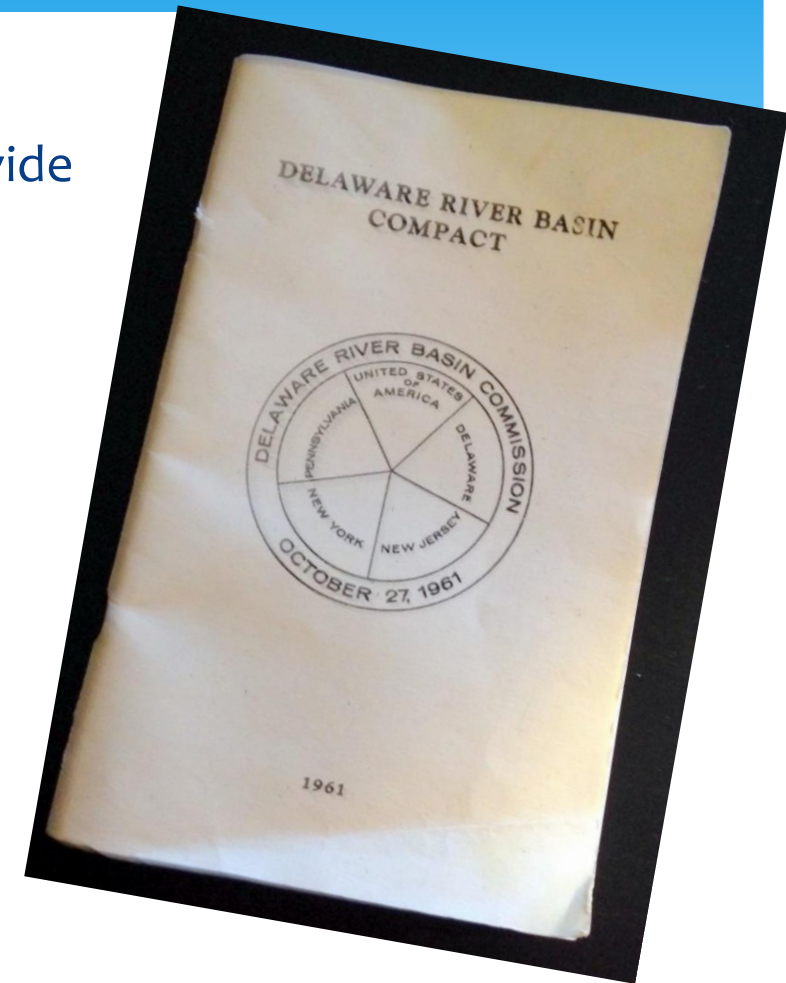


- Four Governors are the Commissioners
- Commissioner may select alternates
- Federal Commissioner is Commanding General, USACE, NAD
- Majority rules in most voting
- Meets quarterly

Note: New York City and Philadelphia are “advisors” and not members

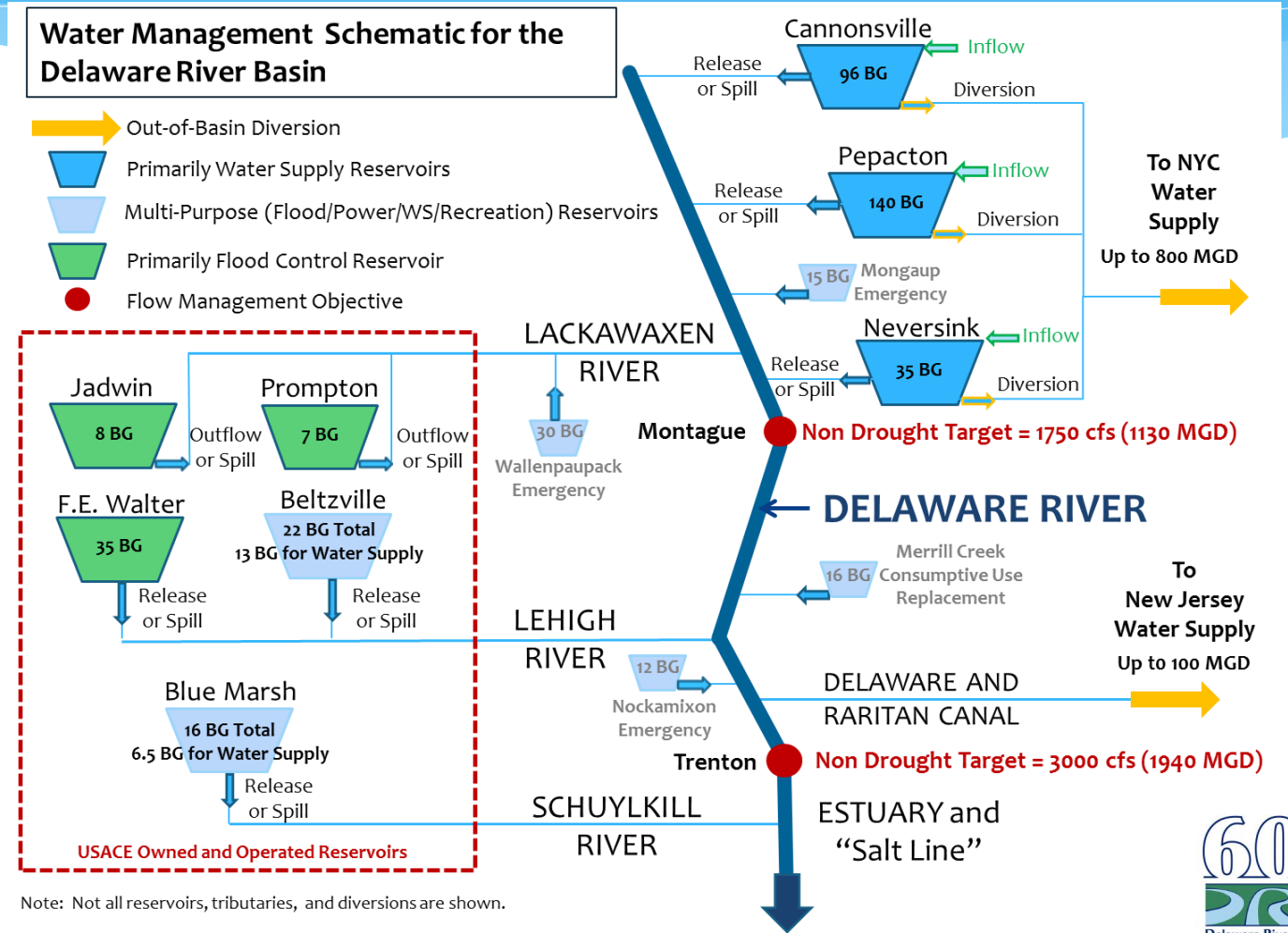
# Basic “Charges” of The Compact

- **From the Compact Preamble:**
- a **Comprehensive Plan** administered by a **basin wide agency** will provide
  - ✓ **flood damage** reduction;
  - ✓ conservation and **development of ground and surface water supply...;**
  - ✓ development of **recreational facilities;**
  - ✓ **propagation of fish and game;**
  - ✓ promotion of related... **watershed projects;**
  - ✓ **protection to fisheries...;**
  - ✓ development of **hydroelectric power;**
  - ✓ improved **navigation;**
  - ✓ **control of movement salt water;**
  - ✓ **abatement and control of stream pollution;**
  - ✓ And **regulation towards the attainment of these goals.**



# 2060 Planning Questions - Water Availability

- Adequacy of available storage?
- Adequacy of emergency storage?
- Number of “drought days”?
- Adequacy of flow objectives?
- Water budget in major sub basins:
  - Will the available Water Supply meet the projected Water Demand?



# Basin Reservoirs Meet Diverse Needs

- All located on tributaries
- Single or multi-purpose
  - Water supply (*DRBC owns water supply storage in two USACE reservoirs: Beltzville and Blue Marsh*)
  - Hydroelectric Power
  - Flood control
  - Recreation
  - Consumptive water use replacement
  - Flow augmentation during drought emergency



# Purpose of Storage Feasibility Study

- Explore the feasibility of additional freshwater storage to meet future water availability, climate adaptation, drought management and flow management needs
- Planning level inventory of potential options (no immediate need for additional storage)
- Initiated April 2021; 18-month study



Blue Marsh Lake, PA. Source: USACE

# Types of Storage Projects Being Considered



## 1. New dams

- Previously identified locations
- Newly identified locations



## 2. Modifications to existing dams/reservoirs:

- Dam raise
- Purchase/lease of existing storage
- Operational changes
- Dry dam to permanent pool



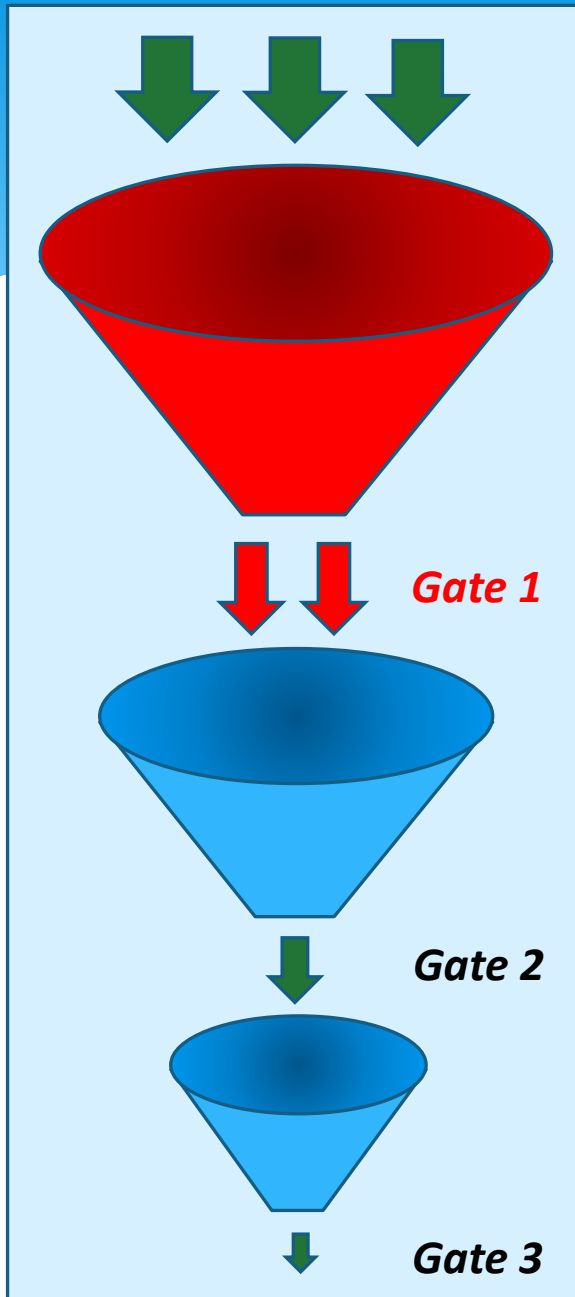
## 3. Quarries



## 4. Subsurface mine with surface pool



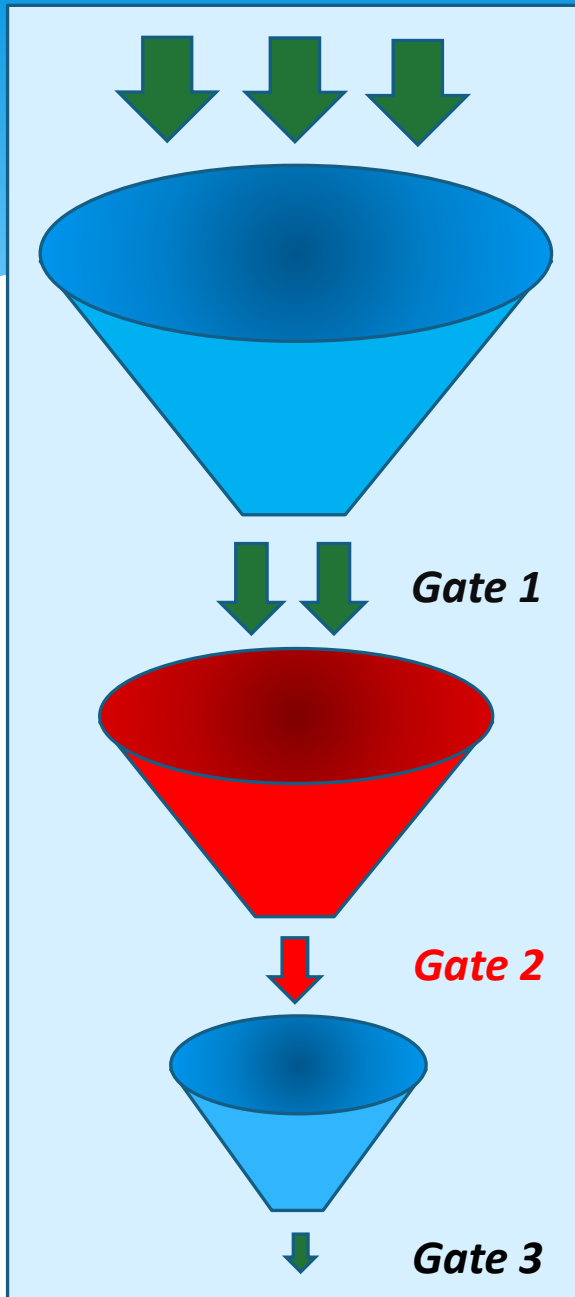
# General Study Approach: Gate 1



- Identify plausible storage options

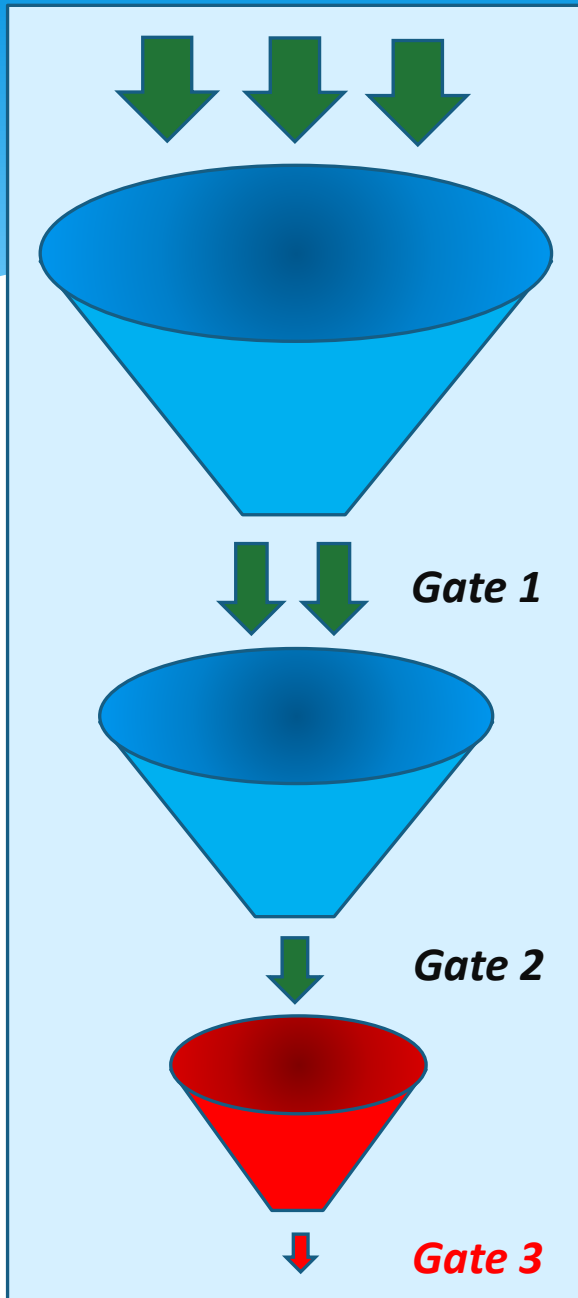
- Begin with list of >60
- Categorize, inventory and map
- Screen out inferior options based on limited data
- Gate 1: Pass ~35 options for further evaluation

# General Study Approach: Gate 2



- **Develop project descriptions**
  - Begin with list of ~35
  - Develop evaluation criteria
  - Screen out options based on semi-quantitative assessment
  - Gate 2: Pass ~15 options for further evaluation

# General Study Approach: Gate 3



- Detailed evaluation
  - Begin with list of ~15
  - Develop projects sufficiently for concept-level cost estimate and comparisons
  - Gate 3: Score and rank ~15; Top 10 to be detailed in report with project briefs

# Where to Find Study Updates

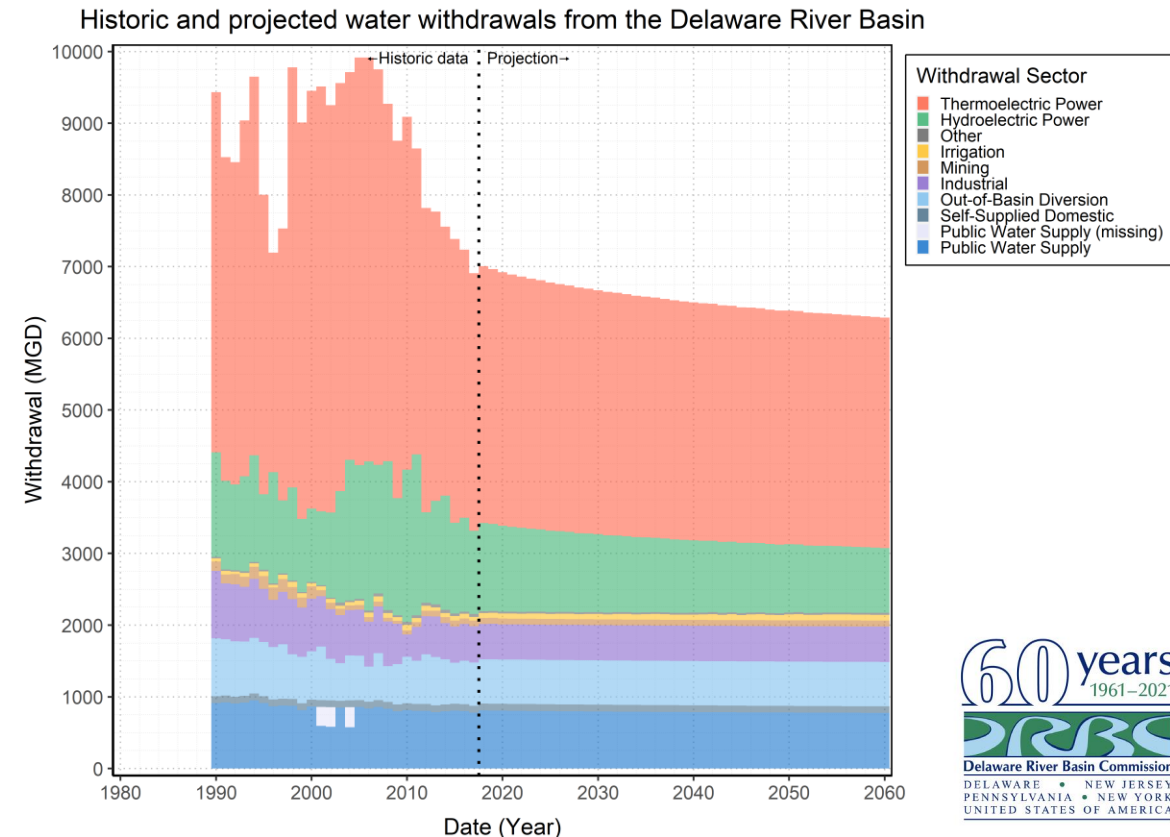
- Project webpage live in July 2021  
<https://www.nj.gov/drbc/programs/flow/reservoir-storage-study.html>
- Periodic updates to public via Water Management Advisory Committee (WMAC)
  - October 21 at 1:30 pm
  - Receive WMAC listserv updates:  
<https://www.nj.gov/drbc/contact/interest/index.html>



Beltzville Lake, PA. Source: USACE

# Additional Studies - Water Availability

- F.E. Walter Re-evaluation study by USACE
- 2060 Projection Study
  - Analyze groundwater and surface water withdrawals from 1990-2017 to project through 2060
  - Across all sectors (incl. public water supply, industrial, and agriculture plus five others)
- Water Availability Studies
  - Consider Drought of Record
  - Consider effects of climate change (future hydrology)
  - Consider reservoir operations



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**Delaware River Basin Commission**

DELAWARE • NEW JERSEY  
PENNSYLVANIA • NEW YORK  
UNITED STATES OF AMERICA

***Managing, Protecting & Improving the Basin's  
Water Resources Since 1961***