Surface water availability analysis for the Delaware River Basin: 2024 Update

Sarah Beganskas, PhD
Sara Sayed
Michael Thompson, PE
Chad Pindar, PE

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Water Management Advisory Committee

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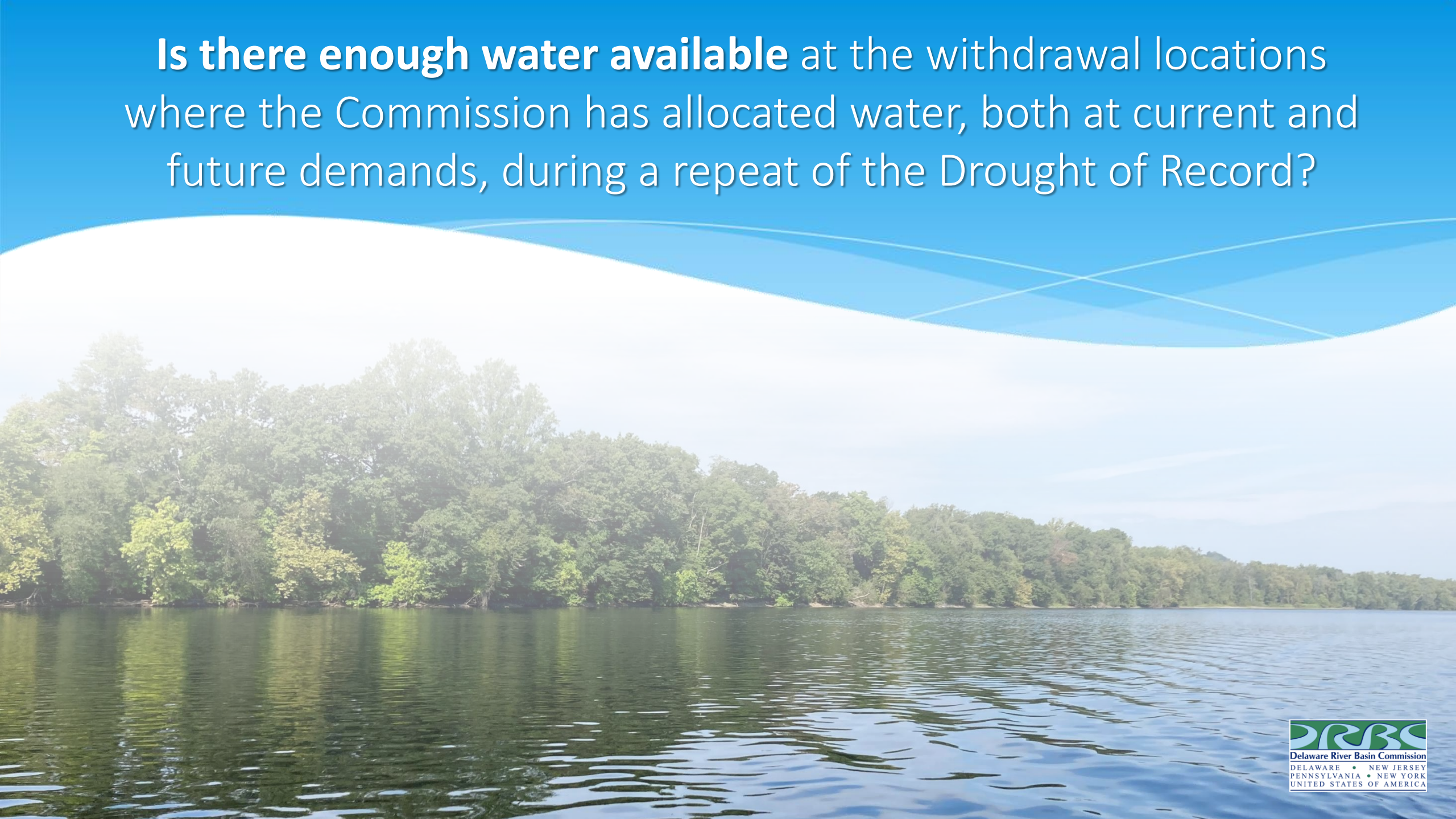
Is there enough water available at the withdrawal locations where the Commission has allocated water, both at current and future demands, during a repeat of the Drought of Record?



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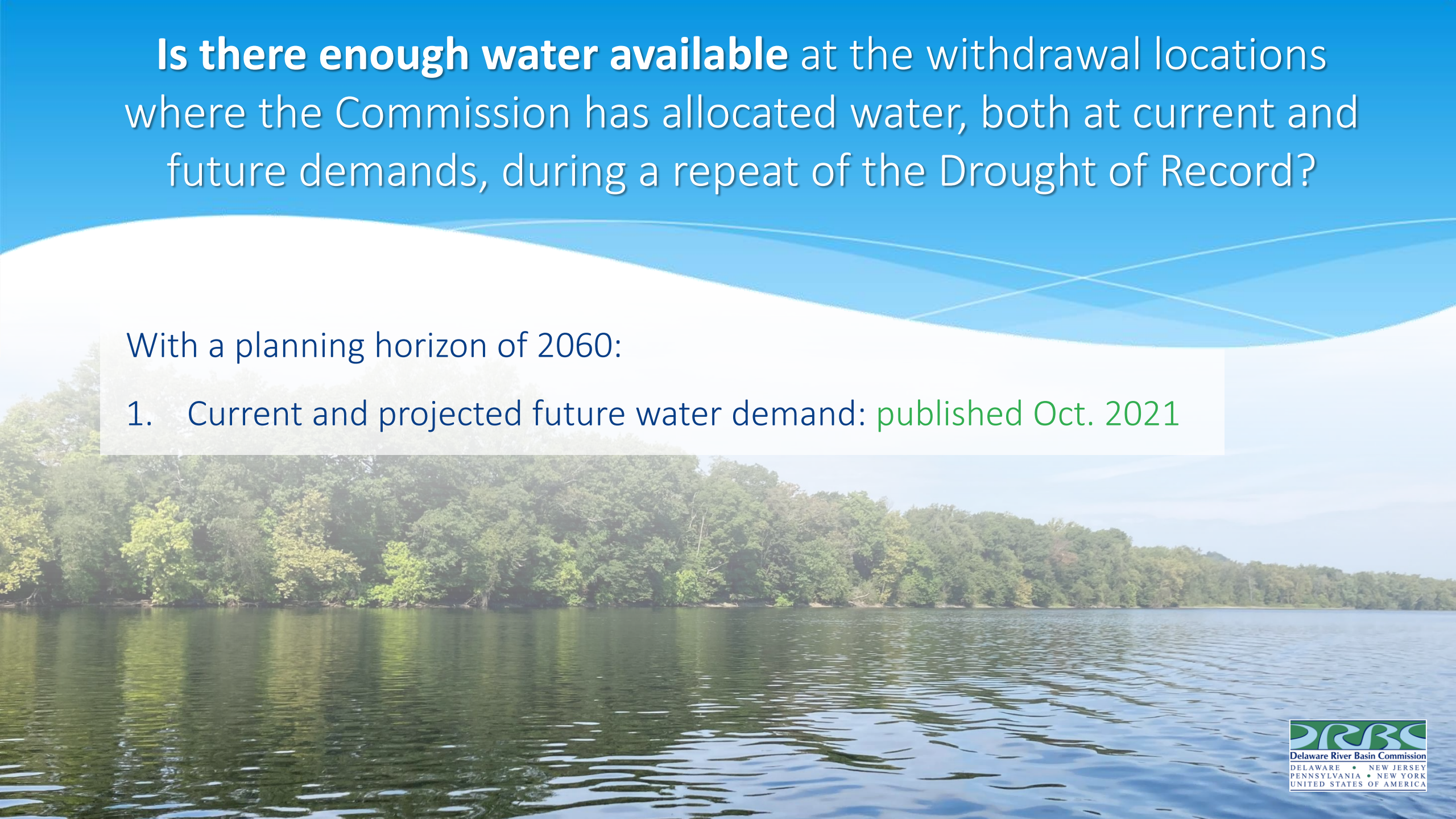
With a planning horizon of 2060:

1. Current and projected future water demand: published Oct. 2021



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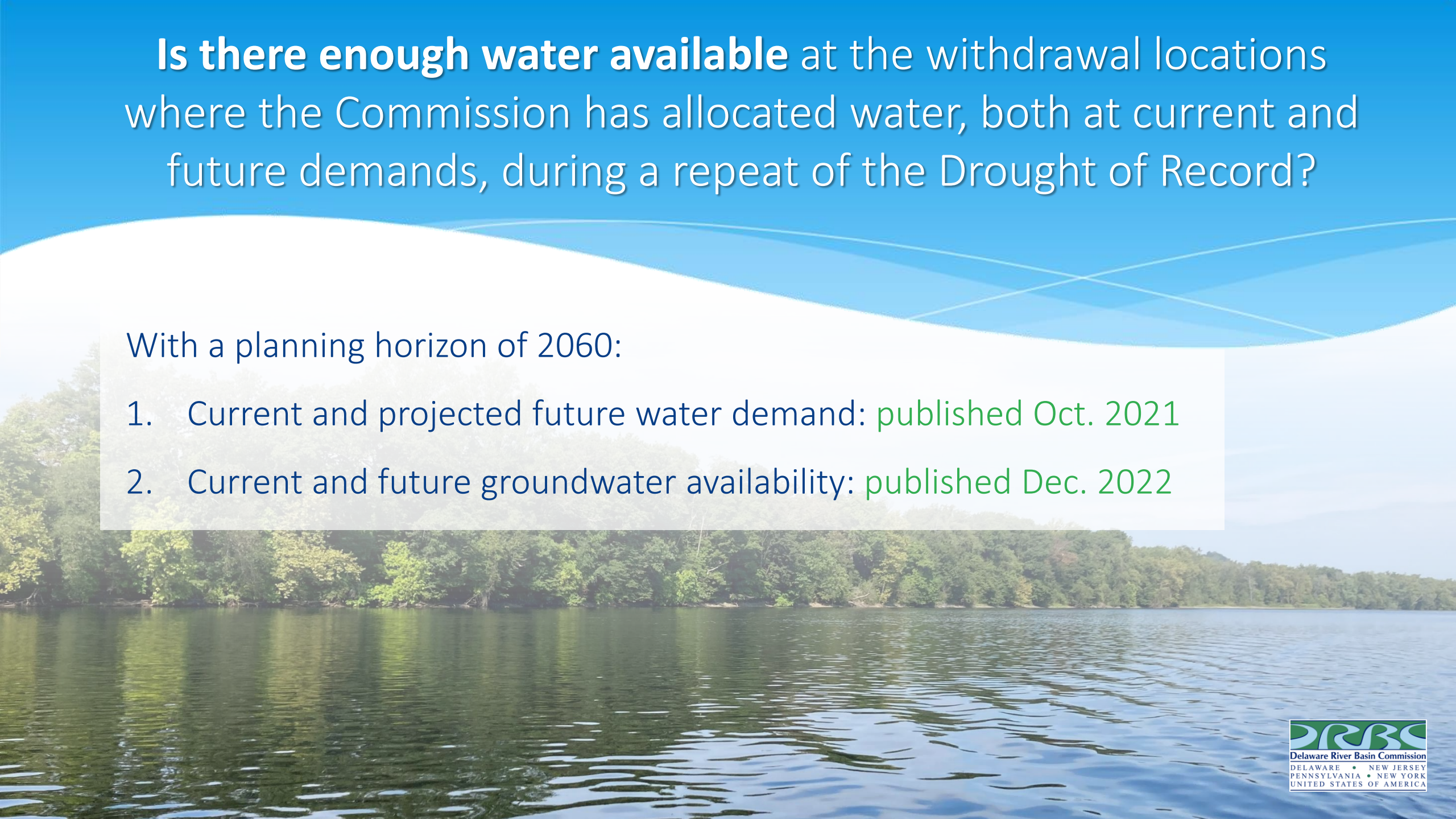

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3. **Current and future surface water availability: in progress**

We are grateful to NFWF for funding part of this work (Grant # 72417).

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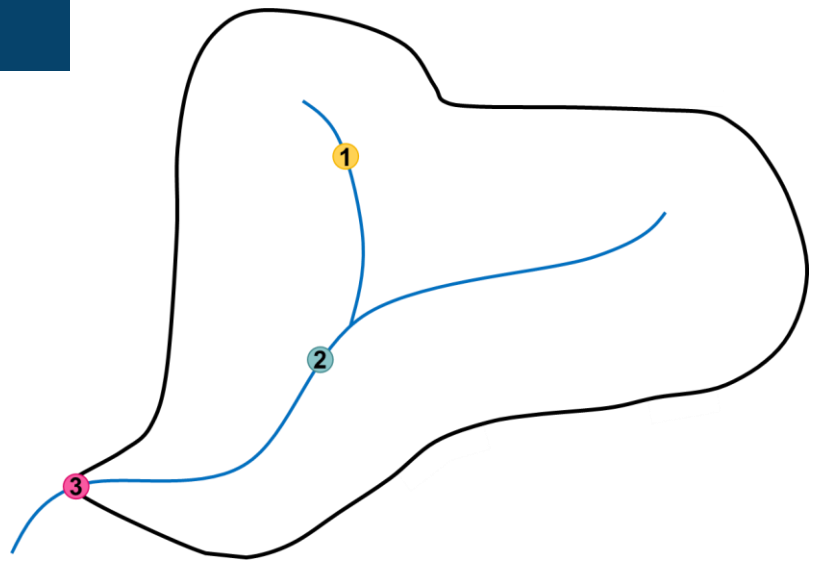
SWEET evaluates surface water availability **at individual withdrawal points**

- **S**urface **W**ater **E**valuation & **E**stimation **T**ool
- Existing DRBC tool was updated, improved, and refined in 2023
- Focus on availability during dry times



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Surface water availability is evaluated at individual withdrawal points

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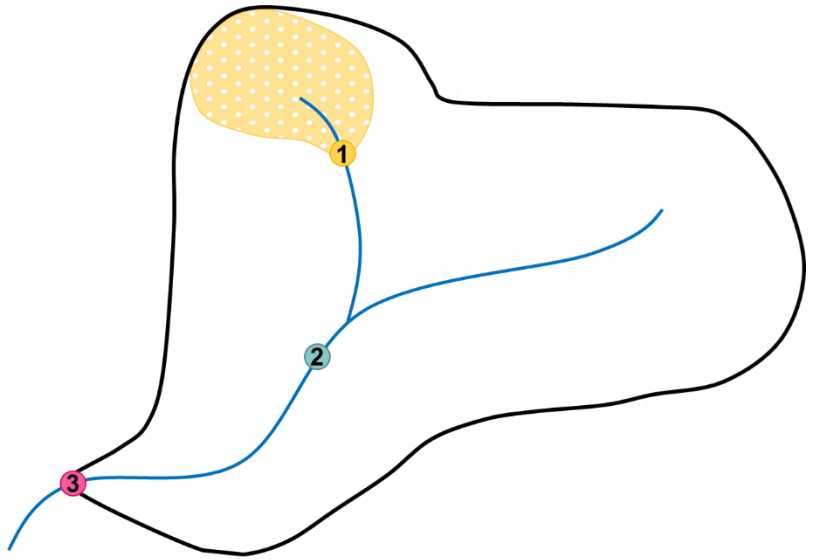

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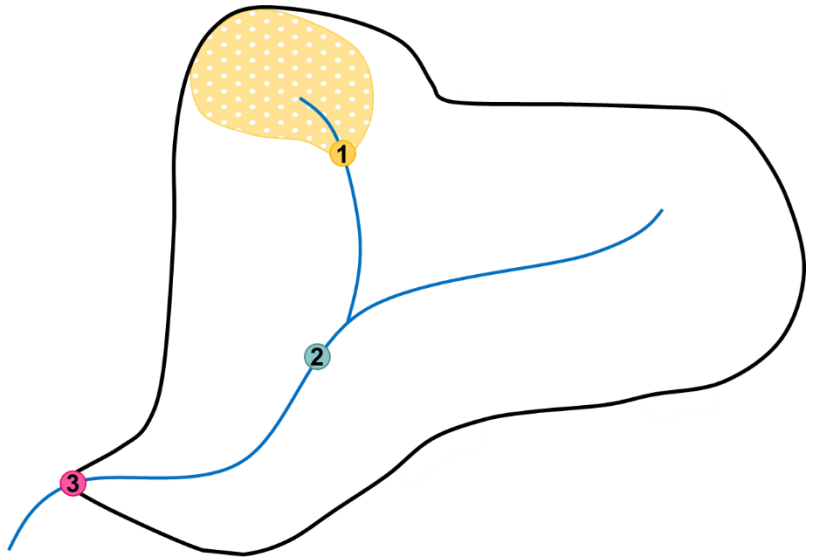

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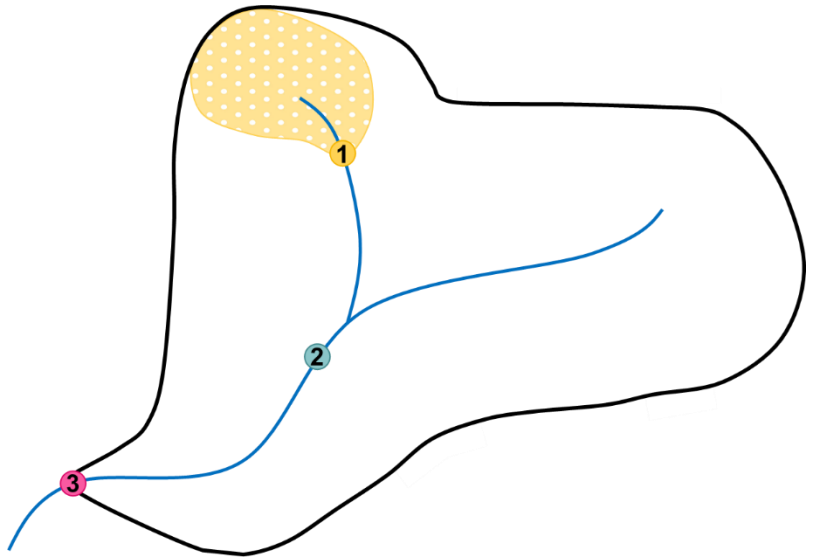

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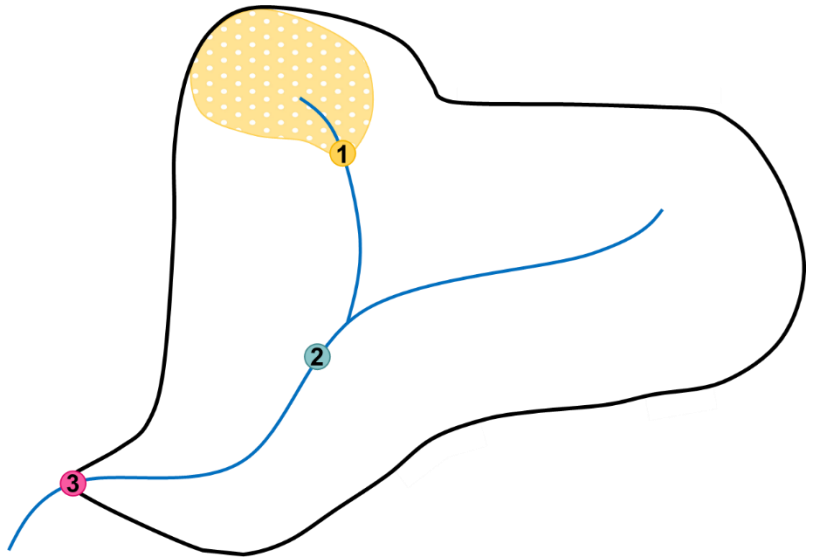

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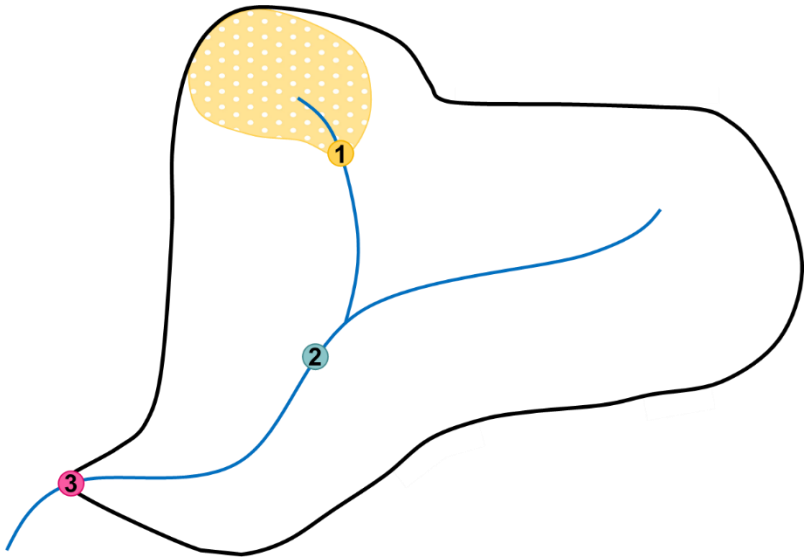

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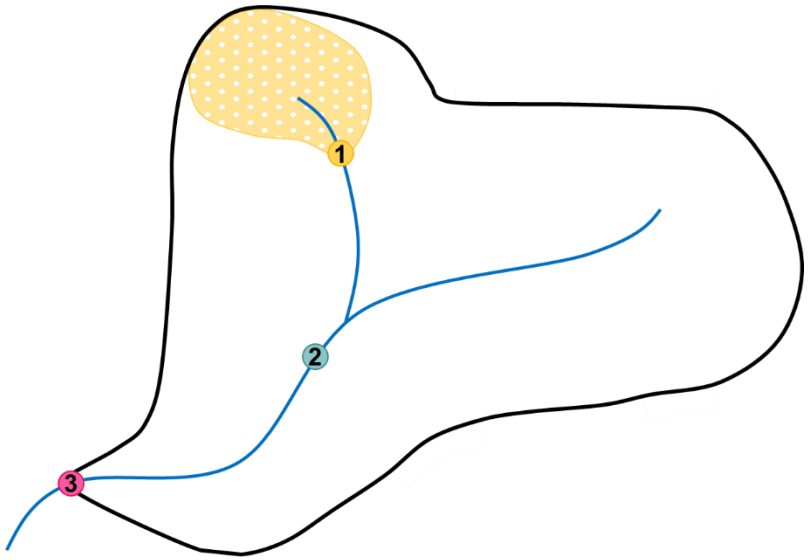

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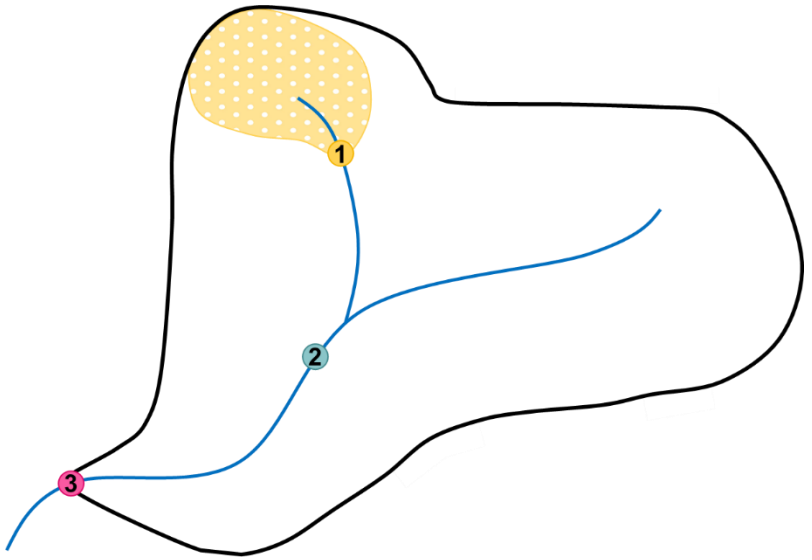

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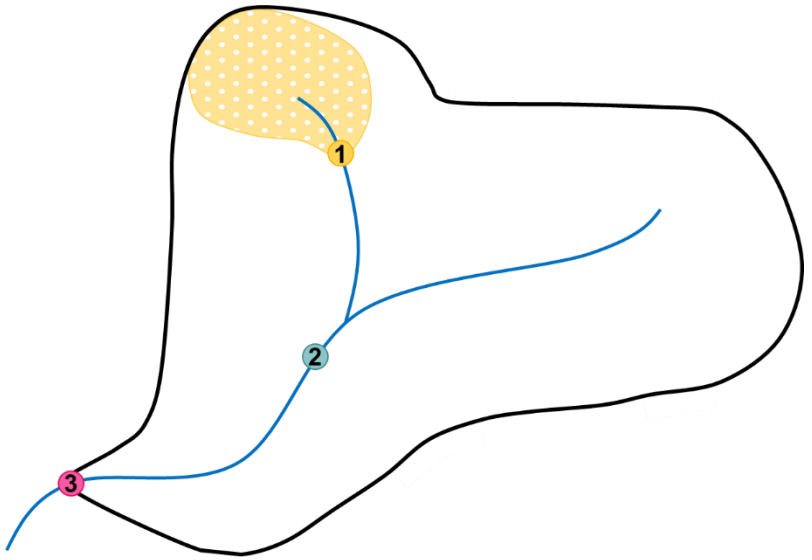

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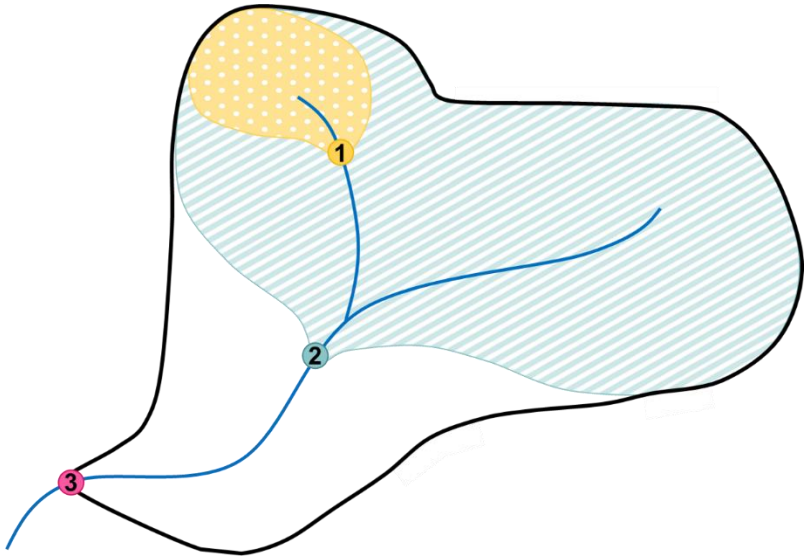

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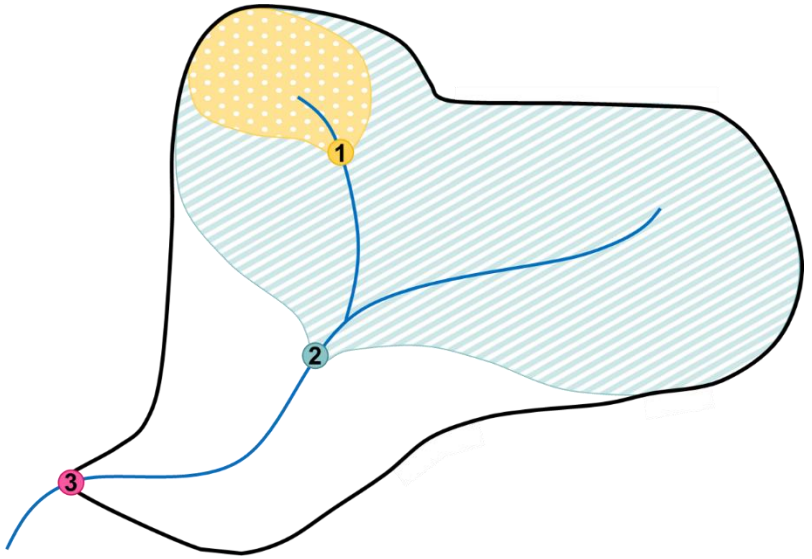

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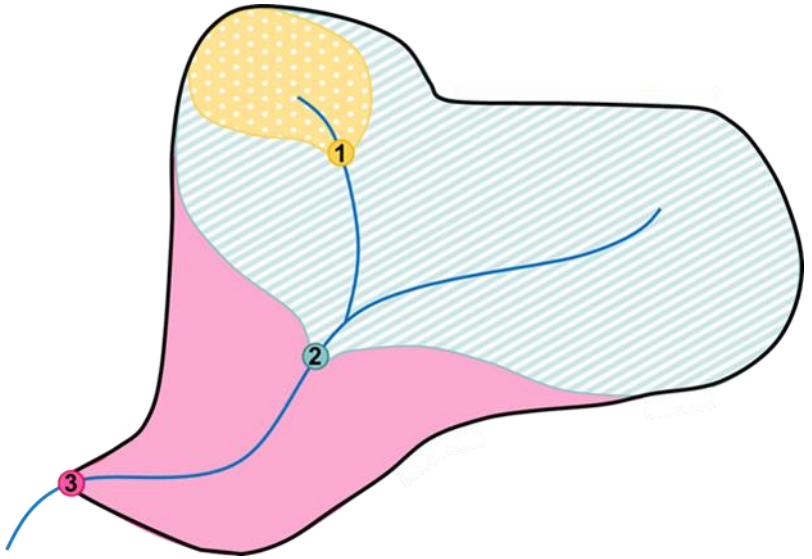

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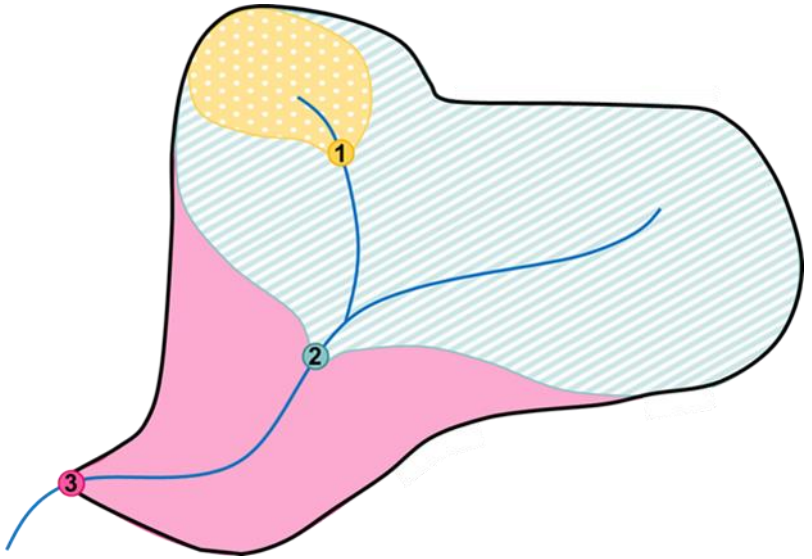
Due to its limitations, **SWEET is intended as a screening tool**



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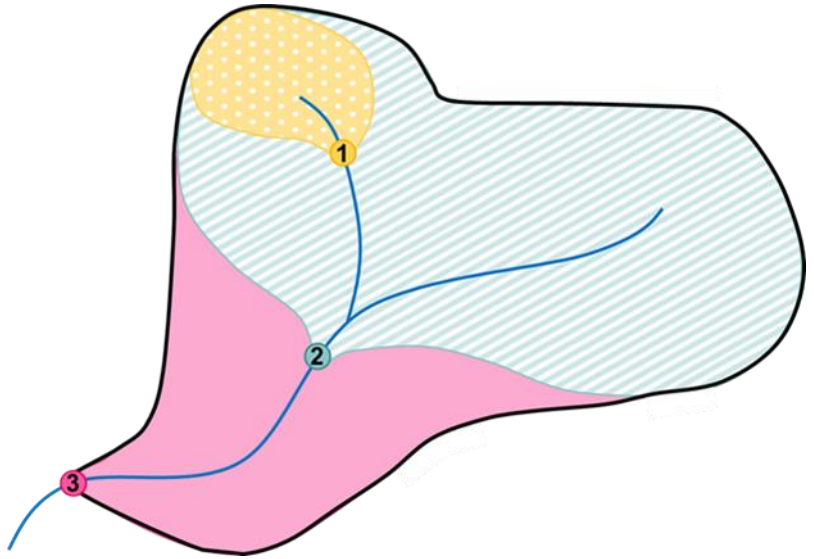

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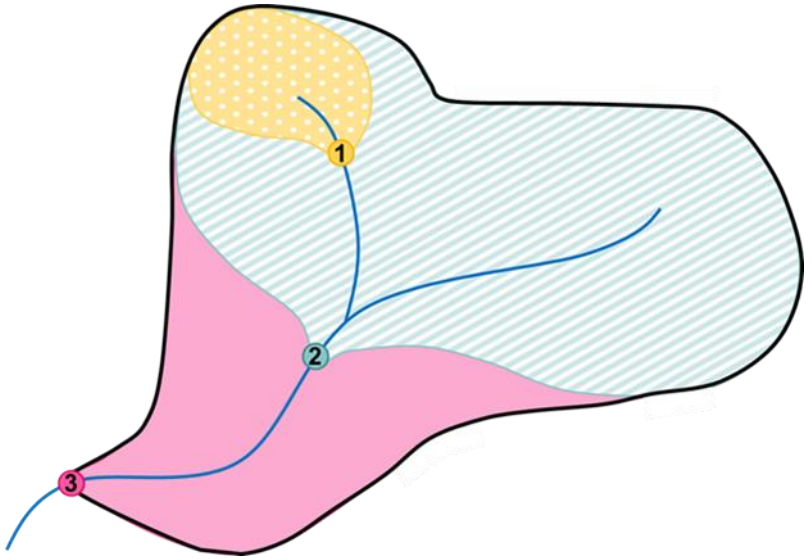

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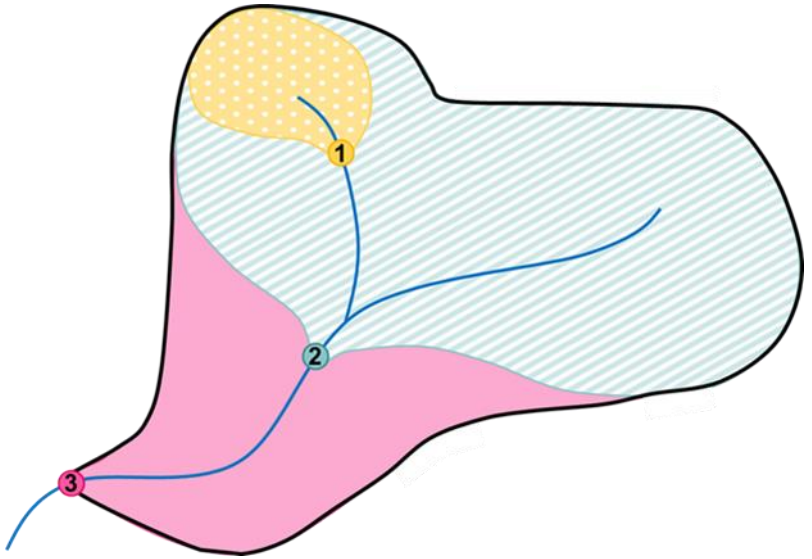
- Limited by accuracy of input data (DRB-SET, NPDES, withdrawals, etc.)



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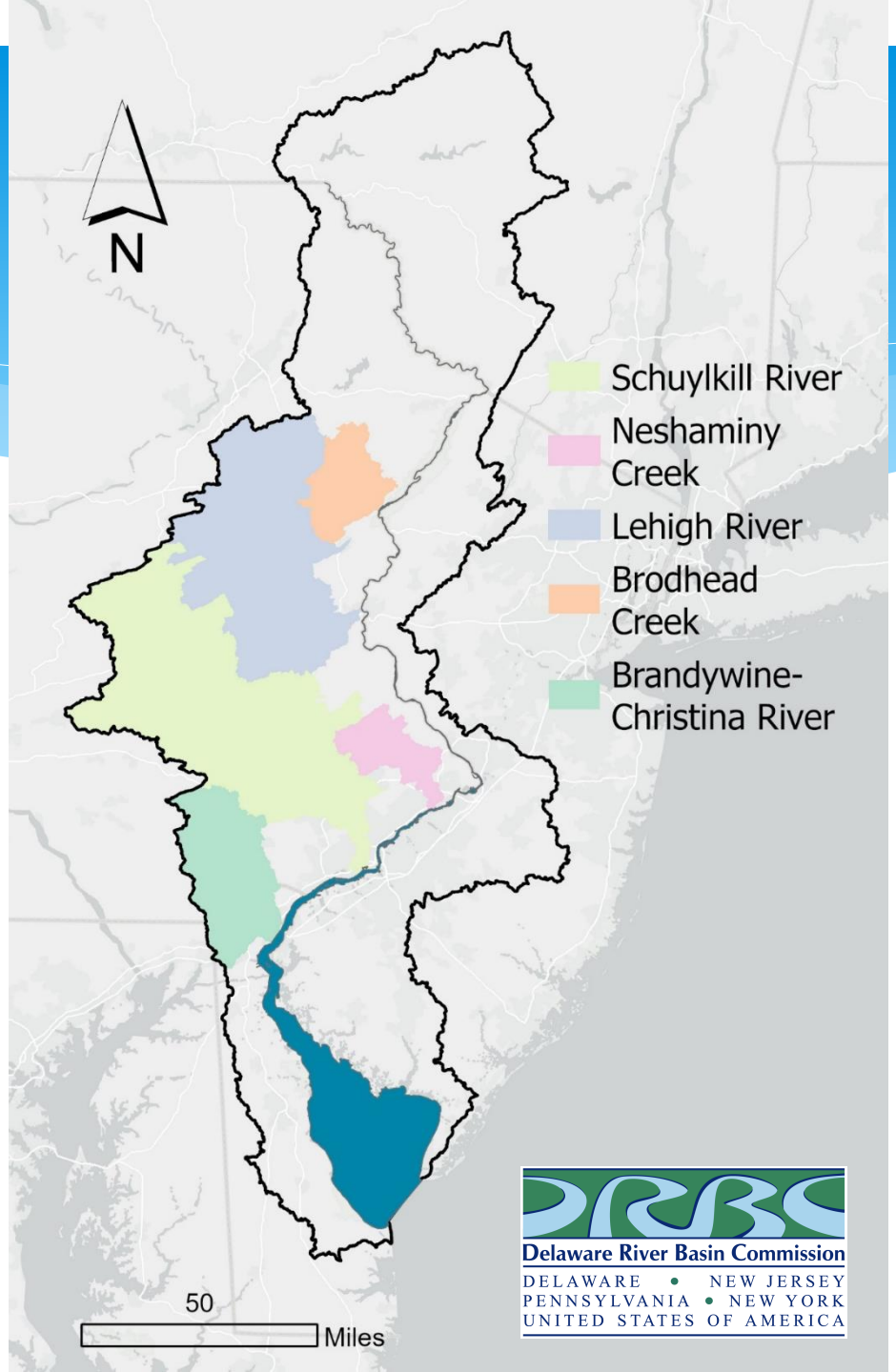
Pilot study focuses on five watersheds

- These watersheds represent the majority of surface water withdrawals on non-tidal tributaries



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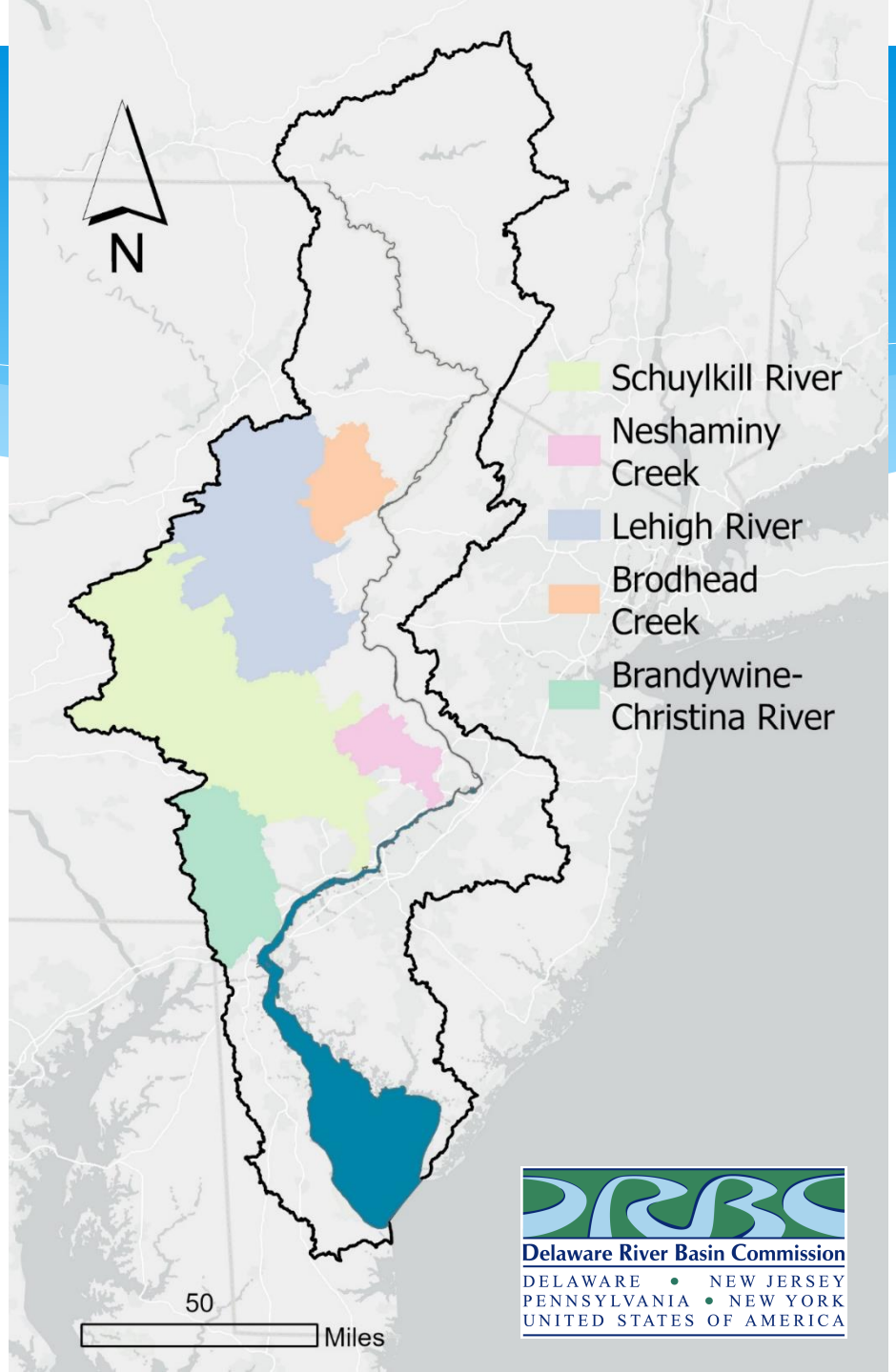

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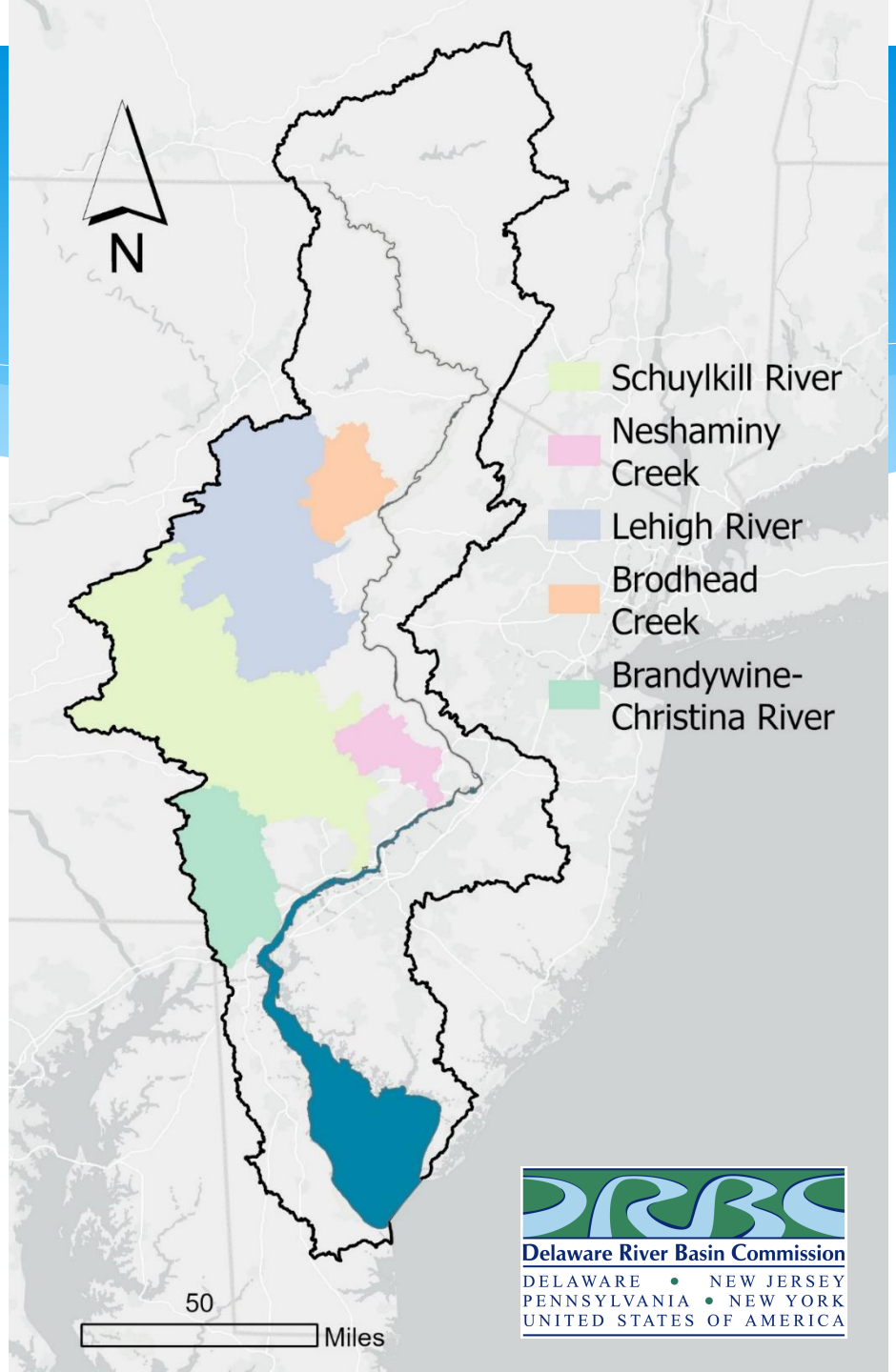
  - Focus on the drought of record (1961–1967) and 1998–2002 drought
- **Set the groundwork for a basin-wide analysis** (non-tidal, non–main stem)



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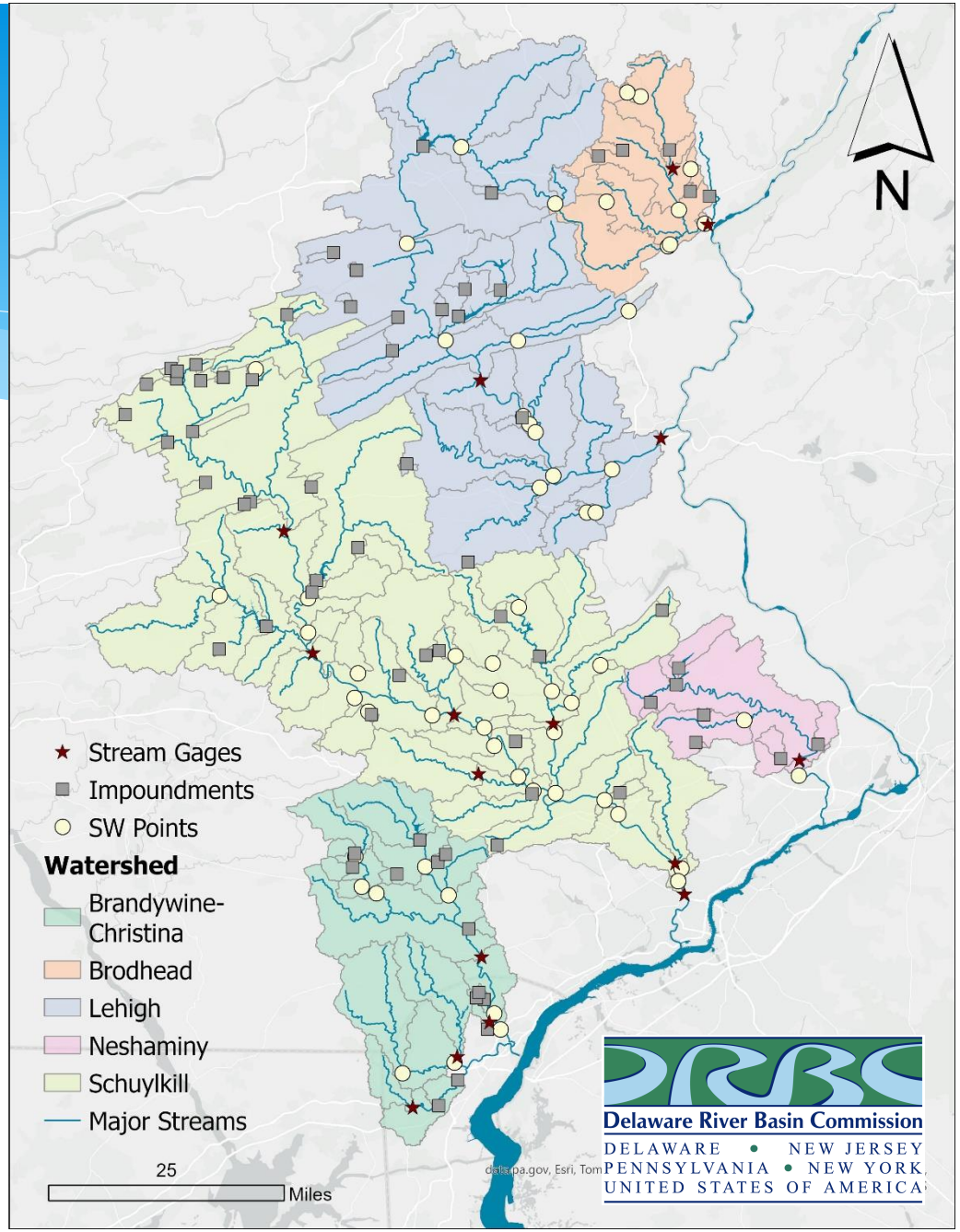
- **SW Points**: Where availability is evaluated



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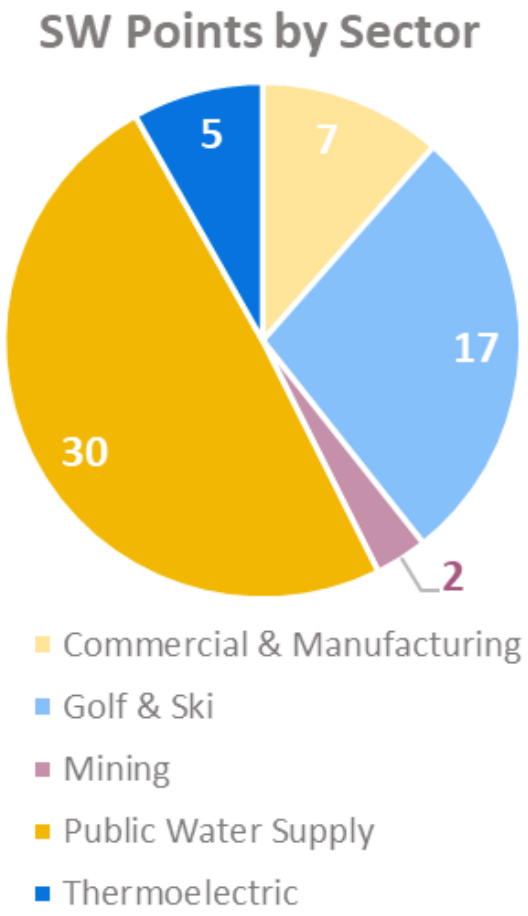

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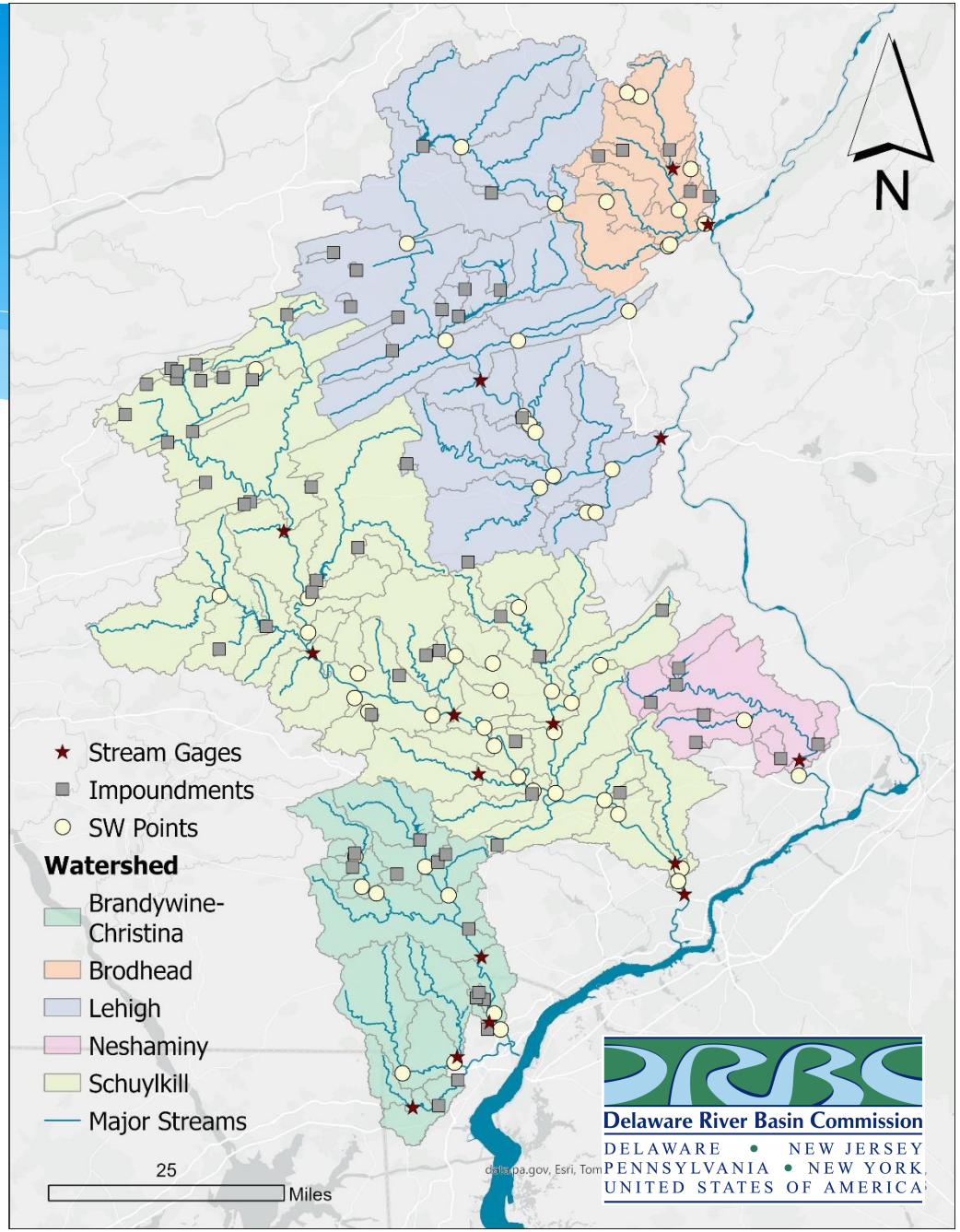

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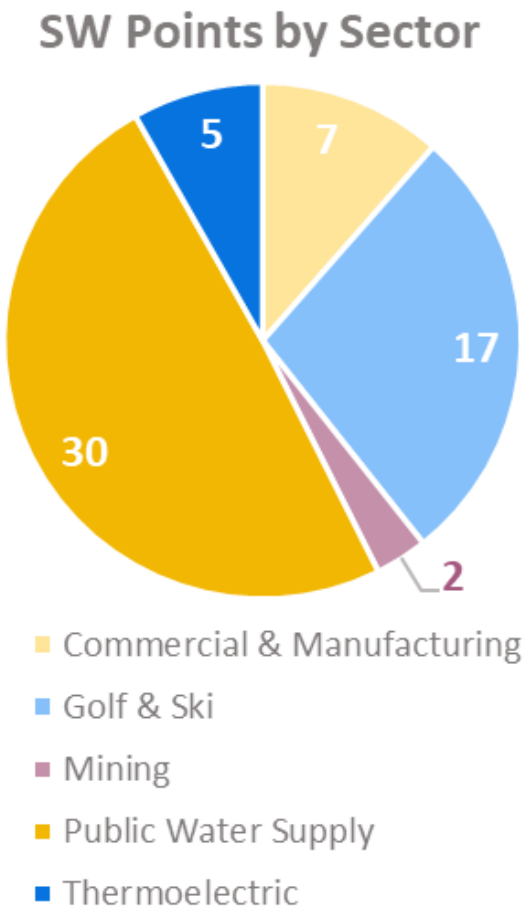

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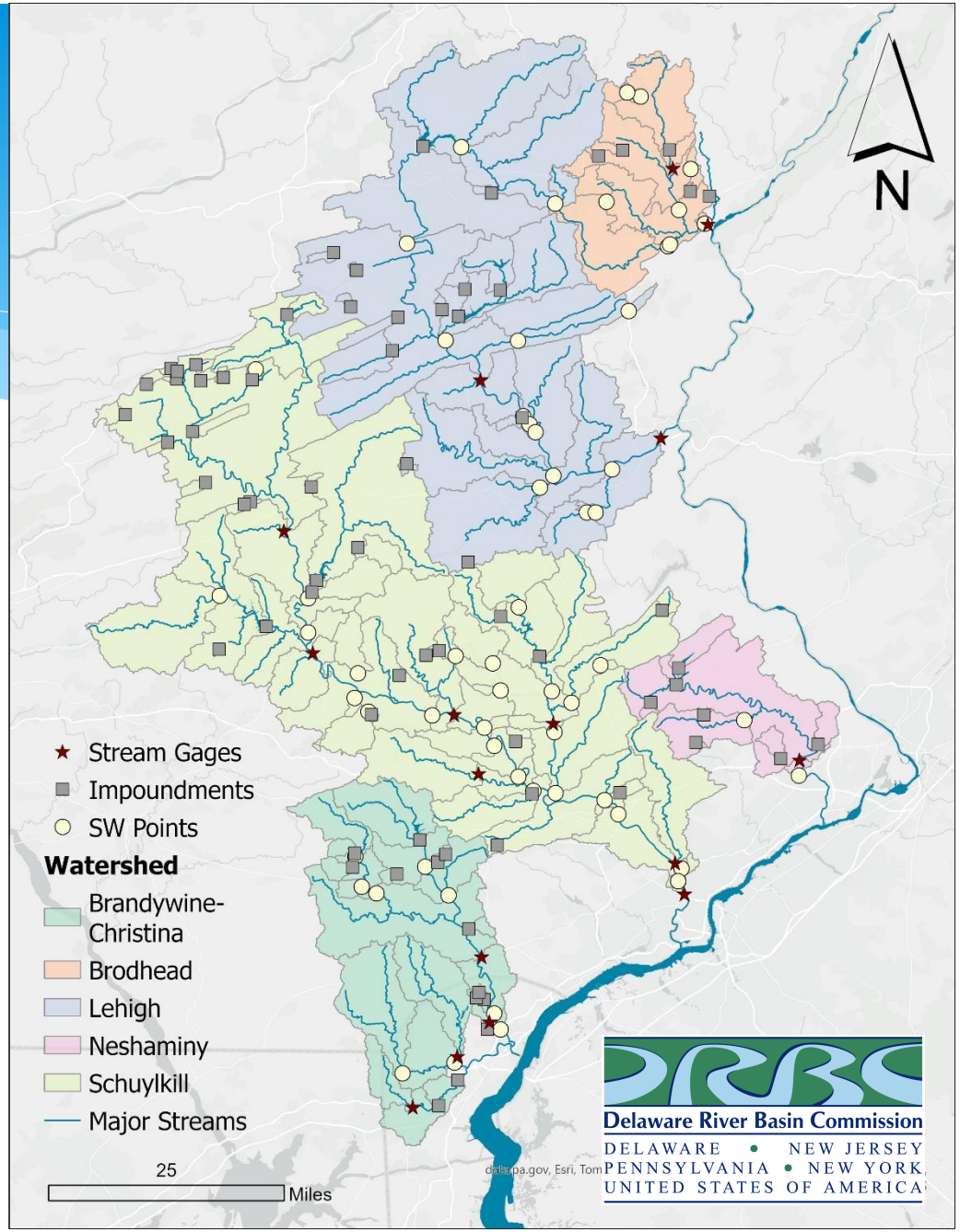

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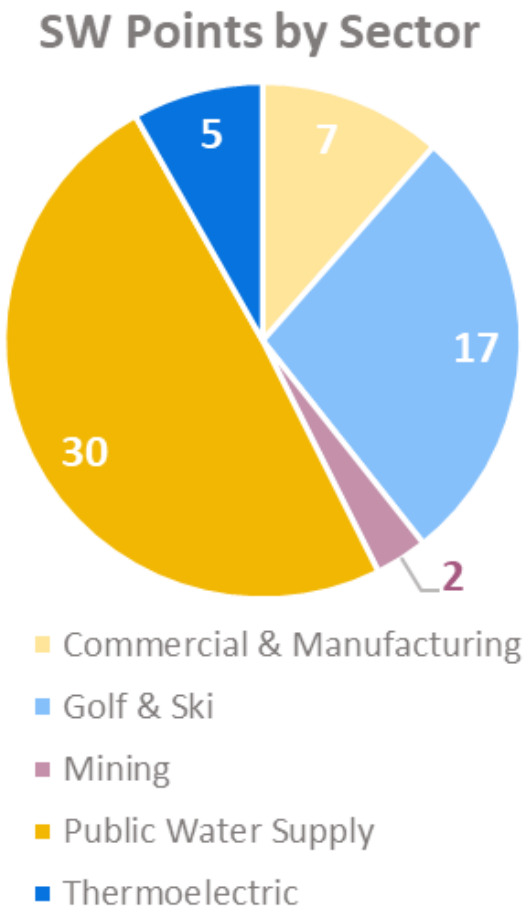

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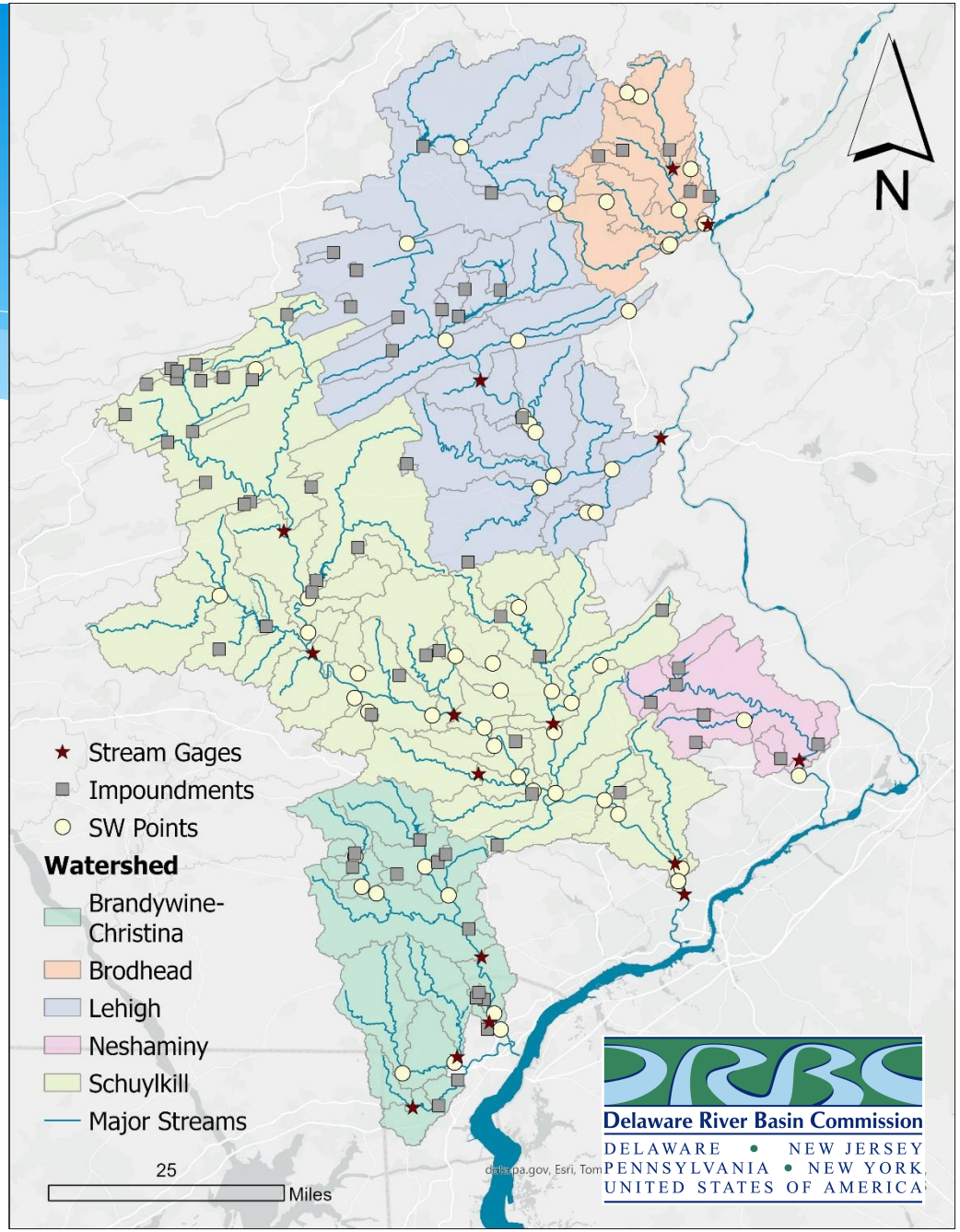
- **Stream gages**: USGS gages used for "validation"



Stay tuned for results later in the next ~year!

- We will continue to update WMAC at future project milestones