



# New Jersey Water Supply Plan and Environmental Justice Communities

Water Supply Plan Environmental Justice

Stakeholder Advisory Group: October 12, 2021



# Today's Discussion

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- Water Supply Plan Overview
  - What the plan does and does not do
  - Water source and use trends
- Goals for Environmental Justice and Water Supply Planning Process
  - Not solving the problems today
  - Focus is to identify the issues of concern for evaluation as part of the plan
  - Discussion started at the September EJAC meeting discussion
- What are the water availability priority issues for the EJ communities?
- How to frame the issues for evaluation and eventual inclusion in the 2023-2028 WSP
- Next steps- there will be additional opportunity for this group to weigh in

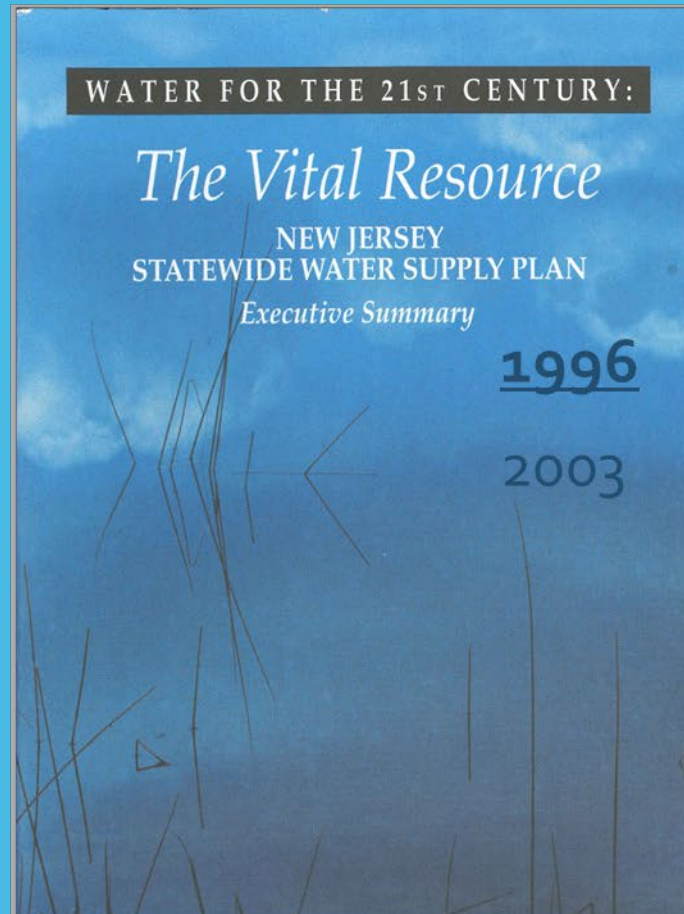
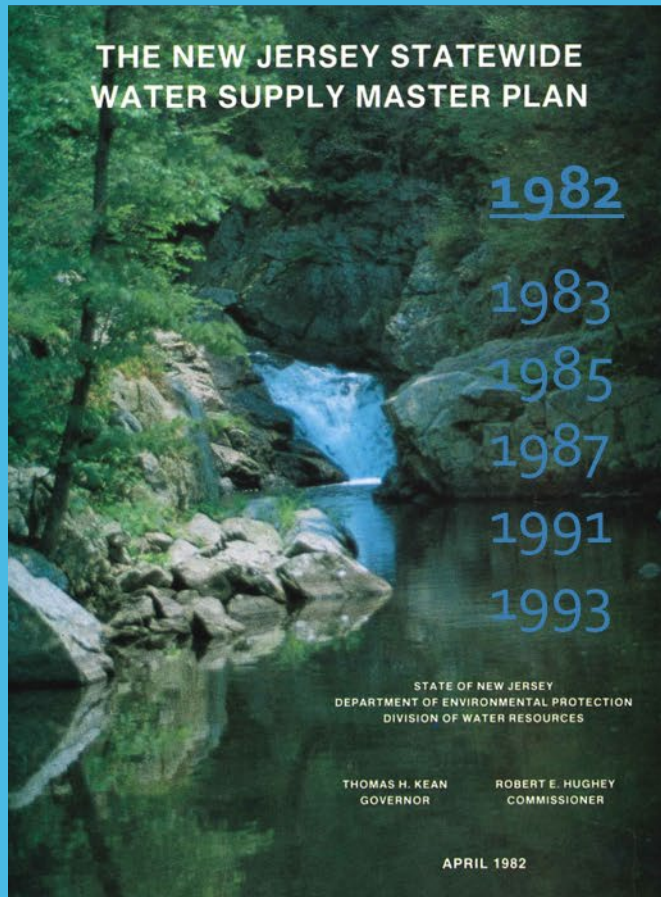
# Planning Principles

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- Water as a public trust resource
- Department administers program to oversee withdrawal and use
- Equitable access
- Protection is more cost-effective than remedial treatment
- Policies and programs should be feasible and cost-effective, not cosmetic or “feel good” without impact
- Increased costs demand increased proof of effectiveness
- Implementation resources always a constraint – priorities

# 2023-2028 Water Supply Planning Process

The 1981 New Jersey Water Supply Management Act (N.J.S.A. 58:1A-1 et. seq.) directs the NJDEP to develop and periodically revise the New Jersey Statewide Water Supply Plan (NJSWSP or Plan) in order to improve the management and protection of the State's water supplies.



# NJ Water Supply Overview

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- NJ relies on surface waters, reservoirs, unconfined aquifers and confined aquifers
- Main issues
  - Densely populated state with intensive water demands
  - Statewide public water demands are flat despite a growing state population – but not for all systems.
  - Self-supplied industrial, commercial, mining, power generation and agricultural uses overall smaller but variable by region.
  - Some water resources are stressed. Water demands have been reduced in some areas, restricted in others, and some areas need further planning and management.
- WSP is focused on water availability:
  - how much do we have, how much do we use, how much will we need in the future, where are there shortfalls/limits, and what do we need to do to ensure that we have adequate supplies now and into the future
  - It also includes effects of water quality, source water protection, etc., on water supply

# NJ Water Supply Overview

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- New to this WSP
  - EO23 Environmental Justice Community and water supply planning nexus
  - EO89 and climate change impacts to water availability
  - Focused drinking water evaluation of new MCLs and emerging contaminants on water system sources and availability



# What the plan does and does not do

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- The plan will:
  - Evaluate available water supplies for current and future use
  - Evaluate the effect of climate change on water supplies
  - Define trends in the withdrawal and use of water throughout the state
  - Project future water demands through 2050
  - Compare current and future use to available water
  - Identify areas where water may be limited and outline specific actions that the department should take or policies that the department should implement to address these shortfalls
  - Include an assessment of water supply issues for EJ communities
  - Be a living plan that evolves to address emerging issues and address policies
  - Direct research efforts over the five-year planning horizon

# What the plan does and does not do

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- The plan will not:
  - Solve every water supply problem
  - Be a regulatory tool- rather it is used to inform individual water allocation permit decision making and focus department efforts
  - Override other regulatory programs, e.g. safe drinking water, land use permitting or wastewater management, but it can make recommendations
- But the WSP is an ideal tool and primary avenue to address current water availability problems and prevent future ones from occurring!



# Chapter Headings (Draft)

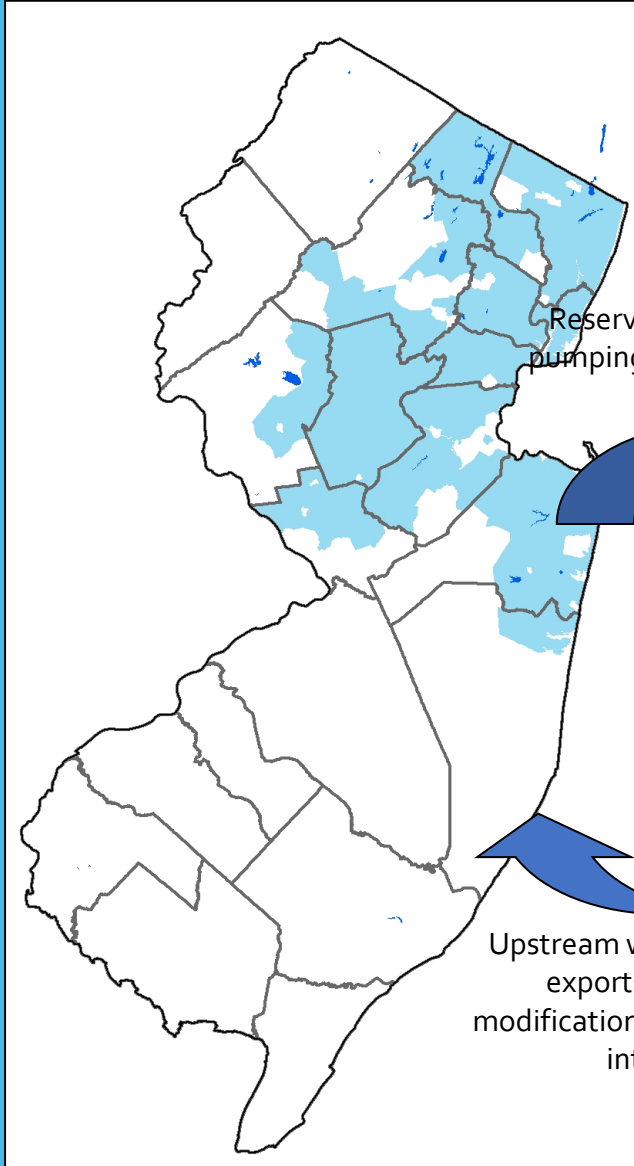
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1. Introduction
2. Water Use Characterization and Trends
3. Climate Change Driven Water Availability Impacts
4. Statewide Water Availability
5. Statewide Demands and Balances
6. Safe Drinking Water Issues
7. Statewide Water Resource Protection and Planning Efforts
8. Regional Planning for Deficit Mitigation and Avoidance
9. Planning for an Uncertain Future
10. Water Supply Action Plan
11. Summary, Conclusions, and Recommendations

Note that EJ topics will be covered in multiple chapters, including 4, 5, 7, and 10.

# Where Our Water Comes From

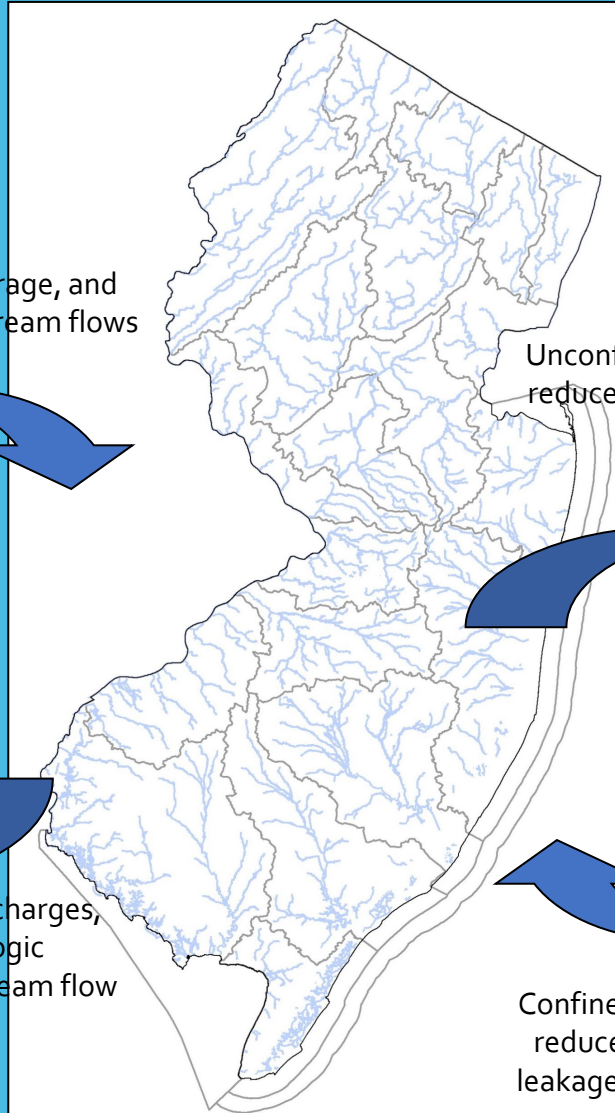
## Reservoir Systems – Safe Yield



Reservoir releases, storage, and pumping affect down stream flows

Upstream withdrawals, discharges, exports, and/or hydrologic modifications can reduce stream flow into the reservoir

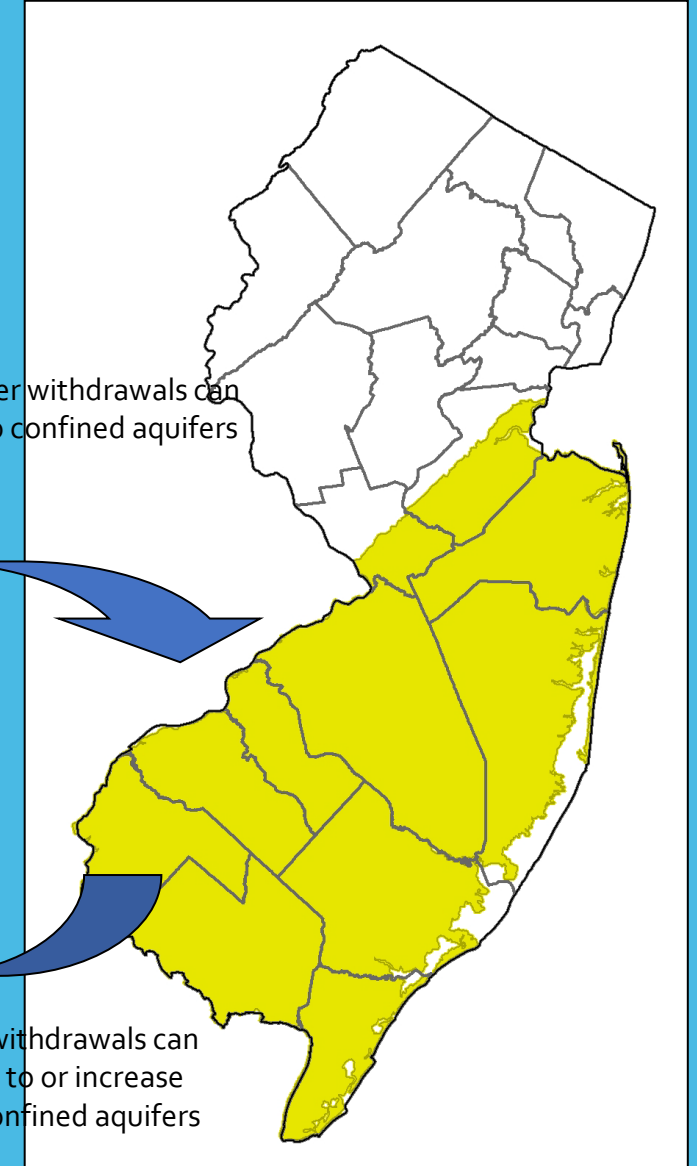
## Unconfined Aquifers and Related Surface Water



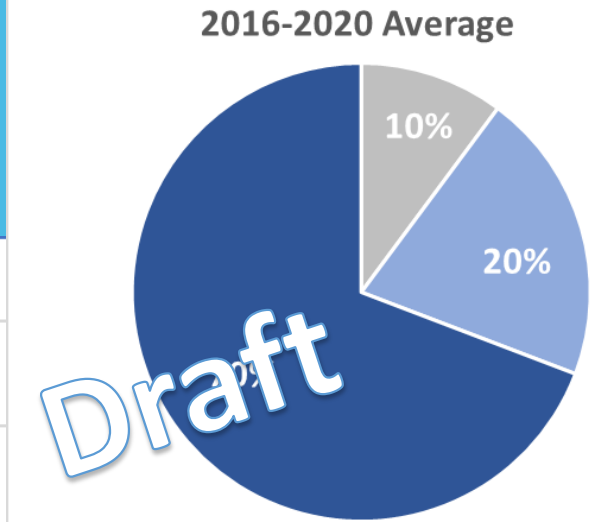
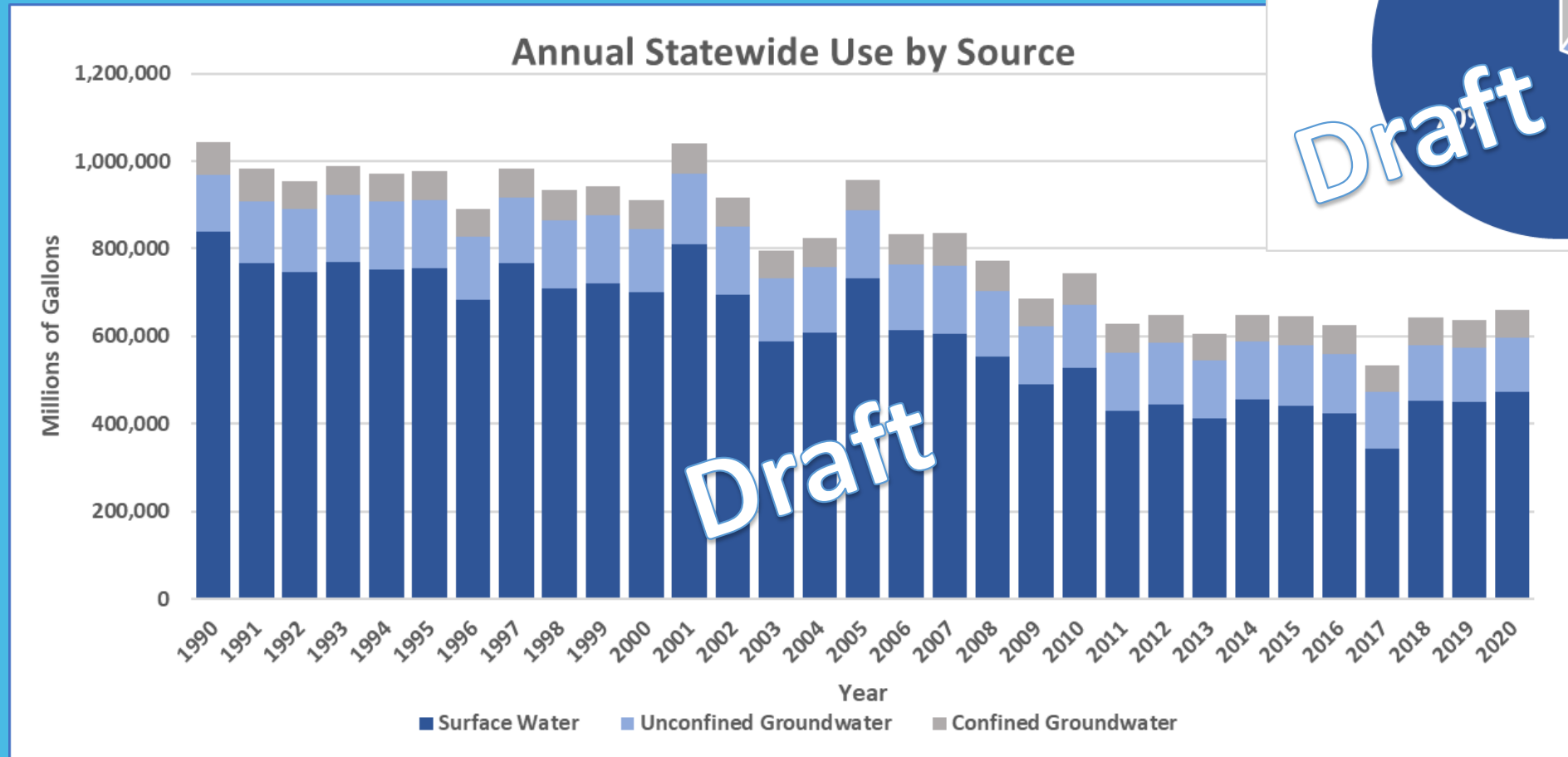
Unconfined aquifer withdrawals can reduce leakage to confined aquifers

Confined aquifer withdrawals can reduce discharge to or increase leakage from unconfined aquifers

## Confined Aquifers

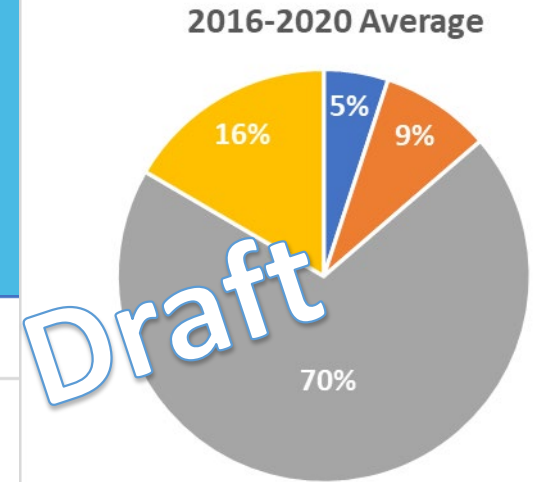
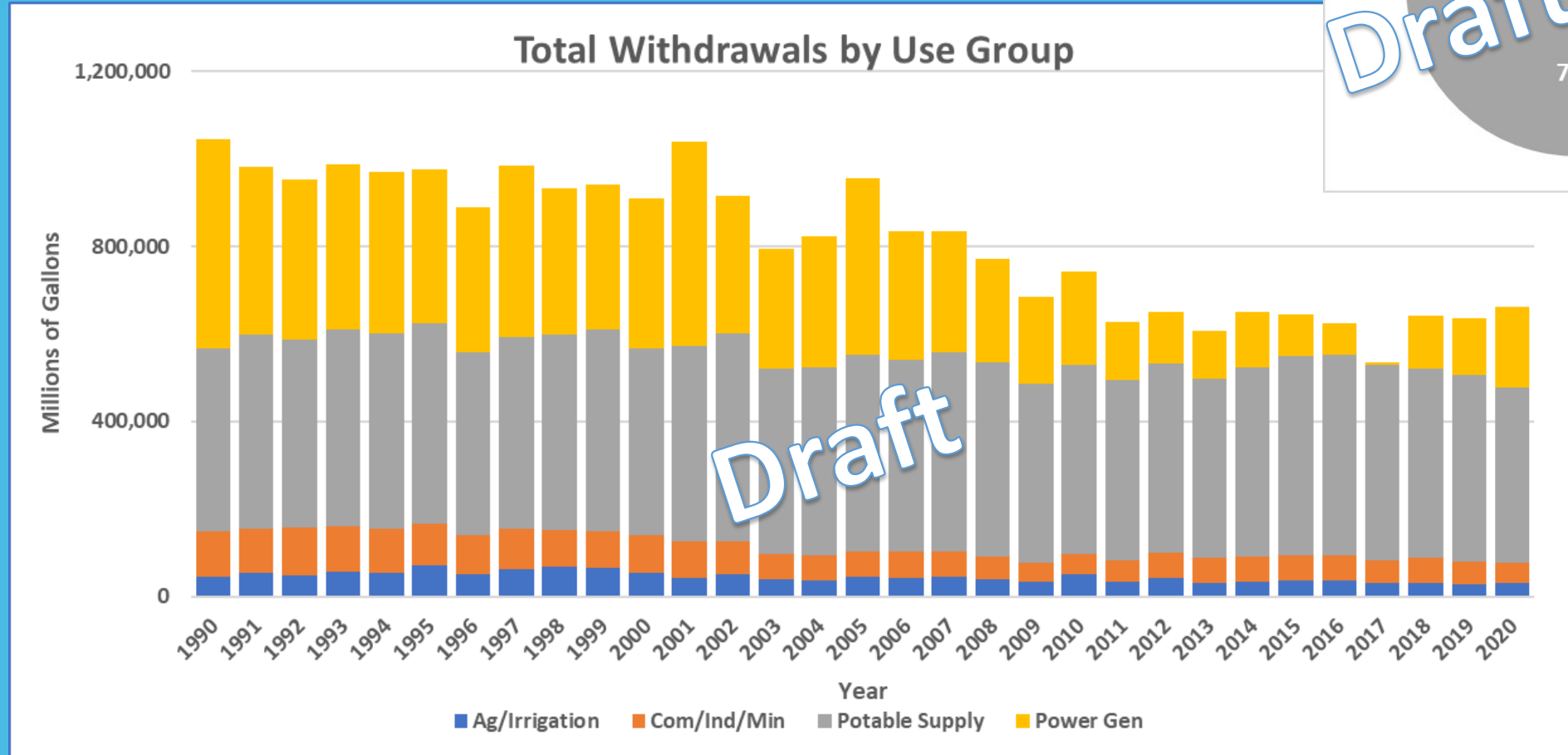


# Source of Water



1,000,000 million gallons per year = 2.7 billion gallons per day  
Newark uses roughly 80 million gallons per day

# Use of Water



# Discussion:

## Potential Environmental Justice Issues

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- What we know:
  - Everyone needs water; urban systems use less per person
  - Urban systems tend to be much older – they were built earliest
  - Rural towns/cities also tend to be older
  - Older systems break more frequently
  - Many disadvantaged communities already face affordability issues
  - Costs of rehabilitating systems will be high
  - Water quality issues exist and will also increase costs
- What we want to know:
  - What other critical water supply-related issues?
  - What priority among the identified issues?

# What the WSP team has heard to date...

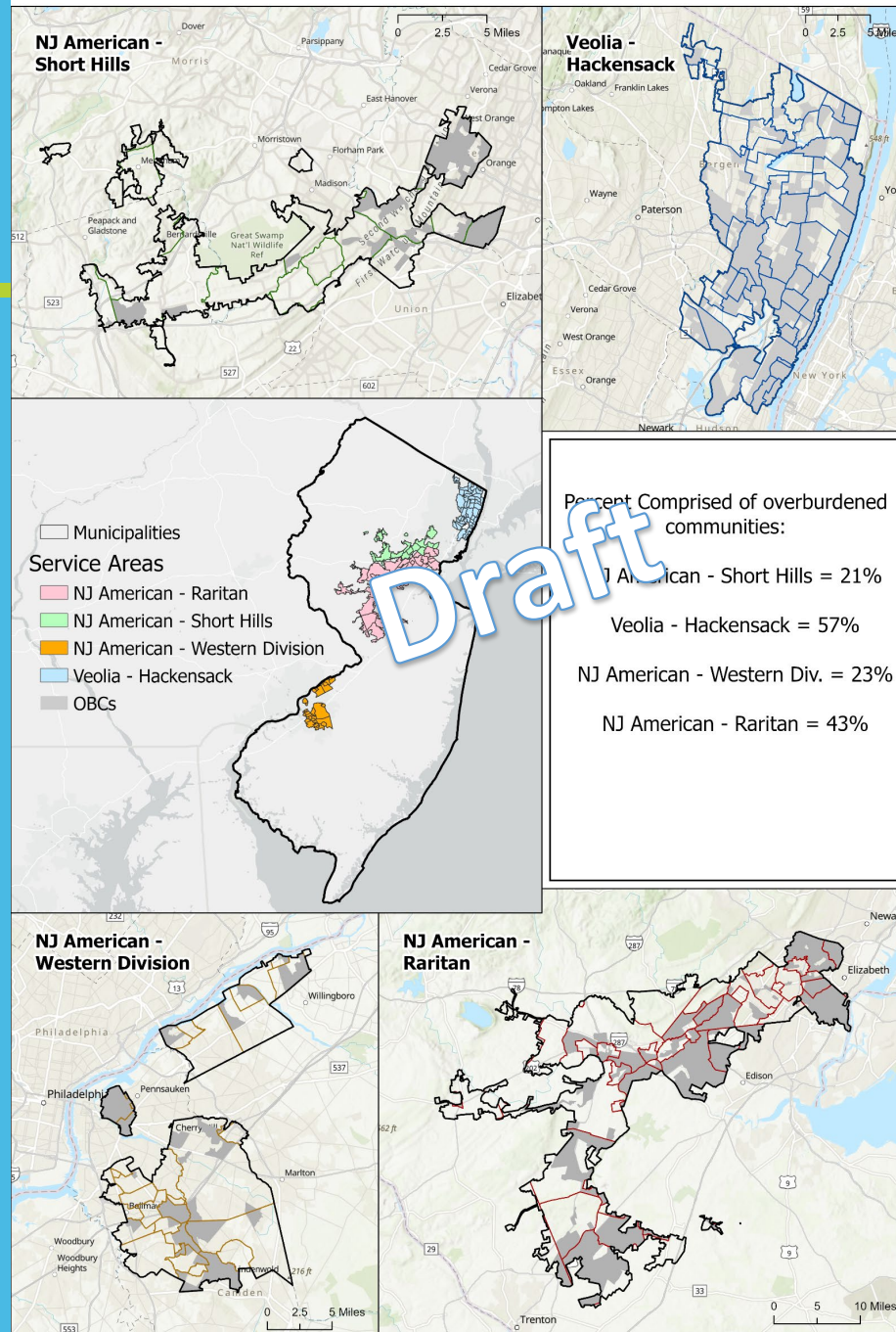
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- Basic education materials needed
- Reducing water use: education and political leadership
- Green infrastructure and stormwater management for water supply protection
- Affordability of drinking water utility services
- Pollution near water sources; e.g., Ringwood Superfund Site
- Removal of lead service lines



# Environmental Justice Communities and Water Purveyors

NJ service areas with a large number of overburdened communities



PWSID	County	Name	% EJ Com
NJ0102001	Atlantic	Atlantic City MUA	100%
NJ0408001	Camden	Camden City Water Department	100%
NJ0705001	Essex	East Orange Water Commission	100%
NJ0717001	Essex	Orange Water Department	100%
NJ1216001	Middlesex	Perth Amboy Dept of Municipal Utilities	100%
NJ0338001	Burlington	Willingboro MUA	100%
NJ0714001	Essex	Newark Water Department	99%
NJ0701001	Essex	Belleville Township Water Department	98%
NJ2004001	Union	Liberty Water Company c/o NJ American	98%
NJ1215001	Middlesex	North Brunswick Water Department	97%
NJ1221004	Middlesex	South Brunswick Twp Sewer & Water Dept	96%
NJ1214001	Middlesex	New Brunswick Water Department	94%
NJ1808001	Somerset	Franklin Township Department Public Works	93%
NJ0906001	Hudson	Jersey City MUA	92%
NJ0901001	Hudson	Bayonne City Water Department	89%
NJ0614003	Cumberland	Vineland City Water and Sewer Utility	88%
NJ1409001	Morris	Dover Water Commission	86%
NJ2013001	Union	Suez Rahway	82%
NJ1205001	Middlesex	Edison Water Company	82%
NJ1225001	Middlesex	Middlesex Water Company	80%
NJ1605002	Passaic	Passaic Valley Water Commission	79%
NJ0424001	Camden	Merchantville Pennsauken Water Commission	76%
NJ0702001	Essex	Bloomfield Water Department	74%
NJ1219001	Middlesex	Sayreville Borough Water Department	70%

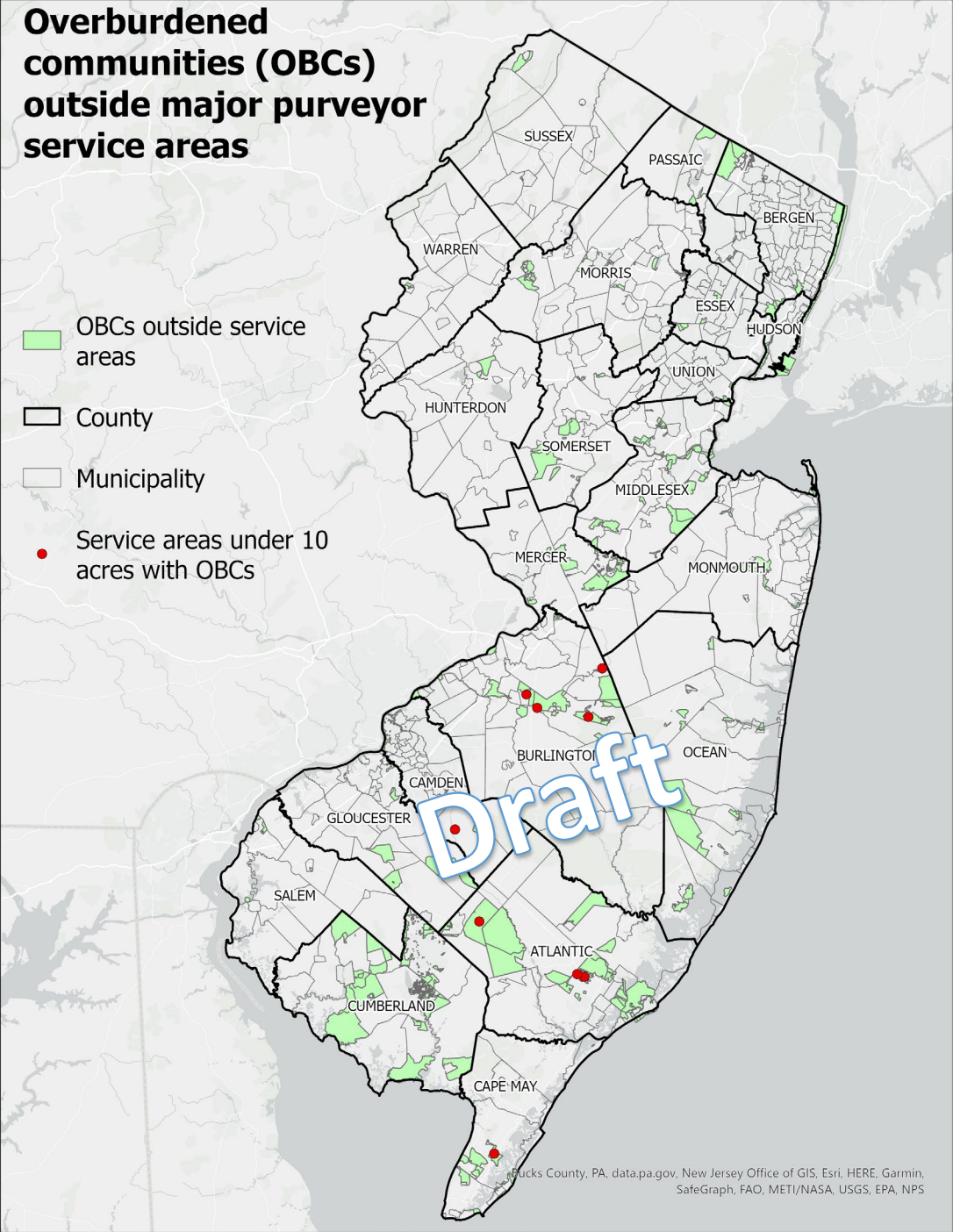


# Issues and Discussion

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- Related to EJ Communities and public water systems

# Overburdened Communities Outside Water Purveyors



County	Municipality
Mercer	Lawrence Township
Ocean	Barnegat Township
Ocean	Stafford Township
Burlington	Pemberton Township
Atlantic	Buena Vista Township
Cumberland	Commercial Township
Somerset	Hillsborough Township
Middlesex	Old Bridge Township
Atlantic	Egg Harbor City
Middlesex	Monroe Township
Cumberland	Deerfield Township
Cape May	Middle Township
Cumberland	Maurice River Township
Cumberland	Millville
Mercer	East Windsor Township
Burlington	New Hanover Township

**Municipalities with significant OBC areas outside of service areas.**

# Issues and Discussion

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- Related to EJ Communities without public water systems

# What's Next

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- Won't likely be able to fully address all of the issues identified
- Will likely conduct an overall assessment of the larger issues
- Will likely outline a plan or set of actions items to address water availability issues in EJ communities over the course of the 5 year plan and beyond
- Additional opportunities for this stakeholder group to engage in the process- along the way and after final draft
- Public meeting process for draft plan: ~ March of 2023
- Water Supply Advisory Council serves as primary focus of input regarding plan, including public engagement/communication

Thank You

# Water Supply Plan Team

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- Department Leads:
  - NJGWS Water Supply Modeling and Planning
  - DWSG Director's Office
  - AC WRM's Office
- Rutgers University Team:
  - Dr. Dan Van Abs, Professor of Professional Practice for Water, Society & Environment
  - Twenty Twenty Public Affairs
  - Mosaic Strategies Group

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