



# Presentation to Salem SERC November 9, 2022

## Issues Pertaining to Water Sustainability for the City of Salem

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**IPSWICH RIVER**  
WATERSHED ASSOCIATION



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is a group of citizens, scientists, businesses and communities concerned about the health of the Ipswich River and its watershed. Our aim is to protect nature and make sure there is enough clean, safe, reliable water for people and wildlife.

IRWA is most concerned about low flows in the Ipswich River, caused by high water use and water exports outside of the basin, and exacerbated by drought.

## Ipswich River Watershed

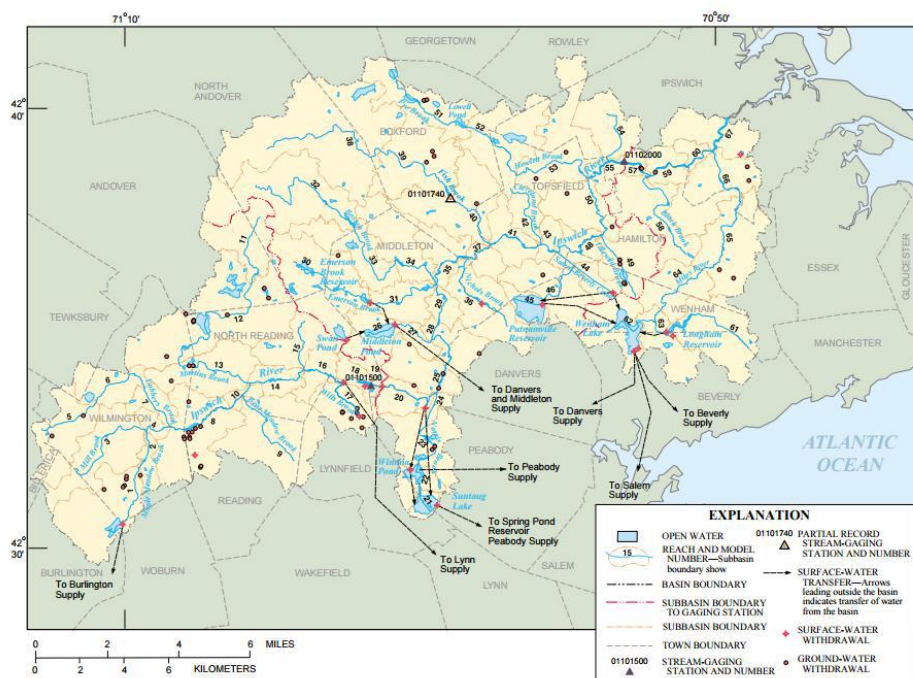
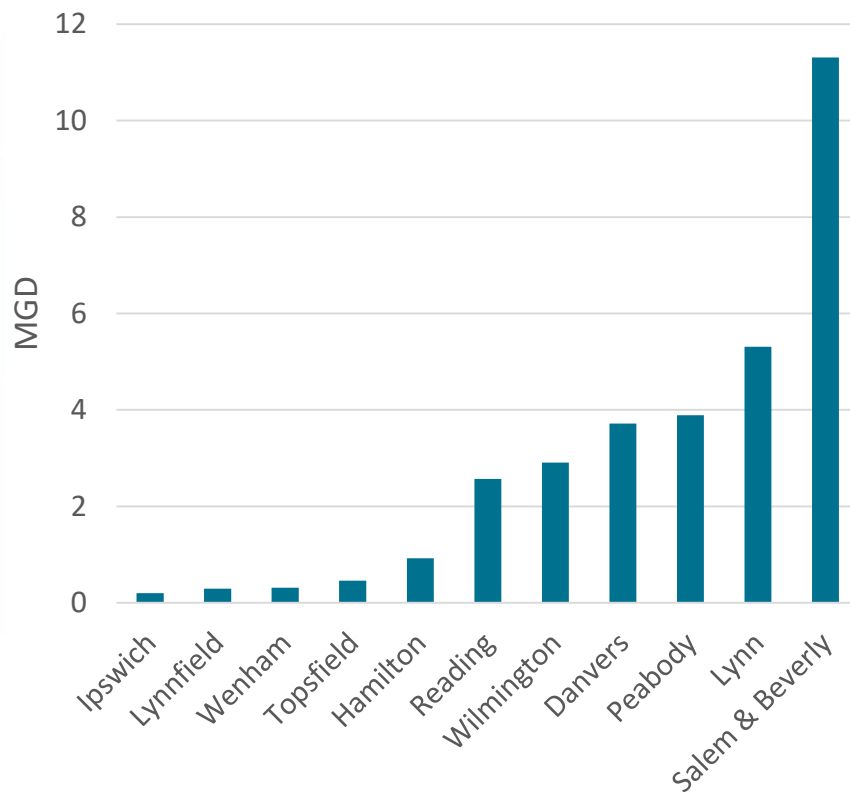


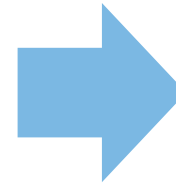
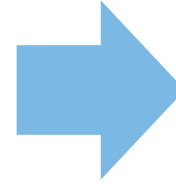
Figure 8. Model reaches, subbasin boundaries, and water withdrawal locations in the Ipswich River Basin, Mass.

## Municipal Water Withdrawals



# What is the relationship between the city of Salem and the Salem and Beverly Water Supply Board?

The Salem and Beverly Water Supply Board sources water from the Ipswich River, treats it, and sells it wholesale to the cities of Salem and Beverly.



The city of Salem is responsible for customer-facing interactions, i.e. issuing the water and sewer bills to residents.

# How does the regulatory landscape impact water use on the North Shore and for Salem in particular?

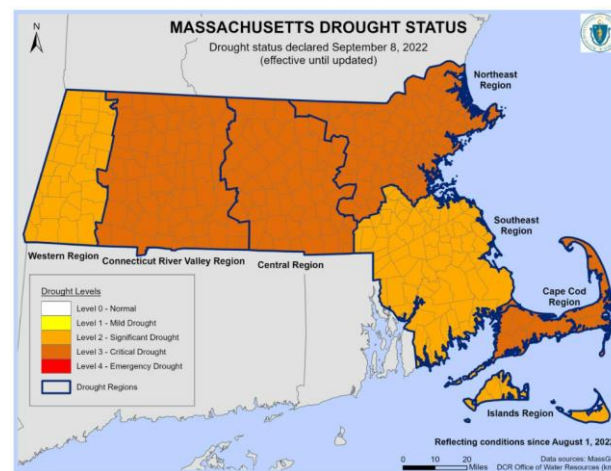
## Massachusetts Water Management Act 1986

- Regulates water withdrawals >100,000 GPD
- Existing withdrawals before 1986 exempt (“registrations”)
- Permits required for amounts over 1986 usage
- Establishes Safe Yield for each river basin (Ipswich River SY exceeded)
- State imposes conditions on withdrawal permits
- > 90% of all water withdrawals for Ipswich River exempt from regulation

# Impending regulatory changes are set to impact Salem in the near future.

New regulation, set to take effect by the end of the year would make Salem subject to water-use restrictions during droughts by expanding current restrictions to water registration holders. The proposed changes are currently in the public comment period.

State Drought Condition (by Region)	Nonessential Outdoor Water-Use Restrictions
Level 1 (Mild Drought)	1 day per week watering, after 5 p.m. or before 9 a.m. (to minimize evaporative losses)
Level 2 (Significant Drought)	Limit outdoor watering to hand-held hoses or watering cans, to be used only after 5 p.m. or before 9 a.m.
Level 3 (Critical Drought)	Ban on all nonessential outdoor water use
Level 4 (Emergency Drought)	Ban on all nonessential outdoor water use



*\*Essential uses are defined by MassDEP as uses required: a) for health or safety reasons; b) by regulation; c) for the production of food and fiber; d) for the maintenance of livestock; or e) to meet the core functions of a business. Nonessential uses are those other than essential uses.*

## **Salem and Beverly Water Supply Board has objected to the planned changes to the Water Resources Management Program Regulations.**

“Pursuant to M.G.L. c. 30A, the MA Department of Environmental Protection (MassDEP) has proposed amending the Water Resources Management Program Regulations (310 CMR 36.00) to add a condition to Water Management Registrations that would restrict nonessential outdoor water use by registrants during times of drought declared by the Secretary of Energy and Environmental Affairs.”

- **SBWSB already restricts withdrawals to wet period between November and May. They object to the need for further restrictions on their withdrawals.**
- **IRWA strongly supports the proposed changes as necessary to protect our over-drawn water resources.**

# Regional Collaboration: North Shore Water Resiliency Task Force



City of Beverly  
City of Lynn / Lynn Water and Sewer  
City of Peabody  
City of Salem  
Ipswich River Watershed Association  
Salem and Beverly Water Supply Board  
Town of Andover  
Town of Boxford  
Town of Burlington  
Town of Danvers

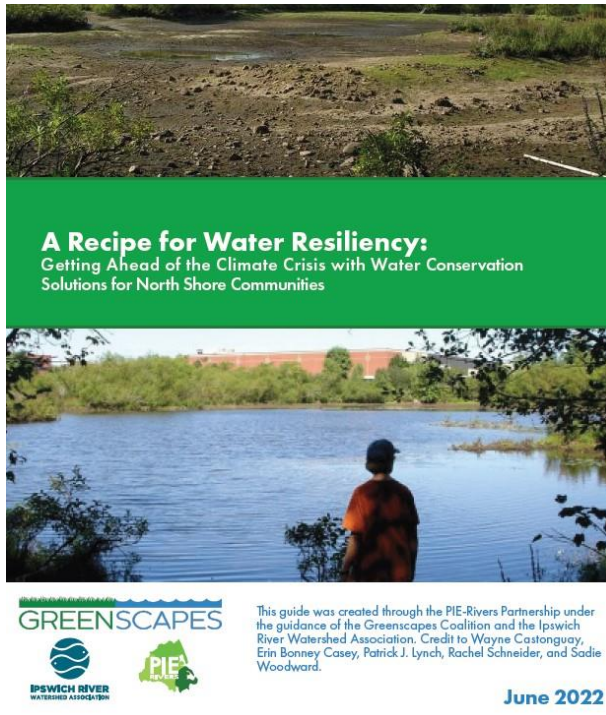
Town of Hamilton  
Town of Ipswich  
Town of Lynnfield / Lynnfield Center Water District  
Town of Middleton  
Town of North Andover  
Town of North Reading  
Town of Reading  
Town of Topsfield  
Town of Wenham  
Town of Wilmington



# What can Salem do to improve sustainability as it related to water use?

## In a word: CONSERVATION

Introducing...



**A Recipe for Water Resiliency**: Getting Ahead of the Climate Crisis with Water Conservation Solutions for North Shore Communities

This is an enhanced water conservation program, consisting of a series of actions that towns and cities can take to reduce water use. Implementing the full Recipe would be a huge leap forward for Salem.

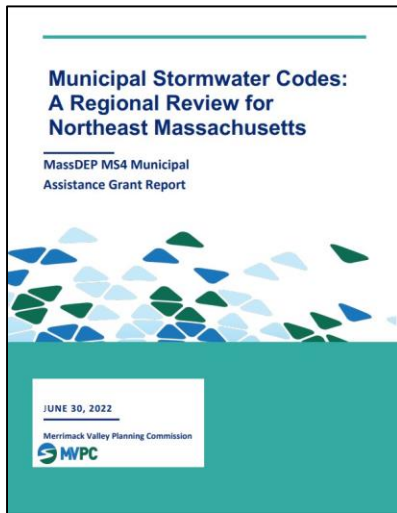
Implementing the full recipe for water resiliency would save Salem 30% of its current water use.

# Ten Ingredients for Enhanced Water Conservation

- Adopt a Water Use Bylaw that requires that new development or re-development minimize water use to achieve **water neutral growth**.
- Adopt or participate in a Water Bank to allow developers to pay into a fund to offset their new water use elsewhere in the community.
- Complete a Community Water Use Profile to scientifically determine how water is being used throughout the community to determine the specific strategies to lower discretionary Water use. Engage directly with the top 10% of residential and commercial water users.
- Conduct an advanced water audit (known as M-36) and implement a rigorous leak detection and repair program.
- Analyze local zoning and land use regulations to identify opportunities to reduce water use and recharge our aquifers through green infrastructure and by making Low-Impact Development the norm.
- Increase public education and awareness on why and how to reduce water use.
- Prohibit the installation of new underground irrigation systems and offer an incentive program to decommission existing systems.
- Establish a water conservation incentive program to help pay for residential and commercial water audits, rebates for fixture upgrades, rain barrels, and other measures.
- Implement a private well bylaw so that all water withdrawals are subject to the same rules and everyone participates in saving water.
- Monitor progress and adjust as needed to ensure water use reduction goals are met until water use is on declining trajectory towards 40 gallons per person per day.

# Leveraging Greenscapes Northshore Coalition

## Bylaw Review and Revision



Click [here](#) to read Greenscape's assessment of Salem's existing bylaws as it related to low-impact development

## Public Education



## Additional Resources





## Contact Us

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