



Massachusetts Water Resources Authority

Presentation to

Water Supply Citizen Advisory Committee

Donor Basin Analysis

August 25, 2026



Agenda

- Regulatory Background
- Interbasin Transfer Act (ITA)
- Donor Basin Analysis
- Questions



Regulatory Background

- Interbasin Transfer Act – March 1984
- MWRA Enabling Act – December 1984
- Water Management Act – March 1986



Interbasin Transfer Act (ITA)

- Administered by the Massachusetts Water Resources Commission (WRC) with support by DCR Office of Water Resources
- Applies to all transfers of water and wastewater between basins
- Assesses the need for the transfer and evaluates impacts to donor basin
- Approval required for all **new** MWRA communities



Donor Basin Analysis Overview

- Goal: Assess impacts of additional transfer from “donor basin” (i.e. Chicopee and Nashua River basins)
 - Reasonable Instream Flow
 - Cumulative Impacts of Transfers
- Analyzes system performance for a range of demand scenarios, required flows (regulatory, etc.)
- Prepared for new communities seeking MWRA admission



Prior Donor Basin Analyses

- MWRA prepared for each community seeking admission
- Applicants included the DBA with their MEPA filings
- Water Resources Commission reviewed and approved DBAs individually with receiving basin analysis
- Performed in 10 MGD increments



Prior ITA Approvals for MWRA Water Admission

Year	Community	MWRA Approved Average (MGD)*	WRC Approved Average (MGD)	MWRA Withdrawal (5-yr avg) <u>at date of admission</u>
1993	Bedford	1.51	1.75	271.4
2002	Stoughton	1.15	1.15	254.3
2005	Reading	2.10	2.27	237.4
2005	DWWD**	1.55	---	237.4
2009	Wilmington	1.23	1.70	218.1
2016	Hatchery***	7.00	---	204.3
2018	Ashland	0.09	1.49	202.8
2020	Burlington	3.50	3.50	200.4
2025	LCWD	0.28	0.28	201.1
*As documented in MWRA Water Supply Agreements (Contracts) with community.				
**DWWD not subject to ITA review.				
***Hatchery based on Memorandum of Agreement; subject to drought actions.				

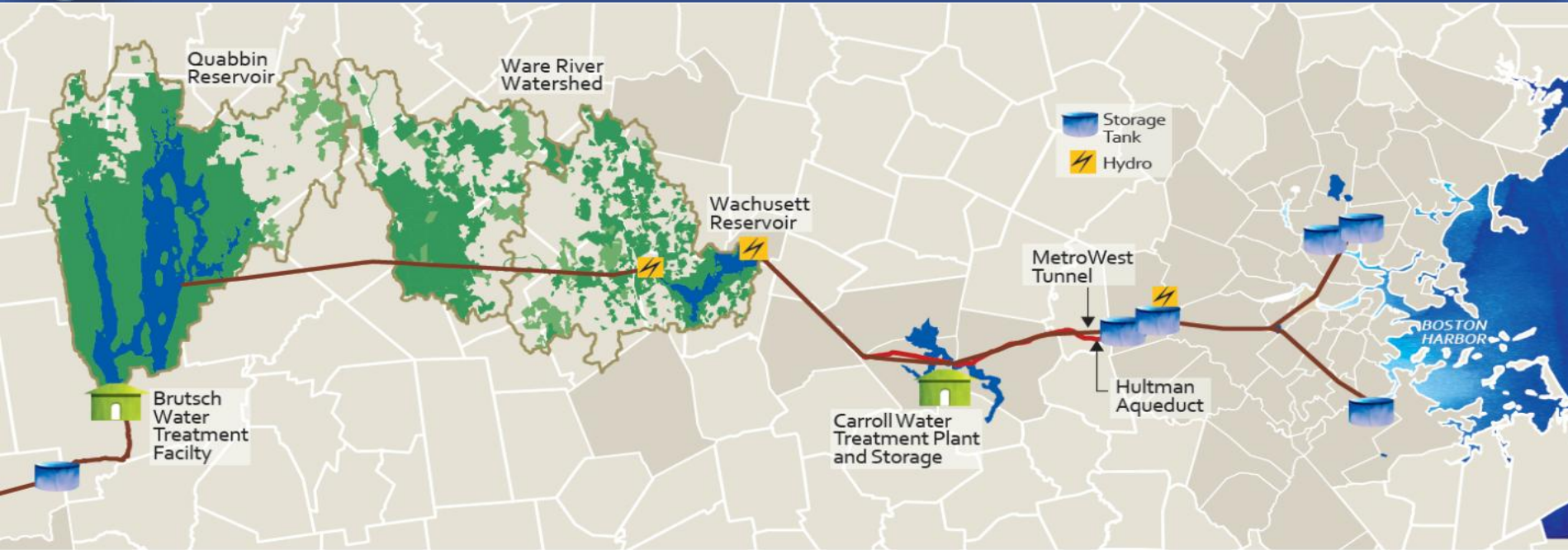


Current Donor Basin Analysis (2026)

- “Regional Supplier Pathway” (independent of receiving basin)
- Comprehensive, intended to streamline process
- Analyzes impacts of additional 20 mgd
- New communities will “chip away” at approved volume
- Demonstrates even with additional 20 mgd supply:
 - Minimal impacts to reservoir elevations and storage volumes, aquatic base flow, and flood flows in the donor basin
 - MWRA system maintains regulatory compliance, protect aquatic resources and preserve long-term system reliability



MWRA Water System – Quabbin + Ware + Wachusett



Around 400 square miles of watershed

~60% of the watershed is protected land

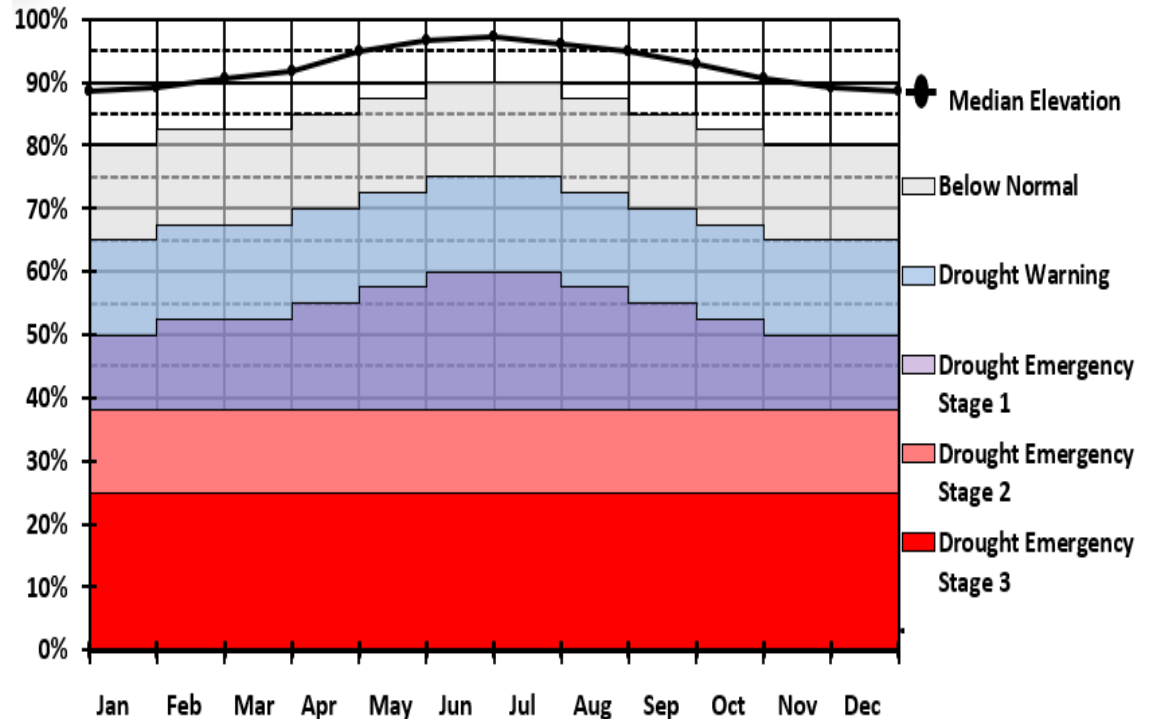
~85% designated forest & wetland



Inflow – Reservoir Capture & Hold

- No significant inter-annual variability
- Seasonal pattern for reservoir fill and drain
- Climate change isn't about less or more water – it's the shifting pattern of water availability

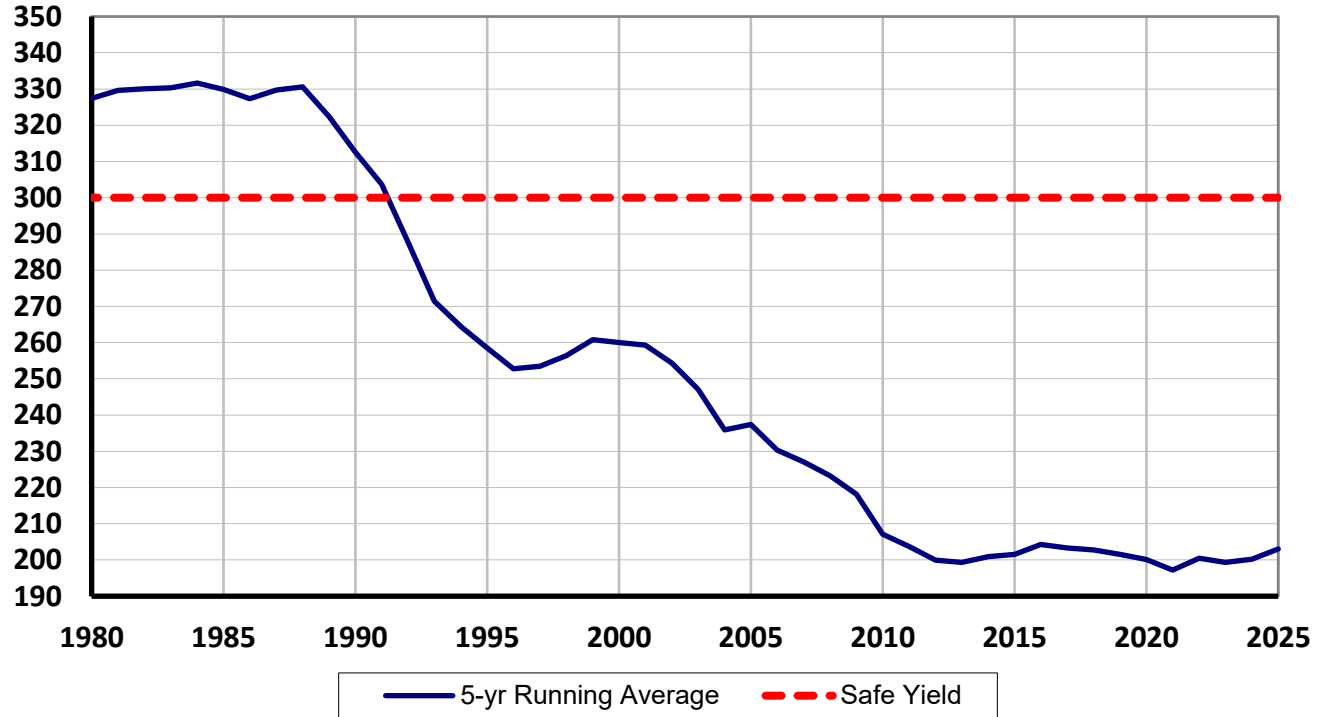
Seasonal Pattern of Quabbin Reservoir Volume





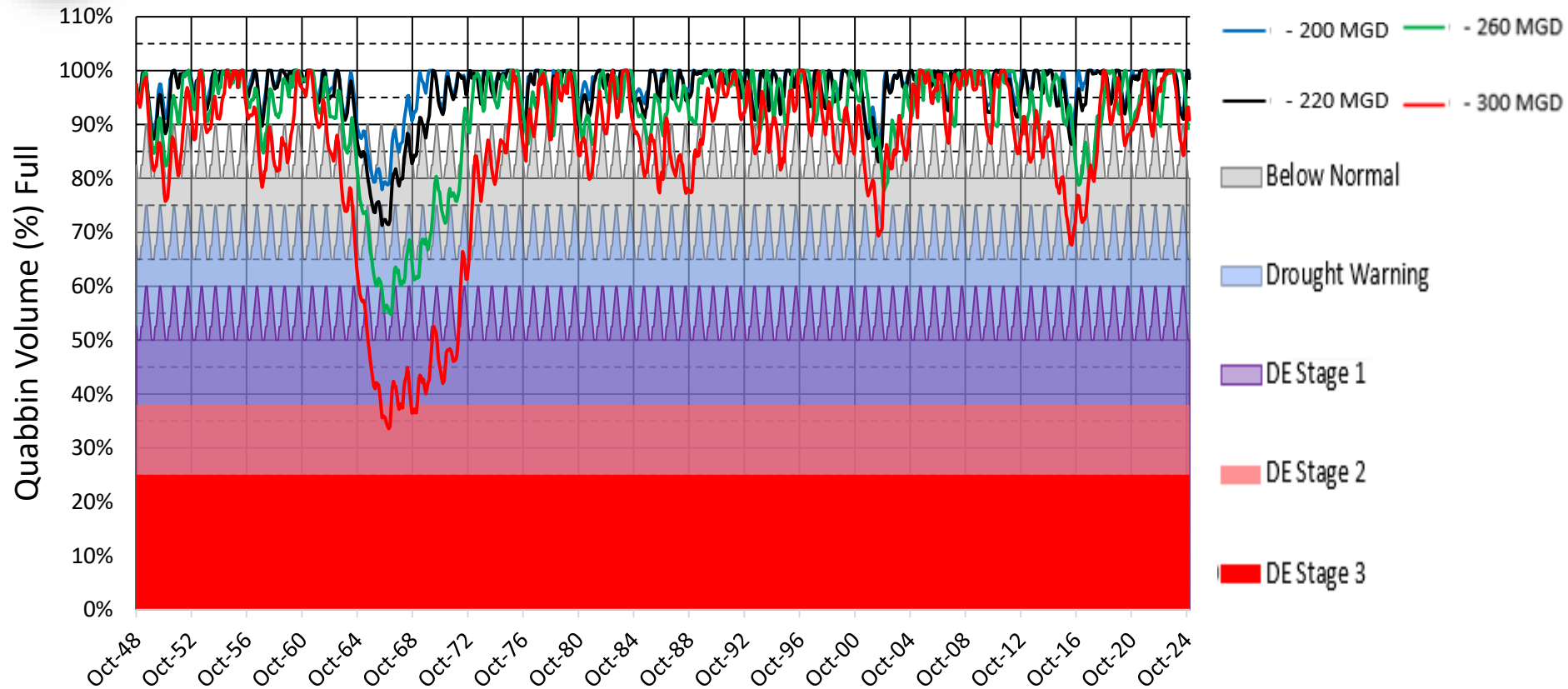
Outflow: Reservoir Withdrawals 1980 - 2025

- Total Withdrawal down to 1950 levels
- Forecasting patterns based on conservative projected population growth



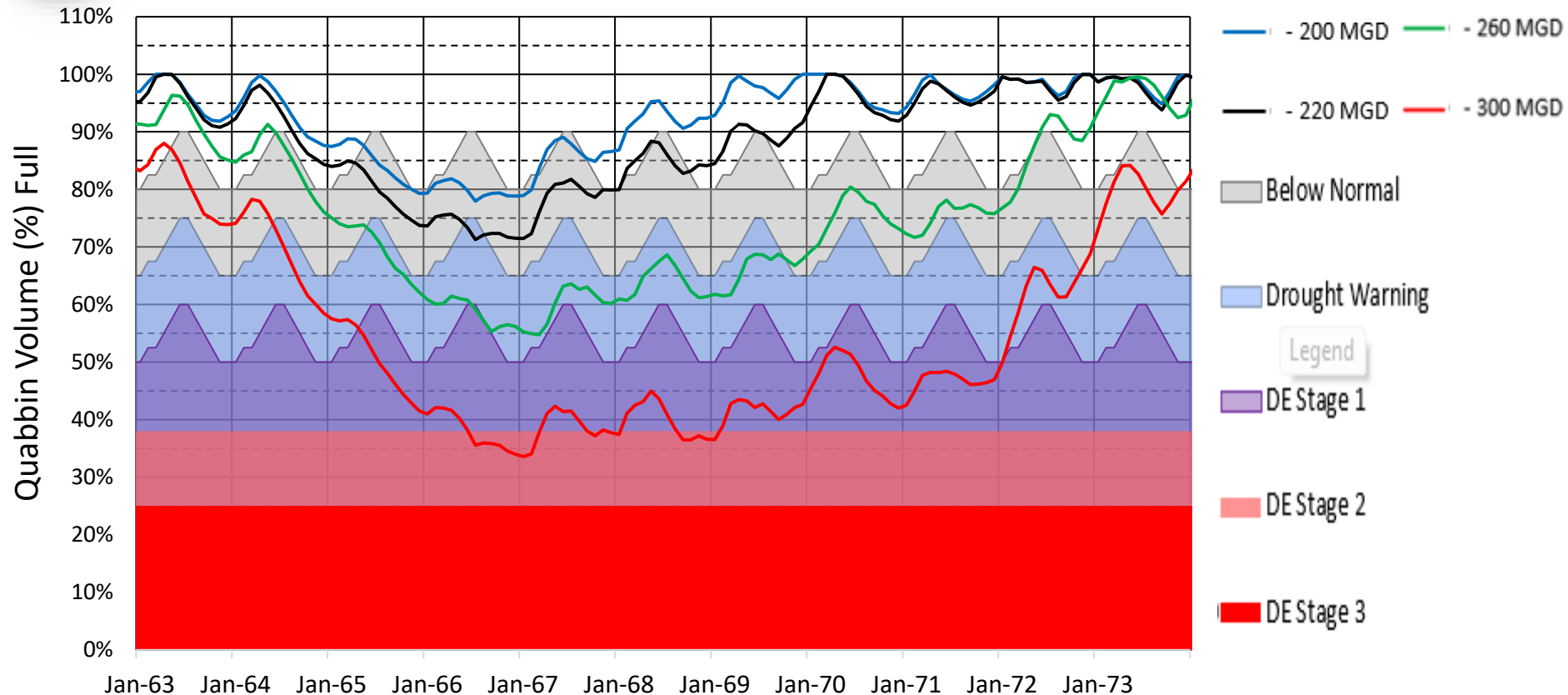


Impact of Drought on Quabbin Volume – Model





Impact of 1960s Drought on Quabbin Volume – Model





Current Donor Basin Analysis – Conclusions

MWRA can supply additional 20 mgd and:

- Maintain minimum in-stream flows and regulatory releases
- Protect aquatic resources
- Preserve long-term reliability
- Require no new facilities or changes in operating rules



Massachusetts Water Resources Authority



Questions