



THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

**Report of the Findings, Justifications and Decision
of the Water Resources Commission
Relating to the Approval of the
Lynnfield Center Water District's
Request for an Interbasin Transfer
Pursuant to M.G.L. Chapter 21 Sections 8B through 8D**

Decision

On March 13, 2025, in a vote unanimous of those present, the Water Resources Commission (WRC) approved, with Conditions, the Lynnfield Center Water District's request to obtain supplemental water supply from the Massachusetts Water Resources Authority, which will facilitate an interbasin transfer of 0.83 million gallons per day (MGD). This vote was taken after review of the facts provided by the applicant, analysis of the associated data, and consideration of public and agency comments received concerning this application.

Introduction

On October 23, 2024, the WRC received a request from the Lynnfield Center Water District (LCWD) for approval of an action to increase the present rate of interbasin transfer under the Interbasin Transfer Act (ITA) as part of a Single Environmental Impact Report (SEIR) and supplemental filing submitted to the Massachusetts Environmental Policy Act (MEPA) Office. The proposed project aims to connect LCWD to the Massachusetts Water Resources Authority (MWRA) Water System through the Town of Wakefield. The Secretary's Certificate on the SEIR was issued on November 29, 2024. The WRC accepted LCWD's application as complete at its December 12, 2024 meeting.

LCWD is proposing to purchase an average day demand of 0.28 million gallons per day (MGD) with a maximum day demand of 0.83 MGD of water from MWRA to supplement its existing water supply sources which will provide redundancy and resiliency to its system as well as help relieve stress on the Ipswich River and North Coastal Basin sources. The capacity of the interconnection to be constructed is currently restricted to 0.36 MGD due to water system infrastructure constraints in Wakefield. However, LCWD is actively working and negotiating with Wakefield towards increasing the capacity to 0.83 MGD. The limiting factor for the proposed maximum interbasin transfer volume of 0.83 MGD will be the agreement with MWRA and the physical capacity of the Wakefield interconnection. LCWD has its sources and service area in the Ipswich River and North Coastal Basins. This interconnection requires review under the ITA because MWRA's sources are located in the Chicopee River and Nashua River Basins.

A summary of the facts described in the application is as follows:

1. LCWD's sources are located in the Ipswich River and North Coastal Basins (Figure 1).

2. LCWD's existing sources consist of four groundwater sources.
3. Two of LCWD's sources are in the stressed Ipswich River Basin and several sources are experiencing water quality issues due to the presence of PFAS, manganese, iron, and nitrate. The Phillips Road tubular wellfield (Station 1) in the North Coastal Basin is currently offline due to elevated levels of nitrate.
4. LCWD is applying for admission to the MWRA Waterworks System, which has its sources in the Chicopee River and Nashua River Basins.
5. A MEPA environmental review, pursuant to M.G.L. c. 30, §§ 61-62I, was required for this proposed action. The ITA application was submitted as part of the SEIR for this project (EOEEA #16722) and supplemental filing with MEPA.
6. The Secretary's Certificate on the SEIR was issued on November 29, 2024, stating that no further MEPA review was needed.
7. Two required public hearings were held virtually via Zoom to take comment on this application, for the donor basin on January 14, 2025 and for the receiving basin on January 15, 2025. Written public comments were accepted until January 22, 2025. Comments received at the receiving basin public hearing and in writing were in favor of the project and requested a formal water conservation plan.
8. A Staff Recommendation to approve the request was presented to the WRC on February 13, 2025.
9. A public hearing on the Staff Recommendation was held virtually via Zoom on February 26, 2025. Written public comments were accepted until March 5, 2025 and none were received.

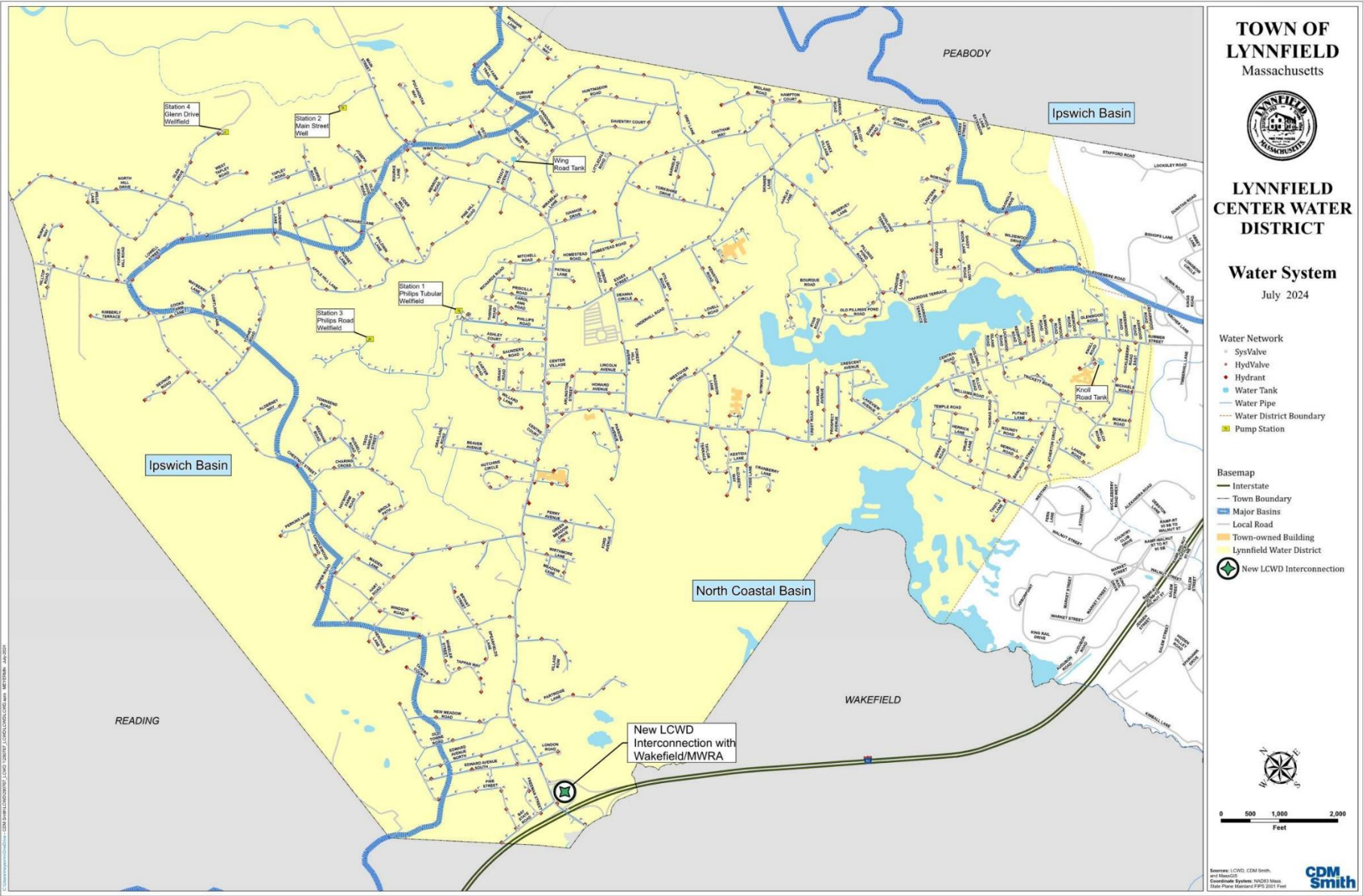
Evaluation of the Proposed Interbasin Transfer

This interbasin transfer application was reviewed on its own merits and is applicable solely to LCWD's purchase of water supply from MWRA in the amount of 0.83 MGD. This Decision is made based on facts contained in LCWD's MEPA submissions and additional information submitted at the WRC's request during the MEPA process and during staff review. The application was evaluated against the seven Criteria outlined in the ITA regulations (313 CMR 4.09), as well as the ITA Performance Standards and with consideration of comments received from the agencies and through the public comment process.

Synopsis of the Evaluation Criteria (313 CMR 4.05)

Criteria	Application Meets?
Criterion 1: MEPA Compliance	Yes
Criterion 2: Viable In-Basin Sources	Yes
Criterion 3: Water Conservation	Yes, with conditions
Criterion 4: Forestry Management	Not applicable
Criterion 5: Reasonable Instream Flow	Yes
Criterion 6: Impacts of Groundwater Withdrawals	Not applicable
Criterion 7: Cumulative Impacts	Yes

Figure 1: LCWD's Sources



Basis for the WRC Decision

This application was reviewed by Executive Office of Energy and Environmental Affairs (EEA), WRC staff at the Department of Conservation and Recreation's (DCR) Office of Water Resources, Department of Environmental Protection (MassDEP), and Department of Fish and Game's (DFG) Division of Fisheries and Wildlife (MassWildlife). This Decision was made after an evaluation of LCWD's application and compliance with the five applicable Criteria of the ITA regulations and the ITA Performance Standards. The following sections describe in detail compliance with the Criteria.

Criterion 1: Compliance with MEPA

An environmental review, pursuant to MEPA (M.G.L. Chapter 30, Sections 61 through 62I) and the MEPA regulations, 301 CMR 11.00, was required for this proposed transfer. The ITA application was submitted as part of the SEIR for this project (EOEEA #16722) and a supplemental filing with MEPA. The SEIR and supplemental filing were submitted in October 2024. The Secretary's Certificate on the SEIR was issued on November 29, 2024 and stated that no further MEPA review is required.

Criterion 2: Viable In-Basin Sources

LCWD was required to demonstrate that all reasonable efforts have been made to identify and develop all viable sources in the receiving area (LCWD). Over several decades, LCWD has evaluated multiple alternatives to develop supplemental water supply sources. Previous efforts to explore potential additional water supply sources resulted in two formal supplemental supply studies, the Ipswich River Basin Water Management Act (WMA) Study (2017 and 2018) and the Supplemental Water Modeling Evaluation Report (2021). Following is a summary of all issues considered relating to viability.

Alternatives Analysis

An alternatives analysis was performed to identify, evaluate, and select potential water supply alternatives. The alternatives evaluated in the receiving basin include surface reservoir sources, additional wells in district territory, and interconnections with non-MWRA neighboring systems and with partial- or fully-MWRA supplied neighboring systems.

Alternative 1: Reservoir/Surface Water Source

In the mid-1970s, LCWD developed plans for a surface water reservoir and filtration plant. The reservoir would have been located north of Glen Drive, flooding a large area of wetlands, including what is now the Glen Drive wellfield (Station 4). Much of the land for the reservoir was acquired by LCWD. However, the funding article for the reservoir and filtration plant was voted down at District Meeting. Given the current stressed nature of the Ipswich River and its basin tributaries, the incompatibility with the current groundwater source well fields and production infrastructure, as well as the regulatory environment for permitting new surface water impoundments, it has been determined that any new surface water source within LCWD's district boundaries is no longer feasible.

Alternative 2: Additional Wells in District Territory

In the 1970's, LCWD explored possible sand and gravel well sites to expand supply, resulting in the conclusion there were no additional sites for that type of well. Over the past few decades,

LCWD has continued to look at the potential of adding new bedrock wells in its territory. Previous investigations led to the construction of the Glen Drive wellfield (Station 4) in 1997 in the Ipswich River Basin. The 2017 Ipswich Basin WMA Study stated that “In general, the Ipswich River Basin has limited extents of medium and high-yielding aquifers...” and “... it appears that the towns searching for new groundwater sources within the Ipswich Basin have not been able to easily identify any feasible sources.” LCWD asserts this is the case within the district boundaries located in the Ipswich River Basin. The 2017 report concluded that “Given the physical and hydrogeological constraints of the Basin, increased groundwater withdrawal is probably not the solution...” and “Studies predict climate change will further exacerbate seasonal streamflow depletion by evapotranspiration in the Basin.” Therefore, new sources within the Ipswich River Basin are not being considered by LCWD.

LCWD also previously experienced challenges with supply from existing wells in the North Coastal Basin at Station 3 (Phillips Road wells) and assessed the possibility of additional wells in this basin as well. As a result, in 2013 LCWD was formally permitted to construct new bedrock wells for Station 3 in the North Coastal Basin. Based on the comprehensive testing associated with production of those new and existing North Coastal Basin wells, and the area of LCWD’s service territory within the basin, LCWD believes it has maximized withdrawals from these sources. In the decade since the new wells went online for Station 3, LCWD has not been able to achieve the expected volume. The wells pump as a single well field, with yield impacted when another one of the well pumps comes on. Therefore, it is expected that even if more wells were installed, they would impact the existing wells and not yield any additional capacity.

Based on the review of both the North Coastal Basin and Ipswich River Basin, LCWD does not consider supplemental groundwater sources in its territory to be a viable alternative to address its demand challenges and redundancy constraints.

MassDEP has noted that it would be extremely difficult to allocate any additional water volume, ground or surface, in the Ipswich River Basin at this time. Long-standing concerns exist about the allocation of any additional volumes in the Ipswich River Basin due to safe yield issues. While the MassDEP WMA Program cannot speak to the availability of sources in the North Coastal Basin for LCWD, there are limited high-yield aquifers in Lynnfield, and in LCWD specifically, since the District is small and has limited area for well placement. The highest yield aquifer is already the location of LCWD’s Phillips Road wells. Placing additional sources in the North Coastal Basin would not provide LCWD with the redundancy it is seeking.

Alternative 3: Interconnection for Additional Water

In the 2021 Supplemental Water Report, LCWD evaluated multiple scenarios to purchase supplemental water through an interconnection with adjacent water systems. In the supplemental filing submitted to MEPA, a table was provided which summarized the feasibility of obtaining water supplies from all communities located wholly or partially in the Ipswich River and North Coastal Basins. The result of this analysis indicated that obtaining water supply from the other in-basin communities is not feasible or is less feasible than the Wakefield interconnection as proposed in the SEIR.

LCWD has the following system interconnections which could possibly serve as point of a permanent supply of alternative source water: North Reading, Peabody, Lynnfield Water District (LWD) and Wakefield. Three of the four interconnections (LWD, Wakefield and Peabody) are with systems fully or partially served by MWRA. This alternative is also known as “wheeling” water from MWRA through an interconnected neighboring community. North Reading is the only system not partially served by MWRA. A direct connection with MWRA was also evaluated.

Interconnection with Lynnfield Water District

LWD (a separate entity and public water supply than Lynnfield Center Water District, LCWD) sources all its drinking water from MWRA. Analysis indicated that wheeling water through existing LWD interconnections would be a hydraulically viable option for LCWD. However, preliminary cost estimates were much higher than other interconnection alternatives scenarios considered and described in the 2021 Supplemental Water Report. Based on this, the LWD interconnection alternative was not pursued further by LCWD.

Interconnection with Peabody

The City of Peabody sources its drinking water from two reservoirs and supplements its supply with water from MWRA during periods of higher demand. Both of Peabody’s reservoirs are located within the Ipswich River Basin, a stressed basin subject to withdrawal limits and restrictions. Peabody receives water from MWRA through a meter located in Lynn. The water from the meter located in Lynn would not be able to transport water from MWRA through Peabody into LCWD without new booster pumping capabilities and significant system reconfiguration. Peabody does not have excess capacity at its existing water treatment plant, and therefore to provide local surface water to LCWD would need to expand the facility, which would come at significant expense.

Interconnection with North Reading

North Reading receives water supply from the Town of Andover, the sources for which are Haggetts Pond, Fish Brook, and the Merrimack River and are all in the Merrimack River Basin. Transmission mains located in North Reading connect LCWD to Andover’s distribution system and would potentially allow LCWD to “wheel” water from Andover through North Reading. Based on coordinated discussions, Andover was interested in the prospect of selling drinking water to LCWD, however, there was concern about supplying supplemental water during June and July, when the systems historically have experienced increased demands. There is also the potential need for significant transmission system reconfiguration. This option is not recommended by LCWD for two reasons: the unreliability of Andover to provide water during peak summer demands, and the extensive distribution upgrades that may be required.

Direct MWRA Interconnection

Possible routes for a connecting pipeline to MWRA include a route to Wakefield that is approximately 17,500 feet or 3.3 miles long, and a route to Saugus that is approximately 10,000 feet or 1.9 miles long and includes construction of a new pipeline along Route 1. A direct interconnection with MWRA is possible, but at a greater cost than the interconnection through Wakefield.

Interconnection with Wakefield

The Town of Wakefield sources the majority of its drinking water through three MWRA connections. A hydraulic evaluation showed that no booster station is needed for Wakefield to supply LCWD with water. Two supply scenarios that were evaluated both maintain LCWD's tank levels over an extended period of maximum day demand. The Wakefield interconnection to wheel water from MWRA as a supplemental source for LCWD was identified as the preferred approach in the 2021 Supplemental Water Report.

In conclusion, the basic requirement of the ITA is that an applicant shows that local water supply sources are used to the maximum extent possible and that other sources cannot be reasonably developed prior to the applicant obtaining permission to transfer water from out of basin. Given the above-described conditions, the WRC determined that all reasonable efforts have been made to identify and develop all viable sources in the receiving area of the proposed interbasin transfer.

Criterion 3: Water Conservation

LCWD was required to demonstrate that all practical water conservation measures have been implemented. The WRC water conservation performance standards are numbered below, followed by a bulleted narrative of LCWD's actions.

- 1) **Water Conservation Program** - A long-term water conservation program should be in place for the receiving community, which, to the extent feasible, is customized based on the specific water use patterns and supply constraints of the system.
 - a) **Data Analysis** - Determining where to focus water conservation efforts and resources should begin with data collection, management, and analysis. To the extent feasible, the system's water conservation programs should be developed using relevant data analysis.
 - According to the SEIR, LCWD supplies drinking water to approximately 70 percent of the Town of Lynnfield residents, as well as four schools and all the Town's municipal facilities. The residential service population as reported in LCWD's 2023 Annual Statistical Report (ASR) was 8,403. LCWD's customers are primarily residential, with approximately 2,692 residential service connections and 18 commercial/business accounts.
 - The proponent demonstrated an understanding of its water use profile, acknowledging that approximately 95% of LCWD's total volume is used within the residential sector. LCWD also acknowledges its municipal/institutional customers as the second-largest water-using sector in the system. LCWD's water conservation program is reflective of this profile and targeted toward the residential sector, with additional efforts made toward maximizing efficiency at public facilities through an ongoing water audit program, as described below.
 - b) **Water Conservation Plan Documentation** - A water conservation/water efficiency plan should outline the system's water use profile, assessment of water savings potential, conservation measures for applicable customer categories, water efficiency-related policies, and measurable performance goals. While a formal water conservation plan is not required, applicants should submit a summary of existing water conservation efforts to help facilitate evaluation and guidance on the system's water conservation program.

- LCWD provided an updated Water Conservation Questionnaire that documents the majority of its water conservation program. LCWD does not have a formal water conservation plan beyond the information listed in the Questionnaire and its Drought/Emergency Contingency Plans.
- The proponent provided descriptions and attachments in the SEIR and through subsequent communications that adequately outlined a water conservation program and plans for program enhancement.
- LCWD's 2004 MassDEP WMA Permit for its Ipswich River Basin sources requires the implementation of a water bank program if the authorized withdrawal volume of 0.29 MGD (on an average annual daily basis) is exceeded. At a minimum, this water bank shall provide for conserving at least two gallons of water for every gallon of water demand added to the system. The authorized volume of 0.29 MGD was exceeded in 2023. MassDEP has no record of receiving documentation of such a program.
- LCWD is encouraged to develop a formal written water conservation plan to most effectively implement its water conservation program. As noted in its comment letter dated January 14th, 2025, the Ipswich River Watershed Association and its partners at the Greenscapes North Shore Coalition have offered to support the Lynnfield community in implementing its water conservation goals.
- LCWD must implement a water bank program and provide documentation to MassDEP.

c) **Residential Water Use Efficiency** - The scope of a residential water efficiency program will be specific to circumstances in each community and should be informed by relevant data analyses. Applicants must meet the residential performance standard of 65 gallons per capita per day (gpcd). This is a system-wide average (including indoor and outdoor use) that represents a minimum level of efficiency. If local environmental or operational conditions warrant higher efficiency (e.g., during times of drought), applicants should strive to achieve year-round residential water use of less than 65 gpcd by implementing indoor and outdoor efficiency measures.

- LCWD's average residential gpcd (rgpcd) from 2019-2023 is 62.6 and has been trending down for the past four years, most recently reaching 56 in 2023.
- LCWD promotes water conservation and recommendations for residents through regular bill stuffers, copies of which were provided for review.
- LCWD also maintains a customer portal using WaterSmart software, which 50% of its customers are signed up to use. The WaterSmart portal allows customers to review their current and historical usage, compares their use to average household use, and provides suggestions on ways to reduce water use and the estimated percent of water saving if water reduction actions are taken.
- LCWD contacts customers with high use to alert them to any issues and prevent long term excessive water usage. LCWD is also in the process of updating water meters to allow for reads at 15-minute intervals, further optimizing the use of the WaterSmart portal and opportunities to alert customers to possible leaks.
- In 2019, LCWD joined the Greenscapes North Shore Coalition, which provides benefits such as water quality/conservation workshops and education/outreach plans for developers and residents.

- LCWD has a bylaw requiring all automatic underground irrigation systems to be equipped with a moisture-sensing device or mechanism that will automatically shut off the system's water flow during and following a period of precipitation.
- LCWD offers an ongoing rebate program for water-saving fixtures including toilets and washing machines. However, details on applying for rebates are not listed on its website, and water conservation information in general is limited on the site.
- In its comment letter on the SEIR, MassDEP WMA Program staff requested that an outdoor water use restriction bylaw be passed by LCWD and enforced as a requirement of MWRA admission. During the ITA review process, LCWD provided information about its existing outdoor water use restriction bylaw and enforcement actions.
- Additional information regarding rebates and links to additional resources such as the state water conservation website ([Massachusetts Water Conservation Toolkit](#)) must be added to LCWD's website to more effectively reach customers not signed up for the WaterSmart portal.

d) Non-Residential Water Use Efficiency - Water conservation measures for the non-residential sector should incorporate the relevant components of residential water use efficiency described above. In addition, all government and other public buildings under the control of the applicant should have been constructed or retrofitted with water fixtures meeting EPA's WaterSense standards and/or the current MA plumbing code, or the applicant should establish a timeline to transition to such fixtures. A program should be in place that identifies, ranks, and conducts outreach to commercial, industrial, and institutional customers based on water usage to determine areas where the greatest potential for water savings exists. The program should include regular contact with the highest users to promote water conservation, including the promotion of water reuse as per [314 CMR 20.00: Reclaimed Water Permit Program and Standards](#), where appropriate. Refer to the EPA's WaterSense guidance for the commercial, industrial, and institutional sector at [EPA's WaterSense page for Commercial Buildings](#).

- LCWD has initiated a water audit program that will be conducted at all public facilities to which it supplies water, with two schools receiving audits so far. Future audits will be completed at the remaining schools in LCWD's fiscal year 2025.
- Additional public facilities served by LCWD are largely limited to buildings currently undergoing complete renovation (e.g. Town Hall and Public Safety), which will include new, efficient plumbing and fixtures.
- LCWD must continue to actively monitor the ICI customers in its system for excessive use and conduct outreach/provide assistance as necessary. LCWD should also more proactively reach out to the top 10 users to direct them to resources that can help facilities manage water use, such as [EPA's WaterSense page for commercial and institutional facilities](#).

2) Water Loss Control Program - A water loss control program should be in place and actively implemented. Guidance on water loss control programs can be obtained from the U.S. Environmental Protection Agency (EPA), American Water Works Association (AWWA), and the Water Research Foundation (WRF).

- LCWD does not currently have a formal water loss control program but does have most of the elements of such a program as detailed in the ITA Performance Standards. LCWD has agreed to use the results of an M36 audit projected to be completed by December 31, 2024, to further develop a water loss control program for the subsequent year, with ranked action items and target completion dates.
- LCWD plans to continue conducting annual M36 audits with at least Level 1 validation as defined by the WRF Level 1 Water Audit Validation Guidance Manual 2nd edition or latest (i.e., a validator audit review, validator interview of auditor, and validation documentation). The audit and data validation should focus on reducing real and apparent losses and improving data validity scores to at least 71 (if below).
- LCWD dedicates funding each year for leak detection and repairs and utilizes industry standard practices to estimate water loss from leaks.
- As of the submission of the SEIR, the most recent leak detection was performed in 2023 and the report from the survey was provided for review. Forty-eight miles of water main were surveyed, resulting in the identification and repair of five leaks.
- A leak detection survey was also conducted in 2022, with 48 miles of water main surveyed, resulting in the identification and repair of two leaks.
- The proponent will continue conducting annual leak detection surveys to reduce real losses as leaks are identified and repaired.
- Average unaccounted-for water (UAW) for the LCWD system from 2019-2023 was 12.2%. However, UAW has been increasing over the last two years, most recently reaching 21%.
- The proponent acknowledged the recent increase in UAW in the SEIR and provided details on efforts to reduce UAW to 10% or less, which in addition to annual M36 audits and leak detection surveys, includes the following steps:
 - The LCWD Board of Commissioners approved a bylaw in 2016 which requires property owners to repair leaks or replace water services within 14 calendar days of being notified of the leak. A fine of \$75 per day will be incurred by the property owner until the leak is fixed.
 - A long-term capital improvement program is in place, which was informed by a distribution study completed in 2017.
 - LCWD has the authority to issue penalties and/or fines for stealing water.
- LCWD must submit the 2024 M36 audit report once it is available.
- LCWD must continue to conduct annual M36 audits, leak detection surveys at least every three years, implement water loss control activities as needed, and provide documentation to the WRC annually for the first five years after approval, and upon request thereafter.
- LCWD will use the results of its 2024 M36 audit to inform its water loss control program and submit documentation of the program to WRC staff. The program will be updated based on the results of future M36 audits. The proponent should refer to the EPA, AWWA, and WRF for guidance on water loss control program development. The program should include, at a minimum, the elements outlined in Section III.A.2.a-h of the [ITA Performance Standards](#).

3) Metering

- a) **Full System Metering** - The water supply system should be 100% metered.
- LCWD's system is 100% metered, including public facilities.
- b) **Properly Size Meters** - To handle required water flow rate and ensure a high level of metering accuracy.
- LCWD has a longstanding distribution system meter maintenance program, consistent with AWWA standards, which includes ensuring that meters are appropriately sized and accurately measure the water volume used by consumers.
- c) **Metering Actual Use** - Meter reading should be done in a manner that allows for collection of actual data instead of use of estimated data.
- Meters are read monthly, and billing occurs quarterly. Information obtained from metering and LCWD's WaterSmart portal is evaluated internally by LCWD.
- d) **Meter Repair/Replacement Program** - Implement a water meter repair/replacement policy and program, including a budget for the calibration, repair, and replacement of all sources of supply and distribution network water metering systems.
- LCWD consistently secures dedicated funding in its annual budget to calibrate, repair, or replace meters as necessary.
 - LCWD replaces 200 to 300 meters per year at a cost of \$40,000. With approximately 2,800 customer accounts, this represents full replacement every 10-14 years.
 - LCWD has hired a contractor to perform annual testing and calibration services of its master meters, which was scheduled to begin in the 3rd or 4th quarter of 2024.
 - LCWD must continue to implement its meter repair/replacement program, with updates made to the program as needed per M36 audit results and its ongoing water loss control program.
 - LCWD must continue meter replacements at least at the current rate.
 - Master meter calibration services will continue on an annual basis.
 - LCWD must provide documentation of the above actions to the WRC annually for the first five years after approval, and upon request thereafter.

4) Water Rates and Billing Practices

- a) **Full-Cost Pricing** - Applicants should demonstrate that water system revenues, including rates, fees, and other charges collectively reflect the full cost of water service including operation, maintenance, capital needs, source protection, debt service, administration, regulatory compliance, and water conservation – or establish a timeframe for transitioning to full-cost pricing. At a minimum, applicants must demonstrate that total revenue sources, including any from outside the water system, are sufficient to cover these costs. Budgets used to establish costs should use a 10-year or longer planning horizon.
- LCWD and its consultants provided descriptions and attachments in the SEIR and subsequent communications that confirmed that LCWD's revenues cover all costs of the system, including operation, maintenance, capital needs, source protection, debt service, administration, regulatory compliance, and water conservation. Revenue is derived from a tax levy added to customer property taxes (35%) and a combination of

water bills, antenna leases on its tanks, and service, repair, and connection permits (65%). LCWD uses a 3 to 5-year planning horizon in its capital planning.

- It is recommended that the planning horizon is increased to at least 10 years to ensure longer-term capital expenditures are reflected in rates to avoid the need for sudden substantial increases.

b) Enterprise Fund or Equivalent Segregation of Utility Accounting - Municipal suppliers other than independent districts should demonstrate the use of an enterprise fund or equivalent mechanism to segregate water utility accounting from other municipal government activities.

- LCWD is an independent district with a budget segregated from the Town of Lynnfield. While a portion of its revenue is levied on customers through a property tax line item, all proceeds from this line item go directly to LCWD and the levy is set by the LCWD Board of Commissioners.

c) Conservation Pricing - The rate structure must encourage water conservation.

- LCWD uses the same two-tier volumetric pricing structure for all categories of use except municipal. The tier 1 volume threshold of 24,000 gallons per quarter was established by estimating the usage for a family of 4, including a “small factor for some outdoor water use.” For a family of 4, this equates to an rgpcd of approximately 65. For the average household in Lynnfield (2.8 people), it equates to an rgpcd of approximately 94. As a result, 75% of customers stay within the first tier, even during the summer watering season.
- The per-unit charge in tier 1, when ranked against all pricing structures captured in the most recent Tighe and Bond Water Rate Survey, ranged from the 93rd to the 99th percentile. The second tier more than doubles this unit price.
- The only affordability assistance available to customers are 6-month payment plans.
- The volumetric charges component of the LCWD rate structure sends a very strong conservation signal.
- With volumetric charges at the 99th percentile for households using as little as 35 rgpcd, this rate could present affordability challenges to some customers.
- It is recommended that LCWD explore expanding protections for customers facing affordability challenges, such as implementing a lifeline rate for customers who qualify based on income.

d) Monthly Billing - Applicants should bill customers monthly or establish a timeframe for transitioning to monthly billing. At a minimum, customers must be billed quarterly, in which case utilities should monitor usage monthly and utilize timely mechanisms to notify customers when abnormal water use is detected.

- LCWD bills customers quarterly. LCWD is a small system with one administrative staff and communicated that moving to monthly billing is not financially viable.
- LCWD reads meters monthly and contacts customers if data show unusually high use.
- Additionally, the WaterSmart customer portals can be used by customers to closely track usage and set water use notifications. LCWD is in the process of upgrading meters to deliver reads to the portals in 15-minute increments.

- It is recommended that customer outreach is increased to maximize enrollment in WaterSmart, which is currently used by approximately 50% of customers.
- e) **Billing Practices** - Bills should be based on actual usage, be easily understandable to the customer, indicate the rate structure clearly, and provide water use in gallons. Additionally, bills or customer portals should help customers evaluate their usage trends.
- LCWD bills provide water use in gallons and clearly explain the billing tiers.
 - LCWD also includes educational materials with bills, guiding customers toward water conservation practices and habits.
 - As mentioned above, 50% of LCWD customers have signed up for access to WaterSmart portals which enable them to track and monitor their use.

5) Protection of Existing Sources in the Receiving Area

- a) **Local Drought Management Plan** - Applicants should provide a local drought management plan in accordance with Section 8 (Guidance for Communities) and any other relevant section(s) of the state's Drought Management Plan.
- LCWD revised its Drought Management Plan (DMP) in August 2024.
 - LCWD's revised DMP does not adequately define its "operational conditions triggers." These are critical triggers that should be source- and/or system- specific, which are necessary to extend supplies during droughts. The proponent should refer to Section 4 of the MA Local Public Water Supply Drought Management Plan Guidance and revise its "operational conditions triggers" accordingly.
 - The outdoor water use restrictions included in Table 5.1 of LCWD's DMP do not currently follow the state's DMP restriction guidelines. The proponent should refer to the 2023 Massachusetts DMP, Section 7.2.1, and revise the nonessential outdoor water use restrictions accordingly.
 - In addition to following the Massachusetts DMP's outdoor water use restrictions for droughts as declared by the Secretary of EEA for the Northeast Drought Region (in which Lynnfield is located), LCWD should also update its DMP to incorporate compliance with any water use restrictions as set forth by MWRA.
 - LCWD must revise its DMP as described above and submit it for WRC review and approval.
 - It is recommended that LCWD work with the Town of Lynnfield to implement a private well bylaw to regulate private well use during droughts.
- b) **Emergency Response Plan** - An emergency response plan, as described in 310 CMR 22.04, should be in place. This plan should establish operating procedures for adequately handling water supply emergencies, such as contamination of water supply sources or seasonal/drought related shortages of water supply.
- LCWD provided documentation of an emergency response plan that was updated in December 2023.
- c) **Local Surface Water Supply Plan** - A written local surface water supply protection plan should be in place for all surface water sources in the Receiving Area under the control of the applicant in accordance with regulations outlined in 310 CMR 22.20 B and C.
- LCWD does not have any surface water supplies.

- d) **Wellhead Protection Areas** - Land in the receiving area located in Zones I, II, III or Interim Wellhead Protection Areas (IWPA) of public drinking water wells must be protected in accordance with regulations outlined in 310 CMR 22.21.
- LCWD provided a copy of the Lynnfield Zoning Bylaws, Section 9.0 – Special Districts, which details the Special Groundwater Protection District that meets the Massachusetts Wellhead Protection Regulations (310 CMR 22.21).

Notwithstanding the above assessment, the WRC recognizes that in certain cases, local conditions may prevent a proponent from meeting or exceeding the “yardstick” that has been described in the ITA performance standards, even after a substantial effort has been made. In these cases, the proponent should explain why that standard cannot be met, demonstrate an alternate method of meeting the intent of the standard, and document any efforts that have been undertaken in order to comply with the standard.

Summary of Water Conservation Criterion

Based on the information evaluated in performance standards 1 through 5 above, the WRC finds that the water conservation Criterion of the ITA will be met upon implementation of conditions.

Criterion 4: Forestry Management Program

This Criterion requires that a comprehensive forestry management program has been implemented on any watershed lands with surface water sources serving the receiving area (LCWD) and under the control of the receiving area. LCWD does not have any surface water sources; therefore, this Criterion is not applicable to this proposal.

Criterion 5: Reasonable Instream Flow and Criterion 7: Cumulative Impacts

Criterion 5 requires that “reasonable instream flow in the river from which the water is transferred is maintained.” In addition, per Criterion 7 the WRC must consider the “cumulative impacts of all past, authorized or proposed transfers on streamflows, groundwater, lakes, ponds, reservoirs or other impoundments in the Donor Basin and relevant sub-basins.”

The ITA regulations (313 CMR 4.09(3)(e)) direct the WRC to consider “the impact of the proposed action to increase the Present Rate of Interbasin Transfer on the streamflow dependent ecosystems and water uses and the potential to affect instream values” in making its decision to approve or deny an interbasin transfer request.

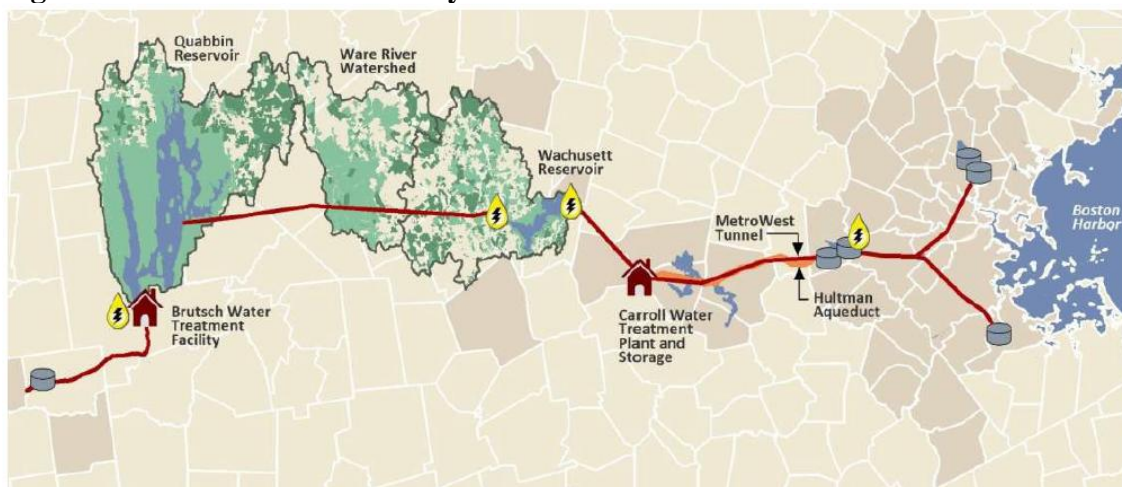
Background

The first community that the WRC approved under the ITA for admission to MWRA was Bedford in 1992. Since then, donor basin analyses and updates have been written for five communities. Reference is made to the previous donor basin analyses found in WRC Decisions for Stoughton (2002), Reading (2005, partial membership), Wilmington (2007), Reading (2007, full membership), Ashland (2018), and Burlington (2020). Dedham-Westwood Water District, admitted to MWRA in 2005, was not subject to the ITA per MWRA’s Enabling Act. Also

consulted in this donor basin analysis update for LCWD is the LCWD 2024 SEIR and other resources and documents¹.

LCWD is seeking approval for an interbasin transfer of 0.28 MGD average day demand and up to 0.83 MGD maximum day demand from the MWRA Waterworks System. The sources that supply the MWRA Waterworks System are the Quabbin Reservoir, Ware River, and Wachusett Reservoir (Quabbin-Ware-Wachusett system). The Quabbin Reservoir and Ware River are in the Chicopee River Basin, and the Wachusett Reservoir is in the Nashua River Basin. The MWRA Waterworks System consists of aqueducts, tunnels, and other transmission facilities (refer to Figure 2 below) and about 285 miles of pipe that distribute water to MWRA communities.

Figure 2: MWRA Waterworks System



The Quabbin-Ware-Wachusett system is operated to optimize both the quality and quantity of water available to MWRA for water supply purposes and to meet statutory and regulatory requirements for downstream releases and other legal obligations. Secondary operational objectives include maintaining an adequate flood protection buffer.

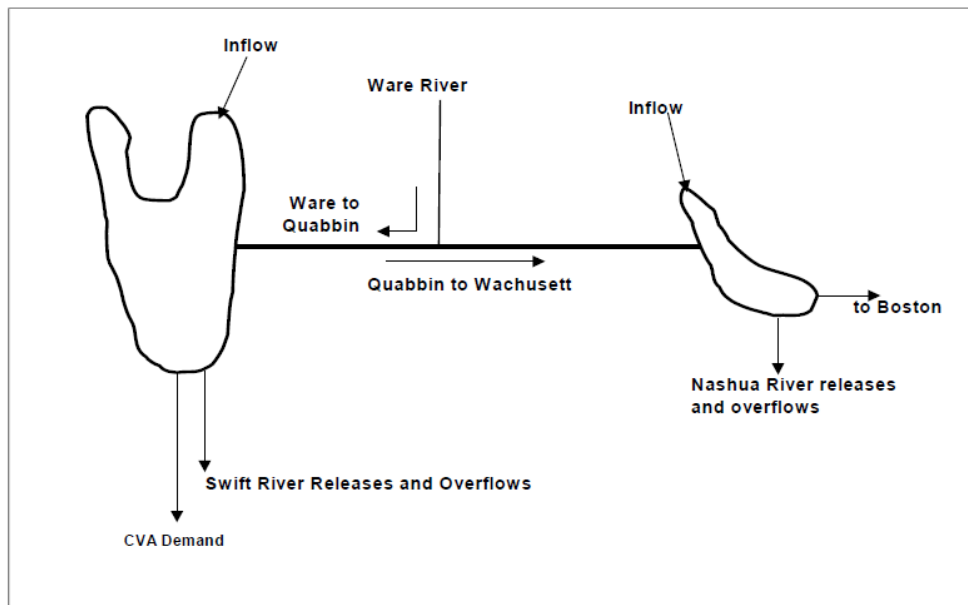
Water can flow into each reservoir from inflows or transfers. Flow out of the reservoirs consists of withdrawals for water supply, required controlled releases, voluntary controlled releases, and uncontrolled overflows (“spills”) when the reservoirs are full. Refer to Figure 3 for a schematic of reservoir inflows and outflows.

Water is discharged from the Quabbin Reservoir primarily through the Quabbin Aqueduct which ultimately discharges into the Wachusett Reservoir and constitutes more than half of the average annual inflow to the Wachusett Reservoir. Withdrawals from the Quabbin also occur through the Chicopee Valley Aqueduct to supply three communities southwest of the Quabbin and the

¹ MWRA NPDES Demand Report 2024; MWRA Board of Directors Staff Summaries and vote extracts June 2015, January 2017, January 2018, September 2022; *Division of Fisheries and Wildlife Annual Report 2016*, *MWRA Master Plan 2018*, *MWRA Long Range Water Supply Planning* May 2006, *The National Study of Water Management During Drought- The New England Drought Study: Trigger Planning* 1994, MWRA Drought Management Plan 1989, MWRA website [MWRA water system's reservoirs and watersheds webpage](#)

McLaughlin Fish Hatchery. Additional outflow from the Quabbin includes releases and overflows to the Swift River at the Winsor Dam.

Figure 3: Reservoir Flow Schematic



Reasonable Instream Flow

Quabbin Reservoir and the Swift River

The Quabbin Reservoir has a maximum storage capacity of 412 billion gallons, equivalent to about five to six years' worth of supply. It is fed by a well-protected watershed of 186 square miles and contributes about 53% of the total Quabbin-Ware-Wachusett system safe yield.

Flow in the Swift River was significantly impacted when the Quabbin Reservoir was built (completed in 1939). Minimum release requirements are governed by Massachusetts law and a 1929 War Department permit. Chapter 321 of the 1927 Acts of Massachusetts requires that sufficient water must be discharged from the Quabbin Reservoir to provide at least 20 MGD in the Swift River at the Village of Bondsville (in the Town of Palmer) located five miles downstream of the Winsor Dam. According to the LCWD 2024 SEIR, at least 18 MGD is released from the Winsor Dam each calendar day. This satisfies the 20 MGD requirement since the intervening watershed between Winsor Dam and Bondsville is estimated on average to contribute 4 MGD. In the summer months the watershed contributes less and approximately 25 MGD is released. The 1929 War Department permit, now overseen by the U.S. Army Corps of Engineers, requires releases based on the flow in the Connecticut River at the Montague gage in order to maintain navigability. From June 1 to November 30, if the average daily flow is less than 4,900 cubic feet per second (cfs), 45 MGD must be released, and if the flow is less than 4,460 cfs, 70 MGD must be released.

No impact to the Swift River 95% exceedance flow duration is expected from the proposed transfer compared to existing conditions because of the mandated 20 MGD flow at Bondsville.

Previous WRC Decisions on past requests by other communities joining MWRA have concluded that impacts to high flows and flow velocity will be minimal.

Impacts to Fisheries and Other Uses, Swift River

According to MassWildlife, the Swift River below Winsor Dam and downstream to the confluence of the Ware River contains significant fisheries habitat. The required flow releases are beneficial to the fishery as they provide a continuous source of cold water. An instream flow study of the Swift River was done by Normandeau Associates in 1997 for MWRA. MWRA initiated the study after a 1991 fire damaged the turbines at Winsor Dam and MWRA was considering reactivating the facility. The study found that the current flow releases were adequate to protect the Swift River trout fishery.

Over the years MWRA, MassWildlife, and DCR have worked to improve flow and habitat conditions in the Swift River through changes in how releases are done (e.g., continuous instead of over 5-7 hours, slower ramp-ups during the summer, cooling warm water spills). More recently, collaboration between MWRA and MassWildlife resulted in a pipeline to the McLaughlin Fish Hatchery from the Chicopee Valley Aqueduct. Completed in 2017, the pipeline provides a 6 MGD supply of consistent and reliable cold, well-oxygenated water to the Hatchery. Previously the Hatchery withdrew water directly from the Swift River making the Hatchery vulnerable to warm water spills from the Quabbin. The Hatchery discharges the water to the Swift River effectively supplementing flows in the river.

The proposed additional withdrawal for LCWD will have no effect on anadromous fisheries, searun brook and brown trout, smelt, and American shad. There are numerous downstream barriers to fish passage on the Swift and Chicopee Rivers. In addition, the proposed additional withdrawal will have no effect on hydropower or other instream uses.

Ware River

The Ware River at the diversion to the Quabbin Aqueduct has a watershed area of 96.8 square miles. The Ware River contributes approximately 13% of the total Quabbin-Ware-Wachusett system safe yield. Under the Acts of Massachusetts State Legislature Chapter 375, Acts of 1926, Ware River diversions are only allowed when flows in the Ware River are above 85 mgd (131 cfs) and limited to the period from October 15 to June 15. In addition, permission must be obtained from the U.S. Army Corps of Engineers to transfer water during the periods of June 1 through June 15 and October 15th through November 30th.

As water use has decreased in MWRA communities since the 1980's, less water has been typically diverted from the Ware River during normal to wet years. Under the "limited Ware" operating approach currently implemented by MWRA, transfers from the Ware River are made only on a limited basis for flood control (when requested) or to help fill the Quabbin when Quabbin Reservoir is below Normal as defined in the MWRA Drought Management Plan.

Low flow impacts on the Ware River as a result of the additional demand posed by LCWD are not expected. Ware River diversions are limited to non-low-flow months and to periods when flow exceeds 85 MGD. As mentioned above, diversions from the Ware River to the Quabbin Reservoir are typically only made when the reservoir level is below Normal or the U.S. Army

Corps of Engineers requests them for flood control. Previous Decisions have summarized that the frequency and magnitude of intermediate and high flows appear nearly normal/near natural. It is acknowledged that Ware diversions are limited per MWRA's operating practices. This could change in the future, especially if MWRA service area demand increases.

There are no other impacts expected on other Ware River instream uses with the addition of LCWD.

Wachusett Reservoir and Nashua River

Wachusett Reservoir has a maximum capacity of 65 billion gallons and has drainage area of 107 square miles. The watershed is slightly more developed than the Quabbin watershed. The Wachusett Reservoir contributes about 34% of the total Quabbin-Ware-Wachusett system safe yield. Wachusett Reservoir is managed for continuous water availability, optimal water quality, release requirements, and flood control.

Chapter 488 of the Acts of 1895 requires that not less than 12 million gallons per week be discharged into the South Branch of the Nashua River. This release is typically made via a continuous release into the basin at the base of the Wachusett Dam and is typically higher than the minimum required.

While the Quabbin Reservoir's level fluctuates, the Wachusett Reservoir's level is maintained within a narrow operating band. The range of elevations was established because it provides adequate supply to meet demands, minimizes shoreline erosion, provides adequate freeboard to minimize downstream flooding, and improves water quality. This operating band is maintained by Wachusett watershed yield, transfers from the Quabbin Reservoir, and additional releases as needed.

MWRA has historically maintained water quality by mixing Wachusett water with higher quality Quabbin water. During the summer stratification of the Wachusett Reservoir, water transferred from the Quabbin can establish an "interflow" layer in which higher quality Quabbin water can move through the Wachusett to the intake. When Wachusett watershed yields are sufficient to maintain reservoir elevations within the normal operating band, and transfers of Quabbin water for water quality purposes are made, higher volumes of releases through or over the Wachusett Dam may be required to maintain adequate freeboard to minimize flooding potential. With the decrease of MWRA system demand, it has become increasingly necessary to release more Wachusett water. This has resulted in higher releases during the summer in recent years.

The 95% exceedance flow is not likely to be affected by LCWD's proposed additional transfer request as it will not affect MWRA's ability to meet minimum releases. Since high flows from the Wachusett Reservoir are generally uncontrolled spills, and the reservoir level is intended to be managed to a narrow range of levels, the proposed LCWD interbasin transfer is not expected to have an impact on high flows in the Nashua River.

Other Uses and Values

There are no other impacts expected with the addition of LCWD on other Nashua River instream uses. The Central Nashua River Valley ACEC is located downstream of the Wachusett

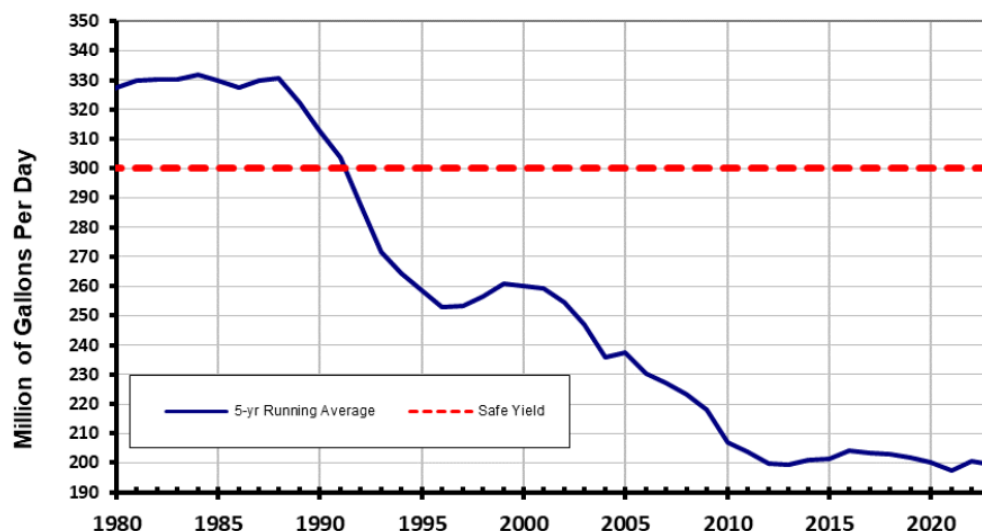
Reservoir, but will not be affected by this transfer as current operating procedures and required discharges will not change.

Cumulative Impacts

In the 1992 Bedford ITA Decision, the WRC expressed agreement with concerns about incremental impacts, whether from adding new communities to the MWRA Waterworks System or increasing demand from communities already served, potentially resulting in long-term cumulative reductions in supply available within the Quabbin Reservoir system safe yield. However, the WRC expected that water conservation efforts, the requirements for admission to MWRA, the MEPA review process, and the ITA process, as well as the various costs of MWRA entry, including the entrance fee, pipeline costs, and supply costs, would all work in concert to minimize the cumulative impacts by reducing existing demand and limiting new demand.

Since the 1992 Bedford WRC Decision, demand continued its downward trend from the high of 343 MGD in 1980 to about 2011 when the 5-year running average of reservoir withdrawals leveled off around 200 MGD (Figure 4).

Figure 4: MWRA Reservoir Withdrawals (5-year running average)



This decrease has been due to MWRA demand management, especially in the years directly following its creation in 1984, and due to other likely factors such as consumer response to higher rates and improved metering, shifts in the commercial base away from water-intensive manufacturing, changes in the plumbing code, and industry trends towards more efficient fixtures. While the MWRA Board has waived the water system entrance fee through 2027, the other factors mentioned in the Bedford Decision still remain including the ITA and the recently updated ITA performance standards, which will work towards minimizing the transfers.

Table 1 lists the communities that have received WRC approval and the approved amounts, the year of MWRA admission, and the 5-year average reservoir withdrawals at the time of admission.

Table 1: Communities That Have Received WRC Approval to Join the MWRA

Year Admitted to MWRA	Community	WRC Approved Amount in MGD, Average Day Demand	WRC Approved Amount in MGD, Max Day Demand	Reservoir Withdrawals (5 Year Running Average) at Date of MWRA Admission, MGD
1993	Bedford	1.75	Not specified	271
2002	Stoughton	1.15	2.5	254
2005	Reading*	2.27	Not specified	237
2009	Wilmington	1.7	3.25	218
2018	Ashland	Not specified	1.6	203
2020	Burlington	3.5	6.5	200

*Reading received WRC approval for partial MWRA supply in 2005 and full MWRA supply in 2007

As previously mentioned, the Dedham-Westwood Water District was admitted to MWRA for up to 2 MGD in 2005. This was not subject to ITA review, as the District had prior rights to obtain water supply from MWRA. In addition, MWRA signed a Memorandum of Agreement (MOA) with MassWildlife and DFG to provide 6 MGD to the McLaughlin Fish Hatchery (excluding periods when drought restrictions are required). Note that Wilmington did not join the MWRA Waterworks System for the full ITA approved amount, and, according to the SEIR, while Burlington has begun to use water provided by MWRA, Ashland has not. The 2023 5-year average reservoir withdrawal is 199 MGD and is used as a baseline in the following analysis.

Cumulative Impacts and Adequacy of the Safe Yield Analysis

The analysis presented in the SEIR considers existing, projected, and potential demand of the existing MWRA water service area. By comparing the Quabbin-Ware-Wachusett system safe yield and modeled performance with a conservative projection of future demand, the reliability of supply can be assessed for both existing MWRA member communities and new members. Additional demand was projected from 2010 to 2040 and uses volumes from the latest available MWRA Water Master Plan (dated 2018). Table 2 “MWRA Demand Projections, 2040” provides a summary of these volumes.

Table 2: MWRA Demand Projections, 2040

Use Categories	Demand
Existing service area 2019-2023	199 MGD
Additional residential use, 362,000 population increase* at 65 rgpcd	23.6 MGD
Additional non-residential use, 9.8 %* increase	5.9 MGD
Contingency for partially supplied and emergency-only, 25% increase	17 MGD
Total	245 MGD

* calculated using MassDOT population and employment projections 2010-2040

The conservative projection of future demand used for analysis includes the proposed demand of LCWD along with new cumulative demand of recently joined or soon-to-join communities of up to 10 MGD for a total of **255 MGD**. This is similar to the last WRC Decision for a new MWRA community, Burlington, which used 260 MGD.

Using its reservoir model, MWRA evaluated the impact of varying withdrawal rates on “performance measures” developed as part of *The National Study of Water Management During Drought- The New England Drought Study: Trigger Planning* (also known as “The Trigger Planning Study”) dated 1994. The withdrawal rates analyzed ranged from 190 MGD to 300 MGD and the analysis used historical data from October 1948 through December 2023, which includes the 1960’s drought of record. The model incorporates incrementally increasing demand during drought from partially supplied and emergency communities. The modeling assumed full compliance with mandated releases to the Swift and Nashua Rivers and assumed current operating procedures for the Ware River. Results of analysis against three of the MWRA “performance measures” are summarized below.

Safe Yield: (The quantity of water that can be supplied on a continuous basis during a critical drought.) The Quabbin-Ware-Wachusett system has a calculated safe yield of about 300 MGD (studies done in 1922, 1950, and several in the 1980’s and 1990’s).

Maximum Pool Descent: (The maximum deviation of the water level at Quabbin Reservoir below a specific target pool level at a specific water demand.) The Trigger Planning Study recommended that the Quabbin pool should not fall below 470’ Boston City Base elevation (BCB) at which point the reservoir no longer functions as a single unit. At the analyzed demand of 255 MGD, the Quabbin’s maximum pool descent is still above 500’ BCB, above the level at which performance could be affected, and within the reservoir’s normal operating range. Even at demands of 280 MGD, Quabbin would stay above elevation 490’ BCB (38% full) which, according to MWRA’s 1989 Drought Plan, is the minimum pool elevation at which there is an increased risk of poor water quality. Modeling shows that over the historical record of 1948-2023, at a demand of 300 MGD, the lowest level the Quabbin would drop to is to about 488’ BCB.

Drought Actions: (The number of months that the reservoir level at Quabbin Reservoir remains in each of the MWRA Drought Management Plan stages.) Table 3 shows the number of months in MWRA drought plan stages associated with varying levels of demand using the historical record of 1948-2023. Modeling shows that had the demand been 255 MGD during the drought of the 1960’s, the system would not have reached Drought Emergency Stage 1. Comparing demands of 245 MGD and 255 MGD (refer to asterisked rows in Table 3), there would be an additional 12 months at the Below Normal stage, an additional 34 months at the Drought Warning stage, and no months at Drought Emergency Stages (1-3). In the MWRA drought plan, mandatory water use restrictions only start at the Drought Emergency Stages.

Table 3: Number of Months in Each Stage of MWRA’s Drought Management Plan over 904 months from October 1948 to December 2023

Demand MGD	Below Normal	Drought Warning	Drought Emergency Stage 1	Drought Emergency Stage 2	Drought Emergency Stage 3
190	19	0	0	0	0
200	26	0	0	0	0
210	39	3	0	0	0
220	44	4	0	0	0

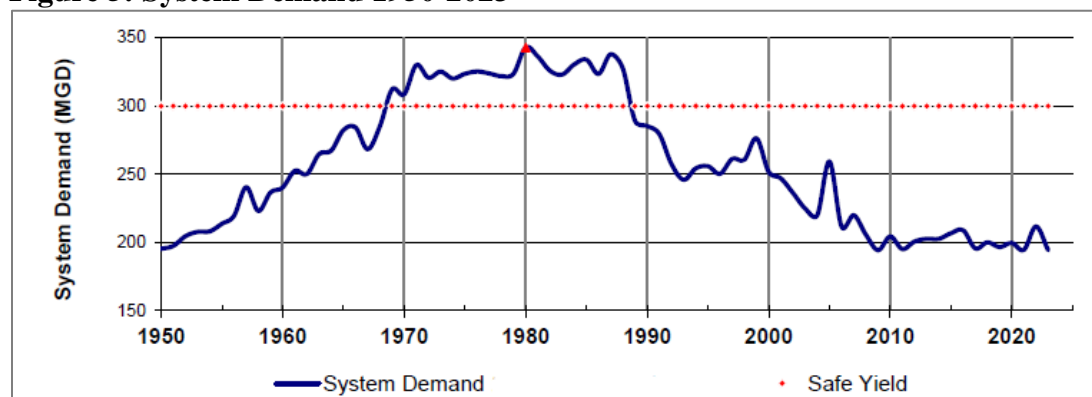
Demand MGD	Below Normal	Drought Warning	Drought Emergency Stage 1	Drought Emergency Stage 2	Drought Emergency Stage 3
230	53	11	0	0	0
240	69	15	0	0	0
245*	68	21	0	0	0
250	81	26	0	0	0
255*	80	55	0	0	0
260	85	54	2	0	0
270	87	51	12	0	0
280	95	62	28	0	0
290	125	44	51	0	0
300	167	40	65	0	0

*245 MGD represents MWRA's projected 2040 demand for current uses. 255 MGD includes demand from communities that have recently joined or are anticipated to join MWRA.

Quabbin Reservoir Levels - Performance during past droughts

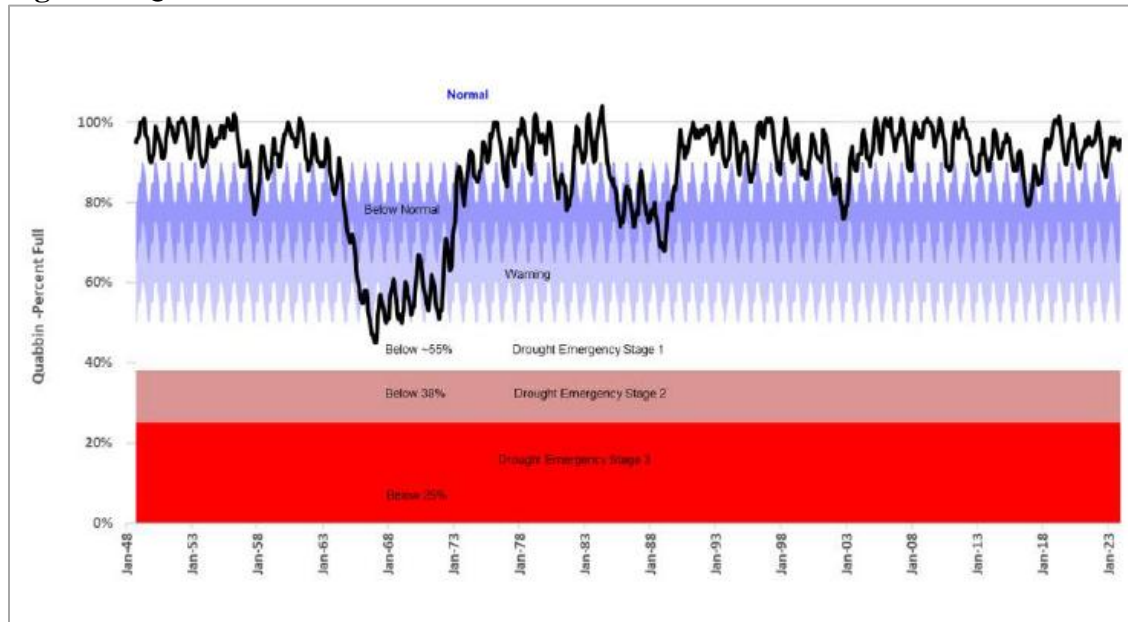
Figures 5 and 6 below show system demand from 1950 through 2023 and the Quabbin Reservoir levels for 1948 through 2023.

Figure 5: System Demand 1950-2023



The lowest Quabbin Reservoir levels occurred in the late 1960's, near the end of a prolonged and severe drought-of-record period resulting in low watershed yields. While demands were below 300 MGD during the 1960's drought, they were still above 250 MGD. The lowest level Quabbin Reservoir reached was 45% full in March 1967. During the periods 1950-1960 and 2000-2010 when demands varied between 200 and 250 MGD, the Quabbin reservoir was typically more than 80% full and only briefly below Normal as defined by the MWRA drought plan. Since 2010, when demand has been around 200 MGD, there have been two times the Quabbin has been below Normal - in 2002 and 2016-2017. Note that during the 2016-2017 drought, the Quabbin yield for calendar year 2016 was the second lowest on record with the 1965 calendar year being the lowest.

Figure 6: Quabbin Reservoir Levels 1948 to 2023



Summary

The LCWD SEIR indicates that in general, given the very small size of the LCWD transfer in comparison to the capacity of the reservoirs and the magnitude of discharges over the spillways, and the discharges governed by regulatory requirements, the effects on hydraulic characteristics from LCWD's withdrawals will be imperceptible. There will be no change in the operation of the Reservoirs in response to the proposed LCWD transfer and downstream flows will continue to meet all applicable regulatory requirements. Current resources will be unaffected by the transfer. Intended downstream releases at the Quabbin Reservoir, Ware River, and the Wachusett Reservoir will not change.

Criterion 6: Impacts of Groundwater Withdrawals

MWRA's sources are surface water sources. This Criterion is not applicable to this proposal.

Conditions for Approval

Based on the analyses of this project, the approval of LCWD's application under the ITA to obtain supplemental water supply from MWRA is subject to the following conditions. **LCWD must commit in writing within 45 days of the approval to abide by all conditions required by the approval of this transfer.**

1. This approval is limited to no more than 0.83 MGD on a maximum daily basis to be transferred from the MWRA Waterworks System to LCWD. Any increase in the rate of interbasin transfer is subject to ITA review and will require WRC approval. LCWD staff must contact WRC staff if any increases in the rate of transfer from the MWRA Waterworks System are anticipated.
2. To attain compliance with water conservation performance standard 1, LCWD must:

- a. Implement a water bank program and submit documentation to MassDEP by December 31, 2025.
 - b. Add additional information regarding rebates and links to additional resources such as the state water conservation website ([Massachusetts Water Conservation Toolkit](#)) to LCWD's website to more effectively reach customers not signed up for the WaterSmart portal.
 - c. Actively monitor the ICI customers in its system for excessive use and conduct outreach/provide assistance as necessary. LCWD should also more proactively reach out to the top 10 users to direct them to resources that can help facilities manage water use, such as [EPA's WaterSense page for commercial and institutional facilities](#).
3. To attain compliance with water conservation performance standard 2, LCWD must:
 - a. Submit the 2024 M36 audit report once it is available.
 - b. Continue to conduct annual M36 audits, leak detection surveys at least every three years, implement water loss control activities as needed, and provide documentation to the WRC annually for the first five years after approval, and upon request thereafter.
 - c. Use the results of its 2024 M36 audit to inform its water loss control program and submit documentation of the program to WRC staff within one year. The program will be updated based on the results of future M36 audits. The proponent should refer to the EPA, AWWA, and WRF for guidance on water loss control program development. The program should include, at a minimum, the elements outlined in Section III.A.2.a-h of the [ITA Performance Standards](#).
4. To attain compliance with water conservation performance standard 3, LCWD must:
 - a. Continue to implement its meter repair/replacement program, with updates made to the program as needed per M36 audit results and its ongoing water loss control program.
 - b. Continue meter replacements at least at the current rate.
 - c. Continue master meter calibration services on an annual basis.
 - d. Provide documentation of the above actions to the WRC annually for the first five years after approval, and upon request thereafter.
5. To attain compliance with water conservation performance standard 4, LCWD must revise its DMP to adequately define its "operational conditions triggers," match its nonessential outdoor water use restrictions to the state DMP guidelines, agree to follow the restrictions for droughts as declared by the Secretary of EEA for the Northeast Drought Region and also as set forth by MWRA, and submit the revised DMP to WRC staff within one year for review and approval.

Executive Order 385

This Decision is consistent with Executive Order 385 - Planning for Growth, which has the dual objective of resource protection and sustainable development. This Decision does not encourage growth in areas without adequate infrastructure nor does it cause a loss of environmental quality or resources.