



# THE COMMONWEALTH OF MASSACHUSETTS

## WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

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### **Request for Determination of Insignificance Under the Interbasin Transfer Act MGL Chapter 21 Sections 8B - 8D**

### **Cherry Valley and Rochdale Water District Request to Purchase Water from the City of Worcester**

**WRC Decision  
July 9, 2015**

#### **Decision**

On July 9, 2015, the Massachusetts Water Resources Commission (WRC), in a vote unanimous of those present, found that the Cherry Valley and Rochdale Water District's request to purchase water from the City of Worcester was insignificant under the Interbasin Transfer Act (ITA).

#### **Background**

On April 17, 2015, the Massachusetts Water Resources Commission (WRC) received a request for determination of insignificance (RDI) under the Interbasin Transfer Act (M.G.L. Chapter 21 §§ 8B-8D) from the Cherry Valley and Rochdale Water District (CVRWD), located in Leicester and Oxford, Massachusetts. The WRC discussed this project at its June 11, 2015 meeting.

CVRWD currently uses two water sources, Henshaw Pond and the Grindstone well in the French River basin. CVRWD has been under an Administrative Consent Order with the Massachusetts Department of Environmental Protection since 2012 because of several violations under the U.S. Environmental Protection Agency Surface Water Treatment Rule and Disinfection By-Product Rule, as well as other water quality issues. Several alternate water supply options were evaluated to address these violations and it was determined that constructing a permanent interconnection with the City of Worcester was the most feasible option to resolve the water quality and water supply needs, based on cost-effectiveness and reliability of water quality. CVRWD is proposing to purchase water from the Worcester Water system, which has sources in the Blackstone and Nashua River Basins. CVRWD discharges its wastewater in the Blackstone and French River Basins.

This application was evaluated against the applicable criteria of 313 CMR 4.04(4) Criteria for Determination of Insignificance of the Interbasin Transfer Act regulations and the criteria contained in the 2014 Water Resources Commission Interim Policy for Transfers Primarily Derived from Lakes, Ponds, Reservoirs or Other Impoundments (“December 2014 Policy”).

### **Proposed Transfer**

The City of Worcester water supply system is comprised of ten surface water reservoirs located in the Nashua and Blackstone River basins, with drainage areas totaling 40.74 square miles and over 7 billion gallons in storage. The Worcester water system safe yield is 29.5 million gallons per day (MGD), and in recent years its water use has been 23 MGD. For purposes of the Interbasin Transfer Act request, the proportion of water from each of the donor basins was determined as the proportion of storage in each of the major basins: 68% from the Nashua Basin (0.41 MGD) and 32% from the Blackstone Basin (0.19 MGD).

The CVRWD is located in the Towns of Leicester and Oxford, with approximately 1,250 service connections and an average annual water use of 0.26 MGD (2014). The CVRWD currently holds a Water Management Act permit for 0.27 MGD. The CVRWD proposes to enter into a contract to purchase a maximum daily amount of 0.60 MGD from the City of Worcester. The transfer will be a full-time, year-round operation. Approximately 44 percent of CVRWD wastewater is discharged at the Upper Blackstone Water Pollution Abatement facility in Millbury (Blackstone River Basin); 56 percent is discharged to the Rochdale-Oxford Wastewater Treatment Facility in the French River Basin. The portion of Worcester water that is derived from and discharged to the Blackstone River Basin (0.08 MGD) is exempt from Interbasin Transfer Act requirements; thus, the net amount of this transfer subject to the Act is 0.52 MGD, with 0.41 MGD coming from the Nashua River Basin and 0.11 MGD from the Blackstone River Basin. See Table 1 and Figure 1 for the breakdown by basin and the areas affected.

**Table 1. Interbasin Transfer Amount Summary**

<b>Basin from/to</b>	<b>Amount (MGD)</b>
Nashua → French	0.23 MGD
Nashua → Blackstone	0.18 MGD
Blackstone → French	0.11 MGD
Blackstone → Blackstone	0.08 MGD (EXEMPT)
<b>Total:</b>	<b>0.60 MGD</b> <b>- 0.08 MGD (Exempt)</b> <b>0.52 MGD (Net)</b>

### **Analysis**

To assist the WRC in making its decision, Staff worked closely with the proponent on the requirements of the Act for this proposal and consulted with other agency staff. CVRWD’s Request for Determination of Insignificance was reviewed by staff from the

Department of Conservation and Recreation (DCR), the Department of Environmental Protection, the Division of Fish and Wildlife, the Natural Heritage and Endangered Species Program, and the Division of Ecological Restoration against the criteria for insignificance listed in the Interbasin Transfer Act regulations, 313 CMR 4.04(4) and the December 2014 Policy.

<b><u>Criterion</u></b>	<b><u>CVRWD's Application</u></b>
313 CMR 4.04(4)(a): Is not over 1 mgd	Meets
313 CMR 4.04(4)(b): Is less than 1 mgd on an annualized basis and is temporary, of short duration and for a purpose other than water supply use	Not Applicable
313 CMR 4.04(4)(c): Additional flow is less than 5% of the instantaneous flow	Not Applicable (December 2014 Policy)
313 CMR 4.04(4)(d): The 95% exceedance flow will not be diminished	Not Applicable (December 2014 Policy)
313 CMR 4.04(4)(e): Special resource values will not be adversely affected	Meets
313 CMR 4.04(4)(f): The Commission shall consider the cumulative impacts of all past, authorized or proposed transfers on streamflows in the donor basin	Meets
December 2014 Policy: That the cumulative annual amount of the transfers including the proposed amount, in all cases, is less than one percent (1%) of the average annual precipitation on the drainage area of the water body, and five percent (5%) of the drought year inflow to the water body	Meets
December 2014 Policy: That consideration has been given to measures to protect instream flows, as described in 4.04(3)(i), and where appropriate, any such measures proposed as part of the application.	Meets

Special resource values in the vicinity of the Worcester reservoir system were mapped by the applicant. NHESP Estimated Habitat of Rare Wildlife is present downstream from the Quinapoxet Reservoir in Holden on Quinapoxet Brook to the DCR/MWRA Wachusett Reservoir in West Boylston. Areas of Critical Environmental Concern are not present in the area, and designated Scenic Rivers are not directly downstream from the Worcester system. There are many areas protected by Article 97; these are primarily lands acquired by DCR and Worcester for water supply watershed protection. This transfer should not impact these special resources values.

Following the Water Resources Commission's December 2014 Policy, the thresholds for average annual rainfall values for the Nashua and Blackstone basins, as well as the thresholds for drought year inflow are compared to the interbasin transfer request below.

**Table 2**  
**Summary of Cherry Valley-Rochdale Water District Interbasin Transfer Request**  
**With Respect to December 2014 Policy Thresholds**

	<b>Threshold: 1% of Average Annual Precipitation</b>	<b>Threshold: 5% of Drought Year Inflow</b>	<b>IBT Request</b>	<b>IBT Request Below Lowest Threshold?</b>
Nashua Basin	0.62 MGD	0.52 MGD	0.41 MGD	Yes
Blackstone Basin	0.28 MGD	0.24 MGD	0.11 MGD	Yes
Total	0.90 MGD	0.76 MGD	0.52 MGD	Yes

Both the City of Worcester and the MWRA transfer water supply from the Nashua Basin. However, given the amount of storage in these systems, it is not expected that this transfer would have a perceptible impact on the basin.

As noted, the proposed transfer is less than the amount deemed insignificant in accordance with the December 2014 Policy, and is therefore not expected to cause negative impacts on instream flow or special resources downstream of Worcester's surface water reservoir system. The proposed transfer is approximately 2% of Worcester's safe yield, baseline, and current use. It is expected that any changes in reservoir spill timing and magnitude caused by the additional withdrawal for this transfer will be imperceptible.

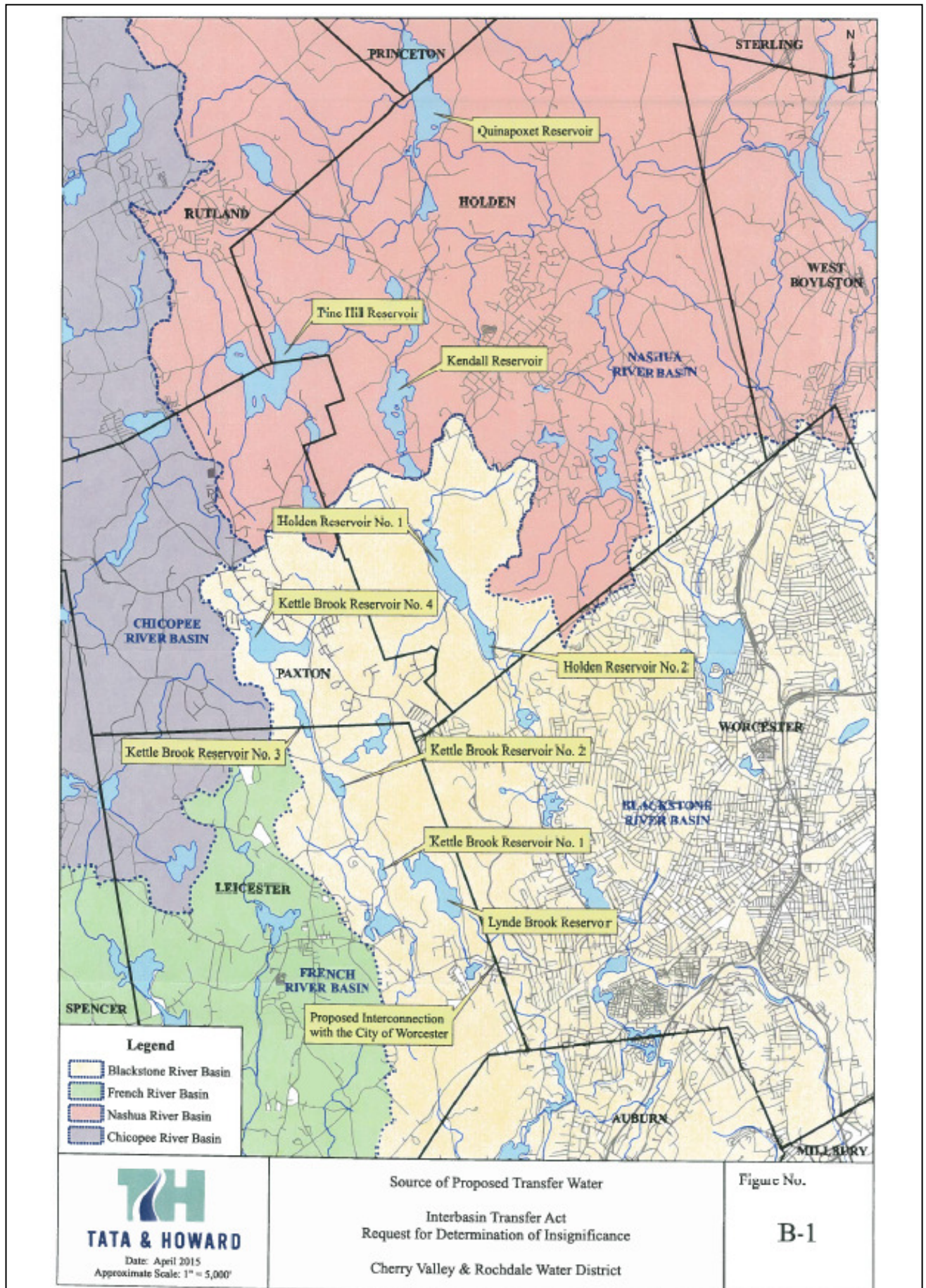
A summary of how the application addressed these criteria is found in Attachment 1.

### **WRC Decision**

After reviewing the proposal and the comments received, **the WRC finds that this project is insignificant under the Interbasin Transfer Act.**



**Figure 1**  
**Worcester's Water Supply Sources**



**Attachment 1**  
**Request for Determination of Insignificance**  
**CVRWD Request to Purchase Water from the City of Worcester**

<b><u>Criterion</u></b>	<b><u>Proposal Meets</u></b>	<b><u>Explanation</u></b>
Is not over 1 mgd	Yes	Net transfer will be 0.52 mgd
Is less than 1 mgd on an annualized basis and is temporary, of short duration and for a purpose other than water supply use)	Not Applicable	Proposal is long-term for purchase of water supply.
Additional flow is less than 5% of the instantaneous flow	Not Applicable	The transfer is primarily derived from Reservoirs (December 2014 Policy)
The 95% exceedance flow will not be diminished	Not Applicable	The transfer is primarily derived from Reservoirs (December 2014 Policy)
Special resource values will not be adversely affected	Meets	Insignificant change in Worcester's operating system and downstream flows.
The Commission shall consider the cumulative impacts of all past, authorized or proposed transfers on streamflows in the donor basin	Meets	Both the City of Worcester and the MWRA transfer water supply from the Nashua Basin. However, given the amount of storage in these systems, it is not expected that this transfer would have a perceptible impact on the basin..
That the cumulative annual amount of the transfers including the proposed amount, in all cases, is less than one percent (1%) of the average annual precipitation on the drainage area of the water body, and five percent (5%) of the drought year inflow <sup>1</sup> to the water body	Meets	Amounts requested from each donor basin are less than thresholds.
That consideration has been given to measures to protect instream flows, as described in 4.04(3)(i), and where appropriate, any such measures proposed as part of the application.	Meets	Changes to downstream flow are expected to be imperceptible from the current operating condition as a result of the requested interbasin transfer.

<sup>1</sup> Drought year inflow is the drought basin yield: the annualized Q90 streamflows in a water source based on averaging estimated near natural monthly Q90 streamflows. It is an estimation of the water that would be available in an river basin that is unimpacted by water withdrawals during the probable driest period that is likely to occur