



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: March 18, 2020
SUBJECT: 2019 Annual Update on New Connections to the MWRA System

COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer
Beth Card, Director, Environmental and Regulatory Affairs
Katie Ronan, Environmental Analyst
Preparer/Title


David W. Coppes, P.E.
Chief Operating Officer

RECOMMENDATION:

For information only. This 2019 Annual Update on New Connections to the MWRA System has been prepared pursuant to the “Annual Update” requirements of MWRA’s system expansion policies.

DISCUSSION:

MWRA’s system expansion policies require an annual update on the status of any new connections (connection approved within the preceding five years) to the MWRA from outside the water and sewer service areas. Calendar year 2002 was the first year that MWRA system expansion policies prescribed update requirements. This 2019 Annual Update addresses post-2002 connections to the MWRA. A summary of each connection’s compliance with requirements as stipulated in its water supply or sewer use agreement is provided. For water connections, requirements include compliance with water withdrawal limits and entrance payments due to MWRA. For wastewater connections, requirements address inflow removal, ongoing stipulations regarding management of wet weather flows, compliance with discharge limits, and entrance payments due to MWRA. An update on inquiries from potential applicants for admission and other system expansion considerations is also included.

The MWRA operating policies listed below govern system expansion. A more detailed summary of each policy is provided in Attachment A.

- # OP.04, Sewer Connections Serving Property Partially Located in a Non-MWRA Community (the “Sewer Straddle” policy);
 - # OP.05, Emergency Water Supply Withdrawals;
 - # OP.09, Water Connections Serving Property Partially Located in a Non-MWRA community (the “Water Straddle” policy);
 - # OP.10, Admission of New Community to MWRA Water System; and
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- # OP.11, Admission of New Community to MWRA Sewer System and Other Requests for Sewer Service to Locations Outside MWRA Sewer Service Area.

Summary of Approved Connections to the MWRA System

Water

In 2019, the Executive Office of Energy and Environmental Affairs and its agencies, through the Massachusetts Drought Management Task Force, continued to assess hydrologic conditions throughout the Commonwealth. According to monthly DCR Hydrologic Conditions Reports, despite monthly and regional variability in the spring, overall precipitation in the state remained normal through July. September was a very dry month across the state and indications of drought conditions were observed, especially in the Connecticut River Valley. However, significant rain events in mid-October brought monthly precipitation levels back to normal across the state. All drought-monitoring regions were in normal status by the end of the year with no indication of drought conditions. Throughout the year, Quabbin Reservoir was well within the normal operating band and spilled a total of 47.2 billion gallons over 195 days. For these reasons, it is not surprising that there were no requests for withdrawals under OP.5, Emergency Water Supply Withdrawals due to hydrologic conditions. Burlington requested water under OP.05 from MWRA on three occasions due to operational issues and necessary maintenance within the local system, which resulted in an inability to meet local demand. There were no formal applications to the MWRA in 2019 under OP.09 or OP.10 – “water straddle” or admission of a new community, respectively. In 2020, MWRA expects that as communities across the Commonwealth are working to address concerns related to PFAS levels, additional inquiries about admission may be received.

Since 2002, Stoughton, Reading, the Dedham-Westwood Water District and Wilmington have become MWRA water supplied communities. (Bedford was admitted into the MWRA system prior to 2002, before firm water withdrawal limits were established for new communities.) There have also been two “straddle connections” since 2002: Avalon in Peabody/Danvers (now called 14 North); and the YMCA in Marblehead/Salem. The connections are shown on the map in Figure 1 and information pertaining to these connections is provided in Table 1.

Figure 1: New Water Connections Since 2002 & Communities Pursuing Admission

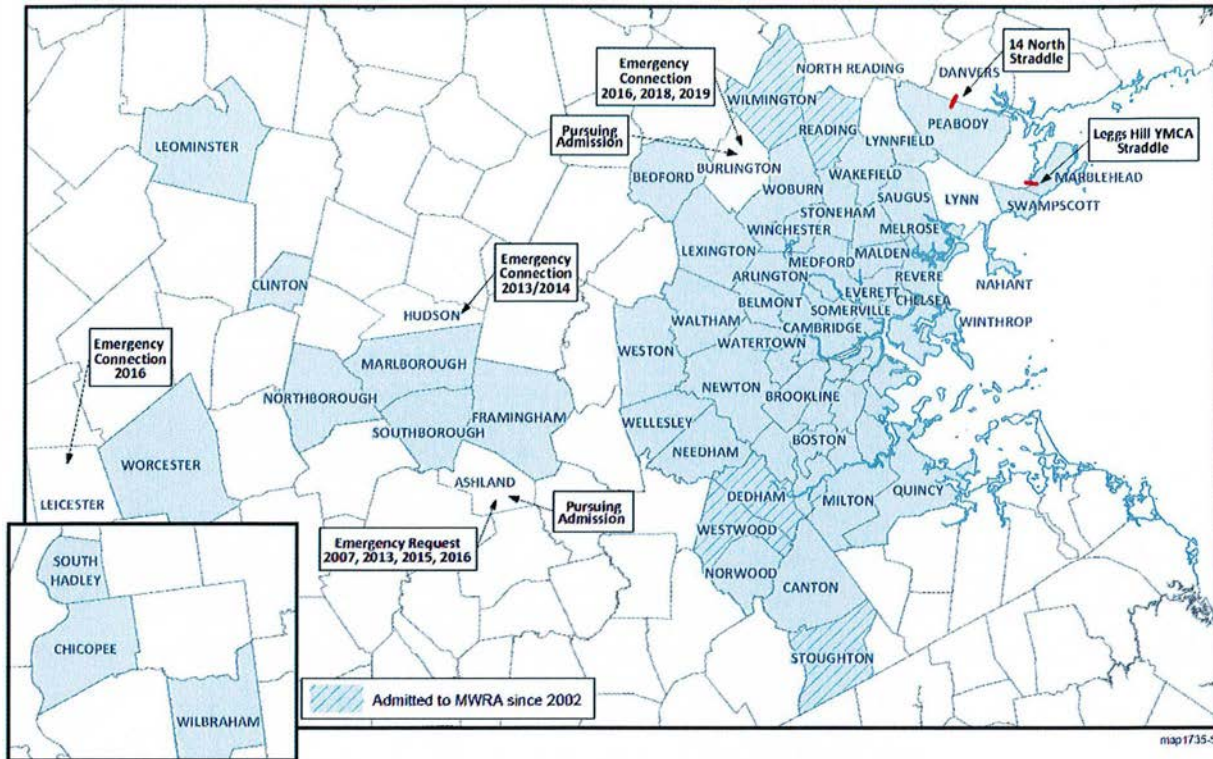


Table 1 - Approved Connections to MWRA Water System Since 2002

Applicant	Applicable MWRA Policy	Approval Date or Emergency Period	Entrance Fee or Payment of Charges Under the Emergency Policy	MWRA Approved withdrawal	2019 MWRA Withdrawal
Burlington (perusing admission)	OP.05 Emergency	9/30/16- 3/29/17 1/18 7/18 12/18 3/19 5/19 10/19	Prior to 2019, MWRA has received a total of \$162,545. For 2019, MWRA received \$86,636 for March/May and \$14,207.33 for October.	0.7 mgd	0.347 mgd 0.095 mgd 0.539 mgd
Cherry Valley Rochdale Water District	OP.05 Emergency	10/27/16- 4/6/17	0	N/A	0
Ashland (perusing admission)	OP.05 Emergency	12/07-5/07 12/13-6/14 12/15-6/16 8/22/16- 2/22/17	For 4 six-month emergency withdrawal periods, MWRA received \$14,078.	.75 mgd	0
Hudson	OP.05 Emergency	6/13 12/13 6/14	For 3 six-month emergency withdrawal periods, MWRA received a total of \$1,033,787.	N/A	0

Table 1 - Approved Connections to MWRA Water System Since 2002					
Applicant	Applicable MWRA Policy	Approval Date or Emergency Period	Entrance Fee or Payment of Charges Under the Emergency Policy	MWRA Approved withdrawal	2019 MWRA Withdrawal
Dedham/ Westwood W.D (partially supplied)	OP.10, New	12/05 12/14 10/18	Entrance fee \$548,748 for first .1 mgd paid in full. Fee of \$566,727 for additional 0.1 mgd paid in full.	0.2 mgd 150 mg (1 mgd for 5 months)	0.658 mgd
Wilmington (partially supplied)	OP.10, New	5/09	Net Entrance Fee of \$2,809,320 w/ 20-year payment schedule. On-time payments.	0.6 mgd	0.38 mgd
Reading	OP.10, New	11/05 10/07	\$3,285,242 (first 0.6 mgd) \$7,799,606 (for additional 1.5 mgd). Paid in full	2.1 mgd	1.52 mgd
YMCA Salem/Marblehead	OP.09, Straddle	11/06	\$70,823 paid in full	0.0127 mgd	0.0091 mgd
14 North Danvers/Peabody	OP.09 Straddle	05/03	\$64,063 paid in full	0.012 mgd	0.00592 mgd
Stoughton (partially supplied)	OP.10, New	6/02	Net Entrance Fee 5,657,117, paid in full as of 7/19.	1.15 mgd	0.089 mgd

The highlights of Table 1 include:

- All water supply withdrawals are below their contract limits.
- For permanent connections, all entrance fees have been paid pursuant to agreed-upon schedules of payments included in MWRA Water Supply Agreements.
- Stoughton’s Entrance Fee was paid early and in full as of July 2019.
- In September 2018, Dedham-Westwood formally requested approval from the MWRA and the MWRA Advisory Board, to temporarily increase its MWRA withdrawal by 150 million gallons (1 mgd for five months). The work being conducted by Dedham-Westwood was delayed by several months so this increased withdrawal did not commence until 2019. The existing water supply agreement between the MWRA and Dedham-Westwood has a provision for a temporary increase in volumes beyond 2 mgd and 73 million gallons on an annual basis without a written amendment to that agreement.
- At Burlington’s request, on March 20, 2019, May 15, 2019, and October 4, 2019, MWRA authorized the temporary use of the emergency connection (up to thirty days) as a result of maintenance and mechanical issues within the local system. Also at Burlington’s request, on October 16, 2019, pursuant to OP.05, the MWRA’s Board of Directors voted to authorize long-term use of the emergency connection (up to six months) to perform necessary maintenance at the local Mill Pond Water Treatment Plant. However, the six-month agreement did not end up being needed. Burlington is currently in the process of joining the MWRA water system.

Sewer

In 2019, the MWRA Board of Directors voted to approve one request under #OP.11, Admission of New Community to MWRA Sewer System and Other Requests for Sewer Service to Locations Outside MWRA Sewer Service Area, for Crescent Ridge Dairy in Sharon. There were no new formal applications for admission under #OP.11 or #OP.4, the “Sewer Straddle” policy; however, several inquiries about admission were received.

Figure 2 shows and Table 2 summarizes connections to the MWRA sewer system since 2002 when annual reporting requirements were established, including the recently approved Crescent Ridge Dairy connection.

Figure 2: New or Increased Volume Sewer Connections Since 2002

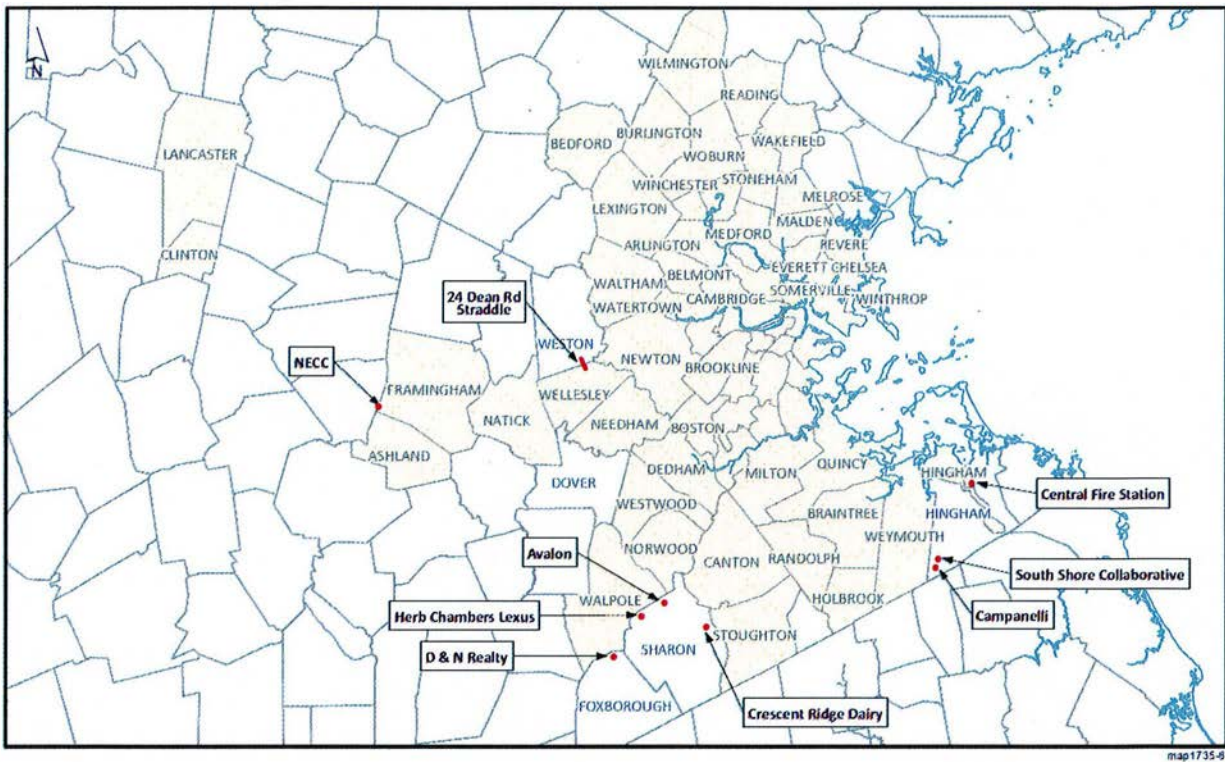


Table 2 - Approved Connections to MWRA Sewer System Since 2002						
<i>Applicant</i>	<i>MWRA Policy</i>	<i>Approval Date</i>	<i>Entrance Fee Payment</i>	<i>Status of Inflow Removal/Other Contract Requirements</i>	<i>MWRA Approved discharge</i>	<i>Estimated Discharge to MWRA in 2019*</i>
New England Center for Children, Southborough	OP.11	7/15	\$24,228 Paid in full	Inflow removal completed.	12,500 gpd	9,035 gpd
FoxRock Realty	OP.11	4/12	\$9,133 + \$12,750 paid in full	Inflow removal completed.	5,536 gpd	2,283 gpd
South Shore Collaborative, Hingham						

Table 2 - Approved Connections to MWRA Sewer System Since 2002						
<i>Applicant</i>	<i>MWRA Policy</i>	<i>Approval Date</i>	<i>Entrance Fee Payment</i>	<i>Status of Inflow Removal/Other Contract Requirements</i>	<i>MWRA Approved discharge</i>	<i>Estimated Discharge to MWRA in 2019*</i>
24 Dean Road, Weston/Wellesley	OP.04	3/11	\$18,033 paid in full	Inflow removal completed.	575 gpd	341.13 gpd
D&N Realty, Foxborough	OP.11	6/07	\$168,391 paid in full	Inflow removal completed.	13,000 gpd (average) 22,750 gpd (max day)	6,310 gpd
Avalon Bay, Sharon	OP.11	6/07	\$105,586 paid in full	Inflow removal completed.	16,120 gpd	15,168 gpd
Herb Chambers Lexus, Sharon	OP.11	5/07	\$40,750 paid in full.	Inflow removal completed.	6,400 gpd (average) 10,500 gpd (max)	8,993 gpd**
Hingham Fire Station, Hingham	OP.11	4/07	\$8,429 paid in full	Inflow removal completed.	782 gpd	216.63 gpd
Campanelli, Hingham (now Gill Research Drive, LLC)	OP.11	2/04	\$11,162, paid in full	Inflow removal completed.	2,475 gpd	No reporting requirement in contract
* Wastewater discharges are estimated based on water meter readings.						
**Water consumption figures are adjusted downward by 5% to account for a certain percentage of water that is used by the facility and not returned as wastewater (such as landscaping, water consumed).						

The key findings of Table 2 include:

- South Shore Collaborative in Hingham appeared over its approved estimated discharge in 2018 due to a reporting error. MWRA worked with South Shore Collaborative in 2019 and resolved the issue.
- Herb Chambers of Chicopee, LLC Lexus of Sharon was over its approved estimated discharge in 2019 due to an increase in water usage during the first half of the year (March & June meter readings). Despite immediate investigations, Herb Chambers was unable to determine the cause, though usage returned to normal during the second half of the year. Herb Chambers has increased water usage monitoring and ensured all on-site conservation measures are functioning properly. MWRA will continue to coordinate with HCC to ensure this issue is resolved.
- All other connections reported that wastewater discharges in 2019 were below their approved agreement limits and entities reported compliance with obligations related to sewer system operations.

- In 2019, Crescent Ridge Dairy completed the application process pursuant to OP.11 and on May 29, 2019, the MWRA Board of Directors voted to approve admission to the MWRA wastewater system. Crescent Ridge is required to abate 40,000 gpd of Infiltration and Inflow (I/I) in the Stoughton wastewater system, and obtain an MWRA Sewer Use Discharge Permit prior to the discharge of any wastewater to the MWRA system. At this time, Crescent Ridge Dairy has not yet submitted this permit application, but is expected to in 2020.

Potential Future Connections and Expansions

In 2019, several communities and other potential applicants inquired about the process and feasibility of connection to the MWRA or expanding existing service volumes.

Communities

Ashland: Ashland is seeking approximately 0.2 mgd (up to 1.6 mgd peak use and 73 million gallons annual use) of supplemental water supply from MWRA in an effort to diversify its water source. Currently, the Town relies on three wells in a well field adjacent to the Hopkinton State Reservoir. In 2018, Ashland completed the MEPA process and received approval from the Water Resources Commission (WRC) for its request for an Interbasin Transfer. During 2019, enabling legislation for admission was passed and Ashland continued to work with MWRA staff towards submitting a formal application in compliance with OP.10. Ashland's formal application is expected in 2020.

Burlington: At its May 2018 Town meeting, members voted to approve Article 15, which provides \$5.3 million in funding to begin the process of joining the MWRA. Since that time, Burlington has been moving through the MEPA process. In December 2019, Burlington filed a DEIR and a certificate was issued by the Secretary outlining a scope for an FEIR and the FEIR is expected to be filed in early 2020. The FEIR will also serve as the application for a request for Interbasin Transfer, to be reviewed by the WRC. Enabling legislation for admission was passed in 2019. Coordination with Burlington will be on-going in the year ahead.

Pursuant to OP.10, once a community has completed the MEPA process, received approval for Interbasin Transfer from the WRC, and legislation has been enacted authorizing the addition of that community to Section 8(d) of the MWRA Enabling Act, a formal application is submitted to MWRA and the MWRA Advisory Board. The request for admission is then voted on for approval by the MWRA Advisory Board Executive Committee, the full MWRA Advisory Board, and finally the MWRA Board of Directors.

Non-Communities

Sherborn Potential Development: Pulte Homes of New England, LLC has been in contact with MWRA regarding a proposed residential development in Sherborn to be located near the Natick and Framingham borders. The developer is interested in options to connect to the sewer in Natick and to purchase water through Framingham. Initial conversations allowed Pulte Homes to understand that while a sewer connection is likely feasible, a water connection is not because it is the development, as opposed to the municipality or a water district, which is seeking to purchase

water. In 2019, the developer indicated interest in creating a water district to make connection to MWRA possible. Admission policy and cost information has been provided.

The Rivers School: This is a co-educational, college preparatory day school for students in grades 6 through 12, located at 333 Winter Street on the Weston/Natick town line. The school, which has property in both towns, is seeking to discharge wastewater generated at the Weston portion of its campus into the MWRA system. The school has determined that the most sensible location for this connection is via the collection system in Natick. MWRA staff have met with operational staff and a consultant for the school. On average, the school generates approximately 2,500 gallons per day; however, the peak day average daily flow, for example when there are large events at the school, is about 14,500 gallons per day. The school has a functioning on-site wastewater treatment system that is a permitted groundwater discharge. However, given the fluctuations in flows when students are in and out of school, it is difficult to maintain the system effectively and meet permit requirements during low flow periods. Further, the school has indicated an interest in doing more to protect surface waters in neighboring areas and a sewer connection, as opposed to a groundwater discharge, would advance that goal. School officials have obtained approval for the connection from both Weston and Natick. MWRA staff are in coordination with the Rivers School and a formal application is expected in the coming months.

Yankee Trader Foods: This Company, which makes frozen seafood appetizer products, has purchased a building in Hingham. The property, located at 80 Sharp Street, has a failed septic system. The company expressed interest in connecting via the Weymouth wastewater system to discharge an average of 1,500 gpd, with a peak of 3,000 gpd. On April 22, 2019, MWRA met with Yankee Trader Foods to discuss the requirements of OP.11 and the admission process. Since this meeting, there has not been any additional communication from Yankee Trader Foods regarding their plans to pursue admission.

Miscellaneous: Throughout the year MWRA received various inquiries, typically from residential homeowners, regarding connection to either the MWRA water or wastewater system. In addition, from time to time communities, particularly those with water quality concerns, reach out for information. MWRA staff provide information, answer questions, and help all who seek to understand the admission process.

ATTACHMENT:

Attachment A: Policies for Admission to the MWRA

ATTACHMENT A

Policies for Admission to the MWRA

- **OP. #04, Sewer Connections Serving Property Partially Located in a Non-MWRA Community.** This policy applies to persons seeking sewer services for buildings/structures that are located partially within an MWRA sewer community and partially outside an MWRA sewer community (the actual structures, not just the parcel of land on which the structure is located, must straddle the municipal boundary). It is also known as the “Sewer Straddle” policy.
- **OP#05. Emergency Water Supply Withdrawals.** This policy applies to communities outside MWRA’s Water Service Area that are seeking MWRA water on an emergency basis. The MWRA may approve emergency withdrawals for no more than six months at a time, and typically, the emergency withdrawal period coincides with a DEP Declaration of Emergency for the Community.
- **OP#09, Water Connections Serving Property Partially Located in a Non-MWRA community.** This policy applies to persons seeking to obtain water for a location, building, or structure located on a parcel of land, under single ownership, and which is subject to an integrated plan for use of development. That location, building, or structure is located partially within an MWRA water community and partially outside an MWRA water community. It is also known as the “Water Straddle” policy.
- **OP#10, Admission of New Community to MWRA Water System.** This policy applies to communities seeking admission to the MWRA water system. OP#10 also applies to any local body, institution, agency or facility of the Commonwealth or federal government seeking MWRA water for a location outside MWRA’s Water Service area. Connections and withdrawals by private entities outside the water service area are prohibited, except for those that are eligible under either the water straddle policy (OP#9), or that are located contiguous to or in the vicinity of local community-owned water supply pipelines that extend from the MWRA’s Chicopee Valley Aqueduct (CVA) and receive the appropriate approvals from the CVA, host communities, and applicable regulatory bodies.
- **OP#11, Admission of New Community to MWRA Sewer System and Other Requests for Sewer Service to Locations Outside MWRA Sewer Service Area.** This policy applies to communities seeking admission to the MWRA sewer system and to all parties seeking sewer service for locations outside the MWRA service area that are not eligible under the Sewer Straddle Policy.

MWRA must approve all extension of service to entities outside the service area pursuant to the applicable policy noted above, with the exception of connections to local community owned water supply pipelines that extend from the Chicopee Valley Aqueduct. This is the case even when an entity outside the service area is not directly connected to the MWRA, but instead to a community local system that is part of the MWRA service area.