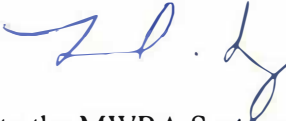


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 17, 2019
SUBJECT: 2018 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 2018 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 2018 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

- # 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 2018, 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 DCR Hydrologic Conditions Reports, precipitation was at or above normal in the Spring of 2018 and after a short dry period during May and June rainfall returned to normal and above normal for the balance of the year. There were no requests for withdrawals under OP.5, Emergency Water Supply Withdrawals, due to hydrologic conditions, although there was one request from Burlington due to operational issues within the local system resulting in inability to meet local demand. There were no formal applications to the MWRA in 2018 under OP.09 or OP.10 – “water straddle” or admission of a new community, respectively.

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

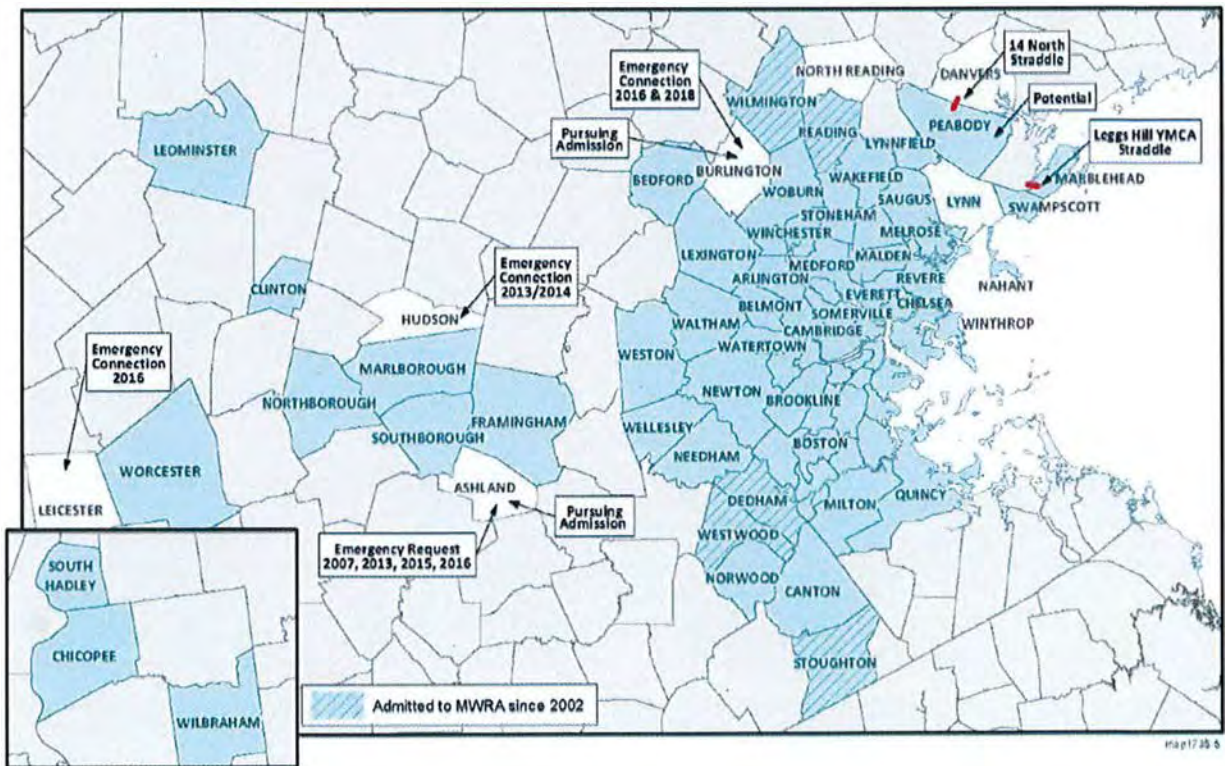


Table 1 - Approved Connections to MWRA Water System Since 2002					
Applicant	Applicable MWRA Policy	Approval Date or Emergency Period	Entrance Fee or Payment of Charges Under the Emergency Policy	MWRA Approved withdrawal	2018 MWRA Withdrawal
Burlington	OP.05 Emergency	9/30/16- 3/29/17 1/18 7/18 12/18	For 1 six-month and 3 one-month emergency withdrawal periods, MWRA received a total of \$162,545.	N/A	0.07 mgd
Cherry Valley Rochdale Water District	OP.05 Emergency	10/27/16- 4/6/17	0	N/A	0
Ashland	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
Dedham/ Westwood W.D (partially supplied)	OP.10, New	12/05 12/14 10/18	Entrance fee \$548,748 for first .1 mgd paid. Fee of \$566,727 for additional 0.1 mgd paid in 5 annual installments. Final installment was received in FY19.	0.2 mgd 150 mg (1 mgd for 5 months)	0.124 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	0.499 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	1.615 mgd
YMCA Salem/Marblehead	OP.09, Straddle	11/06	\$70,823 paid in full	0.0127 mgd	0.0073 mgd
14 North Danvers/Peabody	OP.09 Straddle	05/03	\$64,063 paid in full	0.012 mgd	0.00787 mgd
Stoughton (partially supplied)	OP.10, New	6/02	Net Entrance Fee of 5,657,117 w/ 20-year payment schedule. On time payments.	1.15 mgd	0.100 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 the communities' Water Supply Agreements.

- At this time, the Cherry Valley and Rochdale Water District have not executed the Emergency Water Supply Agreement.
- Stoughton's 2018 MWRA withdrawals are substantially below the volume it projected when it joined MWRA. Stoughton has rehabilitated local wells and decreased reliance on MWRA.
- 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 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.
- On March 20, 2019, at Burlington's request, MWRA authorized the temporary use of the emergency connection as a result of maintenance/mechanical issues.

Sewer

In 2018, there was one application to MWRA for a sewer connection 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 formal applications for admission under #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 as well as the proposed new Crescent Ridge Dairy connection.

Figure 2: New or Increased Volume Sewer Connections Since 2002

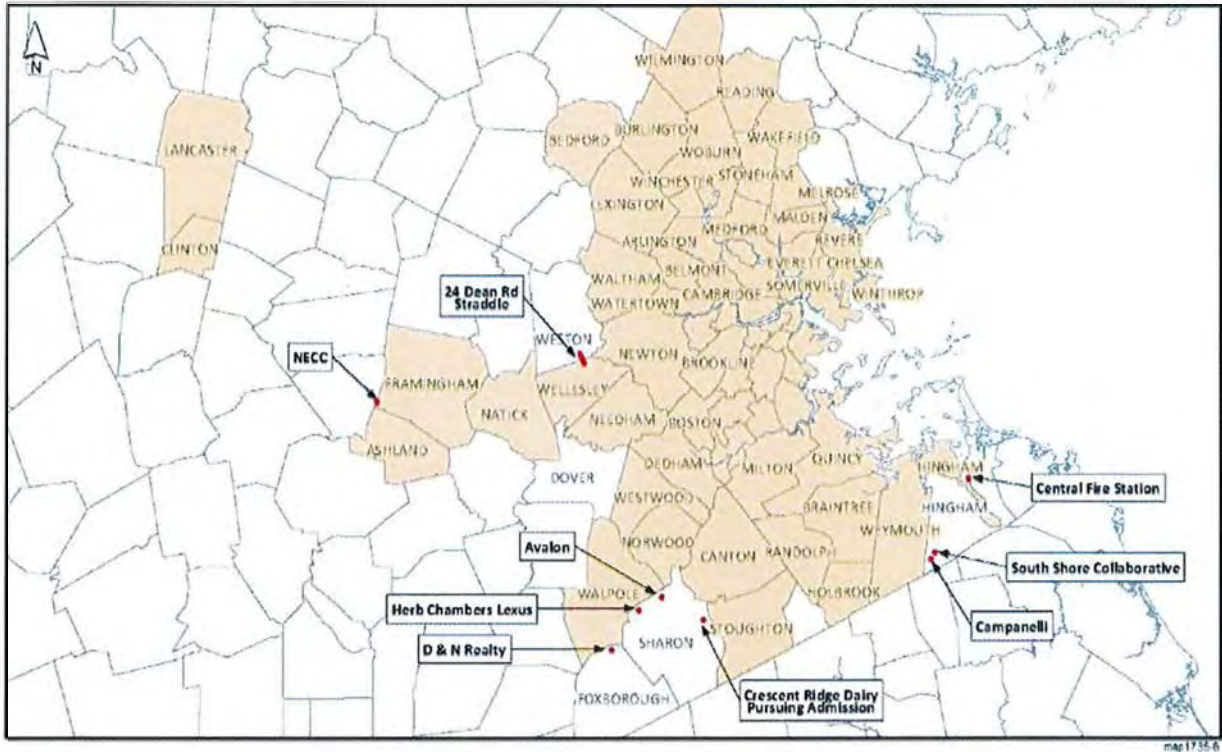


Table 2 - Approved Connections to MWRA Sewer System Since 2002

Applicant	MWRA Policy	Approval Date	Entrance Fee Payment	Status of Inflow Removal/Other Contract Requirements	MWRA Approved discharge	Estimated Discharge to MWRA in 2018*
New England Center for Children, Southborough	OP.11	7/15	\$24,228 Paid in full	Inflow removal completed.	12,500 gpd	9,232
FoxRock Realty South Shore Collaborative, Hingham	OP.11	4/12	\$9,133 + \$12,750 paid in full	Inflow removal completed.	5,536 gpd	7,331 gpd
24 Dean Road, Weston/Wellesley	OP.04	3/11	\$18,033 paid in full	Inflow removal completed.	575 gpd	317.64 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)	4,346 gpd**

Table 2 - Approved Connections to MWRA Sewer System Since 2002						
Applicant	MWRA Policy	Approval Date	Entrance Fee Payment	Status of Inflow Removal/Other Contract Requirements	MWRA Approved discharge	Estimated Discharge to MWRA in 2018*
Avalon Bay, Sharon	OP.11	6/07	\$105,586 paid in full	Inflow removal completed.	16,120 gpd	15,245 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)	5,578 gpd**
Hingham Fire Station, Hingham	●P.11	4/07	\$8,429 paid in full	Inflow removal completed.	782 gpd	203.81 gpd
* 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 is over its approved discharge. Communications are beginning with regard to whether a modification to the entrance fee payment is appropriate.
- All other connections reported that wastewater discharges in 2018 were below their approved agreement limits.
- Entities reported compliance with ongoing obligations that relate to sewer system operations.

Potential Future Connections and Expansions

In 2018, 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 0.3 mgd 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 May 2018, Ashland filed an FEIR with MEPA and a certificate was issued by the Secretary in late June 2018, which found that the project properly complies with MEPA. In October 2018, the Water Resources Commission approved Ashland’s request for an Interbasin Transfer. Ashland is currently working with MWRA staff to submit a formal application in compliance with ●P.10 and is pursuing necessary legislation to authorize connection to the system.

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. In June 2018, MWRA staff met with Town representatives to discuss the next steps for the Town related to the MWRA approval process, environmental permitting, construction of additional water mains and the creation of a water stabilization fund. Options associated with sharing some of the connection costs, particularly if Burlington were to construct a direct connection to MWRA as opposed to wheeling MWRA water through Lexington as it has done in emergencies, is being considered. A flow test has been conducted for the calibration of a hydraulic model. This flow test and calibration included opening a connection between Burlington and Lexington, and tracking pressures and flow rates at key locations. Coordination with Burlington will be on-going in the year ahead. In November 2018, Burlington filed an ENF with MEPA and a certificate was issued by the Secretary requiring a mandatory EIR. The ENF outlined Burlington's two-phased proposal to obtain water supply from MWRA. Phase 1 includes purchasing approximately 1 mgd of MWRA water through a wheeling arrangement with Lexington. Phase 2 includes a second connection to MWRA and pipeline construction to obtain an Average Day Demand of approximately 3.47 million gallons and a Maximum Daily Demand of approximately 6.45 million gallons. In December 2018, MWRA staff attended a scoping meeting with staff from MEPA, MassDEP, Water Resources Commission, Burlington and Lexington to discuss project details and next steps. Burlington is continuing to work on its EIR and in March 2018 MWRA, MEPA, and WRC staff met with the Town to discuss the MEPA process and the best approach for the Town.

Non-Communities

Crescent Ridge Dairy: Crescent Ridge Dairy is currently pursuing admission under OP.11 to the MWRA wastewater system to discharge approximately 6,500 gpd of wastewater via a connection to the Town of Stoughton. In May 2018 Sharon, Stoughton and Crescent Ridge Dairy signed an agreement outlining the details of the sewer connection and codifying a commitment for Infiltration/Inflow removal. Water supply is provided by the Town of Sharon, which has sources in the Neponset River Basin and Taunton River Basin. The portion of the water originating from the Neponset River Basin (0.065mgd) is subject to the Interbasin Transfer Act. Crescent Ridge Dairy has requested a Determination of Insignificance which was reviewed by the Water Resources Commission in March 2019 and is expected to be voted on in April 2019. The Entrance Fee is estimated to be approximately \$25,000. Legislation has been signed enabling MWRA to provide sewer service to Crescent Ridge Dairy upon approval by the MWRA Advisory Board and MWRA Board of Directors. Crescent Ridge Dairy will also be required to obtain a Sewer Use Discharge Permit from MWRA upon connection to the wastewater system.

Sherborn Potential Development: Pulte Homes of New England, LLC recently requested to meet with MWRA about a proposed residential development in Sherborn that is going to be 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 that is seeking to purchase the water. 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 in Weston. The school, which is located on the Weston/Natick town line and 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 place 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 finding it hard 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 begun to have conversations with DPW personnel in Natick to evaluate the feasibility of connecting via their system. Conversations have yet to be finalized with other officials in Natick or Weston, so the Rivers School does not yet have formal approval to join the MWRA, as is required by MWRA admission policies.

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 is looking to connect to the Weymouth wastewater system. The facility would discharge on average 1,500 gallons per-day, with a peak of 3,000 gallons per-day. While these are relatively low volumes, capacity in Weymouth is limited in wet weather and the Town typically requires 6:1 inflow and infiltration removal. MWRA and Yankee Trader Seafood have both been in communications with the Town of Weymouth. Currently, the Town's wastewater superintendent is reviewing the sewer plans, septic connection and grease trap plans to determine if the connection is allowable. If the Town of Weymouth is willing to accept the additional wastewater into its system, then the MWRA will work with Yankee Trader Seafood to consider a recommendation for the MWRA admission process. The wastewater has been described as sanitary waste, but considering that it is generated at a food processing facility, MWRA staff will make a determination as to whether additional permits, such as a Sewer Use Discharge Permit, will be required along with the other components of our admission policy.

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 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 that 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.