

TOWN OF IPSWICH

UTILITIES DEPARTMENT



272 HIGH STREET, PO BOX 151 • IPSWICH, MA 01938 • (978) 356-6635 • FAX: (978) 356-6634

September 19, 2016

Eric S. Worrall, Regional Director
MassDEP Northeast Regional Office
205B Lowell Street
Wilmington, Massachusetts 01887

RE: Town of Ipswich Water Department
PWS ID #: 3144000
Emergency Declaration Request

Dear Mr. Worrall,

The Town of Ipswich is currently experiencing extreme drought conditions. On June 20, 2016 the Water Department imposed watering restrictions. One month later, a full ban on outdoor watering was imposed. The continued lack of rainfall and seasonal customer demand caused the Water Department to declare a drought emergency on August 22, 2016.

The events that brought the Town of Ipswich to this extreme situation and actions taken by the Town in response to the drought are detailed in Appendix A.

The Water Department is managing its sources as necessary to maintain sufficient water quality and pressures throughout the distribution system. Water Management Act authorization in the Ipswich River Basin (Registration # 31714402) has been exceeded. As of this date, we have not exceeded the 100,000 gallon per day buffer. Although the Parker River Basin Permit (Permit # 9P2-3-16-144.01) authorizes sufficient withdrawals, extremely low surface water storage in our reservoirs and restricted use of a highly productive well (Browns Well 3144000-02G) due to elevated levels of Manganese significantly limit use of the Parker Basin sources.

Due to the reduced storage volume of our reservoir system, regulatory limits and other operational limitations, the Water Department's ability to maintain a continuous supply of water to meet demand is compromised. Ipswich respectfully requests a Declaration of Water Supply Emergency be issued by MassDEP to authorize Ipswich to take the steps detailed in Appendix B to address the immediate threat to the public health, safety and welfare of the citizens of Ipswich.

Please contact me with questions or concerns at 978-356-6635 extension 2108 or vhalmen@ipswichutilities.org

Sincerely,

A handwritten signature in blue ink, appearing to read "Vicki Halmen". The signature is fluid and cursive, with the first name "Vicki" and last name "Halmen" clearly distinguishable.

Vicki Halmen
Water & Wastewater Director

CC: Robin Crosbie, Ipswich Town Manager
Ipswich Board of Selectmen
Bethany Card, Deputy Commissioner MassDEP
Duane LeVangie, Water Management Act Section Chief, MassDEP
Tom Mahin, Drinking Water Section Chief, MassDEP – NERO

APPENDIX A

The information below details specific events/actions related to the drought.

Ipswich has continued its residential seasonal rate structure, which began in 2003, as a means of seasonal water demand management. Throughout the drought season, beginning in May, Water Department staff meet formally and informally on a regular basis. Discussions include: specific source operation, WMA compliance, surface water levels, water quality, watershed inspections and overall drought management.

Throughout this drought season, Ipswich staff has been engaged in discussions with various members of MassDEP, community leaders (Ipswich and others) and other related staff, as well as the media. Below is a non-exhaustive list of all ongoing efforts to address improvements to the Ipswich water system (infrastructure, treatment, supply).

June 20, 2016 Water Restrictions Declared

Reservoir Storage 71.8 MG (91.4 MG Capacity)

Rainfall to date 17.74 inches (10 inch +/- year to date deficit)

During a declared public water supply shortage, the following practices shall be **permitted**:

- (a) Car washing, by the pail method only.
- (b) Lawn/garden watering by hand-held hose between the hours of 7:00 p.m. and 6:00 a.m.

The following practices shall be **prohibited**:

- (a) Pool filling/refilling (pool owners shall contract for the delivery of pool water from suppliers other than those of the Town).
- (b) Washing of house siding.
- (c) Automatic sprinkler use.

Customers notified via local media outlets, town website, utility newsletter, signs and banner placed throughout town.

July 20th

Water Ban Declared

Reservoir Storage 49.9 MG

Rainfall to date 18.14 inches (10 inch +/- YTD deficit)

During a declared public water ban all outside use of water is prohibited.

Customers notified via local media outlets, town website, utility newsletter, signs and banner placed throughout town.

Ipswich Police begin conducting patrols to identify water ban violators, report to Water Director. Verification of municipal water is made and warnings issued as appropriate.

July 29th Rave alert message sent to all residents
Ipswich EMA Alert:

This is Water & Wastewater Director Vicki Halmen. Due to high customer water demand and persistent drought conditions, the Town of Ipswich imposed a mandatory water ban on July 20th. This ban prohibits all outdoor water use, and will be in effect until further notice. Sustained days of rain and cooler temperatures, in addition to your reduction of water consumption, are needed to alleviate this severe shortage of water. We urge all residents to comply with this ban and reduce your water use as much as possible. For more information please visit ipswichma.gov. Thank you for your cooperation.

August 2nd Water Subcommittee convened to discuss drought situation
Discussion topics include:

- Communicate with Fire Chief to prepare for potential supply deficiencies
- Potential to utilize Beverly/Salem supply
- How the Master Plan will be developed to include long range planning to address drought management (increased storage, wastewater reuse, etc.)
- Modifications to existing regulations to address violations to water restrictions.

August 9th First of weekly drought status updates released
Sent to Town officials, media, posted on website and sent as alert to subscribers. Updates continue on a weekly basis.

August 10th All Water Department staff met to discuss current operation, short and long term options to address drought – Short term options:

- Use of newly installed test wells on former Lynch property for Bull Brook recharge.
[Reviewed logistics of test well use with consultant]
- Increase use of Browns Well (currently restricted due to Manganese).
[Flow rate was not increased from 200 gpm; days of use remain limited]
- Reduce use of WTP due to limited surface water storage; increase well use, proceed with caution due to Mn and WMA withdrawal limits in Ipswich Basin.

August 12th Water Department contacted MassDEP
Discussed concerns over the ability to maintain safe and adequate service levels.

August 22nd Drought Emergency Declared
Reservoir Storage 37.4 MG
Rainfall to date 20.39 inches (10 inch +/- YTD deficit)

During a declared Drought Emergency all outside use of water continues to be prohibited and all residents are to limit non-essential indoor water use.

Customers notified via local media outlets, town website, utility newsletter, signs and banner placed throughout town.

Staff inspected Bull Brook watershed in search of water

- All previously installed beaver/flow control devices are intact and functioning, but little water is in watershed.
- Beaver dam/blocked culvert behind Doyon School, off Sand Pebble Drive on private property found to be impounding water that would flow to Bull Brook.
- With drought condition critical we will request an emergency certification to breach dam and clear culvert. Landowner permission had been previously obtained.

Rave alert message sent to all residents

Ipswich EMA Alert:

This is Water & Wastewater Director Vicki Halmen. Due to the shortage of rainfall and continued high water demand, the Water Department is declaring a Drought Emergency, effective today, August 22nd. It is imperative that demand drop to winter levels immediately in order to ensure the Water Department can continue to meet basic domestic and firefighting needs. Please help reduce town-wide water use by 200,000 gallons per day. All outdoor watering must stop and customers should limit non-essential indoor water use. Irrespective of where your water comes from, we ask that all residents abide by this order. For more information on the drought and ways to save water, please visit ipswichma.gov. Thank you for your cooperation.

August 23rd Beaver Threat Determination Request sent to MassDEP for the beaver dam off Sand Pebble Drive

August 31st Received Determination of Threat to Public Water Supply due to Beaver from DEP

Pump test conducted at former Lynch property

Pump test (8 hour) conducted as part of previously planned new source investigation.

Water samples taken for testing of all parameters related to new source approval in anticipation of potential use for recharge.

Sept 2nd Obtained Emergency Certification from Ipswich Conservation Commission Breached beaver dam as authorized.

Obtained verbal declaration of Water Supply Emergency from MassDEP

Sept 6th Drought update provided at Board of Selectmen public meeting

Obtained 10-day emergency trapping permit from Ipswich Board of Health

Began beaver trapping with a licensed trapper.

- Sept 13th Hosted meeting with local town and state officials to discuss drought**
- Sept 15th Breached beaver dam for second time and installed beaver deceiver, as authorized**
- Sept 16th Submitted written request for Declaration of Water Supply Emergency**

Ipswich intends to maintain these comprehensive efforts to reduce the Town's water demand and will continue its public outreach campaign and water use restrictions in accordance with the Ipswich By-Laws for as long as Drought Conditions continue.

APPENDIX B

In order to address the current drought situation, Ipswich respectfully requests permission to use its three active sources in the Ipswich River Basin (Winthrop Well #2 3144000-04G; Essex Road Wells 3144000-06G; and Fellows Road Well 3144000-07G) at volumes that may lead it to exceed of the threshold volume for permitting of those sources. Ipswich has currently exceeded it permitted threshold in the Ipswich Basin, however, remains within the 100,000 gallon per day buffer. Ipswich proposes to begin additional pumping of the above referenced sources immediately.