

**147 Cordaville Road  
Southborough, MA 01772**



**DATE: June 9, 2022**

**MEMORANDUM**

**TO: Southborough Select Board  
Southborough Capital Planning Committee  
Southborough Advisory Committee  
Public Works Planning Board**

**CC: Mark Purple, Town Administrator  
Brian Ballantine, Treasurer/CFO**

**FROM: Karen Galligan, DPW Superintendent**

**SUBJECT: Hopkinton Water Interconnection**

The Town of Hopkinton is seeking a connection to the Massachusetts Water Resource Authority (MWRA) system. Their best option for this connection is through the Town of Southborough. Hopkinton, like Ashland, has retained Pare Corporation (Pare) Southborough's Water Engineer to look into this interconnection.

Tim Thies from Pare, John Westerling, Hopkinton DPW Director, Norman Khumalo, Hopkinton Town Manager, Mark Purple, Southborough Town Administrator and I met in January to discuss the results of Pare's hydraulic evaluation of an interconnection between Southborough and Hopkinton. Pare and Hopkinton took Southborough's feedback and revised the project approach. Specifically, Pare evaluated ways to reduce the potential adverse impacts to Southborough's current customers while also looking for opportunities to improve water service in Southborough. Pare developed a project that meets both criteria, and the parties met via Zoom to discuss the revised project. Below is a brief description of the project, followed by a list of the impacts (benefits) it would have on Southborough's system based on discussions and emails with Pare.

The proposed interconnection involves three main elements in the Town of Southborough:

1. Upgrade the Boland and Hosmer pump stations to supply the combined maximum day demands of Southborough and Hopkinton.
2. Install new pipes in various locations around Southborough to improve transmission capacity between the pump stations and the new interconnection.
3. Replace the Oak Hill storage tank with a new larger and taller storage tank.

The benefits to Southborough are as follows:

1. While both pump stations have been recently upgraded, as part of this project they would be further upgraded to increase capacity, which would mean all new pumping and piping in the stations. And while these upgrades are not a high priority for Southborough because the stations were recently upgraded, they would result in extended life of each station. So, while the benefits of this part of the project are not overly significant, they come at no cost to Southborough and provide a benefit through extended service life of each station;
2. The installation of new pipes in certain parts of Town will increase transmission capacity for Hopkinton and improve circulation in the system for Southborough. These new pipes will also

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result in improved fire protection in the areas that they serve. These new pipe sections will replace smaller diameter pipes in the system that vary in age from 30 to 60 years old. The benefit to Southborough is improved circulation, improved fire protection, and the replacement of older, small diameter pipe at no cost to Southborough;

3. The benefits of a new, larger and taller tank at Oak Hill are both significant and numerous.
  - a. If we replace Oak Hill with a tank that is 23 feet taller than the current tank, we could run the entire Southborough system as a single pressure zone, thereby eliminating the need for the 4 pressure reducing valves that currently exist;
  - b. Adding 23 feet would add about 10 psi to the current Low Service Area of the system, which would improve pressure throughout the southern half of Town. The increase in pressure would offset the reduction in pressure that we may see when Hopkinton is drawing water at its maximum draw rate in the summer;
  - c. Adding 10 psi to the system would improve fire protection throughout the Low Service Area;
  - d. Adding 10 psi to the system would improve delivery capacity to the Ashland interconnection;
  - e. The current Oak Hill tank has a significant amount of unusable storage; the new tank would be designed to be almost 100 percent usable;
  - f. The new tank would be larger than the old tank, which could eliminate the storage deficit the Town of Southborough has had for many years. This issue has been a significant one for the Town, both in the High Service Area and the Low Service Area. By running the system as a single pressure zone, we no longer need to worry about High Service Area versus Low Service Area and how to fix the storage deficit in each; this one project could eliminate this issue for the entire Town;
  - g. Having another tank in the system at the same elevation as Tara means that maintenance on Tara would be much easier. This enables us to take Tara out of service for maintenance, which is very difficult to do currently;
  - h. We also may be able to eliminate the Overlook tank entirely (Pare is still evaluating this, but they say it looks favorable). Eliminating Overlook would mean one less tank in the system that would need regular inspections, maintenance, and future replacement.

If this plan were implemented, we would likely need to install a pressure-reducing valve on Boston Road near the base of the Sudbury Reservoir where pressure may be too high. We would also want to notify the existing customers to let them know of the pressure increase so they could make accommodations for sensitive equipment that could be impacted by higher pressure. This project will take careful planning and coordination by both Towns, but the benefits to Southborough make this project worth our consideration.

This plan addresses many of the water system improvements identified in Southborough's most recent Water System Master Plan (WSMP). Many of these improvements are also identified in previous WSMPs, all of which are posted on the DPW's Water Division website. Addressing these issues through the interconnection allows Southborough to address other water system improvements identified in the WSMP in a timelier manner.