

# TOWN OF IPSWICH

## UTILITIES DEPARTMENT



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### MEMORANDUM

**TO:** BOARD OF WATER COMMISSIONERS  
**FROM:** VICKI HALMEN  
**SUBJECT:** HOOD FARM AREA HYDRANT FLUSHING  
**DATE:** JUNE 16, 2017  
**CC:** TOWN MANAGER, WATER SUBCOMMITTEE

The Water Department has been working to alleviate the impacts of its annual flushing activities in the Hood Farm area since 2015. The most recent effort was to perform targeted flushing in the area to gain additional information on system hydraulics.

The flushing event was conducted on April 4<sup>th</sup> of this year, just prior to our annual flushing program. System pressures and flows were monitored during the flushing. The data confirmed that homes at the highest elevations in this area lose water completely and air gets introduced into the pipes through open hydrants and/or plumbing fixtures. We estimate homes above elevation 100 experience this situation. Homes at lower elevations have significantly reduced water pressure, but may not lose water completely.

The trial included manual use of the Mile Lane Booster Station, which is typically utilized to fill the Pinefield Water Tank. The booster was operated at various rates to determine if flow in this area could be enhanced. It appears it is not effective, as the distance and elevations are too great to overcome.

It was concluded that flushing the area of Linebrook Road west of Pond Edge Lane has the most significant impact to the Hood Farm area. The water system in its current state cannot provide sufficient volume to allow hydrants from this point west to be fully operated without significant impact to area residents.

Questionnaires were sent to area homeowners to provide feedback at the conclusion of the targeted flushing. Roughly two-thirds of the responding residents indicated that targeted flushing had minimal impact to their home. That was perhaps due to the limited nature of the flushing and shorter duration. One-third of the responding residents shared that flushing typically has a medium to severe impact at their home.

During the annual flushing program this year hydrants were operated at a lower flow rate to avoid introducing air into the system. I received feedback that homeowner issues were significantly reduced as a result.

We propose to expand our water system hydraulic model to include the outer Linebrook area and model various scenarios to determine what system improvements (tank, second booster station, piping modification, etc.) may improve the hydraulics in the area. The various options will be evaluated for feasibility and cost effectiveness and presented to the Water Commissioners. Any proposed improvements would then be evaluated against other departmental capital needs.