



**Date:** September 10, 2018  
**To:** Wayland Conservation Commission and Board of Health  
**From:** Henry T. Nover, P.E.  
**Subject:** **Mounding Analysis for Cascade Wayland**

#### DOCUMENTS REVIEWED

- *40B – Peer Review Hydrogeologic Report, Cascade Wayland, 113-119 Boston Post Road, Wayland, MA*; prepared by Tetra Tech; dated July 17, 2018.
- *MEMO, RE: Cascade-Wayland, Hydrogeologic Report (GEOSPHERE, June 26, 2018)*; prepared by Geosphere Environmental Management, Inc.; dated August 28, 2018.
- *PW-ZBA hearing 11 September 2018 – Final V2 – 9.8.2018*: prepared by Mark Hays for ProtectWayland.

#### PROJECT UPDATE

Nover-Armstrong Associates, Inc. (Nover-Armstrong) was asked on behalf of the Conservation Commission to provide preliminary comments regarding Geosphere Environmental Management, Inc.'s (Geosphere) mounding analysis for the Cascade Wayland's proposed subsurface disposal system for the September 12, 2018 Zoning Board of Appeals (ZBA) hearing. Our review is limited to the above referenced documents by the Applicant's hydrogeologist, Geosphere Environmental Management, Inc. (Geosphere); Tetra Tech, the ZBA's hydrogeologic consultant, and Mark Hays for ProtectWayland.

#### PRELIMINARY COMMENTS

- There are obvious differences of opinion between Geosphere and both Tetra Tech and ProtectWayland on the amount of information that is necessary to adequately evaluate Cascade Wayland Project's proposed subsurface disposal system's water quality impact on Pine Brook.
- Geosphere feels that this evaluation is beyond the agreed upon Scope of Work and could be performed under future Board of Health and/or DEP submittals.
- Nover-Armstrong agrees with Tetra Tech's position that evaluation of the impacts to the water quality of Pine Brook should be part of the applicant's hydrogeologic report and feels that the Conservation Commission and the Board of Health should support Tetra Tech's recommendations in this regard.
- ProtectWayland believes there are inaccuracies in the soil permeability and LiDAR surface elevations that result in underestimating the mound height and areas of breakout along Pine Brook.
- It is Tetra Tech's position that the subsurface investigation is appropriate for determining critical model input and the application of the parameters were also likewise appropriate. They believe the modeled seasonal high groundwater could provide conservative estimates of the mounding.

They also believe that model calibration issues were explained appropriately and would not negatively impact the analysis.

- At this time, Nover-Armstrong has no specific comment regarding input parameters inaccuracies in Geosphere's mounding analysis alleged by ProtectWayland. We believe that the Commission and the Board of Health can expect a resolution on this matter between Geosphere, Tetra Tech, and ProtectWayland.
- ProtectWayland believes it's necessary to include in the hydrogeologic analysis the impacts from the anticipated stormwater infiltration system.
- Nover-Armstrong agrees with ProtectWayland' position that the applicant should include the expected infiltration of the project's stormwater in the hydrogeologic report.

## **CONCLUSION**

Nover-Armstrong recommends that the Commission and Board of Health require further evaluation of the impacts of Cascade Wayland's proposed subsurface disposal system on Pine Brook's hydrology and water quality in accordance with the recommendations outlined in Tetra Tech's July 17, 2018 letter to the ZBA and that any proposed stormwater infiltration be included in the hydrogeologic report.