



5/31/2016

Craig Miller,

Included please find two Bathymetric Maps and one Sediment Map developed from Field Surveys conducted on May 4th and May 18th of the Webster University Stormwater Retention Pond. The Bathymetric Contour Map identifies the depth of the lake marked in 1 foot intervals. The Bathymetric 3D Map offers a more visual graphic representation of the same depths. Both maps may be used to benchmark current lake depths, indicate habitat and zones aquatic plants may grow, and document other lake morphometry.

The Sedimentation Map indicates estimated sediment depths collected manually in the field overlaid on current Bathymetric Contours. If previous sediment data is also available an estimation of a lake sedimentation rate may be developed.

I am impressed with the design and function of the Webster University Stormwater Pond. Data collected within the main pool, downstream of the two forbays, indicate minimal accumulation of sediment. The two forbays appear to be doing a good job of protecting it, as they were designed to do..

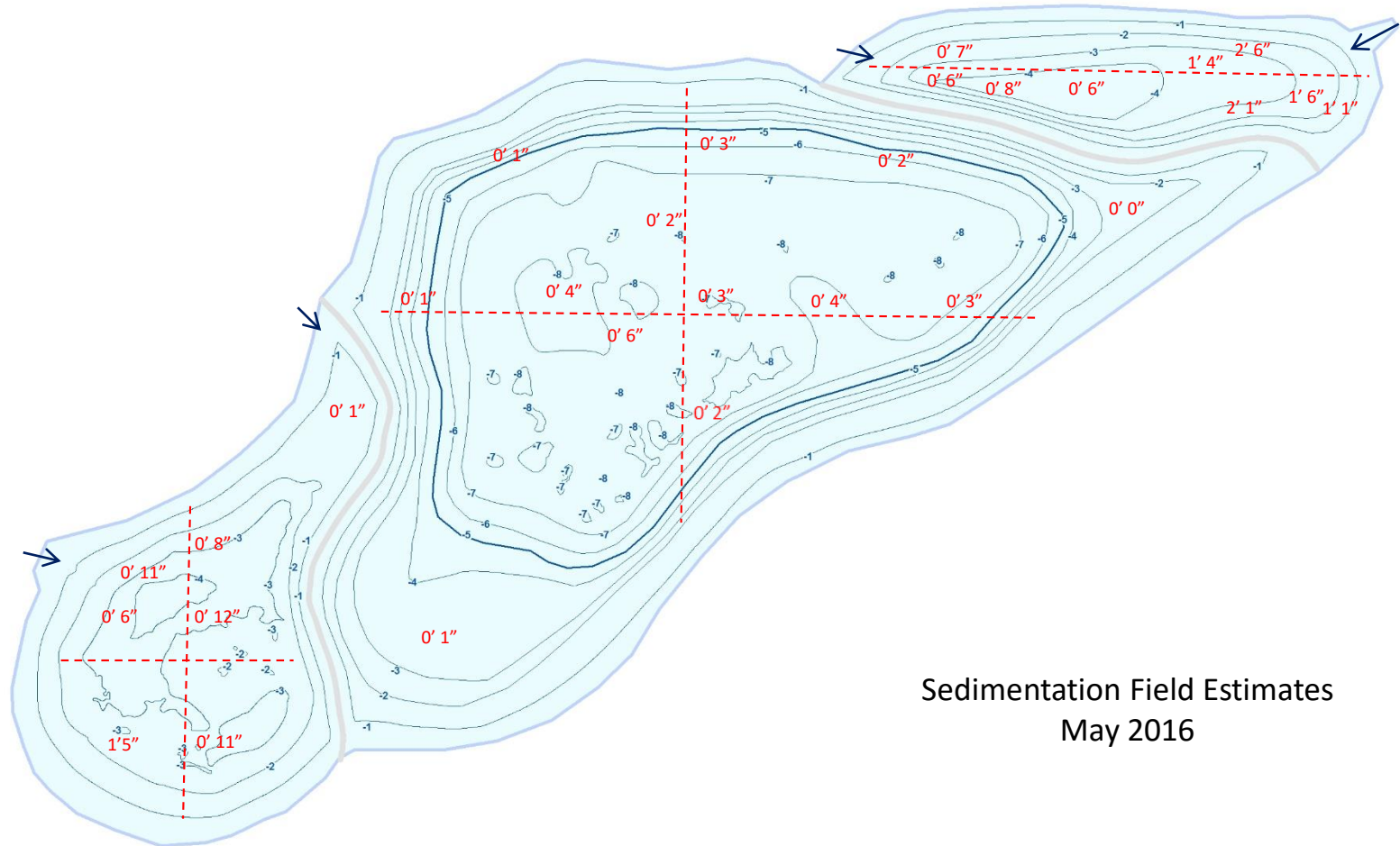
Sediment probes indicate sediment has accumulated within the two forbays. The far east portion of the NE Forbay is collecting sediment gradually filling the deeper east end of its forbay pool area. Less sediment appears to be accumulating from the west inlet of the NE Forbay. The SW Forbay also is catching and accumulating sediment as it protects the main pool. The inlet on the north end of the forbay is shallow with a bed of rock that may be periodically flushed of sediment from heavy rains pushing it into the main forbay pool area. The SW Forbay pool area is accumulating some sediment.

The benthic benches along the shoreline intentionally designed for growing emergent aquatic plants would be expected to have some soil structure to support those plants. No sediment depths for those areas are indicated on the sediment map and sample probes did not indicate a problem. Very little sediment was observed collecting on the steeper sloped areas including the rock slopes on either side of the dividing walls between the basins.

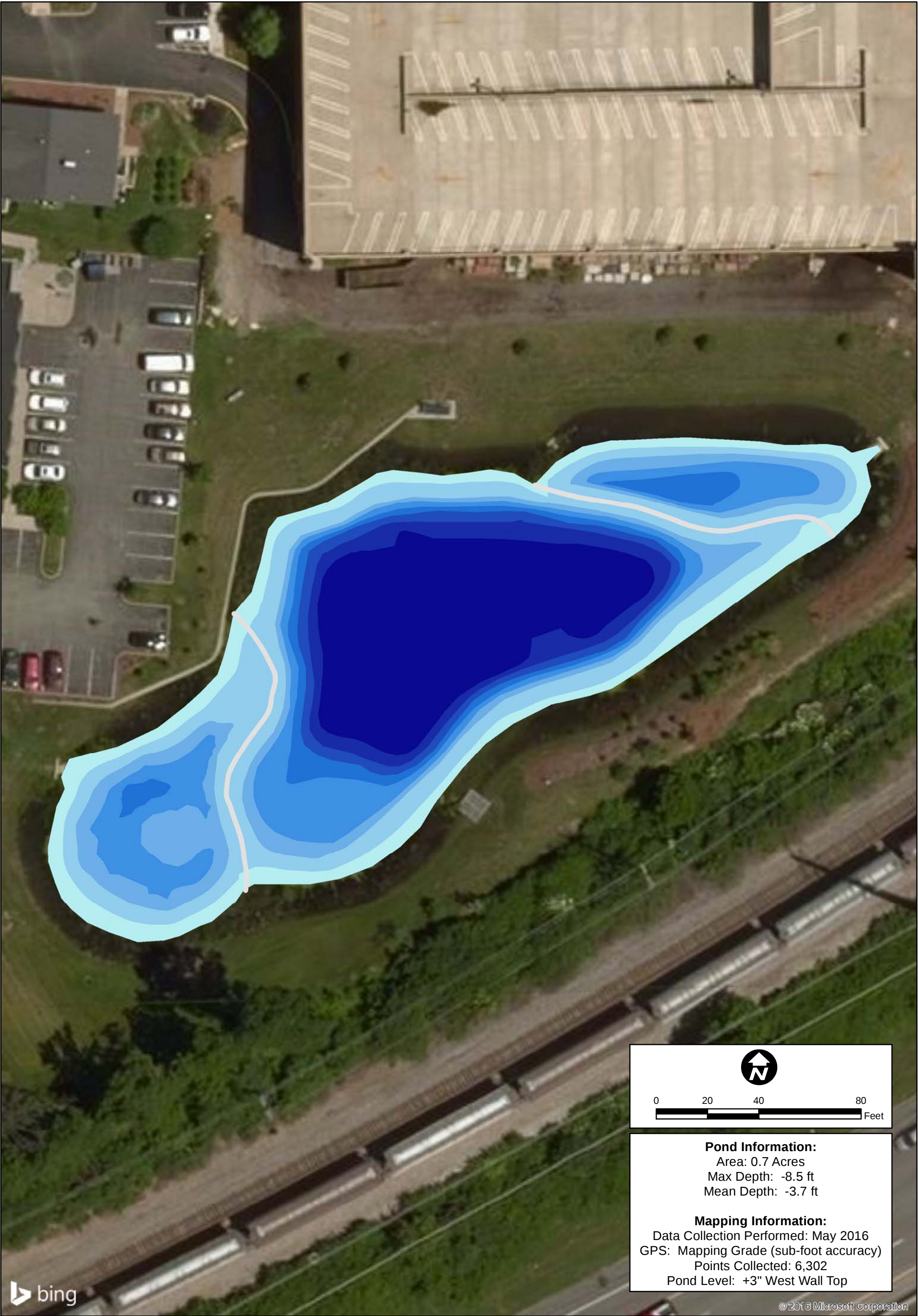
Lake owners often use the maps to identify current lake morphometry problems and benchmark bathymetric conditions. Planning to conduct another bathymetric survey in 5-10 years is valuable to measure changes (lake aging) and project possible lake renovation needs and timing.

Please call if you have any questions.

Jim Darlington



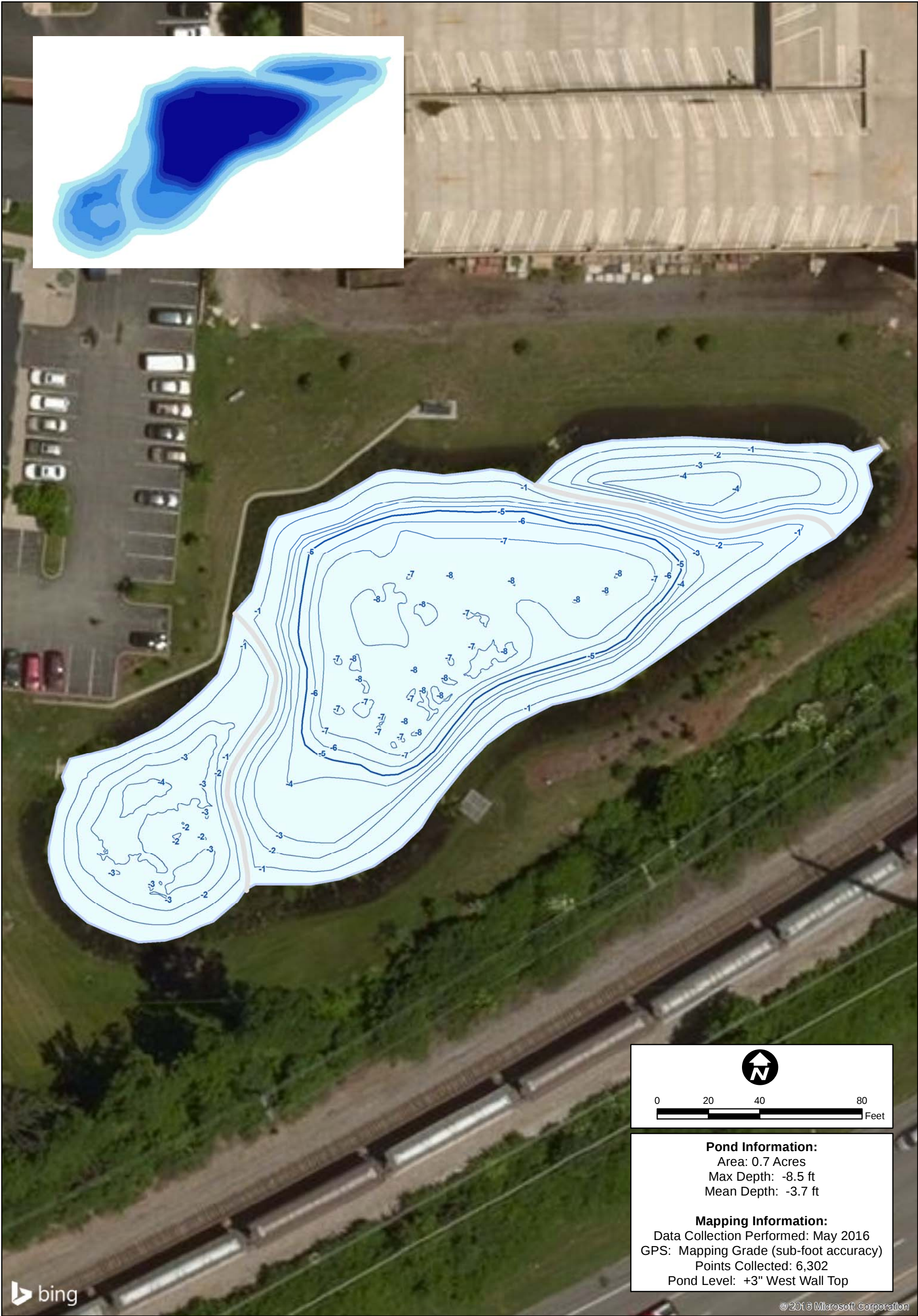
Sedimentation Field Estimates
May 2016



Webster University Detention Pond



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Webster University Detention Pond



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