

September 16, 2013
File No. 15.0166128.01

Mr. Blair Haney
Assistant Planning Director
City of Peabody - Community Development and Planning
24 Lowell Street
Peabody, MA 01960



RE: Containment Basin Constructability Evaluation Addendum
Results of Vernal Pool Investigation
Crystal Lake and Elginwood Pond
Peabody, Massachusetts

ONE FINANCIAL PLAZA
1350 Main Street
Suite 1400
Springfield
Massachusetts 01103
413-726-2100
FAX 413-732-1249
www.gza.com

Dear Mr. Haney:

GZA GeoEnvironmental, Inc. (GZA) is pleased to provide you with this addendum to our April 12, 2013, report entitled “Crystal Lake & Elginwood Pond – Evaluation of Containment Basin Constructability as Part of a Hydraulic Dredging Program”. This addendum presents the results of GZA’s investigative work regarding the certified vernal pools on City-owned land adjacent to Crystal Lake (Assessor’s Parcel Nos. 034-006, 024-077x, and 025-024).

GZA initially visited the City-owned property neighboring Crystal Lake in October, 2012, to perform a wetland assessment in support of the basin constructability evaluation. Several areas with vernal pool characteristics were found on site; however, the pools encountered did not appear to be located where indicated on the Massachusetts Division of Fisheries and Wildlife Natural Heritage & Endangered Species Program (MA NHESP) mapping. Said mapping indicates that several vernal pools (Certified Vernal Pool Nos. 505, 514, 515, 516, 517, and 5221) are located within the general area proposed for containment basin construction. The City hired GZA to conduct a follow-up vernal pool investigation in the Spring of 2013 to survey locate the vernal pools using GPS surveying equipment.

As a first step in attempting to accurately locate the certified vernal pools, GZA contacted MA NHESP to obtain the original vernal pool survey documentation. The provided information included photographs of the vernal pools and documentation that the pools were certified circa 1992. Using the photographs and the current MA NHESP vernal pool mapping, GZA was able to observe and survey-locate each of the aforementioned vernal pools in the field on April 18, 2013. The attached map shows the locations of the certified vernal pools as currently mapped by MA NHESP (red symbols) and the pool locations as surveyed by GZA (yellow symbols).



GZA's survey of these MA NHESP certified vernal pools indicates that all but one of the pools are mapped incorrectly¹. Two of the vernal pools, Pool Nos. 514 and 516, are mapped within the GZA-recommended footprint of the proposed containment basin; however, Pool No. 514 was survey located by GZA to be further south of its mapped location, placing the vernal pool outside of the containment basin limits. Pool No. 516, although survey located several hundred feet from its mapped location, still remains within the proposed containment basin limits.

GZA did not conduct a full-scale biological investigation of Pool Nos. 514 and 516 to determine if they meet current vernal pool certification criteria (published in 2009); however, our limited site investigation on April 18, 2013, found no vernal pool biological activity in either vernal pool. It is possible that these pools could be de-certified; however, investigative work over a span of two years is required and the investigation must determine that either the biological or physical conditions criteria for certifying a vernal pool are not met. Until such time that they are proven otherwise, the on-site vernal pools remain as mapped by MA NHESP and remain certified.

If the City wishes to continue pursuing the hydraulic dredging of Crystal Lake & Elginwood Pond, GZA recommends requesting that the mapped vernal pool locations be revised to the GZA surveyed locations, and further recommends attempting to decertify vernal pool No. 516. The City may engage GZA in performing these tasks by authorizing Task 3 (\$8,400) of GZA Change Order #1, dated April 10, 2013.

If you have any questions, feel free to contact any of the undersigned at 413-726-2100.

Very truly yours,
GZA GeoEnvironmental, Inc.

A handwritten signature in blue ink that reads "Steve T. D'Ambrosio".

Steve D'Ambrosio, P.E.
Project Manager

A handwritten signature in black ink that reads "Paul G. Davis".

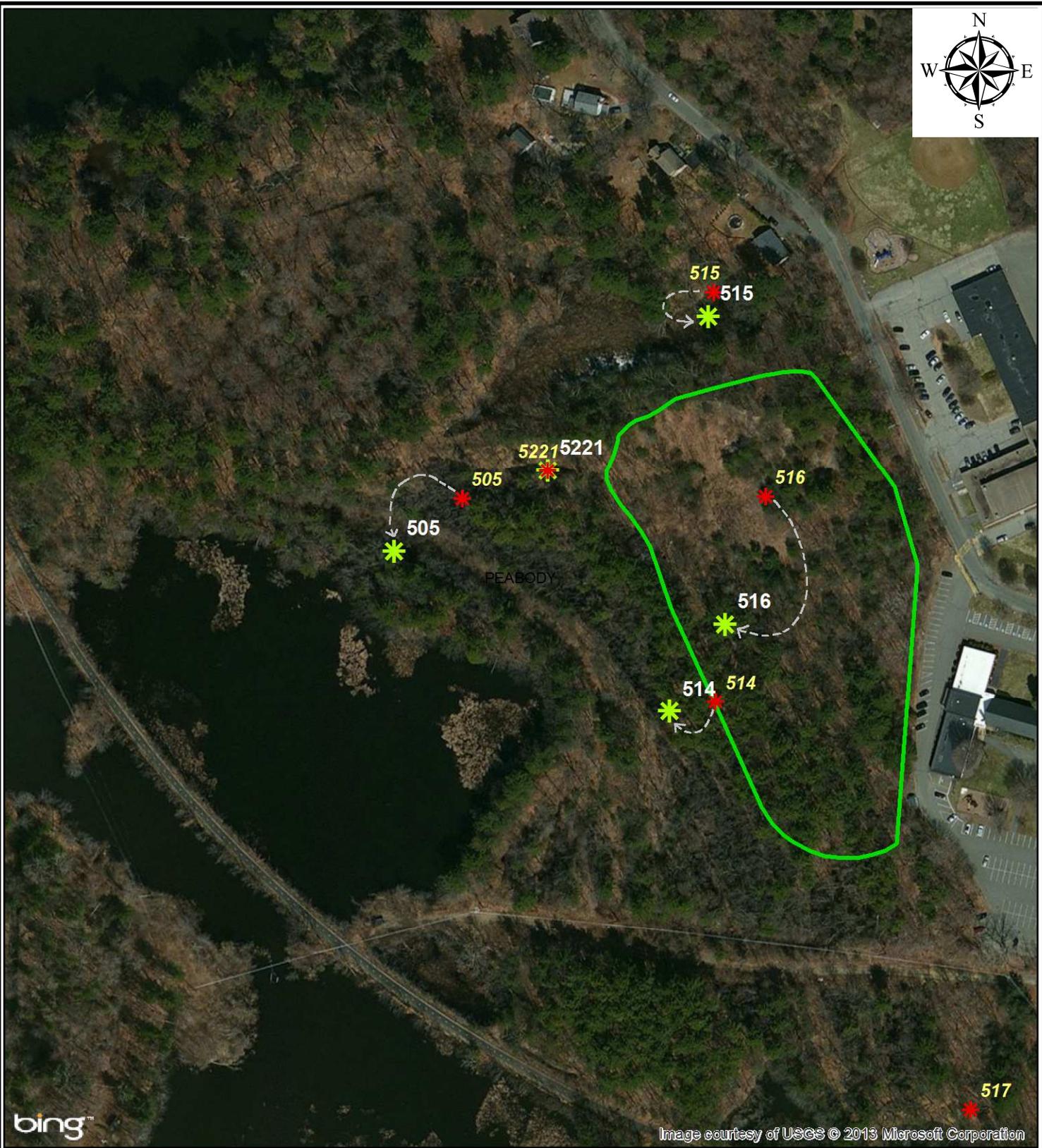
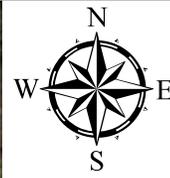
Paul G. Davis, Ph.D.
Principal Environmental Scientist
Consultant / Reviewer

A handwritten signature in black ink that reads "Tom E. Jenkins Jr.".

Tom Jenkins, P.E.
Principal-in-Charge

Attachments: Figure 1: Vernal Pool Location Map (09/2013)

¹ GZA did not attempt to survey locate Vernal Pool No. 517 due to its distance from the proposed containment basin area.



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Image courtesy of USGS © 2013 Microsoft Corporation



VERNAL POOL LOCATION MAP

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- LEGEND**
- Certified Vernal Pools - 2013 GZA GPS Survey
 - Certified Vernal Pools - 2013 NHESP Mapping
 - Proposed Containment Basin Footprint

Crystal Lake and Elginwood Pond Restoration Project Peabody, Massachusetts

Drawn by:
PJS

Checked by:
STD/SDR

Date:
September 2013

BASE MAP: BING MAP AERIAL PHOTO

Figure No:

GZA GeoEnvironmental, Inc.
Springfield, Massachusetts

Data obtained from MASS GIS, Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs (EEA). NHESP 2008 Estimated and Priority Habitats for Rare Wildlife for use with the MA Wetlands Protection Act (310 CMR 10.00)

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