



Town of Lancaster

701 Main Street, Suite 4

Lancaster, MA 01523

Telephone: 978-365-3326 ext. 1054

E-mail: dkoonce@lancasterma.net

**Office of the
Conservation Agent**

April 23, 2019

Jeanne Rich, Chair
Lancaster Zoning Board of Appeals

RE: CEI Peer Review of Goddard Consulting Environmental Analysis for Goodridge Brook Estates

Dear Ms. Rich:

Below are my comments on the April 19, 2019 Peer Review Letter (the "Letter") submitted by Comprehensive Environmental Inc. (CEI) on the above-referenced matter.

Vernal Pool Habitat

The Letter states that field observations on April 16th, 2019 identified a total of 10 Spotted Salamander egg masses "within the wetland/intermittent stream complex on the property", indicating the possible, if not likely, presence of vernal pool habitat certifiable as such by the Massachusetts Natural Heritage and Endangered Species Program (NHESP). The Board should direct CEI to continue to collect and document all field data identifying areas of possible vernal pool habitat; in particular, the boundaries of vernal pool habitat should be flagged on-site, surveyed, and added, along with their 100-foot buffer zones, to the Project Plans. Hydrological connections, seasonal or otherwise, between vernal pool habitat and the intermittent stream should be identified and described qualitatively and quantitatively. The field data should also include a survey and inventory of macro-invertebrate species in vernal pool habitat, and the intermittent stream as well, since invertebrates are at the base of the food chain for many species of animals living both inside and outside wetlands, and many species of invertebrates are highly sensitive to even slight degradations of water quality, so they can be indicators of the proper functioning, or not, of stormwater management systems. Once all data have been collected and all supporting information compiled for the identified area(s) of vernal pool habitat, it should all be formally submitted to NHESP for an official determination on certification(s).

It is very important that as much forested upland buffer as possible be left undisturbed around vernal pools because that is where the amphibians that breed in them live for the remainder of the year beyond vernal pool season, which is why the Lancaster Wetlands Protection Bylaw specifies that the resource area for vernal pools is the unaltered, unmaintained area, including uplands, within 100 feet of vernal pool boundaries. Also, vernal pools are designated as Outstanding Resource Waters (ORW) by the Massachusetts Surface Water Quality Standards, which requires ORW's to be "protected and maintained"; in particular, point discharges directly to (certified) vernal pools are strictly prohibited, and constructed stormwater management in their vicinity must not alter their natural hydrology or degrade their water quality.

Endangered Species

While CEI did not observe any endangered species during their April 16th site visit, the Letter does note the site is within the range predicted by the United States Geological Survey Gap Analysis

Project (GAP) for the Wood Turtle, a species of Special Concern in Massachusetts, and is possibly used seasonally by the Eastern Box Turtle, also a species of Special Concern, and the Blandings Turtle, a Threatened Species. A professional herpetologist with expertise in Massachusetts inland turtles should be consulted to determine if any additional investigation for the on-site presence of endangered turtles is warranted.

Intermittent Stream

In addition to having the Massachusetts Division of Fisheries and Wildlife investigate the intermittent stream to determine whether it is habitat for wild brook trout, as recommended by CEI, the stream should be surveyed and inventoried for macro-invertebrate species for the reasons I mentioned in my comments under Vernal Pool Habitat above.

Thank you for the opportunity to provide comments on this matter.

Sincerely,

A handwritten signature in black ink that reads "David M. Koonce". The signature is fluid and cursive, with the first name "David" being the most prominent.

David Koonce
Conservation Agent