



March 27, 2019

Daniel Hill, Esq.
Hill Law
6 Beacon Street
Boston MA 02108

**Subject: Wetlands & Stormwater Review for
Sterling Road 40B Project, Lancaster**

Dear Dan:

As requested, I am submitting a second peer review of the Sterling Road 40B project, based on a recent wildlife analysis by Goddard Consulting (dated March 22 2019). My letter also references a recent stormwater analysis by Sean Reardon, P.E., at Tetra Tech (dated Feb 26 2019), as well as a recent letter from Adam Kautza, PhD, MassWildlife.

❖ General Comments

Goddard Consulting conducted what they describe as an "Environmental Analysis." Said report is dated March 22, 2019. The report makes no reference to concerns expressed in the recent MassWildlife letter, nor to concerns expressed in my January 11, 2019 report. Similarly, the Goddard report is silent regarding Tetra Tech's concerns about stormwater impacts to Goodridge Brook.

Vernal Pools

Goddard notes that the wildlife investigation was conducted at an improper time to determine whether areas on site may qualify as vernal pools. Why the field investigation was conducted in early and middle March--a time when many wildlife species remain dormant--is not explained. A one month delay would have made the Goddard report more effective, and eliminated inevitable questions that continue to plague this proposal.

- As noted previously, vernal pools lie offsite within a short distance of the project. Therefore, the project site may contain active vernal pools. At least two species of spotted salamanders have been photo documented in spring of 2018 along Deershorn Road to the immediate southeast of the project. The site is likely habitat for wood frogs, a species also associated with vernal pools.
- Because Goddard chose to conduct this work 30-45 days too early to measure vernal pool activity, the report's conclusion on this topic is not reliable.

Intermittent Stream

As I note below in greater detail, Goddard does not address the recent MassWildlife letter which expresses numerous concerns on this issue. Therefore, the report's conclusion on this topic is not reliable.

The Tetra Tech letter from Sean Reardon notes (and I emphasize),

South of the subject parcel is a designated cold-water fishery (Goodridge Brook). Stormwater runoff leaving the site at Design Points 2 and 3 (potentially Design Point 4) are conveyed overland to

Goodridge Brook. No documentation is provided by the Applicant demonstrating that these discharges do not meet the definition of being near a critical area. Discharges to the ground near a critical area requires at least 44% of total suspended solids (TSS) be removed prior to discharge to an infiltration structure/practice per Massachusetts Stormwater Standard 3 AND requires a water quality volume (WQV) equaling 1.0 inch of runoff times the total impervious area of the post-development project site per Massachusetts Stormwater Standard 4. Applicant's stormwater calculations indicate a water quality volume equaling 0.5 inch of runoff times the total impervious area of the post-development project site. The need to provide a 1.0-inch WQV may result in larger stormwater basin footprints.

Once again, the applicant has failed to adequately address issues that may impact the stream on site, and the coldwater fishery downstream.

Snags

As Goddard notes, snags are an important habitat feature. In fact, the report places tremendous emphasis on them. Goddard identifies more than 300 snags, and notes that the project will eliminate more than half of the snags counted.

Breeding Birds

Again, given the timing of the report, bird habitat could not be properly evaluated. Therefore, the report's conclusion on this topic is not useful or reliable.

IVW

The Goddard report states that the isolated wetlands (IVW) on site are "non-jurisdictional." In fact, that statement is incorrect. IVW is protected by the town wetland bylaw. Further, the IVW may be federally protected by the Army Corps of Engineers (USACE) under the Clean Water Act.

Outstanding Botanical Features

Because of snow cover and the timing of the field investigation, the site could not be properly assessed for these features.

❖ Unresolved Issues

Lancaster Wetland Bylaw

Under its wetland bylaw (Chapter 215 Wetlands Protection) the Conservation Commission does not allow alteration within 25-feet of the edge of BVW, streams, ponds and vernal pools. The applicant's design violates this regulation. The plan shows grading and other sitework within 5 and 10-feet of wetlands in numerous locations. Altering existing vegetation within the "no-build" zone creates multiple physical changes that directly impact adjacent BVW.

- The Goddard report is silent on these issues.

Intermittent vs. Perennial Status of Stream

- Adam Kautza, PhD, states in his MassWildlife letter that there is "a valid argument" that the stream running up into the site may be perennial.
- Most critically, Kautza finds sufficient physical evidence from his site inspection to state that the stream warrants further inspection, particularly whether it may harbor populations of wild Brook trout. He requests the opportunity to conduct fish surveys in July or August.
- The Goddard report is silent on the Kautza findings.

Wetland Water Budget

- The proposed project fails to include a water budget for wetlands--a basic requirement to ensure that no impacts occur. As designed, proposed post-development water volume increases dramatically and

- runoff decreases. These volumetric fluctuations are due to the increase in impervious area.
- The project proposes to alter surface runoff into the adjoining BVW, thus altering species that exist. Far more analysis than provided is required to determine the extent of alteration to BVW that may occur.
- Again, the Goddard report is silent on this issue.

Stormwater Issues

- The precipitation runoff numbers used in the HydroCAD calculations do not reflect current precipitation data. Use of outdated rain events may lead to inadequately sized pipes and stormwater detention basins, among other impacts.
- Further, the watershed mapping provided for the project is inaccurate and should be revised. Bestway of New England, an industrial site directly to the west of the project, flushes stormwater runoff onto the site and that additional watershed is not reflected in the calculations.
- The engineer largely cuts off the watershed along the common property line, ignoring the physical reality, and thus minimizing the watershed size. When I walked the common property line between Bestway and the project site, I observed scouring and channelization from Bestway onto the project site; this additional runoff is excluded from the engineer's catchment areas.
- The engineer proposes a berm to deflect stormwater from Bestway. No analysis is provided for impacts from redirected runoff, or from anticipated impacts to the Bestway site itself from the change in flow.
- All calculations should be rerun to reflect accurate watershed areas and precipitation volumes.
- Further, overflow from the proposed basins would contain herbicides and pesticides, vehicular heavy metals, hydrocarbons and brake dust. The project, as designed, does not filter out any of these pollutants, and as such, would contribute road and project runoff into the adjacent stream which flows into Goodridge Brook. The applicant should, at a minimum, provide the Town with analysis that proves that water quality in Goodridge Brook will not be impaired as a result of untreated stormwater from the project site.

Other

- No Notice of Intent has been filed with the Conservation Commission. As I have emphasized previously, Zoning Board and Conservation Commission applications should be simultaneous and parallel. They are not, and consequently, the Zoning Board has insufficient information to be able to determine wetland resource impacts.
- Bestway of New England, which adjoins this project directly to the west, is an US EPA Tier 2-designated industrial site. It is regulated by the Massachusetts State Emergency Response Commission (SERC), which is charged with implementing the EPA's Emergency Planning. Bestway operates a wood-kiln situated 20 to 30-feet from the project site. That kiln generates both aerial emissions and surface water releases. Because the project site is downgradient of the Bestway operation, it may be directly impacted by both. The plans are silent on this issue.
- Further, nearby residences have filed noise complaints with the Town over Bestway's all-season operations. The project's proposed residences will be significantly closer to Bestway than the residences of the nearby complainants. The plans are silent on this issue.

❖ Summary

As I stated in my initial peer review in January of this year, many of these basic issues could have been avoided if the applicant had: (1) worked first with the Conservation Commission to determine the full extent of wetland resources; and (2) submitted a permit application to the Commission to resolve stormwater issues before submitting plans to the Zoning Board. Since the applicant did neither, the plans before the Zoning Board cannot be relied upon to determine project density, road placement or infrastructure design.

Unfortunately, because of the timing of the Goddard field investigation, many of the critical issues discussed before the Zoning Board remain unresolved.

Please contact me with any questions or comments.

Very truly yours,

A handwritten signature in black ink, reading "Patrick Garner". The signature is written in a cursive, flowing style with a large initial 'P'.

Patrick Garner
Wetland Scientist & Hydrologist