

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street

Worcester, MA 01605-2629

508-752-9666 – Fax: 508-752-9494

December 3, 2014

Tom Tidman, Natural Resources Director

Acton Conservation Commission

472 Main St.

Acton, MA 01720

VIA EMAIL: ttidman@acton-ma.gov

Re: Notice of Intent, 12 Summer Street, Acton

Subject: 4th Review Letter: Revised Plans and Replication Specifications

Dear Mr. Tidman and Commission Members:

As requested by the Commission, I have reviewed supplemental materials received relative to the Notice of Intent (“NOI”) filing at 12 Summer Street, Acton. On December 1, 2014 I received via email from Goddard Consulting LLC (“Goddard”) the following materials:

- Wetland Replication Plan (narrative) from Goddard revised 11/26/2014;
- NOI Plans by R. Wilson Associates: 7 sheets revised (“floodplain”) 11/25/2014. Note that the plan copies that I received via email were not signed or stamped.

I offer the following comments related to these materials.

I. Revised NOI Plans:

1. Bordering Land Subject to Flooding (“BLSF”) (floodplain) data (previously requested in my 11/9/2014 review letter) is provided on the plans;
 - a. Reference to the NAVD88 elevation datum utilized by FEMA is provided on sheet 2, which notes a 8.56 feet difference between the NOI Plan’s assumed benchmark and the NAVD88 datum;
 - b. Based upon the reported 8.56 foot offset, the plans appear to do an appropriate job of establishing the floodplain along the length of the site, with approximately 0.5 foot increments provided, although a continuous BLSF boundary is difficult to discern on the plans;
 - c. The plans report a total floodplain fill of 6,087 cf, but do not specify the exact location(s) and elevation increment(s) of where that floodplain fill is proposed;
 - d. The plans report a total floodplain mitigation of 6,452 cf (in excess of proposed total floodplain fill volume), but do not provide an incremental breakdown of the elevations where this is designed. The Regulations require:

“310 CMR 10.57: (4) General Performance Standards.

(a) Bordering Land Subject to Flooding.

1. Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows.

*Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water **at each elevation**, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.” (emphasis added)*

- e. The plans do not show provisions for construction access to the BLSF mitigation areas proposed;
 - f. The proposed mitigation areas (not including significant additional disturbance for access) propose an additional Buffer Zone disturbance of over 5,000 sf. No details are provided for restoring these areas of Buffer Zone, which are in close proximity to the BVW;
 - g. The area (sf) of BLSF impact is not specified but it appears based on 6,087 cf of floodplain volume proposed to be filled that the BLSF alteration exceeds the wildlife habitat threshold at 301 CMR 10.57(4)(a)3: “10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat...” which may trigger a wildlife habitat evaluation for BLSF. The wildlife habitat evaluation would potentially provide information pertinent to BLSF mitigation specifications, or raise additional concerns.
2. The NOI plans continue to show the proposed paved sidewalk in addition to the unimproved trail. As discussed in my October 24, 2014 review letter, I continue to question the inclusion of the paved sidewalk.

II. Wetland Replication Plan (narrative) by Goddard (rev 11/26/2014):

I offer the following comments related to this submittal:

1. The BVW replication area location has been revised to a location which requires less grading and woody vegetation removal, and is, in my opinion, therefore preferable;
2. I concur with the proposal to leave some existing trees in the replication area, but disagree that a 1 to 1.5 times DBH protective radius is sufficient to protect roots. A much larger protective radius is typically necessary, with roots being deeper with increasing distance from the trunk. In my opinion, field determination of the extent of

grading that is acceptable around these trees is required during construction (if approved);

3. The final grading should incorporate translocated topsoil from the BVW impact area;
4. For augmented replication area soils, Step 5 notes a topsoil and compost mix, but Step 1 of the Goddard "Performance Standards for Soils" calls for compost and mineral soils mix. In my opinion, the topsoil and compost mix is more appropriate, and the two soil specifications should be made consistent in that regard;
5. The proposed BVW planting plan has been made much more substantial and expanded to:
 - 5 red maples: 4-6 feet tall;
 - 40 shrubs (silky dogwood and arrow-wood): > 18 inches tall
 - 400 2 inch plugs (boneset and tussock sedge).

This represents a substantial improvement, however in my opinion the woody plantings proposed are quite small, and should be doubled in size to accomplish the replication goals and minimize the opportunity for invasives to take hold.

6. For the proposed trail restoration, an unspecified wetmix is proposed as the only planting, and de-compaction is proposed "if needed." I recommend:
 - Substantial woody plantings in the trail to discourage continued trail use and minimize colonization by invasives;
 - Specify the seed mix (e.g. New England Wetland Plants "WetMix");
 - Require exposing and loosening of soils by hand raking prior to seed application.

III. Summary:

I recommend that the Commission seek the following information/ modifications to the NOI materials:

- Incremental BLSF impact and mitigation tabulation, to ensure compliance with the performance standard cited above;
- Detail of the total footprint, including construction access, of the BLSF mitigation areas;
- Restoration specifications (soil, vegetation, construction methodology) for the proposed BLSF mitigation areas;
- Wildlife habitat evaluation for BLSF (or a demonstration that the threshold for an Appendix A and/or Appendix B Wildlife habitat Evaluation is not exceeded);
- Modifications to the Wetland Replication Plan as described above in section II.

I hope that this information is helpful to the Commission in your continued review. Please contact me if you have any questions concerning this or other matters.

Acton Conservation Commission
Re: Notice of Intent Review, 12 Summer Street
December 3, 2014
Page 4 of 4

Sincerely,

A handwritten signature in blue ink that reads "Paul J. McManus". The signature is written in a cursive style with a large initial "P" and "M".

Paul J. McManus, LSP, PWS
President

cc: Goddard Consulting – by email

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street

Worcester, MA 01605-2629

508-752-9666 – Fax: 508-752-9494

Paul J. McManus, LSP, PWS President

Paul McManus is the President and owner of EcoTec, Inc., which he founded in 1990. He has received certification as a Professional Wetlands Scientist (PWS) from the International Society of Wetlands Scientists (SWS), the leading professional organization in the field. He was elected President of the New England Chapter of SWS, and represented the Chapter on the International Board of Directors for several years, and currently serves as Chapter Past President and Treasurer. Mr. McManus is also a Massachusetts-certified Licensed Site Professional with experience that has included a wide range of site assessment and remediation projects, focused on the field of ecological risk assessment at contaminated sites. Prior to the founding of EcoTec, Mr. McManus was employed as the Senior Scientist at Harborline Engineering Inc. of New Bedford, MA and served for several years as a project manager at the Gulf of Maine Research Center Inc. in Salem, MA. His experience also includes employment as an aquatic ecologist at the Massachusetts Division of Water Pollution Control. Mr. McManus brings a wide variety of environmental consulting experience to EcoTec, including wetland evaluation and delineation, lake and stream assessment, wildlife habitat evaluation, oil and hazardous materials assessment and ecological risk assessment, as well as a variety of other types of environmental impact assessment. Included among the major wetland projects he has completed are detailed wetland community surveys and impact restoration specifications for lengthy pipeline crossings of the Fowl Meadow "Area of Critical Environmental Concern" (ACEC). At the MWRA's Norumbega Reservoir property in Weston, he conducted the state and federal wetland delineations, was project manager for the related town-wide off-site vernal pool mitigation evaluation, and authored the project's wetland mitigation program, including vernal pool replication in support of a Wetlands Protection Act Variance and other environmental permits. He has directed hundreds of other wetlands projects at sites including large and small residential and commercial developments. He has completed all phases of environmental permitting work, including wetland delineation, replication and mitigation design, implementation, and monitoring in freshwater wetlands and salt marsh, as well as general wildlife and rare species assessments and trapping, including marbled salamander, 4-toed salamander, spotted turtle, and eastern box turtle, under the MA Wetlands and Endangered Species Act Regulations. Permitting efforts regularly include federal, local and state permitting, including filings under the Massachusetts Environmental Policy Act (MEPA) regulations. Additional projects he has directed include major biological and chemical marine sampling programs; he has been involved in a variety of freshwater system evaluations, and conducted evaluations and sampling for proposed fresh water and marine dredging projects. He has conducted ecological risk assessments for aquatic and terrestrial biota, including state-listed species, at numerous locations of contamination by oil and hazardous materials. Mr. McManus serves as a consultant on behalf of government, business, major utility companies, the development community, conservation commissions, and concerned citizens' groups. He presently serves on a regular basis as technical wetlands consultant for the Town of Dover Conservation Commission, and works regularly for other Commissions providing peer review expertise on a wide variety of projects.

Education: Master of Science: Applied Marine Ecology - University of Massachusetts/Boston, 1988
Bachelor of Arts: Biology (Ecology emphasis) – College of the Holy Cross, Worcester, MA, 1984
U.S. Fish and Wildlife Service: Habitat Evaluation Procedure (HEP) Certification
Massachusetts Division of Water Pollution Control: Algal Assay (eutrophication) Short Course

Professional Affiliations: Massachusetts Association of Conservation Commissioners
(Partial list) Society of Wetland Scientists (Past President of the New England Chapter)
Association of Massachusetts Wetlands Scientists
Society of Environmental Toxicology and Chemistry

Certifications: Society of Wetlands Scientists Professional Wetlands Scientist # 962
Commonwealth of Massachusetts Licensed Site Professional # 5711
OSHA Health & Safety Hazardous Waste Safety Training, 29 CFR 1910.120 (40 hr & refresher)