

Falmouth Conservation Commission
Town Hall Square
Falmouth, MA 02540

February 24, 2003

Commission Members:

As you know, on December 6, 2002, and January 7, 2003, the Buzzards Bay Project National Estuary Program submitted comments on stormwater treatment designs contained in a Notice of Intent (NOI) before the Falmouth Conservation Commission. The proposed development, a commercial retail building and parking lot (Douglas Shearer applicant), is located at Clausons Corner near Rt. 151 and Sandwich Road. The proposed construction activity is within a 100-foot wetland buffer of a jurisdictional wetland under the Town of Falmouth wetland bylaw and supporting regulations. The buffer zone to this wetland area also contains a Massachusetts Threatened Species--*Asclepias purpurescens* (Purple Milkweed).

As outlined in our December and January correspondence, the Buzzards Bay Project (BBP) concluded that the applicant failed to submit all materials required by the Falmouth Wetland Regulations (FWR) for stormwater designs, and failed to provide adequate information for the evaluation of stormwater remediation designs pursuant to the FWR. In response to these comments, the applicant withdrew their application, and in February 2003, the applicant developed new stormwater designs, and prepared a stormwater management plan pursuant to the Falmouth Wetland Regulations.

The BBP reviewed these new designs dated February 3, 2003, and the supporting Stormwater Management Plan. We found the submission complete¹, and conducted a review of the applicant's stormwater management Plan. On February 21, 2003, BBP staff conducted a site visit of the property, and then later met with the applicant's engineer to discuss details of the plan.

In general, the February 3, 2003 dated plans met most of the FWR requirements. In brief, the applicant has met the regulations stormwater water quality treatment requirements for the first flush with the installation of a proprietary swirl separator known as a "*Stormceptor*." The applicant proposed to address the volume standard in the Falmouth Wetland Regulations (no increase in

¹ The FWR require plans be submitted with 1 foot contours, however the 2-foot contours shown did not impede our review because of the steepness of the site, and information gathered on our site visit. The engineer was unable to place the precise location of the purple milkweed on plans because the plants were never surveyed and placed on the plans, possibly due to an earlier Conservation Commission request.

stormwater runoff from the site with a 10-year 24 hour storm) using underground storage chambers². However, the Buzzards Bay Project found that the storage capacity of the chambers was inadequate for the 10-year 24-hour storm.

After our February 21 meeting, the engineer agreed to modify the February 3 plans to increase the storage capacity of the parking lot and make other changes to make the plans fully compliant with the Falmouth regulations. These revisions have been incorporated into the applicant's revised plans dated February 23, 2003. The modifications to the plans are summarized as follows:

- 1) The vegetated area between Route 151 and the parking lot is now bermed, preventing the flow of clean storm water runoff from entering the parking lot stormwater treatment and infiltration system.
- 2) The lower parking lot has been bermed to provide additional storage required to meet the 10-year volume requirement and to control the 100-year storm rate of flow. A spillway has been provided on the southern parking lot boundary. This discharge is outside of any jurisdictional wetland buffer zone. This design will result in the parking lot providing the necessary stormwater storage in the event of extreme storms, and allow the excess capacity to discharge away from the isolated wetland.
- 3) A ramp will be installed at the entrance to the utility access road to ensure ongoing access while preventing stormwater leaving the site at this point, and not compromising the storage capacity of the parking lot.
- 4) The applicant plans to construct a berm to prevent receiving runoff from the adjoining commercial site, which includes a gasoline service station and mini mart. This will help prevent either accidental or chronic spills of hydrocarbons from entering the applicant's stormwater system.
- 5) The Buzzards Bay Project discovered a catch basin on the applicant's property not included in previous surveys. The applicant identified this as a leaching catch basin on the February 23 plans, and it is collecting stormwater from the abutting property (the service station and mini mart). The applicant has proposed to remove this catch basin (which is near the proposed berm in item 4 above.). The Buzzards Bay Project supports this action, and the removal of this catch basin will also prevent accidental fuel spills from entering the applicant's property.

In conclusion, the Buzzards Bay Project finds that the plans dated February 3, 2003, with the revisions shown dated February 23, 2003 and summarized above, are compliant with the Town of Falmouth's Wetland Regulations stormwater management sections. It is our opinion that these revised plans will preserve the water balance to the isolated wetland, and prevent the overland discharge of contaminated stormwater toward the isolated wetland or habitat area of the Purple Milkweed, a threatened Massachusetts species.

² For discharges to isolated depressions, only the "first flush" volume requirement of the FWR apply, and volume and rate control performance standards do not apply (FWR 2.05). The applicant went beyond these minimum requirement and addressed the rate and volume standards in order to better address concerns about preserving the hydrology and to prevent untreated discharges to the isolated wetland and the adjoining habitat for the threatened endangered purple milkweed habitat during severe storm events.

We are unable to definitively address issues related to the Purple Milkweed, however it is our understanding that the Massachusetts Natural Heritage and Endangered Species Program will address this issue in separate correspondence.

Finally, the Buzzards Bay Project recommends that the order of conditions include reporting requirements for maintenance of the *Stormceptor* device. The *Stormceptor* should be inspected four times the first year, then annually thereafter. After each inspection, the applicant should send a brief letter to the Conservation Commission stating the date of the inspection, whether it appeared to be operating properly, and whether any maintenance was required (e.g. removal of sand or debris). These inspection reports should be kept on file.

If you need further assistance from the Buzzards Bay Project, please do not hesitate to call me.

Sincerely,

Joseph E. Costa, PhD
Executive Director

cc. Paul Somers, NHESP
Steve Pisch, Falmouth Engineer
William Riley, Rycon Corporation
Douglas Shearer, owner