



Charles River Watershed Association

By Fax and Mail

March 19, 2010

Ian A. Bowles, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, 9th floor
Boston, MA 02114

Attn: Purvi Patel

Re: Medfield State Hospital Clean-up and Redevelopment EENF, EEA # 14448R

Dear Secretary Bowles:

Charles River Watershed Association (CRWA) submits the following comments on the Expanded Environmental Notification Form (EENF) for the Medfield State Hospital Clean-up and Redevelopment project by the Division of Capital Asset Management (DCAM). The project proposes to clean-up three G.L. c. 21E sites pursuant to the Massachusetts Contingency Plan (MCP) and five non-MCP sites on the former Medfield State Hospital property and to transfer the property to the Department of Conservation and Recreation, the Department of Developmental Services, the Executive Office of Public Safety, the Department of Mental Health and a private developer. The project involves two phases: clean-up of current contamination and redevelopment to include 440 dwelling units, office space and a community center.

Because the project will use state funding and is also undertaken by an agency, MEPA review is broad in scope and extends to all aspects of the project that may cause damage to the environment. The EENF, as discussed below, does not adequately and properly comply with MEPA. Nor can it be said that the project has avoided, or minimized and mitigated damage to the environment to the maximum extent practicable. Accordingly, we request that you require a full environmental impact review, including both a draft and final EIR.

The proponent appears to suggest that if a full EIR is required, it should only be for the redevelopment. Separating the cleanup from the redevelopment raises segmentation issues. Here, the various work and activities should be found to constitute one Project under 310 CMR 11.01(2)(c), because both the project and the alternatives analysis need to be looked at holistically and comprehensively in order to understand how best to deal with the site's contamination issues, the proposed mixed residential use, the location within the Zone II of a public water supply well, and the town of Medfield's water problems.

Alternatives Analysis

A true alternatives analysis is crucial and goes to the heart of the MEPA process. The EENF contains a limited analysis, lacks a discussion of costs of alternatives and selects DCAM's preferred alternative without the completion of a holistic Phase II or III assessment. As a Wetlands Limited Project under 310 CMR 10.53Q, DCAM is required to conduct a Phase II alternatives analysis and Phase III remedial action outcome, neither of which have been done for the clean-up. The proponent puts forth three alternatives: no action, removal of debris and removal of structures. It then states that the preferred alternative is to "*remove select debris from the C&D area and complete debris and contaminated fill removal from the salvage yard*" (EENF at p.19). DCAM does not discuss why it has committed to complete removal in one area and partial removal in other areas and as a result, there is no way to know whether this alternative is really the best choice.

In no sense is the proposed alternative a permanent solution, as hazardous material will still remain on site, close to a residential property and adjacent to and impacting the Charles River. If DCAM is not committed to removing all contamination, it should explain how and why it arrived at this decision. Otherwise it is not possible to determine if it has avoided, or minimized and mitigated damage to the environment to the maximum extent practicable. DCAM needs to provide a detailed comparison of the environmental, social and economic factors for all alternatives, including complete excavation and off-site disposal, capping, isolation, groundwater treatment or a combination of these methods.

Environmental Factors

As referenced in the cover letter accompanying the town of Medfield's February 26, 2010, Water Management Act Permit 9P3-2-20-175.02 (WMA permit), a 20-year water needs forecast could not be done by DCR for Medfield due to questions about the data, including "*unaccounted for water (UAW) that exceeded an average of 20% and inconsistencies between different parts of the Annual Statistical Reports.*" The town's seasonal use skyrockets and currently, the town is not meeting either the UAW or residential gallons per capita day (rgpcd) standards set forth in the Massachusetts Water Conservation Standards (2006) and required in Medfield's Water Management Act permit.

Medfield's system-wide authorized withdrawal from the Charles River and Boston Harbor Basins is 1.5 million gallons a day (MGD). In the EENF, DCAM erroneously states that a withdrawal of 0.5 MGD from the Hospital tubular well field was not included in its historically authorized withdrawal volume of 0.58 MGD (0.47 MGD permitted + 0.11 MGD registered) from the Charles¹ (EENF at p. 36). However, DEP has confirmed, and the Town's 2003 amended permit reflects that the 0.2 MGD annual withdrawal from the State Hospital wellfield is already included in the authorized system-wide withdrawal of 1.5 MGD.²

¹ In fact, a final approval has not been issued by DEP for the State Hospital wellfield and while the maximum daily withdrawal volume is 0.5 MGD, the withdrawal cannot exceed 0.2 MGD on an annual average. The town's 2003 amended permit included this, which increased the Town's permitted withdrawal from 0.27 MGD to 0.47 MGD.

² CRWA disagrees with DEP's interpretation that the 0.92 MGD registered withdrawal in the Boston Harbor basin can be withdrawn from the Charles basin. There is no provision in the WMA that allows a registered withdrawal in one basin to be withdrawn from another basin. The Town's 2003 amended permit authorized a total permitted withdrawal of 0.47 MGD from the Charles. In an attempt to rectify its past illegal transfer of the Boston Harbor registered volume to the Charles, DEP has now permitted the town to withdraw 1.39 MGD in addition to its 0.11 MGD registered volume from the Charles basin, provided it reduces its withdrawals from the Boston Harbor basin accordingly.

Given the impacts to the Charles River from pumping well #6 (which is 150 feet from the river) and wells #1 and 2, also in close proximity to the mainstem, and the future impacts from pumping the State Hospital wellfield on streamflow, every effort should be made to reduce water use in the redevelopment. In the DEIR, DCAM should discuss in detail the basis for its statement that the redevelopment although projected to use 0.093 MGD will only use about 0.063 MGD, or 1/3rd less water. It should also discuss the ability of the Medfield water system to supply this amount of water given that the Town's annual use averaged 1.42 MGD in the period 2003-2005. In addition, while DCAM commits in the EENF to achieving 75 rgpcd, this conflicts with the Town's WMA permit and the MA Water Conservation Standards, both of which require that residential use not exceed 65 gallons per person per day. In fact, given the density of the redevelopment, the project should be able to reduce use well below 65 rgpcd.

Every effort should be made to conserve water in this redevelopment.³ The proponent should commit to replacing all water lines, capturing rooftop runoff, storing it in cisterns and using it exclusively for irrigation. The public water supply should not be used for irrigation. Using xeriscaping and drought-tolerant plants would eliminate the need to irrigate entirely. Lawn area is relatively impervious, requires fertilizer/pesticide applications and needs large quantities of water and therefore should be avoided. Because of the project's proximity to wetlands, it is important to develop a management plan that minimizes (or entirely eliminates) fertilizer and pesticide use. The proponent should also commit to installing high efficiency toilets and low water use appliances (dishwashers and front loading washing machines) and to an effective water conservation program.

DCAM's commitment to inspect and repair or replace all sewer lines to eliminate inflow and infiltration is critical. Medfield has a serious town-wide infiltration problem and according to a 2006 Globe article, 183,600 gallons per day of water was entering the sewer pipes from the hospital even though it was no longer in use.⁴ This contradicts the EENF, which states that in 2003 "*Five leaks were detected in the site's infrastructure and all five leaks were repaired*". The DEIR should discuss the inspection results, the necessary repair or replacement work and provide a timeline for doing it.

The proponent asserts that the project's stormwater management will meet DEP standards, but provides little detail on how these standards will actually be met. In addition, the EENF does not discuss detention and recharge of storm water. The site's proximity to the Charles River and the project's 29.6 acres of imperviousness make stormwater management particularly important. The DEIR should fully characterize existing conditions, drainage patterns, and the quantity and quality of flows, including an analysis of 10, 25, and 100-year storm events. Both pre and post construction drainage calculations should be provided. The DEIR should contain a detailed discussion of the proposed stormwater management system, alternatives to it, and an operation and maintenance (O&M) plan. Low impact development techniques should be incorporated into the project's design to the extent possible given the soils. The development should use pervious pavement and green roofs to reduce site runoff. We agree that "green bids"

³ While DCAM will not be the entity redeveloping the property, it can and should effectively bind the developer through the disposition agreement to mitigation commitments.

⁴ A 1998 DEP Administrative Consent Order with the Department of Mental Health for multiple environmental violations at the hospital also documented that a broken sewer line flows into the storm drain. CRWA does not know whether this problem was ever fixed.

should be given priority. Although the soils are not adequate for recharge on the “core” parcel, the proponent should discuss in the DEIR the recharge potential of other parcels on and off site as well as easement options for stormwater BMPs. An effective stormwater management plan should be included in the DEIR and incorporated in acquisition and disposition agreements.

The Total Maximum Daily Load (TMDL) for nutrients issued by U.S. EPA and DEP for the Lower Charles Basin (2007) and the draft Nutrient TMDL for the upper 70 miles of the Charles (2009) document that phosphorous loadings to the river are directly causing or contributing to the eutrophication and excessive algal blooms in the river. Pursuant to the TMDL, phosphorous loading needs to be reduced by 54% across the watershed to comply with water quality standards. Stormwater (from both overland and piped drainage systems) is a major contributor of phosphorous loading to the river. According to the TMDL, phosphorous loadings from sites such as this one need to be reduced by 65% on an annual basis to achieve water quality standards. The proponent should discuss how it intends to meet the TMDL’s 65% phosphorous removal requirement. Because phosphorus is a byproduct of gasoline combustion, parking lots and roadways are a significant source of phosphorus. Weekly sweeping of parking lots and road areas with high efficiency vacuum sweepers is an effective way to reduce pollutants including phosphorus, and the proponent should commit to this level of maintenance.

The proponent is proposing to cut/buzz vegetation on the river banks during the assessment and remediation process. This should be avoided because red maple is well stabilized on the western portion of the embankment and there is low flood plain and marsh on the river’s edge. Additionally, The DEIR should contain strict construction and erosion control measures to prevent bank erosion and sediment from entering the Charles River. The site should be visually inspected twice a year post-construction to ensure that erosion and channelization are not occurring. After remediation there should be annual monitoring of groundwater, surface water, soil and sediment testing to ensure that contamination issues have been completely resolved.

In Section 7.0 (Transportation), DCAM assumes only a small number of age-restricted housing residents will leave their homes each morning and evening (EENF at 43). However, in Section 8.0 (Greenhouse Gas Emissions) it states: *“Because the building is proposed to be used for residential housing, it was also assumed that the building have utilities running only in the morning and at night”* (EENF at 49). Since a large portion of the housing is age-restricted housing, DCAM should explain the basis of this conclusion. We think it is more likely that for a high percentage of the elderly housing, utilities will be run all day. This may significantly change the greenhouse gas emission estimation put forth in the EENF.

Data Availability

Table 8 in the EENF provides a Summary of the Assessment Activities completed at the site (EENf at p. 52). This table does not contain the dates analyses took place, nor does it contain any of the data associated with this sampling. Full and complete presentation of sampling data associated with this project is crucial to understanding the alternatives analysis and the appropriateness of the preferred alternative. Sampling data associated with this project should be made available through the public repositories as soon as possible. This should include data associated with all activities listed in the Table 8 *Summary of the Assessment Activities*, data collected in the Phase I Assessment Report, and any new data from additional assessments that are currently underway. The proponent should provide the TetraTech Rizzo study referenced on

p.41 of the EENF and the MOA mentioned on p.61 of the EENF in the DEIR. While supposedly contained in the EENF appendices, they were not there.

CRWA commends DCAM for beginning the clean up of this G.L. c. 21E site, and we appreciate the opportunity to comment on this project. Please feel free to call should you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Danielle M. Mucciarone".

Danielle Mucciarone
Watershed Scientist

cc: John O'Donnell, DCAM
Medfield Board of Selectmen
Medfield Conservation Commission
Andrea Stiller, LSP
John Thomas, Beals and Thomas
William Massaro
John Thompson, SHERC