



## Charles River Watershed Association

August 2, 2011

### By Fax and Mail

Richard K. Sullivan, Jr., Secretary  
Executive Office of Energy and Environmental Affairs  
MEPA Office  
100 Cambridge Street, Suite 900  
Boston, MA 02114

Attn: Purvi Patel

### ***Re: Former Medfield State Hospital, Medfield, MA, ENF, EOEEA # 14448***

Dear Secretary Sullivan:

On June 15, 2011 Rackemann Strategic Consulting, Inc. filed, on behalf of the Division of Capital Asset Management (DCAM), a *C&D Area Remediation Notice of Project Change – EEA #14448R*, followed by a *Request for Phase I Waiver and Extension of Review Period* on July 23, 2011. The Charles River Watershed Association (CRWA) submits the following comments on the Phase I Waiver and Notice of Project Change (NPC) for the above-referenced project.

The NPC does not adequately and properly comply with MEPA, or the Secretary's Certificate on the Expanded Environmental Notification Form (EENF), and will result in significant environmental impacts. For the reasons discussed below, we request that you deny the Phase I Waiver and require the preparation of an Environmental Impact Report (EIR) before construction can proceed.

### MEPA/EENF Requirements:

The April 2, 2010 Certificate on the Expanded Environmental Notification Form required the preparation of a Single EIR (SEIR) due to the "potential environmental impacts of the project, and the unique nature of the project site." EENF Certificate at 2.<sup>1</sup> The Secretary allowed remediation of only those portions of the site "which will not impact wetland resource areas prior to submission of the SEIR." EENF Certificate at 3. With respect to the C&D Area specifically, the Secretary recognized that if the MCP required final selection of a cleanup alternative in

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<sup>1</sup> MEPA review is broad, extending to all aspects of the project likely to cause Damage to the Environment. *Id.* at 3.

advance of the proponent's submission of the EIR, any NPC filed should present the information requested in the Scope "concerning alternatives that will avoid and minimize wetlands impacts." EENF Certificate at 4.

The NPC contains an inadequate alternatives analysis for remediation work in wetland resource areas as required by the EENF. While the NOI (Attachment C to the NPC) has an Appendix F entitled "Initial Remedial Alternatives Technology Screening" that does briefly present various remedial options in table form,<sup>2</sup> the scoring system for the various alternatives in the Appendix F chart is subjective and no explanation of scoring is provided. For instance, although the Hydraulic Dredging and Offsite Disposal alternative is characterized under "Implementability" as "readily implementable" it is given a score of only 3 out of 5.<sup>3</sup> Additionally, under "Cost" the "In-Situ Sediment Cap" is described as having a "medium" cost, yet was given a score of 4. Such subjectivity and vagueness must be remedied with a thorough, transparent discussion of the costs and benefits for each alternative. Preliminary Alternative 4 (Sediment Amending and In-Situ Biodegradation) is listed, but was not actually analyzed or discussed for any of the criteria. Overall, we find Appendix F of the NOI to be an unsatisfactory alternatives analysis, as it does not include many potential alternatives, and those that are included are poorly evaluated. In addition, MGL Chapter 21E, by law, requires an evaluation of "reducing concentrations to background" conditions. We have seen no indication that this option has been evaluated for this project. Finally, lacking is the discussion as to why DCAM's chosen alternative is the preferred alternative.

The EENF Certificate also required an "update on the status of potential impacts to wetland areas" including a discussion about the "potential impacts to wetland resource areas from proposed activities including ... sediment control,... and stormwater drainage discharges or overland flows into wetland areas," as well as discussing "any compensation or mitigation required." EENF Certificate at 9. The NOI has an Appendix B, which has a Stormwater Report and a Construction Period Pollution Prevention and Erosion and Sediment Control Plan. While both list measures to be taken or followed to minimize negative environmental effects in general, neither mentions potential effects on wetlands specifically. Also, while Appendix I of the NOI does include a Wetlands Delineation Report, there is no discussion about the amount of mitigation necessary for this project, or how it will be carried out.

The request for the Phase I Waiver claims that the project is *severable* because "the remediation of the C&D Area neither affects nor is affected by any other part of the complete project. It is well out of the future redevelopment area and is removed from other sites requiring remediation."

CRWA does not believe the project is severable under MEPA for a number of reasons:

1. The proposed remediation project area may be impacted by other areas of the project than the C&D Area, so it is impossible to determine whether the proposed mitigation will be effective. The proponent claims that the oil sheen in the river sediments is coming from

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<sup>2</sup> This Appendix F information, provided on a CD-ROM, is not easily located as it is not mentioned in the Table of Contents to the NPC. We note that the only reference to the existence, let alone content, of Appendix F appears in the NOI at p. 10.

<sup>3</sup> As the proponent recognizes, both hydraulic and mechanical dredging "would be effective for the remediation of the complete range of organic and inorganic contaminants at the site." NOI, Appendix F.

the C&D Area, dismissing the possibility that other areas of the Medfield State Property, such as the Power Plant Area, which also contains oil, incineration and ash fill, PAHs and metal contamination, could also be contributing to the problem. A fingerprint analysis was done to source the oil, but results were inconclusive due to the age of the hydrocarbons. It is therefore possible that the oil is coming from other source locations in addition to or instead of the C&D area.

2. Because many of the areas throughout the Medfield State Hospital Site contain similar contaminants as those listed above, MassDEP previously designated the site as a Special Project Designation (SPD) Site. This requires that conditions and solutions be reviewed holistically so a comprehensive solution can be found to address the contaminants occurring throughout the property. Claiming that the C&D Area is severable ignores the possibility of interactions between other areas of the Medfield State Hospital site.
3. The proposed remediation project will “restrict the means by which potential environmental impacts from any other phase of the Project may be avoided, minimized or mitigated.”<sup>4</sup> The proposed bank alterations, grading, armoring and placement in the river of a cap and fill will significantly impact future potential remediation or mitigation that may be necessary for future activities on the site.

#### Significant Environmental Impacts:

DCAM is proposing a highly-engineered approach that will permanently impact the river bank and lands under water important for habitat and flood control, and armor the bank with rip rap, displacing vital riparian habitat. DCAM is proposing to re-grade the riverbank along the C&D dump and install a partial liner, which will extend down to the high water mark, place 620 cubic yards of rip rap (covering approximately 780 linear feet of riverbank, 4 feet in height), and to cover, rather than remove, contaminated sediments.

These engineered solutions are unacceptable in this otherwise undeveloped, natural section of the river. Directly across the river from the proposed work site is Trustees of Reservations land, and the river in this area is well used by paddlers, fishermen, and hikers. The Bay Circuit Trail (BCT) crosses the rivers from the Trustees of Reservations’ Rocky Narrows site into the Medfield State Hospital property, and the Charles River Link Trail, a connector to BCT, travels directly through the C&D Area and along the riverbank area in question. With such high human exposure to the area, and the potential for a boat ramp, which has been repeatedly discussed as a potential future use for the area, it would be prudent to ensure human health by removing all contaminants rather than relying on caps to keep such hazards contained.

The proponent claims in the NOI that “dredging could have negative environmental consequences.” NOI at 7. It cites excavation, dewatering and disposal off-site as “opportunities for cross-contamination” militating against dredging. NOI at 7. We note that the Massachusetts Water Resources Authority (MWRA) is removing 480 cubic yard of sediment from the river in Weston resulting from the May, 2010 water main rupture using vacuum dredging. This MRWA project has already been approved by both Weston and Newton Conservation Commissions and is not expected to have significant negative environmental impacts. Clearly vacuum dredging is

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<sup>4</sup> 301 CMR 11.11(4)(c)

an environmentally appropriate alternative in the Charles River and should be evaluated as an alternative for this project as well.

CRWA believes that the contaminated river sediment should be removed along with the C&D Area contaminant removal, rather than capping. Sediment sampling shows the presence of Polycyclic Aromatic Hydrocarbons (PAHs), metals, and mercury<sup>5</sup> at levels exceeding MCP cleanup standards, and in some cases actually toxic to benthic invertebrates. While the proponent's waiver request states that after work is done, "further stabilization... and removal actions can be taken for sediments in the Charles River" if needed, CRWA believes there is little chance that sediment removal would occur in the future.<sup>6</sup> Any additional dredging would be highly unlikely because it would require new bank alteration and further environmental disturbance.

Although not presented in the NPC or the Phase I Waiver, the proponent does indicate in the Immediate Response Action (IRA) Plan that "large non-porous debris will be segregated from the fill, decontaminated, and recycled/reused. Large uncoated concrete and stone will be crushed and reused in the cover material or as riprap."<sup>7</sup> We strongly oppose the reuse of any material from this site for bank stabilization given the mix of asbestos and other hazardous material in the C&D Area.

The proposed action will "significantly increase environmental consequences," 310 CMR 11.10(6). Contrary to the proponent's claim, NOI at 7, this is not a "small portion of the river" relative to its location. The river is only 75 feet wide here and the "Aquablok" would extend about 30 feet into the river channel -- close to mid-stream, and require the placement of another foot of fill on top of the estimated two feet of contaminated sediment. Little information about this material is provided in the NPC—where it has been successfully used, its life span, its chemical composition, potential for movement or damage, or even if there are repair options should it become displaced or damaged.

Given the extensive signs of existing erosion, there are clear indicators of high flow and sediment scouring, which mean any riverbed cap and/or sand sediment cover is likely to fail. There is obvious ongoing erosion of the bank, and given that the proposed location of the sediment cap is located along the outside edge of a natural bend in the river, where there are extremely high flow velocities, particularly at certain times of the year, it is highly unlikely that any cap here will be stable.

To date, the sediment sampling presented in these filings has not adequately characterized the pollution present, its distribution/extent, or its source. We have a number of specific concerns:

1. After CD-SD-122 was observed to produce an oil sheen when the sediment was placed in water, a series of additional cores (CD-SD-122A-F) were then done to determine the extent of this contamination. These additional cores were not, however, analyzed for any

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<sup>5</sup> See Immediate Response Action Plan (IRAP) at 1-4.

<sup>6</sup> An email from Mark Baldi, DEP 21E staff, to Frank Ricciardi, on July 28, 2011, says there is "a possibility and likelihood that the banking cap and riverbed Aquablock, or portion thereof, may be incorporated as part of a Permanent Solution . . ."

<sup>7</sup> See IRAP at 2-3

contaminants. “Based on observation of sediment in these borings”<sup>8</sup> the extent of petroleum impacts was determined. Methods more analytical than “observation” should be used to accurately delineate the extent of this river sediment contamination.

2. The arrangement of these additional core samples extended perpendicularly from the shore into the center of the river, and then downstream from there. This does not assess whether more contamination is present closer to shore, or slightly farther upstream.
3. When elevated PAH levels were discovered in sediment samples, “sampling transects were proposed” around sites SED-6 and SED-7, but the river sediment “was not appropriate for sampling.”<sup>9</sup> Because it is not convenient with the tools available, does not preclude adequately analyzing regions of the river sediment thought to contain high levels of contaminants. Sampling should be done to determine the extent of this high PAH contamination.
4. Of the two sites most contaminated with PAHs, SED-7 appears as though it might fall in the zone to be capped by Aquablok, but SED-6 seems to be too far upstream to be included. That the sampling sites and the delineation of the area to be capped fall on separate maps makes determining this extremely difficult. If SED-6 does indeed fall outside this area, we request that a plan be produced to appropriately remediate this area of elevated PAHs.

The material presented in the “River Monitoring Plan” (NOI at 4) is completely inadequate to ensure there are no downstream impacts from the proposed project. A detailed Monitoring and Response Plan should be developed in order to qualify for a Phase I Waiver, as would be necessary with an EIR. In the NOI, the current monitoring plan calls only for visual and turbidity monitoring in stream during construction. Given the level of contamination in the river and bank sediments, the proponent should develop a plan for monitoring more than just turbidity. Also, sampling upstream and downstream at the same time is critical to account for fluctuations in background conditions. The proponent should also develop a comprehensive Response Plan, including an Emergency Flood Response plan, in the event that monitoring does observe contaminant levels above acceptable limits or high intensity precipitation is projected to occur.

Finally, a number of inconsistencies have appeared in the project plans and documentation:

1. It is clear that the extent of the C&D Area has not yet been adequately delineated. While the NPC says the impacted area is 2.2 acres in size, a recent Immediate Response Action Plan now gives the size as 3.2 acres. In addition, even at the July 14 Draft C&D IRA presentation, the Weston & Sampson representative openly stated that they are still unsure of the southern boundary of the C&D Area.
2. While the amount of dredge material described on page 10 of the NOI is stated as 2450 CY to be removed along the banks, the recent 401 Water Quality Certification says 8500 CY of material. There is a considerable difference between estimates and the actual amount to be dredged and removed needs to be clarified before this alternative can be adequately assessed.

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<sup>8</sup> IRAP 1-3

<sup>9</sup> IRAP 1-3

We request that you deny the Phase One Waiver because:

- The Project is likely to cause Damage to the Environment;<sup>10</sup> 301 CMR 11.11(3)
- the potential environmental impacts of the work proposed in phase one, taken alone, are significant, 301 CMR 11.11(4)(a)
- the Project is not severable to the extent that extensive re-grading, placement of the liner on the C&D dump, and use of rip rap as proposed will restrict the means by which potential environmental impacts from any other phase of the Project may be avoided, minimized or mitigated, 301 CMR 11.11 (4)(c), since it will effectively preclude future sediment removal, except through in-stream barge based dredging.

Conclusion:

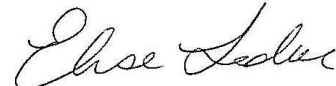
The Charles River Watershed Association is extremely concerned that DCAM is requesting approval for a *temporary* solution capping the C&D Area debris and the Charles River sediment that has not been evaluated against other alternatives, and has a high potential to become the permanent result. As proposed, the project does not appear mitigate environmental damage to the greatest extent practicable. Leaving the contaminants in place is not an appropriate response given the location of the hazardous materials and the proposed recreational uses and high likelihood of human contact in the future.

Sincerely,

Margaret Van Deusen  
Deputy Director



Elise Leduc  
Rita Barron Fellow



cc: Maeve Valley-Bartlett, MEPA  
Martin Suuberg, DEP CERO  
Mark Baldi, DEP CERO  
Allen Wiggin, DCAM  
John O'Donnell, DCAM  
John Thompson, SHERC Chair  
Medfield Board of Selectmen (Mark Fisher, Osler Peterson, Ann Thomspson)  
Andrea Stiller, Medfield LSP  
Leslee Willits, Conservation Agent, Medfield Conservation Commission  
Bill Massaro, PIP

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<sup>10</sup> Damage to the environment includes but is not limited to impairment of rivers and destruction of natural areas. 301 CMR 11.02.