Charles River Watershed Association

August 29, 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, Draft Record of Decision, Notice of Project Change, EOEEA # 14448

Dear Secretary Sullivan:

Charles River Watershed Association (CRWA) submits the following comments on the Draft Record of Decision (DROD) proposing to grant a Phase 1 waiver for the above-referenced project. We ask that you not issue a Final Record of Decision at this time and instead issue a Scope, or alternatively, that you deny the Phase 1 waiver and require the preparation of the Single Environmental Impact Report. If you do decide to issue the FROD at this time, we ask that it be limited to the temporary placement of "AquaBlok" over contaminated river sediments, which was the basis for the Immediate Response Action (IRA) under the Massachusetts Contingency Plan. In this case, the proponent should make a binding commitment in MEPA to AquaBlok as a temporary measure and removal as the permanent solution. DCAM should agree to apply for a U.S. Army Corps of Engineers section 404 permit this winter to remove the sediments so that vacuum dredging of the contaminated sediments from the shore can occur September, 2012. Although not reflected in the minutes, DCAM stated at the August 15th stakeholder meeting at Mass DEP (stakeholder meeting),[1] absent the IRA, it would rather remove, than take the intermediate step of covering, the sediments. CRWA strongly supports this and believes it would be less environmentally damaging to simply remove the sediments next September.

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AquaBlok

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Bank

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Due to the elevations, this will be visible much of the year, especially during the summer and fall when the water level is lower. Riprap is not necessary to protect the bank from erosion at this location; many more natural bio-restorative techniques would stabilize and protect the bank while providing far more habitat, water quality and aesthetic value. The riprap is proposed because it would be used to anchor the proposed FML cover over the C&D area. If C&D debris was fully removed from the Riverfront Area (or at least moved further inland from the floodplain),[8] a cover over the C&D area would not need to extend below the bank, allowing a far

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We note that the destruction of the bank in the floodplain was caused by 50 years of dumping of materials from the hospital. The state, like any other landowner, has an obligation to restore the bank. We disagree with the premise by DCAM's consultant at the stakeholder meeting that the bank is not currently productive, and therefore, does not have to be restored. We note that none of the stakeholders was focused on upland fauna, notwithstanding the write-up in the minutes. Instead, CRWA's concern expressed at the meeting is the value of riparian bank habitat for fish and other aquatic species and bio-restoration alternatives. An Activity and Use Limitation (AUL) also was not discussed.

Floodplain

Metals, PAHs, and asbestos are present in the C&D dump materials exceeding state Mass. Contingency Plan (MCP) cleanup standards. This fill is found between 0-12 feet below the ground surface and throughout the floodplain. The dump is in a Potentially Productive Aquifer and partially within the Zone 2 of a public water supply well.

CRWA recommends all contaminated fill within the floodplain be removed and the floodplain restored to prevent migration of contaminants through groundwater to the river, to withstand the erosive power of the river, and to ensure the success of more natural streambank stabilization. Creation of a bankfull bench is a proven technique, (See http://www.ser.org/sernw/pdf/Streambank_G_Barry_3.pdf), which will help protect water quality, improve riparian habitat and stabilize the bank in an environmentally protective manner. We note that the limit of the 100-year floodplain appears to be at elevation 123 feet. Although DCAM takes the position that no fill can be removed from the gas line easement, part of which is in the floodplain, this does not explain why hazardous material cannot be removed as necessary from the floodplain to create a bankfull bench.

CRWA appreciates this opportunity to comment. Please feel free to contact me with any questions.

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Re: Former Medfield State Hospital, Medfield, MA, Draft Record of Decision, Notice of Project Change, EOEEA # 14448

Dear Secretary Sullivan:

Charles River Watershed Association (CRWA) submits the following comments on the Draft Record of Decision (DROD) proposing to grant a Phase 1 waiver for the above-referenced project. We ask that you not issue a Final Record of Decision at this time and instead issue a Scope, or alternatively, that you deny the Phase 1 waiver and require the preparation of the Single Environmental Impact Report. If you do decide to issue the FROD at this time, we ask that it be limited to the temporary placement of "AquaBlok" over contaminated river sediments, which was the basis for the Immediate Response Action (IRA) under the Massachusetts Contingency Plan. In this case, the proponent should make a binding commitment in MEPA to AquaBlok as a temporary measure and removal as the permanent solution. DCAM should agree to apply for a U.S. Army Corps of Engineers section 404 permit this winter to remove the sediments so that vacuum dredging of the contaminated sediments from the shore can occur September, 2012. Although not reflected in the minutes, DCAM stated at the August 15th stakeholder meeting at Mass DEP (stakeholder meeting),[1] absent the IRA, it would rather remove, than take the intermediate step of covering, the sediments. CRWA strongly supports this and believes it would be less environmentally damaging to simply remove the sediments next September.

[1] DCAM's meeting minutes are inaccurate in parts and fail to capture many of the comments by stakeholders at the meeting. For instance, we do not agree that there was "consensus" about the use of AquaBlok. Additions and corrections to those minutes are discussed herein where relevant.

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The condition of substantial release migration was premised on a sheen that was observed when sampling equipment was pulled from the river in May, 2011. Core sampling was being conducted at the time. We are not aware of any other reports of an oily sheen in this area on the Charles since that time. The boring log for the sample CD-SD-122A showed a foot of sand and gravel sediments covering the oily layer. According to a recent newspaper article and interview with the power plant operator, the oil (and the PAHs) in the river sediments may have resulted from a 1978 spill at the hospital's power plant.

DCAM has stated its intention to perform the proposed work during low flow conditions this fall.[2] Accordingly, it does not believe any dewatering will be necessary for the bank and land under water work.[3] Based on the Dover gage data, flows in the river begin to rise at the beginning of October and all work in and on the banks of the Charles should cease by October 15th at the absolute latest. At the stakeholder meeting, DCAM reported that while the bid documents call for work to be completed by October 15th, it would be up to the contractor if this date was not met. We think the prudent course is for DCAM as the permitee to commit to ceasing all work on or before this date.

DCAM should also submit an emergency response/contingency plan for addressing significant rain events or flooding during the work –for stopping work, pulling its equipment out of the riverfront area, and protecting the bank. In its "Means and Methods for River Bank Restoration" DCAM is proposing that during the 800-feet of riverbank work, only 200-feet will done at any one time. This is far too large an area to be able to protect sufficiently within one day of a predicted significant storm. Accordingly, we suggest no more than 60 feet at a time be uncovered and worked on.

The relevant comments submitted by stakeholders at the meeting have not been addressed as you required as a condition of the proposed Waiver in the DROD. DCAM stated at the stakeholder meeting that because the project had already been publicly bid and bids opened, it could not change the project in any material way or the project would need to be rebid. Accordingly, and while CRWA appreciated the opportunity to participate in the meeting, no progress was made. DCAM stated that anchoring a cap over the C&D dump down to "low water" (*i.e.*, armoring the river banks with rip rap) was "not negotiable." DCAM's consultant has stated publicly that while other components of the proposed remedy could be altered if necessary in the future, the

[2] Contrary to the minutes, DCAM did not state that "all approvals need to be in place by September 2, 2011." Had they done so, a discussion by stakeholders would certainly have ensued. Nor did DCAM discuss the "schedule and maintenance and monitoring required for this approach" except to say that October 15, 2011 was a milestone for completion of work between ordinary high water and seasonal low water elevations. Even then, DCAM did not commit to halting work on or before October 15. More importantly for circumscribing the work, is the actual water level. Today, due to tropical storm Irene, the Dover gage is currently at 682 cfs and will remain high for a number of days. DCAM should agree that no work will occur above seasonal low flow.

[3] Logistically, even under the most expeditious of circumstances, it is unlikely bank and land under water work could be performed in a timely manner this fall. MassDEP recently determined in the context of the MWRA sediment dredging in Weston that work cannot commence until the 21-day appeal period for the 401 water quality certification has elapsed. We also believe that this project falls under Chapter 91 jurisdiction and requires a Waterways permit. See, G.L. c. 91, sect. 12A; 310 CMR 9.02(1)(e).

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riprap would be permanent.[4] We think it is a fair statement about the meeting overall that a discussion/consideration of less environmentally-damaging alternatives was not on the table despite stakeholder attempts to raise them.

Phase One as currently proposed will cause significant environmental impacts -- impacts which can and should be avoided, or minimized and mitigated.

The C&D area sits on top of a potentially productive aquifer (PPA), and part of it within the Zone II of the Town's public water supply well. Under DCAM's proposal, hazardous material will remain in the 100-year flood plain, and 1-3 feet of hazardous material will remain sitting below the water table in the C&D area.[5] John Thompson, licensed site professional, Woodard and Curran, who chairs the State Hospital Environmental Review Committee (SHERC) has characterized the C&D area as a "hazardous waste landfill." Because the entire C&D area will not be lined, and some contaminated fill not slated to be removed sits in groundwater, it will continue to leach contaminants into the river. DCAM's proposal to retain most of the fill on site and partially cover it will not alleviate this problem, nor address concerns about potential contamination of Medfield's water supply well. CRWA believes that a comprehensive solution should be developed to protect the Charles and the town's water supply.

AquaBlok

This is not a "small portion of the river," as characterized by DCAM's consultant, 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. We have a number of concerns and unanswered questions about the use of AquaBlok, which, because it can become dislodged through ice or storm debris in the river, by upwelling, or by persons recreating on the river, should, we believe, require intensive monitoring while it remains in place. If DCAM's consultant is correct that the cap will not deteriorate or erode, at a minimum, a sensor should be inserted in the cap so that it can be located and removed from the river if does in fact become dislodged. CRWA continues to believe that the extent of the contaminated sediments has not been adequately delineated.[6]

Based on the design specifications showing the AquaBlok installation beginning at an elevation of 110 feet, we note that the cap is likely to be exposed during low flow periods. DCAM also has not provided examples of where it has been used successfully in rivers, in contrast to lakes and ponds. Erosion is likely to be greatest on the downstream seam of the cap, and water may

[4] DCAM's consultant stated that there will be 200 linear feet of riprap, however, based on the plan provided (on which the scale is difficult to read), CRWA estimates 250-300 feet of riprap. DCAM's consultant explained at the stakeholder meeting that it relied on MassDOT and Federal Highway guidance with respect to the riprap.

[5] Due to the "potential environmental impacts of the project, and the unique nature of the project site," Secretary Bowles determined that the entire project requires an Environmental Impact Report. April 2, 2010 EENF Certificate.

[6] Although the minutes reflect that "DCAM explained that the 800 square feet that is currently identified may extend further downstream from its current location and would require additional assessments to delineate the impacted area and determine the appropriate remediation," this was not stated at the meeting. We do agree, however, that additional sediment sampling is necessary.

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undermine the cap, causing it to collapse. Actual experience with how AquaBlok can perform under these conditions should also be provided. Repairs, should the cap become displaced or damaged, do not appear to be possible. While the manufacturer claims that AquaBlok can be a temporary measure and removed**,** no details are provided about the methods that would be involved. We are concerned that removal could necessitate mechanical dredging in the river due to the clay particles' highly cohesive nature, instead of vacuum dredging from the shore (DCAM and CRWA's preferred alternative for removal of these sediments).[7] It also seems likely that due to the disruption of the sediment balance caused by the proposed placement of riprap, there will be increased flow velocity and scour at the downstream end of the riprap armament. Finally, six inches of sand, which DCAM's consultant admits will migrate downstream, should not be placed on top of the Aquablok as is being proposed.

Bank

DCAM is proposing to dredge 1,420 CY of land under water and then fill with 650 CY, for a net dredge of 770 CY. The bank will be partially excavated to allow placement of 3 feet of soil over the flexible membrane liner (FML) on the banks and C&D area, while still maintaining a 3:1 slope. No bank restoration below high water is proposed except for rip rap – a material that cannot accurately be characterized as "restorative," even if plantings are allowed to grow up through it. Some 650 CY of rip rap (300 CY LUW and 350 CY BLSF) will be used. DCAM states that riprap will cover approximately 200 LF of bank (although the attached plan shows the area to be covered is closer to 300 LF).

Due to the elevations, this will be visible much of the year, especially during the summer and fall when the water level is lower. Riprap is not necessary to protect the bank from erosion at this location; many more natural bio-restorative techniques would stabilize and protect the bank while providing far more habitat, water quality and aesthetic value. The riprap is proposed because it would be used to anchor the proposed FML cover over the C&D area. If C&D debris was fully removed from the Riverfront Area (or at least moved further inland from the floodplain),[8] a cover over the C&D area would not need to extend below the bank, allowing a far

[7] DCAM's consultant at the stakeholder meeting opined that it could be still be vacuum dredged in pieces.

[8] We request that your Scope require analyses of removing varying volumes of hazardous material (or pushing contaminated material further away from the flood zone). We disagree with the proponent's statement made in the context of the gas line easement that "For the remaining portion of the C&D Disposal Area, DCAM and its consultants indicated that, due to the contaminated fill remaining within the easement, the site could not be completely remediated (removed). Some contaminated material will be left behind and regardless of quantity or location; the 'risk' level remains the same." The proponent should be required to explain why leaving fill in the easement, justifies leaving fill in the riverfront area on top of the bank. In fact, Mark Baldi, MassDEP, was under the impression at the beginning of the meeting that DCAM was proposing to remove all material in the northwest area along the river shown in the revised plan as covered with a liner (up to elevation 124 feet).

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more natural bank restoration using bioengineering techniques, and the elimination of riprap.[9] Bioengineering techniques are far preferable here to restore important bank habitat, and protect water quality as well as for aesthetics.

We note that the destruction of the bank in the floodplain was caused by 50 years of dumping of materials from the hospital. The state, like any other landowner, has an obligation to restore the bank. We disagree with the premise by DCAM's consultant at the stakeholder meeting that the bank is not currently productive, and therefore, does not have to be restored. We note that none of the stakeholders was focused on upland fauna, notwithstanding the write-up in the minutes. Instead, CRWA's concern expressed at the meeting is the value of riparian bank habitat for fish and other aquatic species and bio-restoration alternatives. An Activity and Use Limitation (AUL) also was not discussed.

Floodplain

Metals, PAHs, and asbestos are present in the C&D dump materials exceeding state Mass. Contingency Plan (MCP) cleanup standards. This fill is found between 0-12 feet below the ground surface and throughout the floodplain. The dump is in a Potentially Productive Aquifer and partially within the Zone 2 of a public water supply well.

CRWA recommends all contaminated fill within the floodplain be removed and the floodplain restored to prevent migration of contaminants through groundwater to the river, to withstand the erosive power of the river, and to ensure the success of more natural streambank stabilization. Creation of a bankfull bench is a proven technique, (See http://www.ser.org/sernw/pdf/Streambank_G_Barry_3.pdf), which will help protect water quality, improve riparian habitat and stabilize the bank in an environmentally protective manner. We note that the limit of the 100-year floodplain appears to be at elevation 123 feet. Although DCAM takes the position that no fill can be removed from the gas line easement, part of which is in the floodplain, this does not explain why hazardous material cannot be removed as necessary from the floodplain to create a bankfull bench.

CRWA appreciates this opportunity to comment. Please feel free to contact me with any questions.

Sincerely,

Margaret Van Deusen

Margaret Van Deusen
Deputy Director and General Counsel

[9] Although not reflected in the stakeholder minutes, CRWA discussed its preference for bioengineering for stabilizing the bank and urged DCAM to contact The Bioengineering Group, which performed work at the contaminated Army Lab along the river in Watertown and with whom DCAM has an existing open contract. See, http://www.bioengineering.com/projects/index.php?id=7. Contrary to the minutes, further exploration of this was not made dependent on CRWA providing additional information; however, CRWA did in fact forward information to MassDEP that same day, which in turn was forwarded to DCAM.

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