Charles River Watershed Association

By Fax and Mail

May 2, 2012

Allen Wiggin
Division of Capital Asset Management
One Ashburton Place, 15th Floor
Boston, MA 02108

Re: Former Medfield State Hospital, Medfield, MA Draft Phase IV – C&D Area Remedy Implementation Plan

Dear Mr. Wiggin:

The Division of Capital Asset Management (DCAM) presented its ***Draft Phase IV – C&D Area Remedy Implementation Plan*** to the Medfield PIP Group on April 12, 2012. The Charles River Watershed Association (CRWA) submits the following comments on the Phase IV C&D Area RIP for the above-referenced project.

MCP Process:

At the outset we'd like to express our frustration with the MCP public process. CRWA submitted lengthy (and we think you'll agree, thoughtful) comments on the Phase II and III reports. Therefore, we were extremely discouraged that DCAM issued the Draft Phase IV remedial action plan three business days after the Phase II/Phase III comment period deadline, only two business days after CRWA's Phase II/III comments were submitted, and well before the Town was able to submit its comments.[1] This is at odds with DCAM's goal of increased transparency, and its solicitation of stakeholder input. CRWA appreciates the scheduled stakeholder meetings and more open dialogue which has taken place over the last few months. However, given the timing of the Draft Phase IV and comments by staff that the project cannot be materially changed because it has already been bid and awarded, it is hard to believe that public input is being seriously considered. Nor is it possible given this timing that the Draft Phase III comments have been considered and incorporated into a Final Phase III, which should form the basis of a Phase IV remedy selection. We are left with a sense of futility about the time we have devoted to the public process.

While we think the mediation DCAM has offered the town could be productive in selecting an acceptable alternative for all parties involved, this mediation has yet to be scheduled. Yet

[1] CRWA submitted its comments on April 5, 2012, one day after the deadline, with the agreement of Sandra Duran, DCAM Project Manager.

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DCAM is apparently proceeding with permitting for its preferred alternative, casting doubt on whether the mediation will in fact be truly useful.

Additionally, after listing past stakeholder concerns on page 1-5 of the Draft Phase IV, DCAM states that "each of these concerns has been methodically incorporated into the design of the remedial actions for the C&D area." While CRWA appreciates that some of these concerns have been incorporated, such as "minimizing armoring of the river bank"[2] and "removing contaminated sediment from the Charles River," others at most are "acknowledged," rather than "methodically incorporated." "Reducing residual contamination to background levels by completely removing the HFA debris" should be revisited and the cost re-determined now that it is clear that the Spectra Energy will not approve moving the gas pipeline. Removing debris from within the Zone II and below the water table, which scored comparably to DCAM's preferred alternative and was the second least expensive alternative, should also be given serious consideration. Both of these alternatives provide numerous benefits—flood plain and bank restoration, elimination of the partial cap and its expensive future maintenance, elimination of exposure pathways, and increased public confidence in the remediation.

Pursuant to 310 CMR 40.0810(1), outlining the General Provisions for Comprehensive Response Actions, "Comprehensive Response Actions shall be performed in ***sequential*** phases." Additionally, under 40.0810(3), "each phase of the Comprehensive Response Actions shall ***build on the results of previous work***." (emphasis added). This process can hardly be said to be sequential, or built upon the results of previous work, if a Draft Phase IV is being released before Phase II and Phase III reports are finalized and submitted.

Charles River Sediment:

CRWA remains concerned with the inconsistent description of the volume of contamination to be removed, and how the lateral extent of the contamination will be verified. Additionally, we have concerns and many questions about the proposed dredging itself. For instance, after dredging, the excavated area "will then be stabilized with angular stone fill." (page ix). However, details in Appendix F (page 352023-4) contradict this: "the contractor shall backfill the dredge area with clean backfill material having a ***gradation similar*** to that of the material removed." (emphasis added). The sediment to be dredged is predominantly sand, muck and silt; large, angular stone fill does not constitute a "similar" material. In any event, we oppose placing fill in the dredged area after excavation.

There are also discrepancies as to the amount of contaminated sediment slated to be removed during dredging. "The contaminated sediment will be removed by mechanical excavation (estimated to be 30-45 cubic yards) and disposed of at an off-site facility." (Page ix) However, on page 3-2, the amount of sediment to be removed is estimated at "45-60 cubic yards." Additionally, in previous reports (Phase II and Phase III) the vertical extent of dredging was described as only the top foot of sediment. Impacted sediment and the extent of dredging is then described as 1-2 feet in Figure-7 of the Phase IV and "within the top 2 feet" on page 3-2. We request that the true extent of contamination to be removed be consistently and accurately

[2] In CRWA's Phase II/Phase III comments, we raise the question of whether a partial liner and any bank armoring is necessary if more fill in the C&D area is removed and the area restored.

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defined. Since reports have described a clear delineation of contaminated sediments from the clay layer beneath, we oppose over-dredging.

The dredging plan calls for a clamshell type enclosed excavator, stating that when compared to hydraulic dredging, this method of "mechanical excavation is projected to result in less turbidity." (page ix). There is nothing to support this and in fact, CRWA disagrees with this statement, because in our experience and based on conversations with a number of experts, mechanical dredging, if done in the wet, will produce more turbidity and potentially spread the contamination downstream.[3] Also, if "reaching the clay layer will act as an additional benchmark to confirm that the impacted sediment layer has been removed" vertically (page 4-9), we question how the lateral benchmark will be ascertained. In Appendix F (page 352023-3), DCAM states that "the contractor shall not dredge outside the dredge area as indicated on the contract drawings." Confirmatory sampling is necessary and yet no course of action is proposed if it is discovered that the contamination is more extensive laterally than originally thought.

If mechanical dredging from the bank is chosen, the excavation of contaminated sediment should take place in the dry, and will require a cofferdam, or similar structure to temporarily exclude the river water from the work area.[4] Otherwise the release/threat of release of hazardous material is high. Silt curtains and booms by themselves are inadequate given this particular situation.

From the Construction Sequence section on page xi, a ledge for the machinery for in-river dredging will need to be created. There is also the risk that the machinery will break down the bank further spreading contaminated bank fill into the river. No detail is provided about dewatering, or a staging area, or whether the truck transporting the sediment will be placed on the C&D dump.

CRWA does, however, agree with and support the use of a rock vane for riverbank stabilization. Rock vanes area an established river restoration technique, and the inclusion of one in this design should serve to redirect the main flow away from the bank, allowing the biostabilized bank vegetation to establish. However, one concern with the rock vane is with navigation and boating safety. This is already a narrow stretch of the river, and a rock vane will further reduce the passable width. Because during much of the year, water levels will be just above the top of the rock vane, which is designed to sit just at low water, we are concerned that this barely submerged vane may become a hazard for boaters.

C&D Dump:

CRWA has commented extensively on DCAM's proposed remedy and our belief that much more of the fill should be removed and the area restored. Rather than repeat them here, we refer you to our previous comment letters.

"The selected remedy for the HFA involves removal and off-site disposal of fill from the bank of the Charles River and adjacent wetlands, and covering of the remaining fill." (page viii). This

[3] See, CRWA's earlier comments from the Phase II and Phase III drafts, dated 4/5/12.
[4] See, CRWA's 4/5/12 comment letter in response to Phase II and Phase III.

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will require "an Activity and Use Limitation (AUL) [to] be implemented, prohibiting the use of the Site for residential or agricultural purposes…" (page ix). However, both here, and on page 1-3, no details are provided beyond "placing an AUL on the HFA." Although "permitted and non-permitted activities and land uses" seem to be contemplated (see page 4-2), no explanation is provided. Legal responsibility for AUL enforcement[5] is not discussed, although care will transfer to DCR in the future under the legislation. Similarly, the entity responsible for future O&M is not discussed, or which agency will be required to fund this. Certainly, if DCR is to be responsible, a dedicated fund should be established and DCAM should fully fund this and commit to additional funding should it be necessary.

According to DCAM, "the implementation of the AUL allows contaminated soil to remain in place, because the exposure pathways to human and environmental receptors would be controlled." (page 6-1). CRWA has repeatedly expressed concern that the "donut hole" portion of the cap does not provide a suitable cover for the contaminated fill below.[6] DCAM presumes that 3-ft of topsoil will eliminate exposure for both "burrowing animals and humans." However, topsoil does not provide a significant barrier for wildlife, especially burrowing animals. A fallen tree can also expose deeper soils through its upended roots.

We also point out the inconsistent reasons given for leaving the "donut hole" area open, and its questionable suitability as a cap. On page 4-1, the consultant states that the donut hole will "allow for tree planting/growth and will eliminate the need for significant drainage and storm water management infrastructure." In the Phase III report, the function of the open donut hole was not discussed, although multiple purposes of the liner were expounded at page 6-3 of the Phase III. At a meeting with DCAM on March 14, 2012, DCAM stated that the purpose of the open donut hole was to keep the asbestos fibers remaining in the capped fill area moist. A clear explanation should be provided for the remaining open area in the cap.

While on page 4-4, DCAM mentions that a 40 mil HDPE FML/soil cover cap is "industry standard as an environmental cover system" and it "has been used around the world to safely cover/contain impacted material and prevent direct exposure to contaminants, we wonder how many of these examples were unlined at the bottom, and with a "donut hole" at the top.

Finally, we disagree with the amount of fill to be removed from the HFA, and the potential reuse of concrete fill material. On page 1-3, the cubic yards to be removed is measured at approximately "7,0000" cubic yards. Should this read "7,000" or "70,000"? The entirety of this fill is designated to be disposed off-site (page 1-3). There is no mention in this overview of reusing/crushing concrete material. However "large uncoated segregated concrete, masonry, and stone debris will be stockpiled on-Site and crushed to size 3-inch minus for re-use as cover material." See, page 4-6/7. We would hope that DCAM will treat excavated fill material as we have been repeatedly assured it would be: completely removed and disposed of at an off-Site facility.

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[5] "Security personnel" is mentioned in Appendix F, page 2. A long-term security employee would add considerably to the O&M costs of this project, and would be unnecessary if all contamination was removed, obviating the need for an AUL.

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[6] See CRWA's previous comments on Phase II and Phase III dated 4/5/12.

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According to DCAM, "the contaminated fill material within the Zone II is not an ongoing source of impact to groundwater. Removing it entirely, therefore, would have no appreciable environmental or other benefit." (page xii) CRWA strongly disagrees with both of these statements. In response to the first, CRWA has commented before on the issue of potential groundwater contamination.[7] As for the second issue, we disagree that removing additional contaminated fill material within the Zone II would have no appreciable environmental or other benefit. Benefits would include: elimination future risk, elimination operation and maintenance of the liner and cap, elimination potential for further ground water contamination and/or contaminate migration, and elimination of the need for continued environmental monitoring.

Environmental Protection and Monitoring:

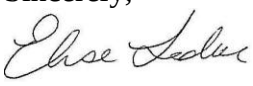
DCAM states that "storm water that collects on Site will be collected, filtered through a 5-micron particulate filter and discharged through straw bales or sedimentation bags to an upland area at the top of the C&D Disposal Area." (Page 4-10). More detail should be provided on this -- how will stormwater be collected? What assemblage of contaminants of concern is the filter designed to remove? Where in the upland area will this stormwater be discharged?

The plan calls for turbidity levels to be monitoring daily, with an engineer slated to do daily inspections "directly downstream of the river operations to observe for the presence of suspended sediment, debris and/or sheen, and assess the condition of the turbidity curtain(s) and oil absorbent boom" (page 4-13). Actual sampling should be conducted daily throughout the work day in addition to visual inspections.

Although DCAM states at page 4-5, that "confirmation sampling will be performed in the C&D Area to ensure that a condition of NSR exists for the Site at the completion of remedial actions," this appears to be spotty post-construction, and very minimal in the long term. Most importantly, visual observations for petroleum (CRS) and asbestos (HFA) (page 4-6), are inadequate. Only one toxicity test is proposed in the CRS Area (page 4-5). Toxicity tests along the edge of the excavated area should be performed to ensure contaminants were not missed; a single sampling in the center of the dredged area will be inadequate to ensure this. Lastly, it appears that sampling for PCEs is missing entirely from the monitoring plan shown in the table on page 4-6. While long-term ground water monitoring for PCEs is mentioned on page 3 of Appendix G, the time span for this monitoring is not described.

Please feel free to call us if you have any questions at 781-788-0007.

Sincerely,



Elise Leduc
Rita Barron Fellow

[7] See CRWA's previous comments on Phase II and Phase III dated 4/5/12.

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