Centredale Manor Proposed Plan
Kenneth_Munney to: Anna Krasko

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From: Kenneth_Munney@fws.gov
To: Anna Krasko/R1/USEPA/US@EPA

1 attachment

Centredale Manor.FWS comms.PDF

Hi Anna,

Attached please find a scanned pdf of FWS comments on the Centredale Manor Proposed Plan. Official hard copy comments were postmarked today, within the Public Comment period, and should be delivered to EPA next week.

Please let us know if you have any questions on our comments. We look forward to the finalization of the Proposed Plan and the Remedial Design Phase of the site. As always, we appreciate EPA's continued coordination with us on technical and Trustee issues related to natural resources.

Best regards,

Ken

(See attached file: Centredale Manor.FWS comms.PDF)
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March 2, 2012

Ms. Anna Krasko
EPA New England
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Boston, MA 02109-3912

Dear Ms. Krasko:

Thank you for the opportunity to review the U.S. Environmental Protection Agency (EPA) Proposed Plan, Centredale Manor Restoration Project Superfund Site, North Providence, Rhode Island, and provide comments to EPA Region 1, as part of the public comment period.

The Proposed Plan (PP) for the cleanup of sediment, soil, surface water and groundwater presents a combination of options for remediation of contamination in section-specific areas of the site associated with historic releases of dioxins, polychlorinated biphenyls (PCBs), and other contaminants of concern (COC). We previously commented to EPA's National Remedy Review Board (NRRB) on July 7, 2010 concerning preliminary proposed remedial actions. The following comments on EPA's preferred remedial options parallel our previous NRRB comments, relative to section-specific areas of the site.

Preferred Remedial Option for the Source Area: Alternative 4E: Conduct focused surface soil removal based on conservative dioxin and PCB clean-up goals, upgrade the current soil cap to a standard RCRA cap, and dispose of highly toxic or mobile waste offsite. We agree that these actions will provide the highest level of human health and ecological protection from contaminated surface soils and minimize potential groundwater and surface water risks to the adjacent Woonasquatucket River. We would prefer that Cap Area 1, as depicted on PP Map 7, be minimized to the greatest extent possible on the southern boundary to avoid filling of floodplain wetlands. In instances where wetland filling is unavoidable in order to attain remedial objectives, mitigation for permanent loss of wetland habitat should be conducted following U.S. Army Corps of Engineers (ACOE) guidelines. Additionally, lost flood storage potential due to capping within the 100-year floodplain should be compensated under ACOE regulations, as addressed in the Administrative Record. Off-site disposal of contaminated soils is preferred rather than impacting additional floodplain habitat by the incorporation of a nearshore Confined Disposal Facility (CDF).

Preferred Remedial Option for Allendale and Lyman Mill Impoundments: Alternative 7A: Conduct full excavation of sediments based on conservative clean-up goals for dioxin and dispose of contaminated sediments offsite. We agree that full excavation based on conservative clean-up goals will remove the bulk of dioxin-contaminated sediments. This will provide the highest level of human health and ecological protection from the currently elevated levels of dioxin contamination in both impoundments. We support the dewatering of the impoundments as the most effective method for removal of contamination, attaining clean-up goals, and minimizing downstream transport of contamination. We also concur that sediments should be capped with clean fill if cleanup goals cannot be attained after significant sediment removal has been conducted. However, cap thickness should be in excess of the proposed thin-layer cap (TLC) in order to be more conservatively protective of biota. A 6-inch habitat layer, on top of the proposed sand cap layer, would provide a more protective barrier from residual contamination and promote re-establishment of the benthic macroinvertebrate community. Habitat layer cap material should contain total organic carbon and sediment grain size characteristics that will promote successful and expedited restoration of the benthic community. EPA acknowledges (Feasibility Study [FS], Appendix K) in their aquatic ecosystem recovery rate analysis that this technique would significantly aid in benthic habitat restoration. Furthermore, integration of a habitat layer in sediment caps is being used at remedial sites within EPA Region 1 and has been effectively instituted at other remedial sites across the country. In areas where clean-up goals can be attained, we recommend application of a habitat layer if native sediment conditions at depth are lacking in characteristics that will support successful benthic re-colonization. Where possible, post-excavation elevations should be retained to increase average impoundment depth and enhance open water habitat potential.

Stabilization of shorelines and restoration of embankments should be done utilizing bioengineering materials to the greatest extent possible. We recommend avoiding the use of bank or bottom armoring except in erosion-prone areas where bioengineering design will not meet ACOE stability specifications. We also recommend naturalizing all shoreline armored areas with a vegetated topsoil/sand mixture. This will promote shoreline restoration and provide a more aesthetically acceptable post-remedial condition. This technique is going to be utilized at the GE/Housatonic Silver Lake remediation in Pittsfield, Massachusetts. The Silver Lake remediation/restoration should serve as a good model for shoreline restoration options in the Allendale and Lyman Mill impoundments.

Excavated sediments should be contained in an upland CDF area, as depicted on PP Map 9. We would prefer the selection of the most southerly CDF location proposed, which is situated off Burr Avenue, and is currently operating as a concrete plant. A 2009 site visit to this location, with EPA and state officials, documented that this site has high potential to fully accommodate excavated soils and sediments from the site. Use of this area would prevent potential impacts to the other areas proposed for upland CDFs which contain quality or developing wildlife habitat that is uncommon in this part of the watershed. We acknowledge that the most heavily contaminated sediment should be shipped out of area to meet regulatory high hazard disposal requirements.

Benthic macro/microfauna and fish are expected to gradually re-colonize the remediated impoundments over a period of several years from upstream and adjacent habitat contributions. However, EPA acknowledges (FS, Appendix K) that natural fish community restoration may be extremely protracted when complete depletion has occurred, especially when upstream migration of fish is not possible due to impassable dams. Therefore, it would be preferable if fish were restocked in the impoundments. The potential benefits and logistics for these efforts should be discussed with the Rhode Island Division of Fish and Wildlife. Restocking with select species and a calculated stocking density appropriate for each impoundment would definitively restore the fishery more quickly than natural repopulation. It would also allow for establishment of a more preferred or beneficial fish community than existed pre-remedy. This in turn will support higher food chain dynamics and potentially provide expedited sport fishery options for the public. Biotic assemblages should be monitored for abundance, diversity, and contaminant levels as the aquatic habitat matures post-remedy.

Preferred Remedial Option for Allendale Floodplain Soils: Alternative 5A: Conduct full excavation of floodplain soils based on conservative clean-up goals for dioxin and other COC. We agree that these actions will be conservatively protective of ecological receptors. Remediated floodplain areas should be restored to riparian forested, scrub-shrub or emergent habitat, especially immediately downstream of the Source Area. Original floodplain elevations should be retained to enhance riparian habitat re-establishment. However, elevations may be lowered in these areas to mitigate for lost flood storage capacity in other areas. Loss or change in habitat type from pre-remedial conditions, due to flood storage mitigation, may also require habitat mitigation. All contaminated soils should be contained in the same upland CDF used for impoundment sediments, as discussed above.

Preferred Remedial Option for Lyman Mill Stream Sediment, excluding the Oxbow Area: Alternative 3A: Conduct full excavation of all in-stream sediment in excess of conservative clean-up goals for dioxin and other COC. We agree that these actions will be conservatively protective of ecological receptors. Instream and associated emergent habitat areas should be restored using bioengineering techniques to the greatest extent practicable. Contaminated sediments should be contained in the same proposed upland CDF, as described above.

Preferred Remedial Option for the Oxbow Area: Alternative 3A: Removal of soil from floodplain areas where contamination is above safe levels for residential/recreational exposure, removal of sediment above target cleanup levels from erosional stream areas, placing a TLC over residual contaminated floodplain soil and sediment, diverting water to flow through the Oxbow Area to speed natural recovery. We agree that contamination elevated above target cleanup levels for human health should be removed. However, there may be some areas classified for human use that are actually unlikely to be utilized for residential or recreational purposes. Further examination of proposed removal areas based on human health protection may result in refinement of excavation boundaries.

We agree that sediment above target cleanup levels should be removed from all erosion-prone areas along stream channels. The remnant former river channel and back channel areas that conduct flows during high water events are particularly susceptible to erosion and exhibit

elevated dioxin levels. Furthermore, future river channel migration or abraided surface water flows have the potential to erode floodplain areas that have not been remediated. These areas would have the potential, if unexcavated, to re-contaminate adjacent and downstream remediated areas during high water or scour events. TLC treatment of elevated dioxin levels in the floodplain areas will not prevent significant flow events from re-distributing residual contamination.

We do not agree that placing a TLC over substantial acreage within the Oxbow Area is warranted in some cases or protective enough in other cases. As described in the PP, the Oxbow Area contains uncommon riparian habitat for this area of the watershed, as characterized by the ACOE. Modeled ecological risks show a relatively low risk from dioxin and COCs in some areas, based on lowest observed adverse effect levels (LOAELs). We are concerned that large areas of functional habitat may be impacted for minimal ecological risk reduction. We recommend that proposed remedial actions be reconsidered for sensitive habitat areas, such as vernal pools, where actions will result in minimal ecological risk reduction and may result in functional loss of habitat. Amphibians, including eggs and larvae, have been found to be relatively insensitive to dioxin exposure. Vernal pools are very sensitive to hydroperiod fluxes and therefore vulnerable to elevation changes. TLC application within vernal pool habitat areas will raise elevations, decrease water retention duration, and compromise functionality. We do not recommend conducting remedial activities in vernal pool habitat areas unless concentration levels are high enough to be considered future potential source areas. In these cases, it would be more beneficial to do targeted small-scale sediment/soil excavation of elevated contaminants, cap residual contamination but retain or improve functional elevations, and restore habitat features post-removal.

We are not confident that TLC in forested and scrub-shrub habitats can be effectively conducted without serious impacts to the functionality of the habitat. Application of a TLC in these habitats, over extensive acreage, is not a well-proven technology. It will minimally sequester surface soil contamination, has questionable stability during flood events, may degrade existing habitat function for an unknown period of time, and may require substantial habitat removal or alteration for application. We consider TLC to be of minimal benefit ecologically and support targeted excavation of floodplain soils, based on significant ecological risk reduction. In areas where long-term effects of excavation may outweigh short-term benefits, as in the removal of forested floodplain habitat, small-scale excavation, TLC or no action should be considered. Risk reduction using area averaging on an ecologically relevant scale may show that a reduced remedial footprint is acceptable.

We are also not confident that water flow diversion into the Oxbow Area can be conducted in a manner that will lead to monitored natural recovery, without promoting potential erosion and re-distribution of residual contamination. The hydrologic cycle within the Oxbow Area is an important feature for sustaining current floodplain habitat function. Large portions of the Oxbow are inundated during seasonal high water or episodic events. It is unclear how water flows would be altered to augment this condition and lead to significant additional sedimentation, in areas left with residual contamination, while not compromising habitat conditions. Further details would need to be provided during the Remedial Design phase

before we were able to agree that this proposed action had significant benefits and insignificant impacts.

Excavated sediments should be contained in the same upland CDF, as described above.

In general, expeditious and well-planned restoration of riparian and floodplain habitat post-remedy will be very important to restore valuable functions and values to the Oxbow and related areas in the Allendale and Lyman Mill reaches. We recommend high organic soils for post-excavation replacement, generous stocking densities of well-developed, site-specific species for forested and scrub-shrub areas, along with aggressive invasive species control and monitoring efforts. Streambanks should be stabilized and restored using bioengineering techniques to the greatest extent possible, as described above.

We recommend that restoration and monitoring standards for all remediated areas of the site include robust, comprehensive, and long-term vegetative community establishment and invasive species control, parallel to those used on the first two miles of the GE/Housatonic River Site. Riparian and terrestrial habitat restoration should be described in a Restoration and Monitoring Plan, as part of the Remedial Design.

Wetland habitat and flood storage capacity that are impacted or lost due to remediation excavation, capping, filling, or disposal activities require mitigation that should be conducted according to ACOE guidance, as previously mentioned. TLC, if implemented, may lead to reduced habitat quality which should be monitored over the long term, in conjunction with habitat restoration areas.

We will be conducting a natural resource damage assessment (NRDA) in coordination with our fellow Trustees, the National Oceanic and Atmospheric Administration (NOAA) and the State of Rhode Island. The focus of the NRDA claim will be to determine the level of past, present and future injury to natural resources from site-related contamination, including injury related to remedial activities. As EPA is aware, NRDA is a separate and parallel process from the remedial process that seeks to recover damages from the Responsible Party to compensate the public for the reduction of services or lost use of natural resources due to contaminant release. We understand that EPA's PP seeks to avoid impacts to natural resources to the greatest extent practical, while insuring protection of human health and the environment. However, as currently proposed, EPA's preferred remedial actions will include substantial injury to natural resources, via sediment and floodplain soil remediation which will remove, alter or otherwise impact significant habitat acreage. Additional injury may occur from the disposal of contaminated sediments and soils. Remedial impacts to natural resources, including acute and chronic impacts, will be assessed though a habitat equivalency analysis. Post-remedial habitat restoration will contribute to reduced future natural resource damages by expediting recovery of impacted habitats. Onsite wetland habitat restoration in excess of required remedial mitigation can be used to offset assessed future damages. Trustees will begin the damage assessment process after the Remedial Plan has been finalized. The injury determination may not be finalized until after the Remedial Design is completed, so that all impacts to natural resources from remedial activities can be assessed and quantified.

We look forward to further discussions with EPA Region 1 regarding the remediation and restoration of the Centredale Manor Site, the Woonasquatucket River, and its floodplain. For further comments or questions, please contact Mr. Kenneth Munney of this office at 603-223-2541, extension 19, or Kenneth_Munney@fws.gov.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office