WILDLIFE HABITAT COUNCIL™

Case Study 24

Dahlgren Case Study	
Name and Location	**Site Name: Site 46 Landfill A, Stump Dump Road** **Site Location: Dahlgren, Virginia**
Ecological Enhancement	**Integrated and established tidal wetlands as part of the remedial design and action in addition to contaminant removal.**
Site Description	Briefly describe site history; i.e., historical uses and current uses (or current uses prior to cleanup. You may want to insert a picture, aerial photograph, etc.) If sending this via e-mail you may want to send the picture separately. **This is a 5 acre landfill that was operated from the 1940's until the 1960's that is located adjacent to Gambo Creek – a tributary to the Potomac River and ultimately Chesapeake Bay. The waste disposed of here was primarily municipal waste including scrap metal, wire, metal shavings, roofing tar, railroad ties, and empty 55 gallon drums. The site was covered with soil and successional vegetation after closure. Since closure, the site was largely unused until the cleanup investigations in the late 1990s.** Is the project located in an urban/suburban setting or rural/agricultural? Briefly describe the area – is it located in a predominantly residential, commercial or industrial area? **This project is located in a largely rural setting with mostly forests and open fields around it. The site is adjacent to Gambo Creek and therefore has tidal wetlands on one side.** What is the size of the property? **Five acres.**
Site Reuse Description	Briefly describe how ecological enhancements will be or have been incorporated into the site restoration project. If the site will have multiple uses; i.e., recreational, ecological, etc, you may want to include this information as well. **The Feasibility Study determined that based upon the contaminants present at the site and its proximity to Gambo Creek, a removal action would be conducted. As part of the restoration after the removal action, wetlands would be established in the low areas of the site.**

	What type of ecological restoration is being sought (wetland, prairie, etc.)? **Wetlands restoration.** Why were ecological enhancements selected as an end use for this project? **The facility has a wetlands accounting program for different types of wetland habitat on the base. Integrating wetlands into this project would enable the base to establish wetland credits for this Site as part of the larger basewide accounting.** Is the community involved in the end use decision making process? **The community is able to provide comments and input to the decision process through involvement on a remedial action board (RAB).**
Stakeholder Involvement	Who were the stakeholders/partners in this site and were their roles/contributions? **In addition to the Navy, the partners include the EPA, United States Fish and Wildlife, National Oceanic Atmospheric Administration, and the Commonwealth of Virginia. This group worked as part of a partnering team where decisions are reached through consensus.** What were the concerns of these stakeholders and how were these resolved? **Concerns included the acreage of wetlands that would be restored, the amount of open water created, types of species to plant, and the types of wetlands that would ultimately be established. These concerns were resolved through discussions and group decisions as part of the partnering team.** Did any of these stakeholders/partners make a financial contribution to the project? **The project was Navy funded.** Were any local, state, federal funding sources used? **No**
Site Assessment Approach and Cleanup	Briefly state the results of the site assessment. Did the site assessment approach take into account end use? **This followed the standard Installation Restoration process with the end results being a remedial action. End use was considered from both an ecological and human health risk standpoint.**

	What is/were the sources of contamination? What are/were the contaminants of concern? **The sources of contamination were the waste. The contaminants of concern included the following: Cadmium, Copper, Lead, Mercury, Nickel, Zinc, DDT, total PAHs, and total PCBs.** Under what specific legal authority(ies) is the cleanup being performed (CERCLA/RCRA/OUST or other)? **CERCLA** Briefly summarize the corrective action taken on site. If corrective action/remedy still in place please describe. Why was the particular remedy selected? Please describe any barriers encountered in employing remedy selected. **The corrective action taken was removal of the contaminated waste from the site to an appropriate off-site landfill. This remedy was selected due largely to the landfills location relative to the adjacent creek. Concerns included potential contaminant transport via groundwater or surface water transport into the creek and ultimately the Potomac River. The initial sampling effort indicated that this was already beginning to take place. The primary barrier encountered in the remedy selection was the potential loss of existing tidal wetlands and upland habitat as part of the removal.** Describe any long term controls (e.g., institutional controls) associated with the site. **The site was a clean closure. A wetland restoration workplan is being prepared and implemented. The wetlands will be monitored to ensure successful restoration.** Was a closure letter obtained for the site? If so what was issued and when? If not, are you currently seeking a closure letter? **Final wetland plantings are currently being installed (June 03). Once complete, a Final Remedial Action Completion Report will be prepared and submitted for approval to EPA and VDEQ.**
Reuse	Describe the end use of the site. What are the benefits of the end use of the site (for the community, regulatory agency, etc.)? **The site has now been restored back to its pre-filled condition and**

	cleaned up to reduce future risk to human health and the environment. There are no restrictions on the site. What has been the added value to the site? **Approximately 1 acre of tidal emergent and scrub-shrub wetlands has been added to the site.**
Obstacles	What problems did you encounter during the corrective action? What was the nature of the problems encountered (e.g., regulatory, community perception, etc.) and how did you overcome these problems? **Uncovering unexploded ordnance (UXO) was a safety issue at the site and required EOD support and screening at all times.** **A bald eagle nest was located near the site and prevented construction between December through July, as long as eagle's were still using the nest. This necessiated an additional mobe and demobe.** Describe any other obstacles related with this project (funding, etc.)
Costs and Funding	How was this project funded, i.e., were there any redevelopment funds or other resources used? **ER,N funded.** What was the total cost of the project? **$1,700,000** If an ecological enhancement was used in the remediation, were there cost savings associated with the selection of this remedy?
Economic and Other Incentives	What were the economic incentives (e.g., conservation easements) associated with this project? **Wetland mitigation commitments from other sites (i.e. capping a wetland in exchange for enlarging an existing wetland)** Were there any other incentives (e.g., public relations) associated with this project? **Creating wetlands is good public relations.**
Time	How long did it take for this project to be completed? If the project has not yet been completed, is there a time estimate for completion **1 ½ years accounting for mobe and demobing for the eagle's nest.**
Other	List any other information that may be of value for this case study. This can be used to insert a "lessons learned" section, or highlight other

	information of interest. Also, you may add additional sections as needed, if additional information does not fit in the categories above.
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