

## **EXECUTIVE SUMMARY**

This Final Environmental Impact Statement (FEIS) has been prepared to support a permit application submitted by the Maryland Port Administration (MPA) to the U.S. Army Corps of Engineers (USACE) pursuant to Section 10 of the River and Harbor Act of 1899 and Section 404 of the Clean Water Act for the construction of a dredged material containment facility (DMCF). A draft environmental impact statement (DEIS) was publicly distributed on May 19, 2006 and a supplement for the potential use of material from the Seagirt dredging area was submitted on June 30, 2006. The National Environmental Policy Act (NEPA) of 1969 process is being conducted in accordance with the USACE regulations for implementing NEPA as part of a regulatory action [33 Code of Federal Regulations (CFR) 325 Appendix B]. An EIS is required due to the size and potential impacts of the proposed project. This FEIS presents a consolidation of the State and Federal study findings, as well as an evaluation of the suitability of the Masonville site to help meet the 20-year Baltimore Harbor dredged material placement and the 1.5 mcy annual placement capacity needs. Potential impacts and site development issues, including the use of dredged material from the Seagirt dredging area, have been included in this document.

Baltimore's geographic location as the port that is situated furthest inland along the East Coast enables it to rapidly ship cargo to the inland industrial centers of the U.S. In order to keep the Baltimore Harbor channels open for safe passage, dredging must occur. Baltimore Harbor dredging projects for maintenance and new work are projected to generate approximately 1.5 million cubic yards (mcy) of dredged material annually. This demand for placement of dredged material is expected to continue in the foreseeable planning horizon. State environmental regulations dictate that materials dredged from the Baltimore Harbor be placed at a dredged material containment facility (DMCF) due to the potential for contamination. Currently, material dredged from the Harbor is placed at the Hart-Miller Island (HMI) DMCF. By Annotated Code of Maryland – Environment Article Section 5-1103, the HMI DMCF must be closed by January 1, 2010. The HMI DMCF will likely stop receiving Baltimore Harbor dredged material in 2008 in order to place materials on top that would be suitable for habitat development. The Cox Creek DMCF has been reactivated for receipt of dredged material; however annual capacity is limited if overloading of the site is to be minimized. Under current circumstances, a shortfall of annual capacity will occur after the HMI DMCF stops receiving Baltimore Harbor dredged material. This shortfall presents an urgent need to study, select, and implement new options capable of accepting the annual volume of 1.5 mcy of Harbor material.

Both the MPA and the USACE are responsible for maintaining the navigation channels within Baltimore Harbor. To address the predicted dredged material placement capacity shortfall, the MPA utilized the committees of the State Dredged Material Management Program (State DMMP) to identify and screen potential Harbor options. This resulted in the formation of the Harbor Team, which is comprised of local citizens groups, government agencies, local industry and non-profit groups. The Harbor Team, along with federal and local resource agencies, have screened hundreds of potential options for upland placement, island creation, fastland creation, and innovative reuses. The screening of the state DMMP and Harbor team indicated that (at this time), avoiding in-water placement of dredged material was not practicable. Along with general policy recommendations for the MPA to move toward increased management of dredged

materials through innovative reuse (0.5 mcy annually by 2023), three sites were selected for feasibility-level study and include: Masonville, Sparrows Point, and the former British Petroleum (BP) Amoco Asphalt Terminal in Fairfield (BP-Fairfield) (Figure ES-1). These studies have indicated that development is feasible for all three sites. However, Masonville is the preferred option from an environmental and engineering standpoint, and it meets the economic requirements of the MPA. The site is owned by the MPA and has the fewest constructability issues. Therefore, Masonville was identified through the detailed State screening process as the preferred alternative.

Concurrent with the State site screening process, the USACE was conducting an independent assessment of dredging and placement needs for the Baltimore Harbor. The USACE recently completed its own Dredged Material Management Plan (Federal DMMP) for placement of material dredged from the Baltimore Harbor and approach channels. This Federal DMMP (USACE 2005) assessed placement capacity for material dredged from the Federal Channels for a 20 year planning horizon. The Federal DMMP is a tiered EIS that contains recommendations for placement of dredged material, but does not make site-specific determinations for future placement sites for material dredged from the Harbor (USACE 2005). For sediments dredged from the Baltimore Harbor channels, the Federal DMMP recommended further study of multiple confined placement facilities in the Patapsco River; optimization of existing dredged material management sites in Maryland [e.g., the HMI DMCF, and Cox Creek DMCF (Figure ES-1)], and continued investigation of innovative reuse alternatives. The further study of Masonville as a DMCF site is consistent with these recommendations.

The proposed Masonville DMCF is located within the estuarine reaches of the Patapsco River, which is generally considered the Baltimore Harbor (Figure ES-1). The Patapsco River is a tributary of the Chesapeake Bay. The Masonville site is located approximately 4 miles upstream of the Key Bridge and approximately 1 mile downstream of the Hanover Street Bridge, on the southern shore of the River. The land portions of the site lie within Baltimore City, Maryland. Immediately west of the proposed Masonville DMCF are approximately 55 acres of habitat protection area known as Masonville Cove. The Cove and adjacent land are undeveloped and utilized by fish and wildlife species, but also contains substantial amounts of debris. Cleanup and enhancement of this area have been integrated into the proposed DMCF site development plan as compensatory mitigation.

Six alignments were originally developed and analyzed based on engineering constraints to determine which was the most cost-effective and environmentally acceptable option. Final Feasibility Alignment (FFA) 3 was chosen as the preferred alternative for the proposed site development and was carried forth through the NEPA process. FFA 3 would avoid some of the areas of poorest foundation conditions and would also minimize the site footprint while avoiding any infringement on Masonville Cove. The minimization of the footprint and associated impacts made this the least damaging alternative.

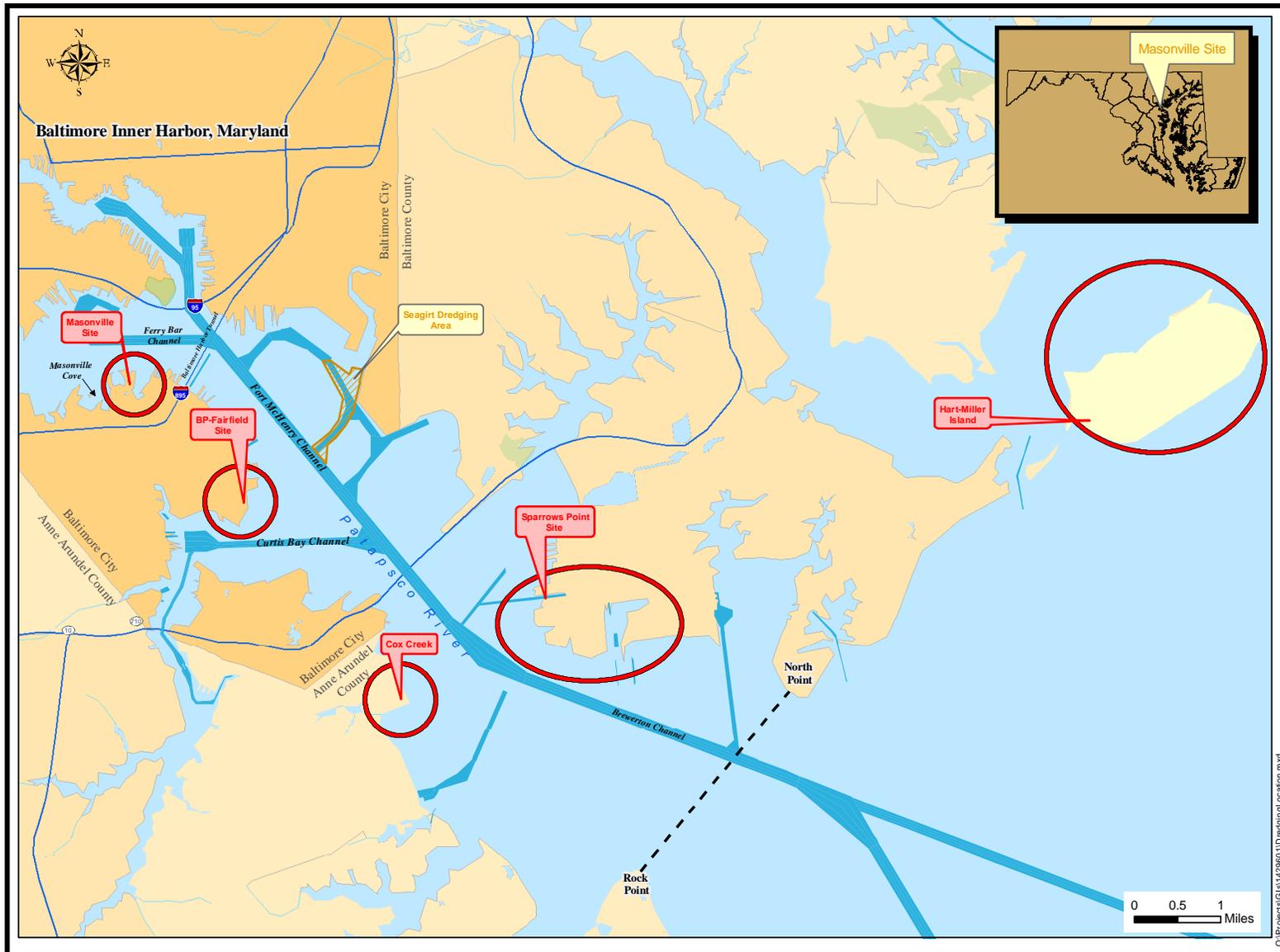


Figure ES-1. Location of MPA Proposed and Existing DMCFs in the Baltimore Harbor Region.

The footprint of the proposed facility at Masonville would be 141 acres. Of this, 10 acres are considered part of the shoreline or upland. There are 127 acres of open water proposed for filling and 3 acres of (legacy) unauthorized fill that would require mitigation. In addition, there is approximately 1 acre of vegetated wetlands that would be affected by dike construction or storm drain relocation. The open water areas include a channel next to the former Kurt Iron and Metal (KIM) facility and an inlet known as the Wet Basin located adjacent to the Fairfield Marine Terminal. The average depth of water at the site is 10 ft with a range of 0 to 40 ft. Ten acres of shallow water habitat (SWH) and preferred submerged aquatic vegetation (SAV) habitat would be lost if the DMCF were constructed. The total capacity of the proposed DMCF is 15.4 mcy and the annual placement capacity is 0.5 to 1.0 mcy. The containment structure would be composed of a cofferdam, an armored sand dike, a fringe marsh dike, and an onshore dike. The containment structure is initially proposed to be constructed to an elevation of +10 ft MLLW. The current plan is to raise the structure to +28 ft MLLW using common borrow material and incrementally from +28 to +42 ft MLLW using dried dredged material. The dike would temporarily be at an elevation of +42 ft MLLW and graded to a final elevation of +36 ft MLLW. Both onsite and offsite construction materials (borrow) would be used. Offsite sources include the Seagirt dredging area and upland material (for the construction of the cofferdam).

The Seagirt dredging area is located along the north shore of the Patapsco River, just west of Colgate Creek. The dredging area is situated within the Baltimore City limits, but is less than one mile from the Baltimore City-Baltimore County line (Figure ES-1). Much of the area is composed of existing access channels to the Seagirt and Dundalk Marine Terminals and has been dredged to a depth of -42 ft in the past. The site is bordered by Colgate Creek and Dundalk Marine Terminal to the east, the Patapsco River to the south, and industrial areas and Seagirt Marine Terminal to the north and west.

Outreach efforts involving the adjacent community (Brooklyn-Curtis Bay) identified Masonville Cove as a good opportunity for ecological enhancement and mitigation with additional opportunities for education and recreation. Therefore, Masonville Cove has become the centerpiece of the mitigation package.

Because the Masonville project is on an accelerated schedule to meet the Baltimore Harbor dredged material placement capacity shortfall, it became apparent in late 2004 that the Masonville project might have to be moved forward for permitting independent of other potential future placement facilities. Consequently, the MPA decided to pursue a Department of the Army Permit, a Tidal Wetlands License, and other necessary permits. The MPA met with the State and Federal Joint Evaluation Committee in January 2005. In March 2005, the USACE Baltimore District - Regulatory Branch determined that it would be the lead agency for these efforts. The MPA met with the USACE and the Maryland Department of the Environment (MDE) to establish a timeline and determined that an EIS would be required to accompany the wetlands permit application. Public scoping for the NEPA document began in June 2005 with a public scoping meeting. Public hearings were held in June and July 2006. Mitigation negotiations are ongoing with the State, the USACE, and other Federal environmental agencies.

State feasibility-level studies of the site were completed in late summer 2005. The results are detailed in this EIS. Existing conditions surveys found that the Masonville site lies in an area

with relatively low salinities and weak tidal currents. The bottom sediments in the Baltimore Harbor and the Masonville site vicinity are predominantly clayey silt, with some locations of sand, silt and clay. Studies indicated the sediments in some parts of the site contain elevated concentrations of typical urban riverine sediment contaminants [e.g., metals, polychlorinated biphenyls (PCBs), and pesticides]. Concentrations of some of the contaminants exceed sediment quality guidelines for probable ecological effects. Water quality in the area is degraded due to anthropogenic inputs and the area is prone to eutrophication in warmer months. Benthic conditions within the site are generally degraded and fish utilization within the footprint of the proposed facility is low relative to other areas of the Harbor. There are no known Rare, Threatened, and Endangered (RTE) species utilizing the proposed Masonville DMCF area, although transient RTE species, such as the bald eagle, have been observed on occasion in the vicinity of the proposed project. A nest was previously located on the land adjacent to Masonville Cove, but the nest tree fell and a new nest was not built in the area. In addition, the Harbor does not provide significant essential fish habitat (EFH) for Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) regulated species. A small area of SAV was identified within the proposed DMCF footprint and approximately 10 acres of Tier I, Tier II, and Tier III SAV habitat would be affected due to proposed site development. Less than 1 acre of vegetated wetlands would be lost by development of the proposed Masonville DMCF.

Conversely, the adjacent Masonville Cove has relatively good sediment and benthic conditions in most areas and supports a diverse fish community. Masonville Cove is designated as a Habitat Protection Area within Baltimore City, mainly due to bird utilization. This function would be protected and enhanced as part of the mitigation for this proposed project. There are few terrestrial resources because the area is largely industrial and the resources that do exist are predominantly opportunistic plant species. Enhancement plans for the Cove are designed to improve substrate and in-stream habitat (including SAV), which could have secondary positive effects on water quality. Masonville Cove enhancements would also include cleanup of the terrestrial area and planting of native species. Creation and enhancement of wetlands and creation of beach areas are also planned as additional ecosystem restoration efforts within the Cove.

The proposed Masonville DMCF project area supports few human use amenities. Recreation in the area (other than birdwatching) is presumed to be low based upon input from the local community. No historical or cultural resources occur within the proposed DMCF footprint or Masonville Cove. Recreational fishing appears to be minimal and little commercial fish harvesting occurs in the area.

Local demographics indicate that the neighborhoods in the vicinity of the site do not contain a disproportionate minority population relative to Baltimore City, but median incomes are below the Baltimore City average. The economic sectors employing the largest number of people in the census tracts near the proposed site are the wholesale and retail trade; the education, health and social services; and the manufacturing sectors.

In order to construct the facility where it is planned, several additional activities would need to occur prior to construction. A storm drain outfall needs to be relocated from the end of the KIM Channel to the eastern side of the proposed alignment. The existing outfall abuts a small tidal

wetland swale (mentioned previously). A Baltimore City water line runs under the proposed alignment and the City has indicated that it must be moved so that it can be accessed for future maintenance. One key pre-development task involves remediation of derelict vessels on the eastern side of the site near the former KIM facility. Some of the derelict vessels are known to contain hazardous or other regulated wastes. The MPA is consulting with the MDE on the applicable, or relevant and appropriate, requirements for cleaning these vessels. Removal of large amounts of debris from both the aquatic and terrestrial areas of Masonville Cove would need to occur prior to any habitat enhancement. A cleanup plan may also be required for that area.

A modified alternative was considered whereby suitable material dredged from the Seagirt Marine Terminal deepening would be used in construction of the Masonville DMCF. The area affected by the Seagirt dredging project is approximately 128 acres of tidal open water. This entire area will be dredged to -50 feet MLLW (plus up to an additional 2 feet overdepth) regardless of whether the Masonville project goes forward. Assuming the Masonville project moves forward, portions of the Seagirt project area (approximately 41 acres) would be dredged to either -51 or -52 feet MLLW (plus up to an additional 2 feet of overdepth) to allow for retrieval of additional borrow for the Masonville project. This would result in maximum total depths of -53 or -54 feet within 41 acres of the project area. It is estimated that there is approximately 0.5 mcy of borrow suitable as construction material for the proposed Masonville DMCF in the Seagirt dredging area if dredging is permitted to -54 feet within a 41 acre area. Due to overall cost and environmental benefits, derived from using this borrow source for a portion of the Masonville dike construction it became the preferred alternative. Because utilizing the Seagirt material for part of the dike construction would have lower overall impacts to air and water quality, it (in conjunction with Masonville FFA 3), became the Least Environmentally Damaging Practical Alternative (LEDPA).

Construction of the proposed Masonville DMCF would take approximately two years. Site construction uses a sand source below the site and material from the Seagirt dredging area. In order to access the material, overburden material from both areas would need to be dredged (stripped off) and placed at the HMI DMCF. This 1.7 mcy overburden material is already included in the plan for the remaining site capacity at the HMI DMCF. The primary sources for construction material (borrow) lie entirely within the proposed Masonville DMCF footprint and within the footprint of an area scheduled for a channel deepening and widening project. Sufficient material to construct the containment dikes should be available from these two sources, although the cofferdam would likely be constructed with offsite borrow material. Any offsite borrow material other than that obtained from the Seagirt dredging area would come from licensed upland sources. Upland borrow material would be required for the construction of the cofferdam. Surficial sediments are silts and clays; the onsite borrow source is predominantly fine sand with some silt and clay lenses. The material from the Seagirt dredging area is composed of sand and gravel and has been tested to determine its suitability for use during dike construction. Laboratory testing of the surficial sediments at Masonville indicated that contamination exists in some areas of the site, although the contaminants are readily released into the water when agitated. However, the material proposed for use in dike construction from both Masonville and Seagirt is relatively free of contaminants. The site is anticipated to be operational for approximately 20 years. The site would be lined with a leachate barrier with a

permeability of  $5 \times 10^{-6}$  cm per second in order to minimize the potential for migration of materials to the adjacent river.

The potential impacts of dredging, dike construction, and site operation were assessed relative to resources. The impacts are outlined below:

**Long-term, adverse impacts of the proposed project** are predominantly associated with conversion of 124 acres of open water to fastland (upland) and conversion of 6 acres of open water to shallower open water, filling of up to 1 acre of vegetated wetlands and filling of up to one acre due to movement of barges along the dike line. The long-term significant impacts include:

- Permanent change in physiography
- Increase in residence time in Masonville Cove, increasing sedimentation slightly.
- Loss of 0.6 percent of the tidal portion of the Patapsco River with associated benthic resources and fisheries habitat.
- Loss of a small amount of SAV and approximately 10 acres of Tier I, Tier II, and Tier III SAV and Shallow Water Habitat and 10 acres of upland habitat.

**Short-term or minor impacts of the proposed project** are predicted to some resources. These would occur predominantly during construction and include:

- Increased turbidity, and nutrient concentrations in the water during construction and intermittent spillway discharges.
- A decrease in plankton density due to construction turbidity and entrainment.
- Intermittent nutrient releases during site operations, which could stimulate phytoplankton growth and affect dissolved oxygen (secondarily).
- Loss of less mobile fish species during site pre-dredging and construction.
- Loss of EFH and aquatic RTE habitat (minor because species of concern are only transient to the Patapsco River).
- Increased air quality emissions during construction. A Federal Conformity analysis has been completed and is available in Appendix K. Mitigation would be required for  $\text{NO}_x$  emissions in 2007 and 2008 and is discussed in the analysis. The draft conformity decision can be found in Appendix K of this document. The final conformity decision will be included in the Record of Decision (ROD).
- Temporary increase in barge traffic during construction and dredged material placement operations.
- Disturbances of the critical area and the floodplain during Masonville Cove cleanup efforts.
- Loss of potential recreational fishing areas within the proposed DMCF footprint.
- Increased noise during construction, dredged material placement operations, and subsequent site development and use.
- Permanent alteration of the viewshed from some vantages that would be consistent with the urban watershed and adjacent Masonville Cove.

For resources that are either not present or only intermittent to the area, **no significant adverse project impacts are anticipated**. In addition, modeling and experience at other containment facilities in the area have indicated that the potential for some impacts is negligible. Therefore, it is expected that the proposed project would have no long-term adverse impact on:

- Tides and currents
- Water column toxics during construction (based upon modeling and laboratory testing)
- Groundwater supply and surficial aquifer contamination
- Sediment quality
- Avian and terrestrial wildlife utilization
- Rare, threatened, and endangered (RTE) species or essential fish habitat (EFH) species
- Upland vegetation
- Noise or light impacts to residential or recreational use
- Increase in hazardous, toxic, or radioactive wastes or associated risks
- Coastal barrier resources
- Wild and Scenic Rivers
- Prime or unique farmland
- Environmental justice or child safety

### *No Action Alternative*

Under the no action alternative, the proposed Masonville DMCF would not be developed. Because the MPA has determined that the currently scheduled dredging activities cannot be deferred, the no action alternative would result in the need to place the materials scheduled to go to Masonville at the HMI and Cox Creek DMCFs through 2009. The no action alternative involves annual overloading at both the HMI and Cox Creek DMCFs. Overloading at the Cox Creek DMCF would decrease the overall site life of the Cox Creek DMCF by approximately 4 years, assuming that the material scheduled for placement at Masonville after 2010 were to be placed at Cox Creek and the material to be placed at Masonville in 2009 would be placed at the HMI DMCF. This would result in no placement capacity for Baltimore Harbor dredged material as early as 2012.

Overloading at the HMI DMCF and the Cox Creek DMCF would very likely result in the need to hold water at the facilities for longer periods and may result in increased discharges of nutrients into the Chesapeake Bay and Patapsco River, respectively. These increased discharges may require modifications to the existing discharge permits. Additional nutrient offsets, such as DMCF spillway treatment or retrofits to existing wastewater treatment plants, may also be required.

The 130 acres of open water, 10 acres of adjacent uplands in the Chesapeake Bay critical area, and 1 acre of vegetated wetlands at Masonville would not be filled if the DMCF is not developed. The existing conditions at the Masonville site would remain. The air emissions associated with the construction of the Masonville DMCF would not be released. Many of the emissions that would be associated with the management of the dredged material at Masonville would be associated with the HMI DMCF and Cox Creek DMCF, since this material would still be managed at a facility. The full-time equivalent (FTE) jobs that would be associated with the construction and monitoring of the proposed Masonville DMCF would not be created.

If the proposed Masonville DMCF is not constructed, there would likely be further delay in the remediation of the derelict vessels, which would potentially increase the cost of doing so. Also,

the other ecological benefits and community enhancements associated with the Masonville DMCF and the proposed mitigation package would not be realized.

### *Cumulative Impacts*

In addition to an assessment of the proposed project and no action alternative on area resources, NEPA requires that the cumulative effects of the project in combination with similar projects be assessed. Activities warranting greatest attention from the cumulative impacts perspectives are those activities that, in combination with development of the proposed DMCF, would potentially magnify what are perceived by resource agency personnel and the public as the most significant impacts of the proposed work in Baltimore Harbor and adjacent areas of the Bay. The activities meriting particular scrutiny include: 1) conversion of large areas of open water and Patapsco River bottom habitat, including SWH, to upland habitat, 2) other major nutrient or turbidity inputs, 3) other large in-water construction projects or dredging operations, and 4) other major air emissions or surface water loadings.

Recent and reasonably foreseeable human actions that have converted or would convert open water habitat to uplands include the HMI DMCF, the Seagirt Marine Terminal facility, the Cox Creek DMCF, the proposed Masonville DMCF, the proposed AES Sparrows Point Liquefied Natural Gas Terminal, and the proposed second and third Harbor placement options that will be needed to meet the 20-year need for dredged material placement capacity. Currently, these second and third potential Harbor placement options include placement facilities at Sparrows Point and BP-Fairfield. The total acreage of river bottom in the Patapsco River and adjacent Chesapeake Bay from the currently operating and proposed facilities is approximately 3,000 acres. Facilities that are currently operating account for approximately 1,294 acres of river bottom in the Patapsco River and nearby areas of the Chesapeake Bay, and the total for proposed facilities includes an additional 790 acres of open water. Only approximately 100 acres of the 3,000 acres is proposed for potential wetland development at this time.

Although the proposed Masonville DMCF would add to the nutrient load in Baltimore Harbor, the discharges would be intermittent. The potential loadings would constitute 0.36 percent or less of the total loadings (nitrogen and phosphorus) within the Patapsco/Back River complex. This accounts for all facilities that are currently operating. Future (proposed) DMCFs would contribute similar (intermittent) loadings similar to the HMI DMCF or the proposed Masonville DMCF, depending upon the size. The HMI DMCF loadings will be much reduced after 2010, when site operations cease and will offset some of the future loadings in the area. The spillways for all facilities would require national pollutant discharge elimination system (NPDES) permits and would be held to certain quality standards, which would limit the amount of nutrients that can be released. Therefore, cumulative impacts to regional water quality are not anticipated from the cumulative discharge of water through the spillways for the existing or proposed DMCFs.

The potential conversion of 2,085 acres of open water habitat, which includes river bottom habitat within the Patapsco River and adjacent areas of the Bay would constitute a permanent loss of benthic habitat and productive open water and would permanently displace fisheries resources from these areas. Of the approximately 19,300 acres of the tidal portion of the Patapsco River, 5 percent has been or is proposed for development. Because the lower Patapsco

River supports both anadromous and marine species, both migratory and resident fish are likely to be displaced. However, the Baltimore Harbor is not considered EFH for MSFCMA regulated species. Therefore, no cumulative adverse impacts to EFH species are anticipated as a result of the proposed project. Commercial fish harvesting is minimal near Masonville and the BP-Fairfield site, but does occur in the outer Baltimore Harbor near Sparrows Point. Because Sparrows Point is the only current or future site that potentially supports commercial harvesting, direct cumulative impacts to commercial harvesting areas are not expected with the proposed Masonville DMCF. Although losses of open water habitat are projected, the associated mitigations and enhancements to fisheries habitat within the Patapsco River as part of the mitigation package are expected to offset some of the losses and ameliorate much of the impact. The cumulative effect of capping or remediation of contaminated sediments as a result of the proposed DMCFs or associated mitigation projects is expected to decrease the non-point source contributions to the estuary, which could have secondary, positive impacts on water quality, benthic habitat and fisheries in some areas.

No other potential cumulative impacts are expected.

### ***Mitigation and Environmental Benefits***

The 131-acre open water fill and 10-acre upland fill would require wetlands and critical area compensatory mitigation (respectively). Both wetlands and critical area mitigation packages are currently being negotiated with state and federal resource agencies. More information may be found in Section 6.2. The sufficiency of the wetlands package to compensate for the aquatic losses was assessed using habitat equivalency analysis, based on initial and final condition factors, and the compensation was deemed to be sufficient to compensate for the losses. In addition the package contains some non-aquatic options that would generally benefit the watershed and neighboring communities. There will also be a need to mitigate for the air emissions that would be generated during construction. A Federal Conformity Analysis has been developed and was reviewed by the USEPA and the MDE (Appendix K). Air emission mitigation credits are currently being secured.

The proposed project, with the integration of the compensatory wetlands mitigation in Masonville Cove and elsewhere in the watershed, has the potential to benefit the Patapsco River. Potential improvements resulting directly or secondarily from site development include:

- The remediation of 25 derelict vessels and capping of sediments has the potential to improve (decrease) the toxics burden in this part of the Patapsco River, making contaminants such as metals (including mercury) and PCBs less available to the aquatic environment. Similar to the cumulative impacts, this remediation has the potential to have a secondary, positive impact on water quality, benthic habitat, and fisheries in the area.
- Because some of the enhancements in Masonville Cove go beyond compensatory mitigation, the proposed cleanup and improvement efforts are expected to benefit both the ecological system as well as the adjacent community.
- The education and trails system was conceived with community input and is being designed specifically to improve community access to Masonville Cove and to improve ecological recreation and educational opportunities in the Brooklyn-Curtis Bay area. These are

expected to provide direct benefits from the project. Indirectly, the project would stimulate community involvement and environmental stewardship.

- Aquatic improvements to Masonville Cove include the cleanup of large in-water debris, tidal wetlands creation and enhancements, substrate improvements to protect/enhance SAV and benthic conditions, softening of shorelines and installation of beach habitat, and fish reef installation (reef balls, rock and sand mounds). Although many of these projects are proposed as compensatory mitigation (e.g., no net benefit), there is a potential that improving the instream habitat (including SAV), the benthic community, and fisheries would have secondary benefits to adjacent areas of the river in the longer-term.
- The hard substrates that would be installed in Masonville Cove and the rock of the dike armor would provide attachment areas for encrusting fauna such as platform mussels, and barnacles. Bivalves (mussels and oysters) are filter feeders and would help improve water clarity within the Cove. Water clarity improvements would have a secondary benefit to SAV in the immediate area. Attached algae would also use the hard substrates that would be installed in the Cove.
- Short-term and long-term beneficial impacts associated with the construction and operation of the proposed DMCF at Masonville include the increased spending that would create jobs both locally and at the State level. The jobs created would benefit employment rates, income, and revenues. The additional beneficial impact of the proposed project would be increased placement capacity to meet the Harbor dredged material placement needs. The direct benefits are to navigation safety and direct Port employment. Secondary benefits are realized in induced jobs and continued Port expansion and cargo market share.
- Several options that are being proposed for mitigation will have secondary watershed-level benefits. Trash interceptors will reduce the flotsam loads in the Patapsco River, which will secondarily benefit all shoreline habitats. Fish restoration (herring/shad stocking) will increase and diversify the fish forage base and have secondary benefits to commercial landings in the future.
- Short-term benefits associated with the use of material from the Seagirt dredging area include a regional reduction in emissions due to the decreased distance of transport for some of the material dredged from the access channels. There would also be benefits associated with the additional availability of placement capacity at the HMI DMCF since some of the material to be dredged from the Seagirt dredging area that was slated for placement at the HMI DMCF would be placed at the proposed Masonville DMCF.
- There would be a long-term change to the physiography of the Seagirt dredging area that would increase the depth of the channel to -51 or -52 ft MLLW. This is an increase from the existing permitted dredging depth of -50 ft MLLW.