

7. IMPLEMENTATION OF RECOMMENDED PLAN

Implementation of the recommended plan would require a commitment by the State of Maryland to adhere to an accelerated schedule for bringing the site online by early 2009. This section outlines the process for implementing the recommended plan, the parties involved, and the schedule for implementation.

7.1 IMPLEMENTATION PROCESS

The construction of the proposed dredged material containment facility (DMCF) at Masonville requires significant site preparation and requires tight scheduling for the preparation of the site. The following is a list of the major schedule items necessary for the implementation of the recommended plan. Some of these items are going to be permitted separately from the DMCF.

- Site Preparation Activities
 - Pre-dredging (removal of overburden) (November 2006 to July 2007)
 - Phase I of Baltimore City Storm Drain Relocation (July 2006 to April 2007)
 - Phase II, Baltimore City Storm Drain Relocation and MMT Phase 2/KIM Stormwater Outfall Relocation (October 2006 to February 2007)
 - Remediation and Relocation of Derelict Vessels (April 2006 to September 2006)
 - Demolition of Piers 1, 2, and 3 (July 2006 to November 2006)
 - Relocation of Baltimore City Waterline (August 2007 to January 2008)
- Masonville DMCF Construction (January 2008 to January 2009)
- Mitigation and Community Enhancement Projects (December 2006 to April 2009)

Implementation for each of these schedule items requires the following four major phases:

1. Engineering
2. Permitting
3. Procurement, Bid, and Award of Construction Projects
4. Construction

These steps often overlap as different items within the overall project move from phase to phase at different times, but the following is a general description of the process for implementing the recommended plan. To meet the accelerated schedule, site engineering is being performed as the permit application is reviewed. This would allow procurement of the funding for the projects to occur immediately following the joint permit (Section 404 permit, Section 10 permit, tidal wetlands license, non-tidal wetlands permit, water quality certification, Federal consistency determination) application decision, if the decision is favorable.

If the joint permit application permits and certification are awarded, funding procurement would begin and the engineering plans would be put out to bid. The contract would be awarded following a bidding period, and construction would begin. Prior to construction the project would also require approval from the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays, approval from the Maryland Department of the Environment (MDE) for stormwater management and erosion and sediment control, a water construction permit, a storm drain modification permit, and an national pollutant discharge elimination system (NPDES) Permit.

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7.1.1 Engineering

The engineering phase involves the planning, design, and scheduling for each of the schedule items. The duration of this phase is dependent upon the complexity of the schedule item and planning and design decisions.

7.1.2 Permitting and Coordination

Federal and state governments regulate construction and dredging within tidal waters. Tidal wetlands in the State of Maryland are protected by the following regulations:

- Section 10 of the River and Harbor Act of 1899 – Federal
- Clean Water Act, Section 404 – Federal
- Maryland Tidal Wetlands Act – State
- Section 401 Water Quality Certification – State

The work to be performed would be done under several permits. The majority of the work would be included under the joint permit application. The following list identifies the major line items included under the DMCF project permit application and those with individual permits.

- Schedule Items Under the DMCF Permit Application
 - Pre-dredging
 - Phase II of the Relocation of Baltimore City Storm Drain Relocation and Masonville Marine Terminal (MMT) Phase 2/ Kurt Iron and Metal (KIM) Stormwater Outfall Relocation
 - Relocation of Baltimore City Waterline
 - Construction of the DMCF
 - Relocation of Derelict Vessels
- Onsite Mitigation and Community Enhancement Projects (in the vicinity of Masonville Cove)
- Schedule Items Under Separate Permits/Agreements
 - Remediation of Derelict Vessels (agreement with the MDE)
 - Off-site Mitigation Projects

The permits that must be obtained and coordination that must occur prior to construction of the DMCF are listed below. The agency issuing each permit or involved in the coordination is shown in parentheses. The overall project schedule in Appendix N provides a timetable for obtaining these permits and completing necessary coordination. An NPDES permit and a Water Appropriations Permit issued by MDE would be required prior to construction.

- Section 404 Permit [U.S. Army Corps of Engineers (USACE)]
- Section 10 Permit (USACE)
- Federal Conformity Decision (MDE/U.S. Environmental Protection Agency (USEPA))
- Water Quality Certification (MDE)
- Erosion and Sediment Control (MDE)
- Non-tidal Wetlands Permit (MDE)
- Critical Area Commission Coordination (Critical Areas Commission for the Chesapeake and Atlantic Coastal Bays)

- 93 • Federal Consistency Determination (MDE)
- 94 • Storm Water Management (MDE)
- 95 • General Permit for Construction Activity (MDE)
- 96 • Industrial Wastewater/Stormwater General Discharge Permit (MDE)
- 97 • Storm Drainage Modifications (City)
- 98 • Water/Sanitary Hookup (City)
- 99 • Relocation of Baltimore City Waterline Developer's Agreement (City)
- 100 • Rare, Threatened, and Endangered Species Consultation (Maryland Department of
- 101 Natural Resources (DNR), National Oceanic and Atmospheric Administration (NOAA),
- 102 U.S. Fish and Wildlife Service)

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104 **7.1.3 Procurement, Bidding, and Award**

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106 This phase includes time for the state to procure the funding necessary to complete each
107 construction task, prepare the contract documents, execute the bidding and review period, and
108 award the contract. This phase is estimated to last approximately five months from the
109 beginning of procurement to the award of the construction job. Generally, this phase
110 immediately follows completion of the engineering phase and issuance of a permit. Some
111 flexibility in the scheduling of this phase exists, as procurement may begin prior to finalizing the
112 engineering plans and/or issuance of the necessary permits.

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114 **7.1.4 Construction**

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116 Construction of the site is dependent upon obtaining the necessary permits and the award of the
117 bid. A detailed construction schedule is presented in Appendix N. Construction includes any
118 work done at the site, excluding work performed for site investigations. The first schedule items
119 to begin the construction phase would be the site preparation activities, followed by the
120 construction of the DMCF. Construction of the compensatory mitigation projects would be
121 ongoing during the site preparation and DMCF construction activities.

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123 **7.2 IMPLEMENTATION SCHEDULE**

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125 An overall schedule for the Masonville project is presented in Appendix N. This schedule shows
126 the relationships between the schedule items and their implementation steps. This section
127 evaluates each schedule item and the factors critical for their timely completion.

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129 **7.2.1 Site Preparation Activities**

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131 **7.2.1.1 Pre-dredging**

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133 The removal of materials geotechnically unsuitable for construction (pre-dredging) is currently
134 in the latter stages of the engineering phase. The pre-dredging would be included under the
135 permit(s) for the DMCF. A permit decision is anticipated in October 2006. Procurement for pre-
136 dredging is expected to begin in July 2006. This would allow the bidding phase for a pre-
137 dredging contract to begin immediately after issuance of the DMCF permit, and the construction
138 phase to begin as early as November 2006. The timing of this is critical to the project, as the pre-

139 dredging must fit around environmental dredging windows, which are the portions of the year
140 where time of year restrictions do not prevent dredging activities. Pre-dredging would be
141 completed using a clamshell mechanical dredge and scow, and material would be barged to the
142 Hart-Miller Island (HMI) DMCF.

143
144 **7.2.1.2 Phase I, Baltimore City Storm Drain Relocation**

145
146 The engineering for this item began in early 2005 and is anticipated to be completed in early
147 2006. Procurement would begin immediately following the engineering phase, and construction
148 would follow once the bid has been awarded. This work requires approval from the Critical
149 Areas Commission and a general permit for construction activity from the MDE. No wetlands or
150 open water would be affected by this Phase. This portion of the project should be finished in
151 April 2007.

152
153 **7.2.1.3 Phase II, Baltimore City Storm Drain Relocation and MMT Phase 2/KIM
154 Stormwater Outfall Relocation**

155
156 The engineering for this item is currently underway, and should be completed by Summer 2006.
157 The procurement, bidding, and award phase would immediately follow engineering, and
158 construction could begin following a favorable joint permit application decision. This would
159 also require a storm drain modification permit from Baltimore City. Construction should be
160 completed in February 2007.

161
162 **7.2.1.4 Remediation and Relocation of Derelict Vessels**

163
164 MPA performed in-depth investigation and testing of various samples of the total of 25 vessels
165 and structures including the floating drydock, and sediments beneath the drydock and debris
166 piles. Based upon these studies and penetration dives conducted on these vessels, MPA would
167 remediate the vessels by removing hazardous and regulated waste, by a marine operation. The
168 remediation plan has been developed in coordination with MDE and is being permitted
169 independently of the proposed Masonville DMCF.

170
171 All vessels are currently sunk or not salvageable. Some of these would be abandoned in place
172 and others would be relocated to other locations within the proposed DMCF footprint, after they
173 have been cleaned of hazardous and regulated waste as approved by a certified industrial
174 hygienist or similarly certified individual. The DMCF would have to be permitted before any of
175 the vessels could be relocated. Barges 1, 2 and 3 are currently located in areas where they would
176 impede construction of the DMCF. These barges would require relocation to the KIM Channel.

177
178 All vessels would then be buried by dredged material during placement operations. It is
179 anticipated that the vessel remediation and management would occur during the Summer of 2006
180 and the relocation would occur as needed.

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182 **7.2.1.5 Demolition of Piers 1, 2, and 3**
183

184 Engineering for the demolition of Piers 2 and 3 and the removal of the Pier 1 deck should be
185 available in spring 2006. The procurement for this item would begin immediately following the
186 engineering phase, and construction would immediately follow award of the contract.
187 Demolition should be complete by Fall 2006.
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189 **7.2.1.6 Relocation of Baltimore City Waterline**
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191 This schedule item requires careful integration with the construction of the DMCF's structure.
192 Coordination between Baltimore City and the Maryland Port Administration (MPA) is crucial for
193 this task. The MPA and their consultants have been meeting regularly with the City, and would
194 continue to do so throughout the project. The 90 percent design documents regarding the
195 waterline relocation into the containment structure are available. However, decisions and
196 planning are ongoing. The new Baltimore City waterline would be built into the sand portion of
197 the dike and would be accessible for maintenance without disturbing dredged material after the
198 site is operational. The portion of the new waterline outside of the alignment would be placed
199 and then the existing waterline would be connected to the new waterline. The disconnected
200 portion of the existing waterline, where the dike would be placed, would be removed and the
201 remainder of the waterline would be abandoned. During placement of the waterline, there would
202 be a gap in the sand dike around the existing waterline. This gap would be filled after the new
203 waterline is connected and prior to the placement of the clay portion of the dike.
204

205 The relocation of the waterline will be included on permit applications for the proposed DMCF.
206 This action would also require an industrial wastewater/stormwater general discharge permit for
207 the hydrostatic testing of the waterline. The procurement for this item would begin immediately
208 following the engineering phase. Construction is currently slated to begin in Spring 2007, but
209 may be shifted pending decisions on integrating the waterline relocation into the construction
210 schedule for the DMCF. The waterline would be relocated prior to the construction of the clay
211 portion of the dike.
212

213 **7.2.2 Masonville DMCF**
214

215 The engineering of the DMCF is currently underway, with completion anticipated in September
216 2006.
217

218 The permitting process for the site is also currently underway. The process centers on the
219 Federal Section 404 Permit for which MPA is preparing this environmental impact statement
220 (EIS). The general schedule for the Federal permit is as follows:

- 221 • Publish Notice of Intent (NOI) to prepare an EIS in the Federal Register – 26 May 2005
222 (completed)
- 223 • Conduct Scoping Process (completed)
 - 224 ○ Public meeting – 15 June 2005
 - 225 ○ Public Comments Due 15 July 2005
- 226 • Prepare draft environmental impact statement (DEIS) – Underway

- 227 • Submit DEIS , Publish Notice of Availability (NOA), and Apply for Federal Permit –
- 228 May 2006
- 229 • Public and Agency Review of DEIS – May 2006 to July 2006
- 230 • Finalize and Submit FEIS, Publish NOA – July 2006 to September 2006
- 231 • Permit Decision – October 2006
- 232

233 A more detailed schedule is available in Appendix N. The permit decision for the joint permit
234 application in October 2006 includes the following:

- 235 • Section 404 Permit
- 236 • Section 10 Permit
- 237 • Tidal Wetlands License
- 238 • Non-tidal Wetlands Permit
- 239 • Water Quality Certification
- 240 • Federal Consistency Determination
- 241

242 All permits necessary for the construction of the site are listed in Section 7.1.2. It is anticipated
243 by the MPA that these would be awarded by October 2006.

244
245 Procurement would begin immediately following the completion of the engineering phase. The
246 bidding would begin immediately following procurement. The construction of the DMCF
247 includes construction of the four containment structure sections detailed in Section 4.4. These
248 containment structure sections are the cofferdam, armored dike, beach dike, and onshore dike.
249 All of these items would be bid as one contract. Award of the contract for construction of the
250 DMCF is anticipated in October 2006.

251
252 Pre-dredging and other site preparation must occur before construction of the containment
253 structure. Pre-dredging requires the removal of overburden from overtop of the onsite borrow
254 areas and under the containment structure footprint. This dredging would be done mechanically
255 using clamshell dredges and hopper barges to transport the material to the HMI DMCF.

256
257 Construction for the majority of the site preparation schedule items would occur during portions
258 of DMCF construction. The sunken barges (Figure 4-1) located under the western portion of the
259 alignment would be dragged west of the western portion of the dike and beach area. The sunken
260 barges currently serve as reef structures and would remain as such. The movement of these
261 sunken barges would fill approximately 1 acre of open water. This requires a Tidal Wetland
262 License. With multiple schedule items occurring simultaneously during the construction of the
263 DMCF, detailed planning and scheduling and strict project oversight would be required. The
264 current construction schedule is displayed in Appendix N.

265
266 The two most complicated site preparation items to fit into the DMCF construction schedule are
267 the waterline relocation and the derelict vessel remediation and relocation. The containment
268 structure (Figure 4-1) of the main portion of the alignment would be constructed in the following
269 order:

- 270 1) Cofferdam
- 271 2) Beach Dike
- 272 3) Armored Sand Dike

273 4) On-shore Dike
274

275 Construction of the cofferdam sections would be the first construction activity for the
276 containment structure, and would have a duration of approximately six months. The cofferdam
277 cells would be filled using off-site material from a licensed upland source (Section 4.4.1.1). The
278 berm behind the cofferdams would be hydraulically placed following construction and filling of
279 the cofferdams. After the cofferdams are completed and material is placed behind the cells, the
280 new Baltimore City waterline would be placed within the fill behind the cofferdams. The new
281 section of waterline would then be tied into the existing waterline. Mobilization of equipment
282 for construction of the sand dike portions of the site would occur once the new waterline has
283 been tied into the existing waterline. Cofferdam construction is described in greater detail in
284 Section 4.5.2.2.
285

286 The sand portion of the dike construction would begin at the western end of the site, which has a
287 beach shoreline. The beach sand dike may be constructed from on-site or off-site material. It is
288 anticipated that there would be a training dike constructed with sand material and the discharge
289 from the dredge would be guided by the training dikes to a limited area that is enclosed by
290 turbidity curtains (Section 4.5.2.4). Having completed the eastern cofferdam and western beach
291 dike, turbidity impacts from borrow activities and construction of the northern sand dike would
292 be minimized. The armored sand dike would also be constructed using on-site construction
293 materials, training dikes and turbidity curtains (Section 4.5.2.3). Construction of the dike would
294 continue, as the dikes are shaped and rock armament is mechanically placed by a crane on the
295 northern section of the dike. The onshore dike would be constructed from on-site construction
296 material, if possible. Conventional earthwork construction methods would be used (Section
297 4.5.2.5).
298

299 Construction of the clay portion of the containment dike (see sections 4.4.1.2 and 4.4.1.3) would
300 begin once the sand portion has been completed. This would prevent the introduction of any
301 potential turbidity from suspended clay particles to the Patapsco River waters. The clay would
302 be excavated and placed with a 30-inch hydraulic dredge.
303

304 After dike construction is finished, an exit channel would be excavated through the dike and the
305 dredging equipment would exit the site. To facilitate the dredge exiting the dike, that portion of
306 the dike would be constructed to the minimum elevation to contain sediments within the site. It
307 would be the same as the other portions of the dike, but lower in elevation. The exit channel
308 would be excavated using equipment already located on-site. Turbidity curtains would likely be
309 used to minimize impacts, particularly a turbidity plume, within the Patapsco River. The exit
310 channel would be filled in mechanically and the dike would be constructed to match the rest of
311 the containment facility. During dike construction, relocation of some of the derelict vessels
312 would be occurring. This would require close coordination of the contractors onsite.
313

314 Ancillary items such as spillways and site facilities would be constructed following completion
315 of the containment structure. Also, following completion of the containment structure, the newly
316 constructed dike would be planted to re-establish a portion of the critical area buffer covered by
317 the DMCF construction. The 100 ft critical area buffer would be reestablished following future

318 dike raisings at the site. The total duration of construction is anticipated to be one and one half
319 years, allowing site operations in the 2008-2009 dredging season.

320
321 After the amount of dredged material in the facility reaches the height of land of the MMT Phase
322 2 (Figure 2-1), an onshore berm along the periphery of MMT Phase 2 connecting the beach sand
323 dike and the onshore dike would be constructed to the final height of the DMCF to contain the
324 dredged material. MMT Phase 2 is anticipated to have a final, graded height of +32 ft MLLW,
325 the onshore berm would be constructed to a temporary height of +42 ft MLLW and graded to a
326 final height of +36 ft MLLW at the appropriate time following filling operations.

327
328 **7.2.3 Integrated Compensatory Mitigation Projects**

329
330 Proposed mitigation projects are discussed in Chapter 6.

331
332 The exact projects and their scope have not yet been determined. However, they are anticipated
333 to be decided upon during the permit review process. A schedule for their completion has not
334 yet been developed, but the projects should be reaching their construction phases between late
335 2006 and 2009, with the majority completed by 2009.

336
337 **7.3 KIM DERELICT VESSEL MANAGEMENT**

338
339 The 25 derelict vessels currently located in KIM Channel would have the solid and hazardous
340 waste removed and then would be buried under dredged material. All material and debris
341 management resulting from demolition and all removal work would be conducted according to
342 current state and federal regulations in order to ensure that no additional contamination or
343 environmental hazards would occur. No debris would be permitted to fall into adjacent bodies of
344 water and all waste would be transported from the site and disposed of in permitted locations.

345
346 The work would include but not limited to:

- 347
348 1) Demolition and removal of the timber dry dock to below deck level.
349 2) Demolition and removal of a 3,000 gallon fuel tank on top of the Gantry crane frame on
350 the crane barge, including approximately 6 inches of residual fuel. Demolition and
351 removal of the Gantry Crane frame.
352 3) Demolition and removal of sufficient portions of the Beverly to allow waterside access
353 for the removal and disposal of the creosoted timbers from Barge No. 3, or the relocation
354 of Barge No. 3, if necessary .
355 4) Demolition and removal of steel drydock decking to access removal of regulated and
356 solid waste materials in the hull interior.
357 5) Incidental demolition and removal of steel plating, decking, superstructure, hull, tanks,
358 and machinery on all vessels to allow access for the subsequent removal of regulated
359 hazardous and solid wastes.

360
361 During the demolition work, adjacent waterways would be protected from debris and other
362 material falling into the water. Cleanup of all debris would be completed by the contractor. As
363 part of the minimization of impacts during the demolition and cleanup activities, a waterside

364 containment boom and turbidity curtain would be employed. These would completely enclose
365 the waterside work area to contain floating debris. In addition, water misting, temporary
366 enclosures, and other suitable methods would be employed, as necessary, to limit the spread of
367 dust and dirt, since environmentally sensitive materials are known to be associated with some of
368 these vessels. All work would be conducted to avoid free fall and to prevent materials from
369 falling into the water. All demolished items and materials would be segregated and stockpiled
370 promptly. On-site storage or sale of removed items would be prohibited.

371
372 Demolished materials would be disposed of daily, and no materials would be burned. All
373 demolished materials would be transported off the property and legally disposed of in
374 accordance state and federal regulations. All debris from the decks, within the superstructure,
375 on equipment, and in the hulls would be mechanically and manual removed and segregated into
376 separate stockpiles of suspect unregulated, solid, and hazardous materials. These would then be
377 characterized according to the nature of the specific materials, i.e., tires, floor tiles, metal, wood,
378 cable, hoses, gaskets, blasting grit, etc. All work would be subject to a site specific Health and
379 Safety Plan (HASP). Personal protective equipment would be required for material segregation
380 in accordance with this HASP. To the extent possible, upon removal of waste, the materials
381 would be mechanically segregated into readily identifiable units such as tires, concrete rubble,
382 sonar dome, creosoted timber, scrap metal, etc. These materials would be immediately
383 stockpiled or field tested for immediate loading and appropriate disposal. Mixed debris
384 stockpiles would then be manually segregated into units such as splintered wood and blasting
385 grit that are intermixed with cable, pipe, scrap metal, gaskets, hoses, insulation, etc.

386
387 ***Sediment and Debris Control***

388
389 A containment boom and turbidity curtain would be utilized to encompass the immediate area of
390 remediation and construction. The removal and disposal of uncontaminated material, which
391 may be characterized as solid waste, would be in accordance with Code of Maryland
392 Regulations (COMAR) 26.04. Facilities accepting such wastes in the State of Maryland must be
393 licensed and are required to maintain a current permit. Disposal certification, quantities,
394 description, and date of all solid waste loads would be provided on a daily basis. Transporters
395 and disposal facilities would be those approved by the MDE. All regulated waste would be
396 properly manifested and all receiving facilities would be only those approved by state and
397 federal regulatory agencies.

398
399 **7.4 MINIMIZATION OF IMPACTS**

400
401 Several techniques to minimize impacts to water quality have been included in the recommended
402 plan for the proposed Masonville DMCF. The construction sequence has been designed to
403 minimize turbidity impacts to the Patapsco River. By constructing the cofferdam cells and the
404 beach sand dike prior to building the armored sand dike, any turbidity generated from mining
405 available on-site sand for construction would be partially contained. This would decrease the
406 cross-sectional area of the Patapsco River affected by the turbidity plume, which would decrease
407 the potential for adverse impacts of construction activities to aquatic life in the River. To
408 prevent turbidity plumes resulting from the mining of on-site clay for construction, this material
409 would not be mined until after the containment structure has enclosed the site. Any mining of

410 on-site construction (borrow) materials that occurs after the containment structure has enclosed
411 the site should have no impact on aquatic life in the Patapsco River.

412
413 Turbidity curtains would be used in conjunction with training dikes to confine turbidity plumes
414 during the construction of the armored sand dike. The training dikes are mounded initially and
415 then moved out as the main dike is constructed. Discharge would be released behind the training
416 dikes and into an area enclosed by a silt curtain. The turbidity plume would be partially
417 contained by the silt curtain. The training dikes and the outfall pipe are extended as construction
418 continues. The turbidity curtains would be placed in a horseshoe arrangement at the training
419 dikes and would move with the dike as it is extended. Though studies have shown that turbidity
420 curtains can reduce turbidity concentrations by up to 90 percent (JBF Scientific 1978), turbidity
421 curtains are generally not that efficient. The 90 percent means that the turbidity levels outside
422 the silt curtains would be up to 90 percent lower than the turbidity levels contained by the
423 turbidity curtains. For Masonville, an assumption of a 50 to 60 percent reduction in turbidity has
424 been anticipated.

425
426 A leachate barrier with a permeability of 5×10^{-6} cm per second would be used to line the dikes.
427 Though migration of contaminants through the dike is not anticipated to be an issue, based on
428 experience at the HMI DMCF (URS 2004), this geomembrane barrier would further minimize
429 movement of any contaminants through the dike to the Patapsco River or Patapsco aquifer.

430

431 **7.5 CONCEPTUAL TURBIDITY MONITORING PLAN**

432
433 The objective of the monitoring plan is to determine the extent of the sediment plume resulting
434 from dredging operations at the Masonville site relative to Maryland water quality regulations.

435

- 436 • While there are no mixing zone regulations for turbidity, the allowed mixing zone is
437 typically the same as that for conventional pollutant (i.e. total suspended solids). For
438 conventional pollutants, the allowed mixing zone (focusing on the mean water level and
439 average tidal velocity) in Maryland estuarine waters is defined as 10-percent of the cross-
440 sectional area of the receiving water body.
- 441 • Turbidity in the surface water resulting from any discharge may not exceed 150
442 Nephelometric Turbidity Units (NTUs) at any time or 50 NTUs as a monthly average.

443
444 The interpretation of the 10 percent cross-sectional area would be redefined as the shoreline
445 changes during the life of the project.

446

447 Several monitoring stations would be established at the prescribed perimeter, plus at least one
448 Middle Branch “control” monitoring station to assess ambient background values for turbidity
449 (in NTUs). Initially, monitoring at each of these stations would be conducted once daily to
450 characterize the plume under various tidal conditions, and then possibly reduced if the plume can
451 be accurately described. At each monitoring station, the plume within the water column would
452 be characterized using a minimum of five points within the water column. For example with
453 five or six vertical water column measurements, the three highest values would be averaged.

454

455 The monitoring would take place at locations corresponding to approximately 10 percent of the
456 cross-sectional area, and data would be collected over the depth of the water column and
457 averaged. Assuming that the dredge point is the centerline of the plume, the monitoring would
458 take place on either side from the dredge point during construction of the western dike. The field
459 monitoring procedures would include locating the downstream distance corresponding to the
460 maximum plume width of concentrations of concern.

461
462 Once construction of the dike along the northern perimeter is underway, cutterhead dredging and
463 placement along the dike line would be taking place simultaneously. The monitoring would take
464 place offshore of the sediment discharge location associated with construction, and data would
465 be collected over the depth of the water column and averaged.

466
467 **7.6 IMPLEMENTATION ISSUES**

468
469 Currently the site is being designed using both sand and clay dredged from onsite and materials
470 from licensed upland facilities for construction. If insufficient volumes are found onsite, upland
471 mined material may be utilized. There is some concern about the ability to use on-site borrow
472 material for the construction of the dikes. The 2001 Dredged Material Management Act
473 prohibits the unconfined placement of Harbor dredged material. This may include the
474 construction of the proposed Masonville DMCF dikes using on-site borrow; MPA and MDE are
475 working together to ensure that all legal requirements would be met.

476
477 Dredging portions of the construction phases may cause near-field turbidity, which could
478 affect fish spawning and migration patterns. To minimize impacts due to turbidity, contractors
479 would adhere to Time of Year (TOY) restrictions on dredging spanning. These typically occur
480 from February 15th to June 15th of each year, but may be shortened for this project to February
481 15th to June 1st since there are no striped bass spawning in the area. Further, the minimization of
482 impacts during construction would be pursued, as discussed in section 7.4

483
484 **7.7 SUMMARY OF RESPONSIBILITIES**

485
486 This section lists the parties responsible for funding the projects described in this DEIS and the
487 parties responsible for maintaining the projects following their construction.

488
489 **7.7.1 Project Funding**

490
491 The MPA would provide funding for construction and management of the DMCF throughout its
492 life as a placement site. The MPA would also provide funding for the mitigation projects and
493 certain portions (to be determined at a later date) of the community enhancement projects
494 associated with the DMCF. MPA would assist the community with finding funding sources for
495 the enhancements. The funding required to complete an operational site, complete the mitigation
496 and support MPA's portion of the community enhancement projects is estimated to be \$83
497 million.

498
499 Typically, a DMCF necessary for supporting a federally maintained navigation project is cost
500 shared between the federal government and the project's local sponsor. However, in this case,

501 the USACE is not able to provide capital funding for construction of the DMCF. The MPA
502 would seek reimbursement of funding under Section 217 of the 1996 Water Resources
503 Development Act.

504

505 **7.7.2 Project Ownership**

506

507 The MPA currently owns the land abutting the DMCF project, would own the DMCF during
508 operations as a placement facility, and would own the land created by the project following
509 closure of the DMCF. The MPA currently owns the land surrounding the Masonville Cove,
510 which is the site for the majority of the mitigation and community enhancement projects. MPA
511 would retain ownership of this land, but intends to enter into a conservation easement with an
512 environmental trust concerning the portion of the property that includes the nature center. Other
513 projects outside of Masonville Cove are being considered, but have not yet been selected, and
514 thus ownership is not addressed.