10. Combined Cost Estimates

As presented in previous sections, cost estimates have been developed for the individual sediment and floodplain alternatives, the selected sediment-floodplain alternative combinations, and the treatment/disposition alternatives (Sections 6, 7, 8, and 9, respectively). To develop the combined cost estimates discussed in this section, the ten sediment alternatives were paired with the appropriate treatment/disposition alternatives, creating a total of 58 cost estimates. Likewise, the nine floodplain alternatives were paired with the appropriate treatment/disposition alternatives, resulting in 56 cost estimates for those combinations. Finally, the seven sediment-floodplain alternative combinations subject to detailed evaluation were also combined with the appropriate treatment/disposition alternatives, resulting in 52 cost estimates for those combinations. A summary of the combined cost estimates and related assumptions is presented below. To illustrate this approach, Appendix Q to this CMS Report provides more detailed information on the cost estimates for the combinations of the seven sediment-floodplain alternative combinations with the appropriate treatment/disposition alternatives.

10.1 Combinations of Sediment Alternatives and Treatment/Disposition Alternatives

Table 10-1 presents the total cost estimates for the SED and TD combinations (including capital and OMM costs). For the SED and TD combinations involving removal, total cost estimates range from $110 million for the combination of SED 10 with TD 3 (local upland disposal at the Rising Pond Site) to approximately $2.4 billion for the combination of SED 8 with TD 5 (thermal desorption).

The following key assumptions were made in developing the combined costs of SED-TD alternatives:

- For the remedial combinations that involve TD 1, it was assumed that, following removal and processing/dewatering at the staging areas (which are considered under the sediment alternatives), no additional material handling activities would be necessary before off-site transport and disposal – i.e., that removed materials would be sufficiently stabilized for off-site transport as part of the removal alternatives. It was also assumed that removed materials, regardless of the removal method, would be appropriately segregated with respect to TSCA classification as part of the removal alternatives. Therefore, no extra costs for material handling were either added to or subtracted from the combined cost estimates for the remedial combinations involving TD 1.

- As discussed in Section 9.2, it has been assumed that the CDF(s) that are part of TD 2 would be used only for disposition of hydraulically dredged sediments from Reaches 5C and 6 under SED 6, SED 7, SED 8, and SED 9. Since SED 3, SED 4, SED 5, and SED

10 do not include hydraulic dredging of sediments, no combined costs are presented for combinations of those sediment alternatives with TD 2. For the combined cost estimates for SED 6, SED 7, SED 8, and SED 9 with TD 2, it was assumed that all sediments removed from reaches other than Reaches 5C and 6 would be transported off-site for disposal. In addition, it was assumed that sediment dewatering and stabilization – activities that were part of the individual sediment alternatives – would not be necessary for the materials to be placed in the CDF(s); and hence costs for sediment dewatering and stabilization were subtracted from the costs for the combinations that involve TD 2. Additionally, some sediments that would otherwise be removed from Reaches 5C and 6 are located within the conceptual footprint of the CDF(s). Construction of the CDF(s) would make the removal of these sediments unnecessary; thus, the sediment removal volumes in Reaches 5C and 6 were reduced in SED 6, SED 7, SED 8, and SED 9 by the volumes of sediments located within the footprint of the CDF(s), and the costs were adjusted accordingly.

- For the combinations of sediment alternatives with TD 3, separate estimates were made for each of the three potential locations identified in Section 9.3.1 for an Upland Disposal Facility.[555] For each of those combinations, adjustments were made to the individual sediment alternative cost estimates presented in Section 6 to account for the fact that, following remediation, the access road and staging area materials would be placed in the Upland Disposal Facility, rather than transported for off-site disposal.

- Where relevant in the combinations of sediment alternatives with TD 4, it was assumed that hydraulically dredged sediments from Reaches 5C and 6 could be pumped directly to the chemical treatment facility (at the assumed location identified in Section 9.4.1.1) without being dewatered. In these cases, the following costs were not included in the combined cost estimates: (1) costs for dewatering and associated water treatment (activities that were part of the original sediment alternatives); and (2) costs for transporting removed sediments hydraulically dredged from Reaches 5C and 6 to the on-site chemical treatment facility. In general, the cost estimates for the combinations that involve TD 4 were based on cost estimates provided by BioGenesis, with certain adjustments and additions to incorporate costs associated with non-treatment activities, as discussed in Section 9.4.9. The costs that were added to the BioGenesis estimates include the costs for transport to the treatment facility location and for off-site transport and disposal of the treated solid materials. These costs were based on the assumption

[555] Since the removal volume involved in SED 8 would exceed the capacity of an Upland Disposal Facility at the Woods Pond Site or the Forest Street Site, cost estimates for the combination of SED 8 with TD 3 were made only for the Rising Pond Site, where the entire volume of removed material could be disposed of. However, as noted in Section 9.3.1, a combination of disposal locations could also be used.

that the treated materials would contain average PCB concentrations less than 50 mg/kg and would be disposed of off-site at a non-TSCA solid waste landfill pursuant to a risk-based TSCA determination from EPA.

- For the combinations of sediment alternatives with TD 5, it was assumed that the thermal desorption process (assumed to take place at the located identified in Section 9.5.1.2) would reduce the PCB concentrations in the treated materials to levels of 1 to 2 mg/kg. Because there is no known precedent for the reuse of such thermally treated materials as backfill in riverine environments, it was assumed that these materials would be transported off-site for disposal in a non-TSCA landfill.

- For all combinations, it was assumed that none of the removed materials would constitute hazardous waste under RCRA criteria or comparable state criteria.

In addition to the total cost estimates, as required by the Permit, the present worth cost for each combination of SED and TD alternatives is presented in Table 10-2, using a 7% discount rate.

10.2 Combinations of Floodplain Alternatives and Treatment/Disposition Alternatives

Table 10-3 presents the total costs for the FP and TD combinations (including capital and OMM costs). For the FP and TD combinations involving removal, the total costs range from $18 million for the combination of FP 2 with TD 1 (off-site disposal) to $676 million for the combination of FP 7 with TD 5B (thermal desorption without re-use).

The following key assumptions were made in developing the combined costs of SED-TD alternatives:

- For the combinations of floodplain alternatives with TD 3, separate estimates were again made for each of the three potential locations identified in Section 9.3.1 for an Upland Disposal Facility. For each of those combinations, adjustments were made to the individual FP cost estimates presented in Section 7, to account for the fact that the access road and staging area materials would be placed in the Upland Disposal Facility rather than transported for off-site disposal.

- For the combinations of floodplain alternatives with TD 4, the cost estimates were generally based on cost information provided by BioGenesis, with certain adjustments and additions to incorporate costs associated with non-treatment activities, as discussed in Section 9.4.9. The costs that were added to the BioGenesis estimates

include the costs for transport to the treatment facility (at the assumed location identified in Section 9.4.1.1) and for off-site transport and disposal of the treated solid materials. These costs were based on the assumption that the treated materials would contain average PCB concentrations less than 50 mg/kg and would be disposed of off-site at a non-TSCA solid waste landfill pursuant to a risk-based TSCA determination from EPA.

- The combinations of floodplain alternatives with TD 5 (assumed to take place at the located identified in Section 9.5.1.2) were evaluated under two scenarios: (1) assuming that a portion of the treated floodplain soils (approximately 50%) would be reused as backfill in the floodplain after being amended with organic material, and that the remainder would be transported off-site for disposal in a non-TSCA landfill (TD 5A); and (2) assuming that all treated soils would be transported off-site for disposal in a non-TSCA landfill (TD 5B). For the combinations that involve TD 5A, given the assumed reuse of treated material as backfill, the floodplain backfill costs were removed from the estimates; however, costs associated with the purchase and placement of topsoil were not removed from the combined cost estimates, and instead were assumed to represent the costs associated with the amendment of the thermally treated materials prior to use as backfill.

- For all combinations, it was assumed that none of the removed materials would constitute hazardous waste under RCRA criteria or comparable state criteria.

In addition to the total cost estimates, as required by the Permit, the present worth cost for each combination of FP and TD alternatives is presented in Table 10-4, using a 7% discount rate.

10.3 Combinations of Combined Sediment/Floodplain Alternatives with Treatment/Disposition Alternatives

Table 10-5 presents the total cost estimates for the combinations of the SED/FP combined alternatives with the TD alternatives (including capital and OMM costs). For the SED/FP and TD combinations involving removal, total cost estimates range from $121 million for combining SED 10/FP 9 with TD 3 (local upland disposal at the Rising Pond Site) to approximately $3.0 billion for combining SED 8/FP 7 with TD 5B (thermal desorption).[556]

[556] As noted above, more detailed information regarding these combined cost estimates is provided in Appendix Q.

The following key assumptions were made in developing the combined costs of the SED/FP and TD alternatives:

- For the remedial combinations that involve TD 1, it was assumed that, following removal and processing/dewatering (as necessary) at the staging areas, no additional material handling activities would be necessary before off-site transport and disposal – i.e., that removed materials would be sufficiently stabilized for off-site transport as part of the removal alternatives. It was also assumed that removed materials, regardless of the removal method, would be appropriately segregated with respect to TSCA classification as part of the removal alternatives. Therefore, no extra costs for material handling were either added to or subtracted from the combined cost estimates for the remedial combinations involving TD 1.

- As discussed in Section 9.2, it has been assumed that the CDF(s) that are part of TD 2 would be used only for disposition of hydraulically dredged sediments from Reaches 5C and 6 under SED 6/FP 4, SED 8/FP 7, and SED 9/FP 8. Since SED 3/FP 3, SED 5/FP 4, and SED 10/FP 9 do not include hydraulic dredging of sediments, no cost estimates are presented for combinations of those combined alternatives with TD 2. For the combined cost estimates for SED 6/FP 4, SED 8/FP 7, and SED 9/FP 8 with TD 2, it was assumed that all floodplain soils, as well as any sediments removed from reaches other than Reaches 5C and 6, would be transported off-site for disposal. In addition, it was assumed that sediment dewatering and stabilization – activities that were part of the individual sediment alternatives – would not be necessary for the materials to be placed in the CDF(s); and hence costs for sediment dewatering and stabilization were subtracted from the costs for the combinations that involve TD 2. Additionally, some sediments that would otherwise be removed from Reaches 5C and 6 are located within the conceptual footprint of the CDF(s). Construction of the CDF(s) would make the removal of these sediments unnecessary; thus, the sediment removal volumes in Reaches 5C and 6 were reduced in SED 6/FP 4, SED 8/FP 7, and SED 9/FP 8 by the volumes of sediments located within the footprint of the CDF(s), and the costs were adjusted accordingly.

- For the combinations of the combined sediment-floodplain alternatives with TD 3, separate estimates were again made for each of the three potential locations identified for an Upland Disposal Facility.[557] For each of those combinations, adjustments were

[557] Since the removal volume involved in SED 8/FP 7 would exceed the capacity of an Upland Disposal Facility at the Woods Pond Site or the Forest Street Site, cost estimates for the combination of SED 8/FP 7 with TD 3 were made only for the Rising Pond Site, where the entire volume of removed material could be disposed of. However, as noted in Section 9.3.1, a combination of disposal locations could also be used.

made to the SED/FP cost estimates presented in Section 8 to account for the fact that, following remediation, the access road and staging area materials would be placed in the Upland Disposal Facility, rather than transported for off-site disposal.

- Where relevant in the combinations of combined sediment/floodplain alternatives with TD 4, it was assumed that hydraulically dredged sediments from Reaches 5C and 6 could be pumped directly to the chemical treatment facility (at the identified location) without being dewatered. In these cases, the following costs were not included in the combined cost estimates: (1) costs for dewatering and associated water treatment (activities that were part of the original combined sediment/floodplain alternatives); and (2) costs for transporting removed sediments hydraulically dredged from Reaches 5C and 6 to the on-site chemical treatment facility. In general, the cost estimates for the combinations that involve TD 4 were based on cost estimates provided by BioGenesis, with certain adjustments and additions to incorporate costs associated with non-treatment activities, as discussed in Section 9.4.9. The costs that were added to the BioGenesis estimates include the costs for transport to the treatment facility location and for off-site transport and disposal of the treated solid materials. These costs were based on the assumption that the treated materials would contain average PCB concentrations less than 50 mg/kg and would be disposed of off-site at a non-TSCA solid waste landfill pursuant to a risk-based TSCA determination from EPA.

- The combinations of sediment-floodplain alternatives with TD 5 were evaluated under two scenarios: (1) assuming that a portion of the treated floodplain soils (approximately 50%) would be reused as backfill in the floodplain after being amended with organic material, and that the remainder of the floodplain soils, and sediment would be transported off-site for disposal in a non-TSCA landfill (TD 5A); and (2) assuming that all treated floodplain soils, and sediment would be transported off-site for disposal in a non-TSCA landfill (TD 5B). For the combinations that involve TD 5A, given the assumed reuse of treated material as backfill, the floodplain backfill costs were removed from the estimates; however, costs associated with the purchase and placement of topsoil were not removed from the combined cost estimates, and instead were assumed to represent the costs associated with the amendment of the thermally treated materials prior to use as backfill.

- For all combinations, it was assumed that none of the removed materials would constitute hazardous waste under RCRA criteria or comparable state criteria.

In addition to the total cost estimates, as required by the Permit, the present worth cost for each combination of SED/FP and TD alternatives is presented in Table 10-6, using a 7% discount rate.

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Section 10 Tables

Table 10-1 – Total Cost Estimates for SED and TD Combinations

Revised CMS Report, Housatonic River - Rest of River
General Electric Company - Pittsfield, MA

Alternative	Cost Estimates for SED and TD Combinations[1,2]						
	TD 1 Off-Site Disposal	TD 2 Confined Disposal Facility	TD 3 Upland Disposal Facility Woods Pond	TD 3 Upland Disposal Facility Rising Pond	TD 3 Upland Disposal Facility Forest Street	TD 4 Chemical Extraction	TD 5 Thermal Desorption
SED 1[3]	NA	NA	NA	NA	NA	NA	NA
SED 2[4]	$5 M	NA	$5 M	$5 M	$5 M	$5 M	$5 M
SED 3	$203 M	NA	$187 M	$181 M	$201 M	$232 M	$283 M
SED 4	$321 M	NA	$271 M	$267 M	$294 M	$355 M	$452 M
SED 5	$405 M	NA	$330 M	$327 M	$360 M	$443 M	$588 M
SED 6	$535 M	$409 M	$411 M	$409 M	$451 M	$552 M	$769 M
SED 7	$684 M	$529 M	$483 M	$483 M	$538 M	$691 M	$1,007 M
SED 8	$1,397 M	$985 M	NA	$916 M	NA	$1,468 M	$2,405 M
SED 9	$604 M	$433 M	$378 M	$381 M	$444 M	$567 M	$999 M
SED 10	$163 M	NA	$117 M	$110 M	$134 M	$163 M	$259 M

Notes:
1. Costs presented represent the sum of estimated capital/labor costs of implementation and the costs of post-remediation OMM and/or long-term monitoring.
2. Costs are presented in 2010 dollars. $ M = million dollars.
3. There are no costs associated with SED 1 as that alternative would not involve remedial activities in the Rest of River.
4. There are no treatment/disposition costs for SED 2; the cost listed represents the long-term monitoring costs associated with monitored natural recovery
5. The maximum capacities of the Forest Street Site and Woods Pond Site Upland Disposal Facilities are approximately 1 million cubic yards (cy) and 2 million cy, respectively. Since the SED 8 volume exceeds the maximum capacity at both sites, costs are not applicable (NA) for the combinations of SED 8 with implementation of TD 3 at these sites.

Table 10-2 – Present Worth Cost Estimates for SED and TD Combinations

Revised CMS Report, Housatonic River - Rest of River
General Electric Company - Pittsfield, MA

Alternative	Present Worth Cost Estimates for SED and TD Combinations[1,2,3]						
	TD 1 Off-Site Disposal	TD 2 Confined Disposal Facility	TD 3 Upland Disposal Facility Woods Pond	TD 3 Upland Disposal Facility Rising Pond	TD 3 Upland Disposal Facility Forest Street	TD 4 Chemical Extraction	TD 5 Thermal Desorption
SED 1[4]	NA	NA	NA	NA	NA	NA	NA
SED 2[5]	$2 M	NA	$2 M	$2 M	$2 M	$2 M	$2 M
SED 3	$151 M	NA	$128 M	$124 M	$138 M	$176 M	$228 M
SED 4	$202 M	NA	$163 M	$161 M	$177 M	$232 M	$313 M
SED 5	$231 M	NA	$182 M	$181 M	$198 M	$263 M	$375 M
SED 6	$277 M	$228 M	$210 M	$209 M	$231 M	$302 M	$461 M
SED 7	$307 M	$257 M	$214 M	$215 M	$239 M	$327 M	$534 M
SED 8	$377 M	$297 M	NA	$273 M	NA	$434 M	$896 M
SED 9	$379 M	$271 M	$229 M	$232 M	$264 M	$368 M	$734 M
SED 10	$134 M	NA	$85 M	$81 M	$99 M	$137 M	$234 M

Notes:
1. Costs presented represent the sum of estimated capital/labor costs of implementation and the costs of post-remediation OMM and/or long-term monitoring.
2. Costs are presented in 2010 dollars. $ M = million dollars.
3. Costs have been assessed for present worth, assuming a constant 7% discount factor.
4. There are no costs associated with SED 1 as that alternative would not involve remedial activities in the Rest of River.
5. There are no treatment/disposition costs for SED 2; the cost listed represents the long-term monitoring costs associated with monitored natural recovery
6. The maximum capacities of the Forest Street Site and Woods Pond Site Upland Disposal Facilities are approximately 1 million cubic yards (cy) and 2 million cy, respectively. Since the SED 8 volume exceeds the maximum capacity at both sites, costs are not applicable (NA) for the combinations of SED 8 with implementation of TD 3 at these sites.

Table 10-3 – Total Cost Estimates for FP and TD Combinations

Revised CMS Report, Housatonic River - Rest of River
General Electric Company - Pittsfield, MA

Alternative	Cost Estimates for FP and TD Combinations[1,2]							
	TD 1 Off-Site Disposal	TD 2[4] Confined Disposal Facility	TD 3 Upland Disposal Facility Woods Pond	TD 3 Upland Disposal Facility Rising Pond	TD 3 Upland Disposal Facility Forest Street	TD 4 Chemical Extraction	TD 5A Thermal Desorption (w/ Reuse)	TD 5B Thermal Desorption (w/o Reuse)
FP 1[3]	NA	NA	NA	NA	NA	NA	NA	NA
FP 2	$18 M	NA	$42 M	$34 M	$41 M	$36 M	$28 M	$33 M
FP 3	$56 M	NA	$63 M	$55 M	$63 M	$74 M	$79 M	$88 M
FP 4	$86 M	NA	$79 M	$71 M	$80 M	$105 M	$107 M	$138 M
FP 5	$91 M	NA	$74 M	$66 M	$74 M	$94 M	$93 M	$120 M
FP 6	$208 M	NA	$156 M	$151 M	$175 M	$250 M	$263 M	$346 M
FP 7	$371 M	NA	$263 M	$262 M	$300 M	$470 M	$514 M	$676 M
FP 8	$131 M	NA	$101 M	$95 M	$112 M	$145 M	$152 M	$198 M
FP 9	$22 M	NA	$43 M	$36 M	$43 M	$40 M	$31 M	$38 M

Notes:
1. Costs presented represent the sum of estimated capital/labor costs of implementation and the costs of post-remediation OMM and/or long-term monitoring.
2. Costs are presented in 2010 dollars. $ M = million dollars.
3. There are no costs associated with FP 1 as that alternative would not involve remedial activities in the Rest of River.
4. Floodplain alternatives have not been combined with TD 2 as the CDF has been assumed to be available only for the placement of hydraulically dredged sediments.

Table 10-4 – Present Worth Cost Estimates for FP and TD Combinations

Revised CMS Report, Housatonic River - Rest of River
General Electric Company - Pittsfield, MA

Alternative	Present Worth Cost Estimates for FP and TD Combinations[1,2,3]							
	TD 1 Off-Site Disposal	TD 2[5] Confined Disposal Facility	TD 3 Upland Disposal Facility Woods Pond	TD 3 Upland Disposal Facility Rising Pond	TD 3 Upland Disposal Facility Forest Street	TD 4 Chemical Extraction	TD 5A Thermal Desorption (w/ Reuse)	TD 5B Thermal Desorption (w/o Reuse)
FP 1[4]	NA	NA	NA	NA	NA	NA	NA	NA
FP 2	$17 M	NA	$29 M	$21 M	$29 M	$36 M	$34 M	$40 M
FP 3	$50 M	NA	$45 M	$39 M	$46 M	$67 M	$72 M	$88 M
FP 4	$77 M	NA	$57 M	$52 M	$58 M	$94 M	$106 M	$132 M
FP 5	$81 M	NA	$54 M	$48 M	$54 M	$84 M	$93 M	$116 M
FP 6	$142 M	NA	$95 M	$92 M	$106 M	$173 M	$201 M	$255 M
FP 7	$187 M	NA	$123 M	$123 M	$139 M	$240 M	$301 M	$379 M
FP 8	$88 M	NA	$63 M	$58 M	$71 M	$105 M	$127 M	$159 M
FP 9	$21 M	NA	$30 M	$24 M	$31 M	$39 M	$37 M	$43 M

Notes:
1. Costs presented represent the sum of estimated capital/labor costs of implementation and the costs of post-remediation OMM and/or long-term monitoring.
2. Costs are presented in 2010 dollars. $ M = million dollars.
3. Costs have been assessed for present worth, assuming a constant 7% discount factor.
4. There are no costs associated with FP 1 as that alternative would not involve remedial activities in the Rest of River.
5. Floodplain alternatives have not been combined with TD 2 as the CDF has been assumed to be available only for the placement of hydraulically dredged sediments.

Table 10-5 – Total Cost Estimates for SED/FP and TD Combinations

Revised CMS Report, Housatonic River - Rest of River
General Electric Company - Pittsfield, MA

Alternative	Cost Estimates for SED/FP and TD Combinations[1,2]							
	TD 1 Off-Site Disposal	TD 2 Confined Disposal Facility	TD 3 Upland Disposal Facility Woods Pond	TD 3 Upland Disposal Facility Rising Pond	TD 3 Upland Disposal Facility Forest Street	TD 4 Chemical Extraction	TD 5A Thermal Desorption (w/ Reuse)	TD 5B Thermal Desorption (w/o Reuse)
SED 2 / FP 1	$5 M	NA	$5 M	$5 M	$5 M	$5 M	$5 M	$5 M
SED 3 / FP 3	$251 M	NA	$210 M	$204 M	$228 M	$274 M	$337 M	$356 M
SED 5 / FP 4	$483 M	NA	$365 M	$362 M	$402 M	$509 M	$678 M	$709 M
SED 6 / FP 4	$612 M	$487 M	$446 M	$444 M	$493 M	$619 M	$860 M	$891 M
SED 8 / FP 7	$1,740 M	$1,337 M	NA	$1,160 M	NA	$1,826 M	$2,866 M	$3,026 M
SED 9 / FP 8	$729 M	$558 M	$435 M	$439 M	$512 M	$662 M	$1,132 M	$1,175 M
SED 10 / FP 9	$183 M	NA	$128 M	$121 M	$146 M	$181 M	$283 M	$290 M

Notes:

1. Costs presented represent the sum of estimated capital/labor costs of implementation and the costs of post-remediation OMM and/or long-term monitoring.
2. Costs are presented in 2010 dollars. $ M = million dollars.
3. The maximum capacities of the Forest Street Site and Woods Pond Site Upland Disposal Facilities are approximately 1 million cubic yards (cy) and 2 million cy, respectively. Since the SED 8/FP 7 volume exceeds the maximum capacity at both sites, costs are not applicable (NA) for the combinations of SED 8/FP 7 with implementation of TD 3 at these sites.

Table 10-6 – Present Worth Cost Estimates for SED/FP and TD Combinations

Revised CMS Report, Housatonic River - Rest of River
General Electric Company - Pittsfield, MA

Alternative	Present Worth Cost Estimates for SED/FP and TD Combinations[1,2]							
	TD 1 Off-Site Disposal	TD 2 Confined Disposal Facility	TD 3 Upland Disposal Facility Woods Pond	TD 3 Upland Disposal Facility Rising Pond	TD 3 Upland Disposal Facility Forest Street	TD 4 Chemical Extraction	TD 5A Thermal Desorption (w/ Reuse)	TD 5B Thermal Desorption (w/o Reuse)
SED 2 / FP 1	$2 M	NA	$2 M	$2 M	$2 M	$2 M	$2 M	$2 M
SED 3 / FP 3	$195 M	NA	$148 M	$145 M	$161 M	$214 M	$277 M	$293 M
SED 5 / FP 4	$299 M	NA	$211 M	$210 M	$232 M	$320 M	$449 M	$472 M
SED 6 / FP 4	$344 M	$296 M	$239 M	$239 M	$264 M	$358 M	$535 M	$558 M
SED 8 / FP 7	$534 M	$455 M	NA	$355 M	NA	$589 M	$1,122 M	$1,184 M
SED 9 / FP 8	$462 M	$355 M	$267 M	$270 M	$316 M	$432 M	$839 M	$869 M
SED 10 / FP 9	$152 M	NA	$95 M	$91 M	$110 M	$154 M	$257 M	$263 M

Notes:
1. Costs presented represent the sum of estimated capital/labor costs of implementation and the costs of post-remediation OMM and/or long-term monitoring.
2. Costs are presented in 2010 dollars. $ M = million dollars.
3. Costs have been assessed for present worth, assuming a constant 7% discount factor.
4. The maximum capacities of the Forest Street Site and Woods Pond Site Upland Disposal Facilities are approximately 1 million cubic yards (cy) and 2 million cy, respectively. Since the SED 8/FP 7 volume exceeds the maximum capacity at both sites, costs are not applicable (NA) for the combinations of SED 8/FP 7 with implementation of TD 3 at these sites.