

## 1 Cumulative Impacts

2 Current and future development projects in the study area would further add to the positive impact of  
3 the Poplar Point development on the area's economy, increasing employment opportunities and tax  
4 revenue in the region.

## 5 Conclusion

6 Alternative 1 would have a minor to moderate, positive impact on the economy of the study area and  
7 the larger region in the short- and long-term. Despite this positive impact, mitigation measures are  
8 recommended to ensure Ward 8 residents experience the largest share of the benefits.

## 9 Mitigation

- 10 • Employment opportunities should be offered to residents through the DC Department of  
11 Employment's First Source Program; this program ensures 51 percent of new hires are District  
12 residents.
- 13 • Employment opportunities should be visibly advertised in the local community and a public  
14 meeting should be held to inform residents of job openings.

### 15 **4.2.7.4 Alternative 2**

#### 16 Direct and Indirect Impacts

17 Alternative 2 would require over \$1.35 billion in investment to build just less than 6.5 million square feet  
18 of commercial and residential space, not including the cost of environmental remediation, public  
19 infrastructure, planting, and soft costs. This alternative would also have significant fiscal implications on  
20 the District of Columbia and the surrounding states. As was shown in Table 4.X.1.2, the 2,100  
21 permanent employees within Poplar Point would generate approximately \$1.89 million in income tax  
22 revenue for the District of Columbia, over \$2.13 million for Maryland, and almost \$1.61 million for  
23 Virginia. As some employees may already be employed and living in each jurisdiction, the actual increase  
24 in revenue may be much less.

25 Property and sales tax revenue would also be generated for the District of Columbia through Alternative  
26 2. Property tax revenues would likely exceed \$13.7 million for the residential units and \$7.2 million for  
27 the commercial component. Resident and employee spending in the study area would generate \$1.22  
28 million in sales tax revenue. As Alternative 2 includes a significant retail component (650,000 sq. ft.),  
29 retail spending by other residents and employees in the study area and the larger region would also  
30 generate a moderate amount of additional sales tax revenue for the District of Columbia.

31 Approximately 11,000 people would be employed in the construction industry and 20,100 people would  
32 be employed across numerous industries in Washington, DC MSA in the short-term as a result of this  
33 development. The short-term, indirect regional impact of Alternative 2 is over \$2.5 billion across all  
34 industries in the Washington, DC MSA. In the long-term, Alternative 2 would create 2,100 permanent  
35 jobs in the shops, offices, and other commercial spaces within Poplar Point. The neighborhoods

1 surrounding Poplar Point would experience a substantial portion of this minor, positive impact,  
2 particularly if local residents are hired to work on-site and if workers spend income in the nearby  
3 businesses.

4 Tax revenues from Alternative 2 would have a minor to moderate, positive impact on the District of  
5 Columbia and a minor, positive impact on the larger region. These impacts would occur primarily in the  
6 long-term.

#### 7 Cumulative Impacts

8 Current and future development projects in the study area would further add to the positive impact of  
9 the Poplar Point development on the area's economy, increasing employment opportunities and tax  
10 revenue in the region.

#### 11 Conclusion

12 Alternative 2 would have a minor to moderate, positive impact on the economy of study area and the  
13 larger region in the short- and long-term. Despite this positive impact, mitigation measures are  
14 recommended to ensure Ward 8 residents experience the largest share of the benefits.

#### 15 Mitigation

- 16 • Employment opportunities should be offered to Ward 8 residents through the DC Department  
17 of Employment's First Source Program to ensure local residents experience the positive impact.
- 18 • Employment opportunities should be visibly advertised in the local community and a public  
19 meeting should be held to inform residents of job openings.

#### 20 **4.2.7.5 Alternative 3**

##### 21 Direct and Indirect Impacts

22 Alternative 3 would result in the construction of over 6.1 million square feet of commercial and  
23 residential space. As was shown in Table 4.X.1.1, it is estimated to cost almost \$1.28 billion in hard costs  
24 for this project, not including environmental remediation, public infrastructure, planting, and other  
25 fringe development costs.

26 Alternative 3 would also have significant fiscal implications for the District of Columbia and the  
27 surrounding states. As was shown in Table 4.X.1.2, the over 2,100 permanent employees within Poplar  
28 Point would generate approximately \$1.90 million in income tax revenue for the District of Columbia,  
29 over \$2.14 million for Maryland, and more than \$1.61 million for Virginia. These estimates do not  
30 necessarily indicate a net increase in revenue, as some of these employees may already be employed  
31 and living in each jurisdiction.

32 Alternative 3 would also generate tax revenue for the District of Columbia through property and sales  
33 taxes. Property tax revenues would likely exceed \$13.9 million for the residential units and \$5.8 million  
34 for the commercial component. Sales tax revenues would likely exceed \$1.23 million from resident and

1 employee spending in the study area. Spending within Alternative 3's 260,000 square feet of retail space  
2 by other residents and employees in the study area and the larger region would also generate a minor  
3 amount of additional sales tax revenue for the District of Columbia.

4 In the short-term, Alternative 3 would create direct employment opportunities for approximately 10,400  
5 people in the construction industry and a total of 19,000 jobs across numerous industries in  
6 Washington, DC MSA. The indirect regional impact of Alternative 3 is approximately \$2.4 billion across  
7 all industries in the Washington, DC MSA. In the long-term, Alternative 3 would create 2,100 permanent  
8 jobs in the shops, offices, and other commercial spaces within Poplar Point. If local residents are hired to  
9 work on-site and if workers spend income in the nearby businesses, the neighborhoods surrounding  
10 Poplar Point would positively experience a substantial portion of this impact.

11 Tax revenues from Alternative 3 would have a minor to moderate, positive impact on the District of  
12 Columbia and a minor, positive impact on the larger region. These impacts would occur primarily in the  
13 long-term.

#### 14 Cumulative Impacts

15 Current and future development projects in the study area would further add to the positive impact of  
16 the Poplar Point development on the area's economy, increasing employment opportunities and tax  
17 revenue in the region.

#### 18 Conclusion

19 Alternative 3 would have a minor to moderate, positive impact on economy of study area and the larger  
20 region in the short- and long-term. Despite this positive impact, mitigation measures are recommended  
21 to ensure Ward 8 residents experience the largest share of the benefits.

#### 22 Mitigation

- 23 • Employment opportunities should be offered to Ward 8 residents through the DC Department  
24 of Employment's First Source Program.
- 25 • Employment opportunities should be visibly advertised in the local community, and a public  
26 meeting held to inform residents of job openings.

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## 1 4.3 Cultural Resources

### 2 4.3.1 Archaeological Resources

#### 3 4.3.1.1 Analysis Methods and Assumptions

##### 4 Analysis Methods

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6  
7 Many data sources were used to analyze impacts to archeological resources. These sources are  
8 discussed in Chapter 3 and include reports on past archeological investigations within the project area as  
9 well as records kept by the SHPO of investigations in the immediate vicinity. Historic maps and records  
10 were also used during the analysis. Although these records and investigations provide some information  
11 on the potential for archeological materials to be present in the project area, they do not constitute a  
12 complete inventory of archaeological resources and can only be used as predictive tools.

13

14 The alternatives on this project have the potential to impact several categories of resources:

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- 16 • Suspected Historic Sites (historical archeological sites that are suspected to be present based on  
17 historical records);
- 18 • Suspected Prehistoric Sites (prehistoric archeological sites that were previously recorded but  
19 whose exact location has not been confirmed);
- 20 • Potential Discovery Sites (as yet unidentified historic or prehistoric sites along the historic  
21 1700s-1800s shoreline that could be buried beneath historic period fill; this area is considered  
22 highly sensitive for archaeological discoveries);
- 23 • Potential Early Period Discovery Sites (as yet unidentified Paleoindian or Archaic period  
24 prehistoric sites on land that became part of the Anacostia River during historic times, and  
25 which could be buried beneath historic period fill and prehistoric alluvium; this area is  
26 considered moderately sensitive for archaeological discoveries); and
- 27 • Previously Recorded Sites (sites that were previously recorded and whose locations are  
28 confirmed).

29

30 Impacts to each of these categories of sites will be discussed in the alternatives discussion that follows.

31

##### 32 Assumptions

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34 Any impacts to historical archeological resources are assumed to be local to the Washington, DC area,  
35 unless identified as regional within the analysis. Any effects to prehistoric archeological resources are  
36 assumed to have regional impacts, unless otherwise identified in the analysis in this document.

37

38

## 1 Impact Thresholds

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3 Thresholds describing the severity of potential impacts to archeological resources resulting from the  
4 proposed alternatives were developed for the impact analysis. Both adverse and positive impacts may  
5 occur due to the proposed alternatives. Adverse impacts result from the disruption or displacement of  
6 archeological resources as a result of earthmoving activities, soil compaction, and related ground  
7 disturbing activities associated with construction and planting. Positive impacts are those that better  
8 protect an archeological resource as a result of changes in patterns of visitor use or management action.

9

10 The impact thresholds developed for the discussion of archeological impacts are as follows:

11

12 **Negligible:** The impact is barely measurable, with no perceptible adverse or positive consequences.

13

14 **Minor:** A minor adverse impact affects archeological sites with the potential to yield important  
15 information in prehistory or history. Impacts are detectable and measurable, but do not diminish the  
16 overall integrity of the resource. The impact does not result in changes to defining features or aspects of  
17 integrity that contribute to eligibility to the National Register. For purposes of Section 106, the  
18 determination of effect is no adverse effect. A minor positive impact maintains and preserves an  
19 archeological resource. Impacts are measurable and localized. For purposes of Section 106, the  
20 determination of effect is no adverse effect.

21

22 **Moderate:** A moderate adverse impact is sufficient to cause a noticeable change, substantially affecting  
23 archeological sites with the potential to yield information, even if most of the resource can be avoided,  
24 and resulting in loss of overall integrity that consequently jeopardizes a site's National Register  
25 eligibility. Impacts include measurable change to character-defining elements. For purposes of Section  
26 106, determination of effect is adverse effect. A moderate positive impact is measurable, and may  
27 include the stabilization of currently threatened sites. For purposes of Section 106, determination of  
28 effect is no adverse effect.

29

30 **Major:** A major adverse impact consists of highly noticeable disturbance, degradation, or destruction of  
31 an archeological resource that results in the loss of most or all of the site and its potential to yield  
32 important information. These impacts result in the loss of overall integrity and substantial changes to  
33 character-defining elements to the extent that the resource is no longer eligible for National Register  
34 listing. For the purposes of Section 106, the determination of effect is adverse effect. A major positive  
35 impact consists of active intervention undertaken to preserve a site. Effects are measurable and  
36 contribute to the overall stability of the site. For purposes of Section 106, the determination of effect is  
37 no adverse effect.

38

## 39 Duration

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41 Archeological resources are non-renewable. Once a direct impact occurs, the effect is irreversible and  
42 permanent; therefore duration is not identified within this analysis.

#### 4.3.1.2 No Action Alternative

##### Direct and Indirect Impacts

Under the no action alternative, ground disturbances may occur if regular maintenance on planting is undertaken. These actions would be minimal and most are likely to occur within previously disturbed contexts, resulting in a low likelihood of impacting intact archeological resources. However, if archeological resources are encountered during ground disturbance, the disturbances proposed under the no action alternative would be addressed by the NPS standard operating procedures, which encourage preservation through avoidance. Under the no action alternative, there could be negligible, local and regional, long-term adverse impacts and no adverse effects under Section 106.

##### Cumulative Impacts

Cumulative impacts would occur from the incremental impact of this alternative when added to other past, present, and foreseeable future actions. Under this alternative, however, the National Park Service would control all activities according to their standard operating procedures, which encourage preservation of archeological sites. Therefore, there would be continued preservation and no cumulative impact to archeological resources under this alternative.

##### Conclusion and Impairment Finding

The no action alternative would consist of minor to moderate ground disturbances resulting in negligible, local and regional, long-term adverse impacts to archeological resources. There would be no cumulative impacts. Under Section 106, there would be no adverse effects to archeological resources. In addition, there would be no impairment to archeological resources as a result of the no action alternative.

#### 4.3.1.3 Alternative 1

##### Direct and Indirect Impacts

Several components of this alternative include ground disturbance that may impact archeological resources. These components constitute different levels of ground disturbance and are located in areas that have varying levels of archeological sensitivity. The types of archeological resources that could be within the project area are listed below with a discussion of the likelihood that they may be impacted by the activities of this alternative.

- Suspected Historic Sites – This alternative places buildings over the area that contained the historic shoreline. Historic maps show that there were parcels along this shoreline, and several buildings and outbuildings, including the Talbot property, located within them.

- 1 • Suspected Prehistoric Sites – This alternative places several buildings near the previously  
2 recorded location of prehistoric site 51SE24 and multi-component site 51SE012.
- 3 • Discovery Sites – Development under this alternative would include placing buildings over the  
4 historic-period shoreline that has a high sensitivity for the presence of previously undiscovered  
5 archeological sites. This alternative would place up to six multi-story buildings in this area,  
6 greatly increasing the potential to disturb possible buried archeological sites. This alternative  
7 has the greatest potential to disturb previously undiscovered archeological sites.
- 8 • Early Period Discovery Sites – Several buildings under this alternative would be placed over the  
9 area immediately adjacent to the historic shoreline. This area was most likely a shoreline during  
10 the Holocene and could contain early Archaic sites.
- 11 • Previously Recorded Sites – The only site that has been confirmed to be within the project area  
12 is P09. Under this alternative, the site would be in the wetlands preserve area and would be  
13 undisturbed.

14

15 Several of the ground-disturbing activities in this alternative, such as the preservation of wetlands or the  
16 cultural/entertainment areas, would have at most a minor local or regional, long-term adverse impact  
17 (no adverse effect) on archeological resources. A few of the activities in this alternative have the  
18 potential to cause major local or regional, long-term adverse impacts (adverse effect) on archeological  
19 resources. These include construction of buildings more than 9 stories tall. Since much of the area is on  
20 fill, the foundations or pilings for these buildings have the potential to penetrate the fill and disturb  
21 intact, original ground surface where archeological sites are most likely to be. These actions may  
22 precipitate major local or regional, long-term adverse impacts (adverse effect) on archeological  
23 resources. If archeological resources are encountered during any of the moderate to major ground  
24 disturbing activities but the activity is then modified to avoid the resource, this would comprise a  
25 positive local or regional, long-term impact (no adverse effect) because the location of the site would  
26 then be known and protected from future inadvertent impacts. Likewise, elements of this alternative  
27 that do not include ground-disturbing activities would have minor local or regional, long-term positive  
28 impacts (no adverse effect) on potential archeological sites that may remain preserved.

29

### 30 Cumulative Impacts

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32 If important archeological resources are encountered as a result of this alternative, cumulative impacts  
33 would occur from the incremental impact of this alternative when added to other past, present, and  
34 foreseeable future actions. Multiple projects are planned or have recently been completed in the  
35 Anacostia area. Some of these past projects have been the location of archeological sites near the  
36 project area and it is likely that planned projects may also impact archeological sites in the future.

37

38 Archeological sites are protected by both local and non-local laws and ordinances (as outlined in Chapter  
39 1). Archeological sites are non-renewable resources. In general, impacts on significant archeological sites  
40 are mitigated by data collection, and that data collection, along with subsequent development of the  
41 site, causes the destruction of that archeological site. Because of the likelihood that past, present, and

1 foreseeable actions in the study area would impact archeological resources, any adverse impacts/effects  
2 on archeological sites discovered as a result of this alternative would have a major local or regional,  
3 long-term cumulative impact.

#### 4 5 Conclusion and Impairment Finding

6  
7 Overall, Alternative 1 would have local or regional, long-term impacts ranging from minor positive to  
8 major adverse, depending on the level of ground disturbance. Thus, there could be an adverse effect  
9 under Section 106. The ground-disturbing activities in this alternative may disturb significant  
10 archeological resources. Depending on the size of the disturbance, these activities would have a local or  
11 regional, long-term adverse impact ranging from minor (no adverse effect) to major (adverse effect).  
12 The range of potential impacts under this alternative is due, in part, to the lack of specific information  
13 regarding the location of archeological sites. Since the exact location of archeological sites within the  
14 project area is unknown with one exception, Phase I investigations (including examination of the  
15 Smithsonian records for the sites and geoarcheological investigations) should be carried out prior to  
16 ground disturbance. If archaeological sites are encountered, treatment plans should be prepared in  
17 consultation with NPS and SHPO and mitigation measures should be undertaken.

18  
19 Elements of this alternative that would not disturb the ground or that could be adjusted to avoid  
20 archeological sites would have no adverse impact (no adverse effect) on archeological resources, and  
21 may have a minor local or regional, long-term positive impact if the resources remain preserved below  
22 the surface.

#### 23 24 Mitigation

25  
26 Mitigation measures will be identified in consultation with the DC SHPO through the Section 106  
27 process.

#### 28 29 **4.3.1.4 Alternative 2**

##### 30 31 Direct and Indirect Impacts

32  
33 The majority of the ground disturbance in this alternative would be from the construction of new  
34 buildings, most of which are clustered near the middle of the project area in the place that would have  
35 been just offshore during historic times. This alternative also includes a commemorative/cultural site  
36 which is located at the point that was offshore during historic times. The types of archeological  
37 resources that could be within the project area are listed below with a discussion of the likelihood that  
38 they would be impacted by the activities of this alternative.

- 39  
40
- 41 • Suspected Historic Sites – This alternative places buildings over the area that contained the  
42 historic shoreline. Historic maps show that the Talbot property and at least one mapped  
building fall within an area slated for construction of 7-8 story buildings.

- 1 • Suspected Prehistoric Sites – This alternative places several buildings near a previously recorded  
2 location of prehistoric sites 51SE24 and 51SE011.
- 3 • Discovery Sites – Development under this alternative would include placing one building on and  
4 two buildings near a small portion of the historic-period shoreline which has a high sensitivity  
5 for the presence of previously undiscovered archeological sites.
- 6 • Early Period Discovery Sites – Most of the buildings under this alternative would be placed over  
7 the area immediately adjacent to the historic shoreline. This area was most likely a shoreline  
8 during the Holocene and could contain early archaeological sites, but overall archaeological  
9 sensitivity is considered lower than the historic period shoreline.
- 10 • Previously Recorded Sites – The only confirmed site within the project area is P09. Under this  
11 alternative, a 9-story or higher building would be constructed very close to that site.

12  
13 Several of the ground-disturbing activities in this alternative, such as the creation of wetlands or the  
14 cultural/entertainment areas, would have at most a minor local or regional, long-term adverse impact  
15 (no adverse effect) on archeological resources. A few of the activities in this alternative have the  
16 potential to cause major local or regional, long-term adverse impacts (adverse effect) on archeological  
17 resources. These activities include construction of buildings more than 9 stories tall. Since much of the  
18 area is on fill, the foundations or pilings for these buildings would most likely penetrate the fill and  
19 disturb intact, original ground surface where archeological sites are most likely to be. These actions may  
20 precipitate major local or regional, long-term adverse impacts (adverse effect) on archeological  
21 resources. If archeological resources are encountered during any of the moderate to major ground  
22 disturbing activities but the activity is then modified to avoid the resource, this would comprise a  
23 positive local or regional, long-term impact (no adverse effect) because the location of the site would  
24 then be known and protected from future inadvertent impacts. Likewise, elements of this alternative  
25 that do not include ground-disturbing activities would have minor local or regional, long-term positive  
26 impacts (no adverse effect) on potential archeological sites that may remain preserved as a result.

### 27 28 Cumulative Impacts

29  
30 If important archeological resources are encountered as a result of this alternative, cumulative impacts  
31 would occur from the incremental impact of this alternative when added to other past, present, and  
32 foreseeable actions. Multiple projects are planned or have been completed in the Anacostia area. Some  
33 of these past projects have been the location of archeological sites around the project area, and it is  
34 likely that planned projects may also impact archeological sites in the future.

35  
36 Archeological sites are protected by both local and non-local laws and ordinances (as outlined in Chapter  
37 1). Archeological sites are non-renewable resources. In general, impacts on significant archeological sites  
38 are mitigated by data collection, and that data collection, along with subsequent development of the  
39 site, causes the destruction of that archeological site. Because of the likelihood that past, present, and  
40 foreseeable actions in the study area would impact archeological resources, any adverse impacts/effects

1 on archeological sites discovered as a result of this alternative would have a major local or regional,  
2 long-term cumulative impact.

#### 3 4 Conclusion and Impairment Finding

5  
6 Overall, Alternative 2 would have local or regional, long-term impacts ranging from minor positive to  
7 major adverse, depending on the level of ground disturbance. Thus, there could be an adverse effect  
8 under Section 106. The ground-disturbing activities in this alternative may disturb significant  
9 archeological resources. Depending on the size of the disturbance, these activities would have a local or  
10 regional, long-term adverse impact ranging from minor (no adverse effect) to major (adverse effect).  
11 The range of potential impacts under this alternative is due, in part, to the lack of specific information  
12 regarding the location of archeological sites. Since the exact location of archeological sites within the  
13 project area is unknown with one exception, Phase I investigations (including examination of the  
14 Smithsonian records for the sites and geoarcheological investigations) should be carried out prior to  
15 ground disturbance. If archaeological sites are encountered, treatment plans should be prepared in  
16 consultation with NPS and SHPO and mitigation measures should be implemented.

17  
18 Elements of this alternative that would not disturb the ground or that could be adjusted to avoid  
19 archeological sites would have no adverse impact (no adverse effect) on archeological resources, and  
20 may have a minor local or regional, long-term positive impact if the resources remain preserved below  
21 the surface.

#### 22 23 Mitigation

24  
25 Mitigation measures will be identified in consultation with the DC SHPO through the Section 106  
26 process.

#### 27 28 **4.3.1.5 Alternative 3**

##### 29 30 Direct and Indirect Impacts

31  
32 The majority of the ground disturbance in this alternative would be from the construction of new  
33 buildings, most of which are clustered near the middle and eastern end of the project area. This area  
34 would have been just offshore during historic times. This alternative also includes a  
35 commemorative/cultural site. The following types of archeological resources that could be within the  
36 project area are listed below with a discussion of the likelihood that they would be impacted by the  
37 activities of this alternative.

- 38  
39
- 40 • Suspected Historic Sites – This alternative places buildings over an area that constituted the  
41 historic shoreline. Historic maps show that the Talbot property and at least two mapped  
building fall within an area slated for 9+ story buildings.

- 1 • Suspected Prehistoric Sites – This alternative places several buildings near the previously  
2 recorded location of prehistoric site 51SE011.
- 3 • Discovery Sites – Development under this alternative would include placing buildings over a  
4 small portion of the historic-period shoreline that has a high sensitivity for the presence of  
5 previously undiscovered archeological sites. However, compared with Alternatives 1 and 2, this  
6 alternative has the fewest number of buildings within this area.
- 7 • Early Period Discovery Sites – Most of the new buildings in this alternative would be placed over  
8 the area immediately adjacent to the historic shoreline. This area would most likely have been a  
9 shoreline during the Holocene and could contain early Archaic sites, but overall archaeological  
10 sensitivity is considered to be lower than at the historic period shorelines.
- 11 • Previously Recorded Sites – The only confirmed site within the project area is P09. Under this  
12 alternative, no development is proposed for the area encompassing this site.

13

14 Several of the ground-disturbing activities in this alternative, such as the preservation or creation of  
15 wetlands and the cultural/entertainment areas, would have at most a minor local or regional, long-term  
16 adverse impact (no adverse effect) on archeological resources. A few of the activities in this alternative  
17 have the potential to cause major local or regional, long-term adverse impacts (adverse effect) on  
18 archeological resources. These include construction of buildings more than nine stories tall. Since much  
19 of the area is on fill, the foundations or pilings for these buildings could penetrate the fill and disturb  
20 intact, original ground surface where archeological sites are most likely to be. These actions may  
21 precipitate major local or regional, long-term adverse impacts (adverse effect) on archeological  
22 resources. If archeological resources are encountered during any of the moderate to major ground  
23 disturbing activities but the activity is then modified to avoid the resource, this would comprise a  
24 positive local or regional, long-term impact (no adverse effect) because the location of the site would  
25 then be known and protected from future inadvertent impacts. Likewise, elements of this alternative  
26 that do not include ground-disturbing activities would have minor local or regional, long-term positive  
27 impacts (no adverse effect) on potential archeological sites that may remain preserved as a result.

28

### 29 Cumulative Impacts

30

31 If important archeological resources are encountered as a result of this alternative, cumulative impacts  
32 would occur from the incremental impact of this alternative when added to other past, present, and  
33 foreseeable future actions. Multiple projects are planned or have recently been completed in the  
34 Anacostia area. Some of these past projects have been the location of archeological sites around the  
35 project area, and it is likely that planned projects may also impact archeological sites in the future.  
36 Archeological sites are protected by both local and non-local laws and ordinances (as outlined in Chapter  
37 1). Archeological sites are non-renewable resources. In general, impacts on significant archeological sites  
38 are mitigated by data collection, and that data collection, along with subsequent development of the  
39 site, causes the destruction of that archeological site. Because of the likelihood that past, present, and  
40 foreseeable actions in the study area would impact archeological resources, any adverse impacts/effects

1 on archeological sites created as a result of this alternative would have a major local or regional, long-  
2 term cumulative impact.

3  
4 Conclusion and Impairment Finding

5  
6 Overall, Alternative 3 would have local or regional, long-term impacts ranging from minor positive to  
7 major adverse, depending on the level of ground disturbance. Thus, there could be an adverse effect  
8 under Section 106. The ground-disturbing activities in this alternative may disturb significant  
9 archeological resources. Depending on the size of the disturbance, these activities would have a local or  
10 regional, long-term adverse impact ranging from minor (no adverse effect) to major (adverse effect).  
11 The range of potential impacts under this alternative is due, in part, to the lack of specific information  
12 regarding the location of archeological sites. Since the exact location of archeological sites within the  
13 project area is unknown with one exception, Phase I investigations (including examination of the  
14 Smithsonian records for the sites and geoarcheological investigations) should be carried out prior to  
15 ground disturbance. If archaeological sites are encountered, treatment plans should be prepared in  
16 consultation with NPS and SHPO and mitigation measures should be implemented.

17  
18 Elements of this alternative that would not disturb the ground or that could be adjusted to avoid  
19 archeological sites would have no adverse impact (no adverse effect) on archeological resources, and  
20 may have a minor local or regional, long-term positive impact if the resources remain preserved below  
21 the surface.

22  
23 Mitigation

24  
25 Mitigation measures will be identified in consultation with the DC SHPO through the Section 106  
26 process.

## 1 4.3.2 Historic Structures and Districts

### 2 4.3.2.1 Methodology and Assumptions

#### 3 Analysis Methods

4 Historic structures and sites located within the APE that are listed in, or eligible for listing in, the  
5 National Register of Historic Places were identified as part of this study. For each of the alternatives, a  
6 determination was made regarding possible adverse effects under Section 106. Please refer to the  
7 discussion of the Section 106 analysis within Section 4.1.4.

8 A range of sources were used in analyzing the impacts to historic structures and districts. As discussed in  
9 Chapter 3, sources included National Register nominations, data from the DC Inventory of Historic Sites,  
10 historic maps, and previous studies. In addition, a three-dimensional model was utilized in the  
11 establishment of the APE and to determine potential indirect visual impacts from each of the action  
12 alternatives. The development of this model is discussed in greater detail in sections 3.2.2.1 and 4.3.4.1.

#### 13 Assumptions

14 Potential impacts to historic structures and districts within the APE include direct, indirect, and  
15 cumulative impacts. Please refer to Section 4.1.2 for a definition of each of these terms. The physical  
16 displacement, demolition, or alteration of a resource is a direct impact; changes in the operation, use or  
17 character of a resource may be a direct or indirect impact; changes to the visual context are considered  
18 to be an indirect impact.

#### 19 Thresholds

20 Thresholds were defined to identify the severity of potential impacts resulting from the implementation  
21 of the proposed alternatives. In addition, there is a determination of adverse effect (see Section 4.1.4).  
22 These thresholds are as follows:

23 **Negligible:** The impact does not result in any noticeable changes to the resource or its visual context.  
24 For the purposes of Section 106, the determination of effect would be *no adverse effect*.

25  
26 **Minor:** A minor *adverse* impact occurs when there are visible changes to the resource or its visual  
27 context, but these changes do not affect the resource's character-defining features or integrity. For the  
28 purposes of Section 106, the determination of effect would be *no adverse effect*. A minor *positive*  
29 impact occurs when the historic resource is maintained and stabilized. For the purposes of Section 106,  
30 the determination of effect would be *no adverse effect*.

31  
32 **Moderate:** A moderate *adverse* impact results in a change in one or more of the resource's character-  
33 defining features, but would not diminish the integrity of the resource to the extent that its NRHP  
34 eligibility would be lost. For the purposes of Section 106, the determination of effect would be *adverse*  
35 *effect*. A moderate *positive* impact results in the preservation or rehabilitation of a small number of

1 character-defining features, and thus improves the integrity of the design. For the purposes of Section  
2 106, the determination of effect would be *no adverse effect*.

3  
4 **Major:** A major *adverse* impact results in substantial and highly noticeable changes to character-  
5 defining features such that the integrity of the resource would be compromised to the extent that it  
6 may no longer be eligible for listing in the National Register. For the purposes of Section 106, the  
7 determination of effect would be *adverse effect*. A major *positive* impact occurs when a large number of  
8 character-defining features are preserved or rehabilitated in accordance with the Secretary of the  
9 Interior's Standards. The preservation/rehabilitation of these features would substantially improve the  
10 integrity of the design. For the purposes of Section 106, the determination of effect would be *no adverse*  
11 *effect*.

### 13 Duration

14 For the purposes of this analysis, short-term impacts are associated with construction activities at the  
15 project site. Long-term impacts persist beyond construction.

### 16 **4.3.2.2 No Action Alternative**

#### 17 Direct and Indirect Impacts

18 Under the No Action Alternative, the land transfer would not occur and the Poplar Point site would not  
19 be developed. The site would continue to be managed under the jurisdiction of NPS as a portion of  
20 Anacostia Park. As a result, there would be no direct or indirect impacts to historic structures and  
21 districts, either within the site or in the surrounding APE.

#### 22 Cumulative Impacts

23 Under the No Action Alternative, the land transfer would not occur and the site would not be  
24 developed. There would thus be no cumulative impacts to historic structures and districts as a result of  
25 the No Action Alternative.

#### 26 Conclusion and Impairment Finding

27 There would be no direct, indirect, or cumulative impacts resulting from the No Action Alternative.  
28 Further, there would be no adverse effect under Section 106 and no impairment of park resources.

### 29 **4.3.2.3 Alternative 1**

#### 30 Direct and Indirect Impacts

31 Under Alternative 1, the Poplar Point site would be transferred from the jurisdiction of NPS to the  
32 District of Columbia and the site would be developed with a mixture of residential, commercial, and  
33 cultural uses, as well as open space. Development would be clustered on the point and at the southeast  
34 portion of the site. Direct impacts to Anacostia Park and the contributing structures that lie within the

1 project site (the Anacostia seawall and Engineer's House) are discussed under Section 4.2.3, Cultural  
2 Landscapes.

### 3 *Anacostia Historic District*

4 The Anacostia Historic District is largely disconnected from the waterfront due to the location of I-295.  
5 Under Alternative 1, physical and visual connections would be established between the historic district  
6 and Poplar Point along W Street, Chicago Street, and Howard Road. In addition, the historic street grid  
7 that once extended from Uniontown northwest into Poplar Point would be reinstated within the  
8 development at the southeast edge of the site. These aspects of the development would result in minor  
9 long-term positive impacts to the Anacostia Historic District. However, there could be minor long-term  
10 adverse impacts to the district resulting from the restriction of views towards the Anacostia River (such  
11 as from Martin Luther King Jr. Avenue and W Streets). There would be no adverse effect on the  
12 Anacostia Historic District under Section 106.

### 13 *L'Enfant and McMillan Plans*

14 Under Alternative 1, a portion of Anacostia Park, originally conceived by the McMillan Commission at  
15 the turn of the century as part of the McMillan Plan, would be developed with commercial, residential,  
16 and cultural uses. This would result in minor to moderate long-term adverse impacts to the McMillan  
17 Plan, and thus could result in an adverse effect under Section 106. However, this would be partially  
18 mitigated by the development of 70 acres of the site as parkland. There could further be adverse  
19 impacts to the McMillan Plan due to the obstruction of views of the edge of the topographic bowl.  
20 However, there could be minor long-term positive impacts to the McMillan Plan, as Poplar Point would  
21 be reconnected to historic Anacostia and could better serve as a community park, as the McMillan  
22 Commission intended.

### 23 *The Frederick Douglass National Historic Site (Cedar Hill)*

24 Alternative 1 would not result in any direct impacts to the Frederick Douglass National Historic Site.  
25 However, there could be indirect visual impacts. Set high on a hill overlooking Historic Anacostia, the  
26 Frederick Douglass National Historic Site affords sweeping views of Washington, DC that include the US  
27 Capitol Building and the Washington Monument. Under Alternative 1, the proposed buildings would  
28 appear in the foreground of the view, but at the edge. The new buildings would partially obscure a  
29 portion of the Anacostia River within the view, but would not obstruct the distant view of the  
30 Monumental Core. There would thus be a minor long-term indirect adverse impact to the Frederick  
31 Douglass National Historic Site, but this would not result in an adverse effect under Section 106.

### 32 *St. Elizabeths Historic District*

33 Alternative 1 would not result in any direct impacts to the St. Elizabeths Historic District. However, there  
34 could be indirect visual impacts. The northern end of the district affords views of downtown  
35 Washington, DC. The Poplar Point development would be visible in the foreground of these views under  
36 Alternative 1, but would not obstruct these views. The proposed development would not diminish the

1 integrity of the district and thus long-term adverse impacts would be minor. There would be no adverse  
2 effect on the St. Elizabeths Historic District under Section 106.

### 3 *Washington Navy Yard*

4 Under Alternative 1, there would be no direct impacts on the Washington Navy Yard. However, there  
5 would be indirect impacts resulting from changes in views south from the Navy Yard towards Anacostia  
6 Park, the Anacostia Historic District, and the Fort Circle Parks. Views south from the Navy Yard are  
7 currently dominated by vegetation along the waterfront in the foreground and the Anacostia Highlands  
8 in the distance. Under Alternative 1, views of the edge of the topographic bowl, particularly Fort  
9 Stanton, would be partially obscured. Obscuring these views would result in a moderate long-term  
10 adverse impact and an adverse effect under Section 106.

### 11 *Fort McNair and the National War College*

12 There would be no direct impacts on Fort McNair and the National War College under Alternative 1.  
13 However, there would be indirect impacts resulting from changes in views south and east from the  
14 installation towards Anacostia Park, the Anacostia Historic District, and the Fort Circle Parks. These  
15 views are currently dominated by the Frederick Douglass Bridge in the foreground, and the vegetation  
16 along the waterfront at Poplar Point beyond the bridge. The green edge of the Fort Circle Parks is visible  
17 in the distance. Under Alternative 1, large portions of the edge of the topographic bowl would be  
18 obscured. This would result in a moderate long-term adverse impact and an adverse effect under  
19 Section 106.

### 20 *Capitol Hill Historic District*

21 Alternative 1 would not result in any direct impacts to the Capitol Hill Historic District. However, there  
22 could be indirect visual impacts. Under Alternative 1, the new development at Poplar Point would not be  
23 visible from the majority of the Capitol Hill Historic District. In locations where the development may be  
24 visible, such as from 13<sup>th</sup> and L Streets, SE, the proposed buildings would not substantively alter the  
25 existing urban views. Thus, impacts to the Capitol Hill Historic District would be negligible and there  
26 would be no adverse effect under Section 106.

### 27 *Washington National Airport*

28 Alternative 1 would not result in any direct impacts to Washington National Airport. However, there  
29 could be indirect visual impacts. Poplar Point is evident in views east from the Old Terminal Building  
30 across the Potomac River. Under Alternative 1, the green swath that is the park would be altered by the  
31 inclusion of a cluster of buildings. However, the existing view is somewhat urban due to development at  
32 Bolling/Anacostia and along the west side of the Anacostia River. Thus, although the view from the  
33 terminal building to Poplar Point would change, long-term adverse impacts would be indirect and minor.  
34 There would be no adverse effect under Section 106.

35

1 *WASA Pumphouses (S. Capitol and O Streets)*

2 Alternative 1 would not result in any direct impacts on the WASA Pumphouses. However, there would  
3 be indirect visual impacts to the South Capitol Street Pumphouse, as the new development under  
4 Alternative 1 would obstruct views of the Anacostia River. This would result in moderate adverse  
5 impacts to the South Capitol Street Pumphouse and an adverse effect under Section 106. The  
6 development would not be visible from the O Street Pumphouse and thus impacts to this resource  
7 would be negligible.

8 *Other Resources within the APE*

9 Under Alternative 1, there would be no direct or indirect impacts to the Latrobe Gate, Quarters A,  
10 Quarters B, the Commandant's Office, the Syphax School, the Thomas Law House, the Duncanson  
11 Cranch House, the Edward Simon Lewis House, or Wheat Row. Further, there would be no direct or  
12 indirect impacts to Carrollsburg Place, or the Metrobus Garage at 17 M Street, SE. There could be minor  
13 long-term adverse impacts to the PEPCO Power Plant on Buzzard Point and Bolling Air Force Base;  
14 however, there would be no adverse effect on these resources under Section 106. There could further  
15 be minor to moderate long-term indirect adverse impacts to the Old National Capital Pump Station. This  
16 could potentially constitute an adverse effect under Section 106.

17 Cumulative Impacts

18 There could be moderate adverse to minor positive long-term impacts on historic structures and  
19 districts as a result of the implementation of Alternative 1. The adverse impacts to the McMillan Plan,  
20 when considered together with the loss of vegetation on the western edge of St. Elizabeths as the result  
21 of that property's redevelopment, could contribute to moderate indirect cumulative impacts to this  
22 resource. When considered together with the development at St. Elizabeths, the Poplar Point  
23 development could also contribute to indirect cumulative impacts to Washington National Airport, Fort  
24 McNair, the Washington Navy Yard, and St. Elizabeths itself, due to changes in views from these historic  
25 properties. Further, the realignment of the Frederick Douglass Bridge would alter the setting of the  
26 South Capitol Street Pumphouse; however, this would not likely result in an adverse effect, as the  
27 historic setting has already been compromised by the adjacent highway and bridge infrastructure.

28 Conclusion and Impairment Finding

29 The implementation of Alternative 1 would result in moderate adverse to minor positive long-term  
30 impacts to historic structures and districts. There could be adverse effects to the McMillan Plan, the  
31 Washington Navy Yard, Fort McNair, the National War College, and the Old National Capital Pump  
32 Station under Section 106. However, there would be no impairment of historic resources as a result of  
33 the implementation of Alternative 1.

34

## 1 Mitigation

2 Mitigation for adverse impacts will be determined in consultation with the DC SHPO and other  
3 consulting parties. The following recommendations represent possible mitigation measures for the  
4 adverse impacts identified above:

- 5 • Consider reducing the height or orientation of select buildings to preserve views of the  
6 Anacostia Highlands from historic properties on the west side of the Anacostia River;
- 7 • Maximize pedestrian and visual connections between the Anacostia Historic District and Poplar  
8 Point;
- 9 • Utilize consistent streetscape elements to create continuity between the Anacostia Historic  
10 District and Poplar Point (along W Street, for example);
- 11 • Widen the view corridor along W Street to preserve views of the Anacostia River from Historic  
12 Anacostia;
- 13 • Incorporate a landscape buffer between the development on the point and the riverfront in  
14 order to maintain the continuity of the green edge running along the east side of the Anacostia  
15 River;
- 16 • In the final design, maximize recreational features at the park such that it serves as a public  
17 amenity, as was intended by the McMillan Plan; and
- 18 • In the final design, seek opportunities for interpretation of the history of the site and  
19 surrounding historic resources.

### 20 **4.3.2.4 Alternative 2**

#### 21 Direct and Indirect Impacts

22 Under Alternative 2, the Poplar Point site would be transferred from the jurisdiction of NPS to the  
23 District of Columbia and the site would be developed with a mixture of residential, commercial, and  
24 cultural uses, as well as open space. Buildings would be clustered at the center of the site adjacent to  
25 the Metrorail station, preserving a green edge along the waterfront. Direct impacts to Anacostia Park  
26 and the contributing structures that lie within the project site (the Anacostia seawall and Engineer's  
27 House) are discussed under Section 4.2.3, Cultural Landscapes.

#### 28 *Anacostia Historic District*

29 The Anacostia Historic District is currently largely disconnected from the waterfront due to the location  
30 of I-295. Under Alternative 2, as under Alternative 1, visual and physical connections would be  
31 reinforced between the historic district and Poplar Point along W Street, Chicago Street, and Howard  
32 Road. In addition, the historic street grid that once extended from Uniontown northwest into Poplar  
33 Point would be reinstated along W Street at the southeast edge of the site. These aspects of the

1 development would result in minor long-term positive impacts to the Anacostia Historic District.  
2 However, there could be minor long-term adverse impacts to the district resulting from the restriction  
3 of views towards the Anacostia River, such as the view from Martin Luther King, Jr. Avenue and W  
4 Street. There would be no adverse effect on the Anacostia Historic District under Section 106.

5 *L'Enfant and McMillan Plans*

6 Under Alternative 2, a portion of Anacostia Park, originally conceived by the McMillan Commission at  
7 the turn of the century as part of the McMillan Plan, would be developed with commercial, residential,  
8 and cultural uses. This would result in minor to moderate long-term adverse impacts to the McMillan  
9 Plan, and thus could result in an adverse effect under Section 106. However, this would be partially  
10 mitigated by maintaining 70 acres of the site as park and preserving the continuity of the parkland  
11 stretching the along the Anacostia River north from the Frederick Douglass Bridge. There could further  
12 be adverse impacts to the McMillan Plan due to the obstruction of views of the edge of the topographic  
13 bowl. However, there could be minor long-term positive impacts to the McMillan Plan, as Poplar Point  
14 would be reconnected to historic Anacostia and could better serve as a community park, as the  
15 McMillan Commission intended.

16 *The Frederick Douglass National Historic Site (Cedar Hill)*

17 There would be no direct impacts to the Frederick Douglass National Historic Site as a result of  
18 Alternative 2. Further, there would not be indirect visual impacts as would not be visible in views  
19 towards the Monumental Core. Impacts would thus be negligible and would not result in an adverse  
20 effect under Section 106.

21 *St. Elizabeths Historic District*

22 Under Alternative 2, there would be no direct impacts to the St. Elizabeths Historic District. However,  
23 there would be indirect visual impacts. The northern end of the St. Elizabeths Historic District affords  
24 views of downtown Washington, DC. The Poplar Point development would be visible in the foreground  
25 of these views under Alternative 2. However, this would not diminish the integrity of the district and  
26 thus long-term adverse impacts would be minor. There would be no adverse effect on the St. Elizabeths  
27 Historic District under Section 106.

28 *Washington Navy Yard*

29 Under Alternative 2, there would be no direct impacts on the Washington Navy Yard. However, there  
30 would be indirect impacts resulting from changes in views south from the Navy Yard towards Anacostia  
31 Park, the Anacostia Historic District, and the Fort Circle Parks. Views south are currently dominated by  
32 vegetation along the waterfront in the foreground, and by the Anacostia Highlands in the distance.  
33 Under Alternative 2, views of the edge of the topographic bowl, particularly Fort Stanton, would be  
34 partially obscured, resulting in a moderate adverse impact. This would result in an adverse effect under  
35 Section 106.

36

1 *Fort McNair and the National War College*

2 Under Alternative 2, there would be no direct impacts to Fort McNair and the National War College.  
3 However, there would be indirect impacts resulting from changes to the views south and east from the  
4 installation towards Anacostia Park, the Anacostia Historic District, and the Fort Circle Parks. These  
5 views are currently dominated by the Frederick Douglass Bridge in the foreground, with the vegetation  
6 at Poplar Point beyond this. The Fort Circle Parks appear in the distance. Under Alternative 2, large  
7 portions of the views of the edge of the topographic bowl would be obscured. This would result in a  
8 moderate long-term adverse impact and an adverse effect under Section 106.

9 *Capitol Hill Historic District*

10 There would be no direct impacts to the Capitol Hill Historic District as a result of Alternative 2. Under  
11 Alternative 2, the new development at Poplar Point would not be visible from the majority of the  
12 district. In locations where the development may be visible, such as from 13<sup>th</sup> and L Streets, SE, the  
13 proposed buildings would not substantively alter the existing urban views. Thus, impacts to the Capitol  
14 Hill Historic District would be negligible and there would be no adverse effect under Section 106.

15 *Washington National Airport*

16 Under Alternative 2, there would be no direct impacts to Washington National Airport, however, there  
17 would be indirect visual impacts to this historic resource. Poplar Point is evident in views east from the  
18 Old Terminal Building across the Potomac River. Under Alternative 2, the green swath that is the park  
19 would be altered with the inclusion of a number of buildings; however the foreground of the view would  
20 continue to include vegetated areas, due to the designed planting at the point. Long-term adverse  
21 impacts would thus be indirect and minor. There would be no adverse effect under Section 106.

22 *WASA Pumphouses (S. Capitol Street and O Street)*

23 Alternative 2 would not result in any direct impacts on the WASA Pumphouses. It is unlikely that the  
24 new development would be visible from either of the two pumphouses. Impacts would thus be  
25 negligible and there would be no adverse effect under Section 106.

26 *Other Resources within the APE*

27 Under Alternative 2, there would be no direct or indirect impacts to the Latrobe Gate, Quarters A,  
28 Quarters B, the Commandant's Office, the Syphax School, the Thomas Law House, the Duncanson  
29 Cranch House, the Edward Simon Lewis House, and Wheat Row, as none of these resources have visual  
30 connections to the project site. In addition, there would be no direct or indirect impacts to Carrollsburg  
31 Place or to the Metrobus Garage at 17 M Street, SE. There could be minor long-term adverse impacts to  
32 the PEPCO Power Plant on Buzzard Point and Bolling Air Force Base; however, there would be no  
33 adverse effect on these resources under Section 106. There could be minor to moderate indirect  
34 adverse impacts to the Old National Capitol Pump Station; there could further be an adverse effect  
35 under Section 106.

36

## 1 Cumulative Impacts

2 There could be moderate adverse to minor positive long-term impacts on historic structures and  
3 districts as a result of the implementation of Alternative 2. The adverse impacts to the McMillan Plan,  
4 when considered together with the loss of vegetation on the western edge of St. Elizabeths as the result  
5 of that property's redevelopment, could contribute to moderate indirect cumulative impacts to this  
6 resource. When considered together with the development at St. Elizabeths, the Poplar Point  
7 development could also contribute to indirect cumulative impacts to Washington National Airport, Fort  
8 McNair, the Washington Navy Yard, and St. Elizabeths itself, due to changes in views from these historic  
9 properties.

## 10 Conclusion and Impairment Finding

11 The implementation of Alternative 2 would result in moderate adverse to minor positive long-term  
12 impacts to historic structures and districts. There could be adverse effects to the McMillan Plan, the  
13 Washington Navy Yard, Fort McNair, the National War College, and the Old National Capitol Pump  
14 Station under Section 106 of the National Historic Preservation Act. However, there would be no  
15 impairment of historic structures and districts as a result of the implementation of Alternative 2.

## 16 Mitigation

17 Mitigation for adverse impacts will be determined in consultation with the DC SHPO and other  
18 consulting parties. The following recommendations represent possible mitigation measures for the  
19 adverse impacts identified above:

- 20 • Consider reducing the height or reorienting select buildings to preserve views of the Anacostia  
21 Highlands from historic properties on the west side of the Anacostia River;
- 22 • Maximize pedestrian and visual connections between the Anacostia Historic District and Poplar  
23 Point;
- 24 • Utilize consistent streetscape elements to create continuity between the Anacostia Historic  
25 District and Poplar Point (along W Street, for example);
- 26 • Widen the view corridor along W Street to preserve views of the Anacostia River from Historic  
27 Anacostia;
- 28 • Ensure that the final design incorporates a landscaped buffer between the development and the  
29 river to maintain the continuity of the green edge running along the east side of the Anacostia  
30 River;
- 31 • In the final design, maximize recreational features at the park such that it serves as a public  
32 amenity, as was intended by the McMillan Plan; and
- 33 • In the final design, seek opportunities for interpretation of the history of the site and  
34 surrounding historic resources.

### 1 **4.3.2.5 Alternative 3**

#### 2 Direct and Indirect Impacts

3 Under Alternative 3, the Poplar Point site would be transferred from the jurisdiction of NPS to the  
4 District of Columbia and the site would be developed with a mixture of residential, commercial, and  
5 cultural uses, as well as open space. Development would be clustered in the southeast portion of the  
6 site. Direct impacts to Anacostia Park and the contributing structures that lie within the project site (the  
7 Anacostia seawall and Engineer's House) are discussed under Section 4.2.3, Cultural Landscapes.

#### 8 *Anacostia Historic District*

9 The Anacostia Historic District is largely disconnected from the waterfront due to the location of I-295.  
10 Under Alternative 3, as under Alternatives 1 and 2, physical and visual connections would be established  
11 between the historic district and Poplar Point along W Street, Chicago Street, and Howard Road. In  
12 addition, the historic street grid that once extended from Uniontown northwest into Poplar Point would  
13 be reinstated along W Street at the southeast edge of the site. These aspects of the development would  
14 result in minor long-term positive impacts to the Anacostia Historic District. However, there could be  
15 minor long-term adverse impacts to the district resulting from the restriction of views towards the  
16 Anacostia River (such as from Martin Luther King Jr. Avenue and W Streets). There would be no adverse  
17 effect on the Anacostia Historic District under Section 106.

#### 18 *L'Enfant and McMillan Plans*

19 Anacostia Park was originally conceived by the McMillan Commission at the turn of the century as part  
20 of the McMillan Plan. Under Alternative 3, approximately 60 acres of the federal property would be  
21 developed with commercial, residential, and cultural uses, as well as infrastructure. This development  
22 would result in minor to moderate long-term adverse impacts to the McMillan Plan, and thus could  
23 result in an adverse effect under Section 106. However, this would be partially mitigated by the  
24 development of 70 acres of the site as parkland. There could further be adverse impacts to the McMillan  
25 Plan due to the obstruction of views of the edge of the topographic bowl. However, there could be  
26 minor long-term positive impacts to the McMillan Plan, as Poplar Point would be reconnected to historic  
27 Anacostia and could better serve as a community park, as the McMillan Commission intended.

#### 28 *The Frederick Douglass National Historic Site (Cedar Hill)*

29 There would be no direct impacts to the Frederick Douglass National Historic Site as a result of  
30 Alternative 3. However, there could be indirect visual impacts. Set high on a hill overlooking Historic  
31 Anacostia, the Frederick Douglass National Historic Site affords sweeping views of Washington, DC that  
32 include the US Capitol Building and the Washington Monument. Under Alternative 3, the proposed  
33 buildings would be visible in views toward the Washington Monument; however the proposed buildings  
34 would appear at the edge of the view and would blend visually with the existing structures. Indirect  
35 impacts would thus be negligible to minor and would not result in an adverse effect under Section 106.

36

1 *St. Elizabeths Historic District*

2 Under Alternative 3, there would be no direct adverse impacts on the St. Elizabeths Historic District.  
3 However, the northern end of the St. Elizabeths Historic District affords views of downtown Washington,  
4 DC, and thus there could be indirect visual impacts. The Poplar Point development would be visible in  
5 the foreground of these views under Alternative 3. However, this change would not diminish the  
6 integrity of the district and thus long-term adverse impacts would be minor. There would be no adverse  
7 effect on the St. Elizabeths Historic District under Section 106.

8 *Washington Navy Yard*

9 Under Alternative 3, there would be no direct impact on the Washington Navy Yard. However, there  
10 would be indirect impacts resulting from changes in views south from the Navy Yard towards Anacostia  
11 Park, the Anacostia Historic District, and the Fort Circle Parks. Views south are currently dominated by  
12 vegetation along the waterfront and by the Anacostia Highlands in the distance. Under Alternative 3,  
13 views of the green edge of the topographic bowl would be partially obscured. Obscuring these views  
14 would result in a moderate long-term adverse impact and an adverse effect under Section 106.

15 *Fort McNair and the National War College*

16 Under Alternative 3, there would be no direct impacts to Fort McNair and the National War College.  
17 However, there would be indirect impacts resulting from changes in views south and east from the  
18 installation towards Anacostia Park, the Anacostia Historic District, and the Fort Circle Parks. These  
19 views are currently dominated by the 11<sup>th</sup> Street Bridge in the foreground, with the vegetation along the  
20 waterfront at Poplar Point appearing behind it. The Anacostia Highlands are visible in the distance.  
21 Under Alternative 3, large portions of the edge of the topographic bowl would be obscured. This would  
22 result in a moderate long-term adverse impact and an adverse effect under Section 106.

23 *Capitol Hill Historic District*

24 There would be no direct impacts on the Capitol Hill Historic District as a result of Alternative 3. Under  
25 Alternative 3, the new development at Poplar Point would not be visible from the majority of the  
26 district. In locations where the development may be visible, such as from 13<sup>th</sup> and L Streets, SE, the  
27 proposed buildings would not substantively alter the existing urban views. Thus, impacts to the Capitol  
28 Hill Historic District would be negligible and there would be no adverse effect under Section 106.

29 *Washington National Airport*

30 Alternative 3 would not result in direct impacts to Washington National Airport. However, it would  
31 result in indirect visual impacts. Poplar Point is evident in views east from the Old Terminal Building  
32 across the Potomac River. Under Alternative 3, the parkland would be altered with the inclusion of the  
33 new buildings; however the foreground of the view would continue to include vegetated space, due to  
34 the designed planting of the point. Long-term adverse impacts would thus be indirect and minor. There  
35 would be no adverse effect under Section 106.

1 *WASA Pumphouses (S. Capitol Street and O Street)*

2 Alternative 3 would not result in any direct impacts on the WASA Pumphouses. Further, it is unlikely that  
3 the new development would be visible from either of the two pumphouses. Impacts would thus be  
4 negligible and there would be no adverse effect under Section 106.

5 *Other Resources within the APE*

6 Under Alternative 3, there would be no direct or indirect impacts to the Latrobe Gate, Quarters A,  
7 Quarters B, the Commandant's Office, the Syphax School, the Thomas Law House, the Duncanson  
8 Cranch House, the Edward Simon Lewis House, or Wheat Row, as none of these resources have visual  
9 connections to the project site. In addition, there would be no direct or indirect impacts to Carrollsburg  
10 Place or to the Metrobus Garage at 17 M Street, SE. There could be minor long-term adverse impacts to  
11 the PEPCO Power Plant on Buzzard Point, and Bolling Air Force Base; however, there would be no  
12 adverse effect on these resources under Section 106. There could be minor to moderate indirect  
13 adverse impacts to the Old National Capital Pump Station; there could also be an adverse effect on this  
14 resource under Section 106.

15 Cumulative Impacts

16 There could be moderate adverse to minor positive long-term impacts on historic structures and  
17 districts as a result of the implementation of Alternative 3. The adverse impacts to the McMillan Plan,  
18 when considered together with the loss of vegetation on the western edge of St. Elizabeths as the result  
19 of that property's redevelopment, could contribute to moderate indirect cumulative impacts to the this  
20 resource. When considered together with the development at St. Elizabeths, the Poplar Point  
21 development could also contribute to indirect cumulative impacts to Washington National Airport, Fort  
22 McNair, the Washington Navy Yard, and St. Elizabeths itself, due to changes in views from these historic  
23 properties.

24 Conclusion and Impairment Finding

25 The implementation of Alternative 3 would result in moderate adverse to minor positive long-term  
26 impacts to historic structures and districts. There could be adverse effects to the McMillan Plan, the  
27 Washington Navy Yard, Fort McNair, the Army War College, and the Old National Capitol Pump Station  
28 under Section 106. However, there would be no impairment of historic structures and districts as a  
29 result of the implementation of Alternative 3.

30 Mitigation

31 Mitigation for adverse impacts will be determined in consultation with the DC SHPO and other  
32 consulting parties. The following recommendations represent possible mitigation measures for the  
33 adverse impacts identified above:

- 34 • Consider reducing the height or reorienting select buildings to preserve views of the Anacostia  
35 Highlands from historic properties on the west side of the Anacostia River;

- 1 • Maximize pedestrian and visual connections between the Anacostia Historic District and Poplar  
2 Point;
- 3 • Utilize consistent streetscape elements to create continuity between the Anacostia Historic  
4 District and Poplar Point (along W Street, for example);
- 5 • Widen the view corridor along W Street to preserve views of the Anacostia River from Historic  
6 Anacostia;
- 7 • Ensure that the final design incorporates a landscaped buffer between the development and the  
8 river to maintain the continuity of the green edge from the Frederick Douglass Bridge to the  
9 Maryland line;
- 10 • In the final design, maximize recreational features at the park such that it serves as a public  
11 amenity, as was intended by the McMillan Plan; and
- 12 • In the final design, seek opportunities for interpretation of the history of the site and  
13 surrounding historic resources.

#### 14 **4.3.3 Cultural Landscapes**

##### 15 **4.3.3.1 Methodology and Assumptions**

###### 16 Analysis Methods

17 Cultural landscapes located within the APE that are listed in, or eligible for listing in, the National  
18 Register of Historic Places were identified as part of this study. For each of the alternatives, a  
19 determination was made regarding possible adverse effects under Section 106. Please refer to the  
20 discussion of the Section 106 analysis within Section 4.1.4.

21 A range of sources were used in analyzing the impacts to cultural landscapes. As discussed in Chapter 3,  
22 sources included National Register nominations, data from the DC Inventory of Historic Sites, historic  
23 maps, and previous studies. In addition, a three-dimensional model was utilized in the establishment of  
24 the APE and to determine potential indirect visual impacts resulting from each of the action alternatives.  
25 The development of this model is discussed in greater detail in sections 3.2.2.1 and 4.3.4.1.

###### 26 Assumptions

27 Potential impacts to cultural landscapes within the APE include direct, indirect, and cumulative impacts.  
28 Please refer to Section 4.1.2 for a definition of each of these terms. The physical displacement,  
29 demolition, or alteration of a resource is a direct impact; changes in the operation, use or character of a  
30 resource may be a direct or indirect impact; changes to the visual context are considered to be an  
31 indirect impact.

32

## 1 Thresholds

2 Thresholds were defined to identify the severity of potential effects resulting from the proposed  
3 alternatives. These thresholds are as follows:

4 **Negligible:** The impact does not result in any noticeable changes to the cultural landscape or its visual  
5 context. For the purposes of Section 106, the determination of effect would be *no adverse effect*.

6

7 **Minor:** A minor *adverse* impact occurs when there are visible changes to the landscape or its visual  
8 context, but these changes do not affect the resource's character-defining features or integrity. For the  
9 purposes of Section 106, the determination of effect would be *no adverse effect*. A minor *positive*  
10 impact occurs when the landscape is maintained and stabilized. For the purposes of Section 106, the  
11 determination of effect would be *no adverse effect*.

12

13 **Moderate:** A moderate *adverse* impact results in a change in one or more of the landscape's character-  
14 defining features, but these changes would not diminish the integrity of the resource to the extent that  
15 its NRHP eligibility would be lost. For the purposes of Section 106, the determination of effect would be  
16 *adverse effect*. A moderate *positive* impact results in the preservation or rehabilitation of character-  
17 defining features, and thus improves the integrity of the landscape. For the purposes of Section 106, the  
18 determination of effect would be *no adverse effect*.

19 **Major:** A major *adverse* impact results in changes to character-defining features that compromise the  
20 integrity of the landscape to the extent that it could compromise its National Register status. For the  
21 purposes of Section 106, the determination of effect would be *adverse effect*. A major *positive* impact  
22 occurs when a large number of character-defining features are preserved or rehabilitated in accordance  
23 with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. The  
24 preservation/rehabilitation of these features substantially improves the integrity of the landscape. For  
25 the purposes of Section 106, the determination of effect would be *no adverse effect*.

26

## 27 Duration

28 For the purposes of this analysis, short-term impacts are associated with construction activities at the  
29 project site. Long-term impacts persist beyond construction.

### 30 **4.3.3.2 No Action Alternative**

#### 31 Direct and Indirect Impacts

32 Under the No Action Alternative, the land transfer would not occur and the Poplar Point site would not  
33 be developed. The site would continue to be managed under the jurisdiction of NPS as a portion of  
34 Anacostia Park. Within the project area, the Anacostia Seawall and Engineer's House, which both  
35 contribute to the significance of Anacostia Park, would remain unchanged. There would be no direct or  
36 indirect impacts to cultural landscapes, either within the site or the surrounding APE. Thus, there would  
37 be no adverse effect under Section 106.

1 Cumulative Impacts

2 Under the No Action Alternative, the land transfer would not occur and the site would not be  
3 developed. There would thus be no cumulative impacts to cultural landscapes as a result of the No  
4 Action Alternative.

5 Conclusion and Impairment Finding

6 There would be no direct, indirect, or cumulative impacts resulting from the No Action Alternative.  
7 Furthermore, there would be no adverse effect under Section 106 and no impairment of park resources.

8 **4.3.3.3 Alternative 1**

9 Direct and Indirect Impacts

10 *Anacostia Park*

11 Alternative 1 would have direct adverse impacts on Anacostia Park, as a portion of the park would be  
12 transferred out of federal ownership and developed with commercial, residential, and cultural uses.  
13 Alternative 1 would maintain and reinvigorate 70 acres of parkland on the site including a vegetated  
14 edge along the waterfront to the point. The development at the point under Alternative 1 would require  
15 the removal of the Engineer's House, a contributing structure to the cultural landscape. The Anacostia  
16 Seawall, also located within the project site, would be reinforced and restored. Overall, there would be  
17 long-term moderate adverse impacts to Anacostia Park, due to the land transfer, loss of parkland, and  
18 the removal of the Engineer's House. However, there would be moderate long-term positive impacts  
19 resulting from the reinforcement and restoration of the Anacostia Seawall. Alternative 1 would result in  
20 an adverse effect under Section 106 on Anacostia Park.

21 *Civil War Fort Sites and Fort Circle Park System*

22 The Fort Circle Parks were established to preserve the Civil War defenses and the associated open  
23 spaces that encircle the city. The Poplar Point redevelopment would not directly impact the Fort Circle  
24 Park System; however it would appear in the foreground of views towards Washington, DC from the  
25 overlook at Fort Stanton. Further, it would partially obstruct views of the Fort Circle Parks from historic  
26 properties on the west side of the Anacostia River, particularly the Washington Navy Yard and Fort  
27 McNair. Since the elevated Fort Circle Parks are intended to visually provide a consistent green edge  
28 around the city, and since the Poplar Point development would interrupt these views, it would result in  
29 a moderate adverse impact and an adverse effect under Section 106.

30 *East Potomac Park*

31 There would be no direct impacts on East Potomac Park as a result of the implementation of Alternative  
32 1. Like Anacostia Park, East Potomac Park was established as part of the McMillan Plan early in the 20<sup>th</sup>  
33 century. East Potomac Park and Hains Point lie west of Anacostia Park; there is a visual connection  
34 between the two sites along the Anacostia River. The proposed buildings would appear within views

1 from Hains Point along the river; however, the proposed buildings would appear to be part of an existing  
2 urban view that includes Bolling/Anacostia and the Frederick Douglass Bridge. Thus, long-term adverse  
3 impacts would be minor and there would be no adverse effect under Section 106.

#### 4 *Suitland Parkway*

5 Alternative 1 would not result in direct impacts to Suitland Parkway. It could, however, result in indirect  
6 visual impacts. The project site is currently largely obscured from view by vegetation and pedestrian and  
7 vehicular bridges near Martin Luther King, Jr. Avenue. The new development would likely be visible from  
8 the north end of Suitland Parkway, however, it would be screened somewhat by the existing vegetation  
9 and infrastructure. In addition, the north end of the parkway transitions from a greenway to a more  
10 urban environment as it approaches the Frederick Douglass Bridge. Thus, while the new buildings may  
11 be visible, they would not compromise the integrity of this historic resource. Long-term impacts would  
12 be minor and there would be no adverse effect under Section 106.

#### 13 *George Washington Memorial Parkway*

14 The development of Poplar Point under Alternative 1 would not result in direct impacts to the George  
15 Washington Memorial Parkway. However, there would be indirect visual impacts, as the new buildings  
16 would be visible across the Potomac River. The development would appear within an existing urban  
17 viewshed that includes Bolling/Anacostia and development on the west side of the Anacostia River.  
18 Thus, adverse impacts would be minor. There would be no adverse effect under Section 106.

#### 19 *Other Resources within the APE*

20 There could be a moderate adverse impact to the Anacostia Freeway due to the partial obstruction of  
21 views of the Anacostia River, and thus an adverse effect under Section 106.

#### 22 Cumulative Impacts

23 There could be moderate adverse to moderate positive long-term impacts on cultural landscapes as a  
24 result of the implementation of Alternative 1. The Poplar Point development, when considered together  
25 with the Anacostia Waterfront Initiative and the planned improvements to Anacostia Park north of the  
26 11<sup>th</sup> Street Bridge, would serve to enhance Anacostia Park as a community resource, resulting in a  
27 positive impact. However, the development at Poplar Point, when considered together with the  
28 proposed development at St. Elizabeths, could contribute to a cumulative impact to the Fort Circle  
29 Parks, due to the interruption of views of the topographic bowl. Further, when considered together with  
30 the development at St. Elizabeths, the Poplar Point development could contribute to indirect cumulative  
31 impacts to the George Washington Memorial Parkway and East Potomac Park itself, due to changes in  
32 views from these historic properties.

#### 33 Conclusion and Impairment Finding

34 The implementation of Alternative 1 would result in moderate adverse to moderate positive long-term  
35 impacts on cultural landscapes. There would be an adverse effect on Anacostia Park, the Fort Circle Park

1 System, and the Anacostia Freeway as a result of the implementation of Alternative 1. However, there  
2 would be no impairment of cultural landscapes.

### 3 Mitigation

4 Mitigation for adverse impacts will be determined in consultation with the DC SHPO and other  
5 consulting parties. The following possible mitigation measures for the adverse impacts identified above  
6 include:

- 7 • Preserve the Engineer's House;
- 8 • If preservation of the Engineer's House is not feasible, document the building in accordance with  
9 the Historic American Building's Survey (HABS) standards prior to demolition;
- 10 • Consider reducing the height or realigning select buildings to preserve views of the Fort Circle  
11 Parks from historic properties on the west side of the Anacostia River;
- 12 • Maximize pedestrian connections between the Anacostia Historic District and Poplar Point; and
- 13 • Complete the restoration of the Anacostia Seawall in accordance with the *Secretary of the*  
14 *Interior's Standards for the Treatment of Historic Properties.*

15

16

#### 1 **4.3.3.4 Alternative 2**

##### 2 Direct and Indirect Impacts

###### 3 *Anacostia Park*

4 Alternative 2 would have direct adverse impacts on Anacostia Park, as 130 acres of the park would  
5 transferred out of federal ownership, and 60 acres of the park would be developed with commercial,  
6 residential, and cultural uses. Alternative 2 would maintain and reinvigorate 70 acres of parkland on the  
7 site including a vegetated edge along the waterfront. This vegetated edge would preserve the relative  
8 continuity of the park system that begins at the Frederick Douglass Bridge and extends east to the  
9 Maryland state line. The Anacostia Seawall, a contributing feature to the historic property, would be  
10 removed and the landscape would be terraced. The Engineer's House, however, would be preserved.  
11 Overall, there would be long-term moderate adverse impacts to Anacostia Park, due to the loss of  
12 parkland and the removal of the Anacostia Seawall. However, there would be minor long-term positive  
13 impacts resulting from the preservation of the Engineer's House. Alternative 2 would result in an  
14 adverse effect under Section 106.

###### 15 *Civil War Fort Sites and Fort Circle Park System*

16 The Fort Circle Parks were established to preserve the Civil War defenses and the associated open  
17 spaces that encircle the city. The Poplar Point redevelopment would not directly impact the Fort Circle  
18 Park System; however it would appear in the foreground of views towards Washington, DC from the  
19 overlook at Fort Stanton. Further, it would partially obstruct views of the Fort Circle Parks from historic  
20 properties on the west side of the Anacostia River, particularly the Washington Navy Yard. Since the  
21 elevated Fort Circle Parks are intended to visually provide a consistent green edge around the city, and  
22 since the Poplar Point development would interrupt these views, it would result in a moderate adverse  
23 impact and an adverse effect under Section 106.

###### 24 *East Potomac Park*

25 East Potomac Park was established as part of the McMillan Plan early in the 20<sup>th</sup> century. East Potomac  
26 Park and Hains Point lie west of Anacostia Park; there is a visual connection between the two sites along  
27 the Anacostia River. The proposed buildings at Poplar Point would appear within views from Hains Point  
28 along the river; however, the buildings would appear to be part of the existing urban view that includes  
29 Bolling/Anacostia and the Frederick Douglass Bridge. Thus, long-term adverse impacts would be minor  
30 and there would be no adverse effect under Section 106.

###### 31 *Suitland Parkway*

32 Alternative 2 would not result in direct impacts to Suitland Parkway. It could, however, result in indirect  
33 visual impacts. The project site is currently largely obscured from view by vegetation and pedestrian and  
34 vehicular bridges near Martin Luther King, Jr. Avenue. The new development would likely be visible from  
35 the north end of Suitland Parkway, however, it would be screened somewhat by the existing vegetation  
36 and infrastructure. In addition, the north end of the parkway transitions from a greenway to a more

1 urban environment as it approaches the Frederick Douglass Bridge. Thus, while the new buildings may  
2 be visible, they would not compromise the integrity of this historic resource. Long-term impacts would  
3 be minor and there would be no adverse effect under Section 106.

#### 4 *George Washington Memorial Parkway*

5 The development of Poplar Point under Alternative 2 would not result in direct impacts to the George  
6 Washington Memorial Parkway. However, there would be indirect visual impacts, as the new buildings  
7 would be visible across the Potomac River. The development would, however, appear within an existing  
8 urban viewshed that includes Bolling/Anacostia and development on the west side of the Anacostia  
9 River. Thus, adverse impacts would be minor. There would be no adverse effect under Section 106.

#### 10 *Other Resources within the APE*

11 Under Alternative 2, there could be a minor adverse impact to the Anacostia Freeway due to the partial  
12 obstruction of views of the Anacostia River. However, this would not result in an adverse effect under  
13 Section 106.

#### 14 Cumulative Impacts

15 There could be moderate adverse to moderate positive long-term impacts on cultural landscapes as a  
16 result of the implementation of Alternative 1. The Poplar Point development, when considered together  
17 with the Anacostia Waterfront Initiative and the planned improvements to Anacostia Park north of the  
18 11<sup>th</sup> Street Bridge, would serve to enhance Anacostia Park as a community resource, resulting in a  
19 positive impact. However, the development at Poplar Point, when considered together with the  
20 proposed development at St. Elizabeths, could contribute to a cumulative impact to the Fort Circle  
21 Parks, due to the interruption of views of the topographic bowl. Further, when considered together with  
22 the development at St. Elizabeths, the Poplar Point development could contribute to indirect cumulative  
23 impacts to the George Washington Memorial Parkway and East Potomac Park itself, due to changes in  
24 views from these historic properties.

#### 25 Conclusion and Impairment Finding

26 The implementation of Alternative 2 would result in moderate adverse to minor positive long-term  
27 impacts on cultural landscapes. There would be an adverse effect on Anacostia Park, the Fort Circle Park  
28 System, and the Anacostia Freeway as a result of the implementation of Alternative 2. However, there  
29 would be no impairment of cultural landscapes.

#### 30 Mitigation

31 Mitigation for adverse impacts will be determined in consultation with the DC SHPO and other  
32 consulting parties. The following possible mitigation measures for the adverse impacts identified above  
33 include:

- 34 • Preserve the Anacostia Seawall;

- 1 • If preservation of the seawall is not feasible, prepare documentation of the historic structure in  
2 accordance with the Historic American Engineering Record (HAER) standards prior to  
3 demolition;
- 4 • Consider reducing the height or realigning select buildings to preserve views of the Fort Circle  
5 Parks from historic properties on the west side of the Anacostia River;
- 6 • Maximize pedestrian connections between the Anacostia Historic District and Poplar Point; and
- 7 • Preserve the Engineer's House in accordance with the *Secretary of the Interior's Standards for*  
8 *the Treatment of Historic Properties.*

#### 9 **4.3.3.5 Alternative 3**

##### 10 Direct and Indirect Impacts

###### 11 *Anacostia Park*

12 Alternative 3 would have direct adverse impacts on Anacostia Park, as 130 acres of the park would be  
13 transferred out of federal ownership and 60 acres of the park would be developed with commercial,  
14 residential, and cultural uses. Alternative 3 would maintain and reinvigorate 70 acres of parkland on the  
15 site, however, the green edge that currently runs along the waterfront from the Frederick Douglass  
16 Bridge north and east along the Anacostia Waterfront would be broken slightly at the proposed marina.  
17 The Anacostia Seawall would remain and the Engineer's House would be preserved. Overall, there  
18 would be long-term moderate adverse impacts to Anacostia Park, due to the transfer of the property  
19 out of federal ownership and the loss of parkland. However, there would be minor long-term positive  
20 impacts resulting from the preservation of the Engineer's House and the Anacostia Seawall. Alternative  
21 3 would result in an adverse effect under Section 106.

###### 22 *Civil War Fort Sites and Fort Circle Park System*

23 The Fort Circle Parks were established to preserve the Civil War defenses and the associated open  
24 spaces that encircle the city. The Poplar Point redevelopment would not directly impact the Fort Circle  
25 Park System; however it would appear in the foreground of views towards Washington, DC from the  
26 overlook at Fort Stanton. Further, it would partially obstruct views of the Fort Circle Parks from historic  
27 properties on the west side of the Anacostia River, particularly the Washington Navy Yard. Since the  
28 elevated Fort Circle Parks are intended to visually provide a consistent green edge around the city, and  
29 since the Poplar Point development would interrupt these views, it would result in a moderate adverse  
30 impact and an adverse effect under Section 106.

###### 31 *East Potomac Park*

32 East Potomac Park was established as part of the McMillan Plan early in the 20<sup>th</sup> century. East Potomac  
33 Park and Hains Point lie west of Anacostia Park; there is a visual connection between the two sites along  
34 the Anacostia River. The proposed buildings at Poplar Point would appear within views from Hains Point

1 along the river; however, the buildings would appear to be part of an existing urban viewshed that  
2 includes Bolling/Anacostia and the Frederick Douglass Bridge. Thus, long-term adverse impacts would be  
3 minor and there would be no adverse effect under Section 106.

#### 4 *Suitland Parkway*

5 Alternative 2 would not result in direct impacts to Suitland Parkway. It could, however, result in indirect  
6 visual impacts. The project site is currently largely obscured from view by vegetation and pedestrian and  
7 vehicular bridges near Martin Luther King, Jr. Avenue. The new development would likely be visible from  
8 the north end of Suitland Parkway, however, it would be screened somewhat by the existing vegetation  
9 and infrastructure. In addition, the north end of the parkway transitions from a greenway to a more  
10 urban environment as it approaches the Frederick Douglass Bridge. Thus, while the new buildings may  
11 be visible, they would not compromise the integrity of this historic resource. Long-term impacts would  
12 be minor and there would be no adverse effect under Section 106.

#### 13 *George Washington Memorial Parkway*

14 The development of Poplar Point under Alternative 3 would not result in direct impacts to the George  
15 Washington Memorial Parkway. However, there would be indirect visual impacts, as the new buildings  
16 would be visible across the Potomac River. The development would, however, appear within an existing  
17 urban viewshed that includes Bolling/Anacostia and development on the west side of the Anacostia  
18 River. Thus, adverse impacts would be minor. There would be no adverse effect under Section 106.

#### 19 *Other Resources within the APE*

20 There could be a moderate adverse impact to the Anacostia Freeway due to the partial obstruction of  
21 views of the Anacostia River, and thus an adverse effect under Section 106.

#### 22 Cumulative Impacts

23 There could be moderate adverse to moderate positive long-term impacts on cultural landscapes as a  
24 result of the implementation of Alternative 1. The Poplar Point development, when considered together  
25 with the Anacostia Waterfront Initiative and the planned improvements to Anacostia Park north of the  
26 11<sup>th</sup> Street Bridge, would serve to enhance Anacostia Park as a community resource, resulting in a  
27 positive impact. However, the development at Poplar Point, when considered together with the  
28 proposed development at St. Elizabeths, could contribute to a cumulative impact to the Fort Circle  
29 Parks, due to the interruption of views of the topographic bowl. Further, when considered together with  
30 the development at St. Elizabeths, the Poplar Point development could contribute to indirect cumulative  
31 impacts to the George Washington Memorial Parkway and East Potomac Park itself, due to changes in  
32 views from these historic properties.

#### 33 Conclusion and Impairment Finding

34 The implementation of Alternative 3 would result in moderate adverse to minor positive long-term  
35 impacts on cultural landscapes. There would be an adverse effect on Anacostia Park, the Fort Circle Park

1 System, and the Anacostia Freeway as a result of the implementation of Alternative 3. However, there  
2 would be no impairment of cultural landscapes.

3 Mitigation

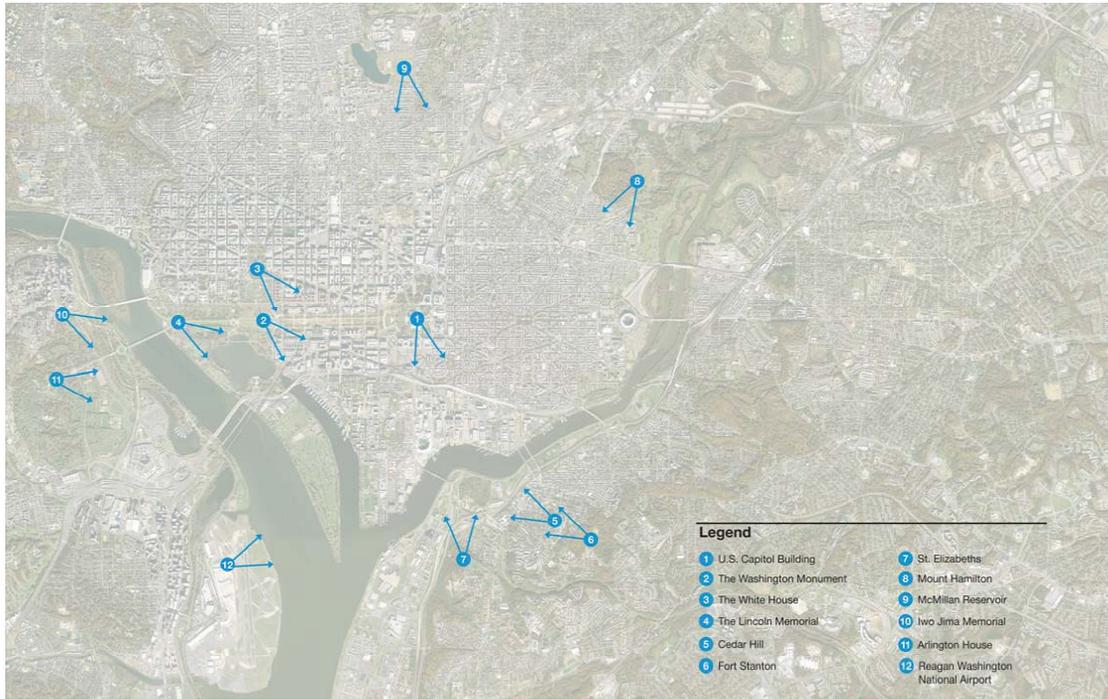
4 Mitigation for adverse impacts will be determined in consultation with the DC SHPO and other  
5 consulting parties. The following possible mitigation measures for the adverse impacts identified above  
6 include:

- 7
- 8 • Consider reducing the height or realigning select buildings to preserve views of the Fort Circle  
9 Parks from historic properties on the west side of the Anacostia River;
  - 10 • Maximize pedestrian connections between the Anacostia Historic District and Poplar Point; and
  - 11 • Preserve the Engineer's House and Anacostia Seawall in accordance with the *Secretary of the  
12 Interior's Standards for the Treatment of Historic Properties.*
- 13

1 **4.3.4 Visual Resources**

2 **4.3.4.1 Methodology and Assumptions**

3 In order to determine the potential visual impacts resulting from the action alternatives, digital 3-  
4 dimensional (3-D) models of each of the alternatives were developed to aid in the visual analysis. These  
5 models were then placed within a digital 3-D model of the city to determine the potential visibility of the  
6 development under each of the action alternatives from various viewpoints. These viewpoints included  
7 the US Capitol Building, the Washington Monument, the White House, and the Lincoln Memorial within  
8 the Monumental Core; the Washington Navy Yard, Capitol Hill, and Hains Point/East Potomac Park on  
9 the west side of the Anacostia River; Fort Stanton, the Frederick Douglass National Historic Site (Cedar  
10 Hill), Historic Anacostia, the Anacostia Park Fieldhouse, and St. Elizabeths within Anacostia; and  
11 Washington National Airport directly across the Potomac River in Arlington, Virginia. All of these points  
12 lie within the primary area of visual influence as discussed in Chapter 3. In addition to these viewpoints,  
13 additional points located outside of this primary area were considered due to their topography and the  
14 potential for the proposed development to be visible. These include Arlington House, the Iwo Jima  
15 Memorial, Mount Hamilton, and the McMillan Reservoir. The viewpoints considered are shown in Figure  
16 4-1.



1  
2  
3 Figure 4-1: Viewpoint Location Map  
4 Source: AECOM, 2010

1 While each of the viewpoints above is discussed in the analysis that follows, key viewpoints were  
2 identified for more detailed analysis. The viewpoints chosen for more detailed analysis represent views  
3 from important public sites such as historic properties and open spaces; they were chosen because of  
4 the potential for impacts to these views. In addition, the existing quality of the view, the sensitivity of  
5 the view (such as important views from historic and cultural sites), and the anticipated relationship of  
6 the proposed design elements to the existing visual environment, were considered.

7 Views towards Poplar Point from the identified viewpoints were photographed using a 35 mm digital  
8 Single Lens Reflex camera. The precise location of each viewpoint was identified through a global  
9 positioning system (GPS) within the camera. Visual simulations were then developed using photographs  
10 taken in the winter months because of the lack of vegetation.

11 Each of these views under existing conditions is shown below. These should be used as references to  
12 gauge the degree of change under each of the action alternatives. In the visual simulations that show  
13 conditions under each of the action alternatives, the new buildings are illustrated in yellow.



14

15 Figure 4-2

16 Existing Condition: View from the Frederick Douglass National Historic Site

17 Source: AECOM 2010

18



1

2 Figure 4-3

3 Existing Condition: View from Martin Luther King Jr. Avenue at W Street

4 Source: AECOM 2010

5



1  
2  
3  
4  
5  
6

Figure 4-4  
Existing Condition: View from the Anacostia Fieldhouse  
Source: AECOM 2010



1

2 Figure 4-5

3 Existing Condition: View from the West Edge of the Washington Navy Yard

4 Source: AECOM 2010

5

6 Assumptions

7 Impacts to visual resources are generally localized in nature. Any regional impacts are identified as such  
8 within the analysis. Impacts to visual resources may be less severe during the summer months due to  
9 screening from vegetation.

10 Thresholds

11

12 Thresholds were defined to identify the severity of potential impacts resulting from the proposed  
13 alternatives. The degree of visual change is measured by thresholds defining the existing character of  
14 the landscape in view, the relationship of the project site to the land around it, and the type of visual  
15 changes that would occur in the viewshed as a result of the project. These thresholds are as follows:

16

17 **Negligible:** The proposed project would not be visible from the representative viewpoint, or visual  
18 changes are so subtle as to be undetectable.

1 **Minor:** The proposed project would be visible as a background element in a view that includes buildings  
2 or other site features of similar mass and scale. The project would not interfere with views from the  
3 representative viewpoint and would not alter the character of the existing views.  
4

5 **Moderate:** The proposed project would be visible as part of a view that includes buildings or site  
6 features of similar mass and scale and interferes with views from the representative viewpoint without  
7 changing the existing viewshed character.  
8

9 **Major:** The proposed project features would be visible and would contrast with or dominate the existing  
10 site features, interfering with views from the representative viewpoint and substantially changing the  
11 character of the existing viewshed.  
12

### 13 Duration

14 For the purposes of this analysis, short-term impacts are associated with construction activities at the  
15 project site. Long-term impacts persist beyond construction.

#### 16 **4.3.4.2 No Action Alternative**

##### 17 Direct and Indirect Impacts

18 Under the No Action Alternative, the land transfer would not occur and the Poplar Point site would not  
19 be redeveloped. The site would remain as parkland. Thus, there would be no direct or indirect visual  
20 impacts to visual resources.

##### 21 Cumulative Impacts

22 Under the No Action Alternative, the land transfer would not occur and the site would not be  
23 redeveloped. There would be no cumulative impacts to visual resources as a result of the No Action  
24 alternative.

##### 25 Conclusion and Impairment Finding

26 There would be no direct, indirect, or cumulative impacts resulting from the No Action Alternative. In  
27 addition, there would be no impairment of park resources.  
28

1 **4.3.4.3 Alternative 1**

2 Direct and Indirect Impacts

3 The following discussion evaluates the potential impacts of the development of the project site under  
4 Alternative 1 on the visual quality of the site and key viewsheds.

5 *Site*

6 Under Alternative 1, the visual quality of the site would improve. Many of the existing buildings and  
7 structures, including the abandoned nursery buildings, would be removed. In their place, a vibrant  
8 mixed-use development would be constructed with building heights ranging from one to nine stories.  
9 The new development would highlight the amenities of the site, including preserving the existing  
10 wetlands and enhancing the waterfront through the construction of promenades, plazas and an  
11 observation tower to provide visitors with panoramic views of the Monumental Core and the Anacostia  
12 River. A signature cultural destination located on the point itself would be a key visual feature of the  
13 development. Overall, long-term moderate positive impacts to visual resources on the site would result  
14 from the implementation of Alternative 1.

15

1 *Key Viewpoints within Anacostia*

2 *Frederick Douglass National Historic Site (Cedar Hill):* From its elevated location, the Frederick Douglass  
3 National Historic Site provides panoramic views of Historic Anacostia in the foreground and of the  
4 Monumental Core in the distance (see the existing view in Figure 4-2). Under Alternative 1, these views  
5 would be altered with the inclusion of the new buildings at Poplar Point (Figure 4-6). These buildings  
6 would not obstruct views of Historic Anacostia and the Monumental Core, but would partially obscure  
7 portions of the river, resulting in a long-term moderate adverse impact on the viewshed.



8

9 Figure 4.6

10 Alternative 1: View from the Frederick Douglass National Historic Site

11 Source: AECOM 2010

12

1 *Historic Anacostia (Martin Luther King Jr. Avenue at W Street):* Due to dense development within  
2 Historic Anacostia, views towards Poplar Point from this area are limited. However, the proposed  
3 development would be visible at Martin Luther King Jr. Avenue looking south along W Street. The  
4 existing view (illustrated in Figure 4-3) is framed by a five-story building on the west side of the street  
5 and a lower scale warehouse structure on the east side of the roadway. The open parkland at Poplar  
6 Point and the river beyond are visible in the center of the view. Under Alternative 1, the view corridor  
7 would be maintained along W Street towards the river (Figure 4-7). The new multi-story structures at  
8 Poplar Point would narrow the existing view, partially obscuring the Anacostia River, but the character  
9 of the existing view that combines both urban multi-story urban buildings in the foreground and open  
10 space in the distance, would not change. Overall there would be long-term moderate adverse impacts to  
11 this viewshed.  
12



13  
14 Figure 4.7  
15 Alternative 1: View from Martin Luther King Jr. Avenue at W Street  
16 Source: AECOM 2010

17  
18  
19

1 *Anacostia Fieldhouse:* Views west from the Anacostia Fieldhouse (see Figure 4-4) currently include an  
2 open expanse of parkland with a line of trees and the 11<sup>th</sup> Street Bridge in the distance. Under  
3 Alternative 1, the new buildings at Poplar Point would be visible under the bridge infrastructure, but  
4 would not obscure the view or alter its character (Figure 4-8). Overall, there would be long-term minor  
5 adverse impacts to this view.  
6



7  
8 Figure 4-8  
9 Alternative 1: View from the Anacostia Fieldhouse  
10 Source: AECOM 2010

11  
12 *St. Elizabeths:* Due to its high elevation, St. Elizabeths affords panoramic views of Historic Anacostia and  
13 the distant Monumental Core. Under Alternative 1, the new structures at Poplar Point would be visible  
14 in the foreground of the view, but would not obstruct the view or alter its largely urban character. Thus,  
15 long-term adverse impacts would be minor.  
16

17 *Fort Stanton:* Due to its high elevation, the overlook at Fort Stanton provides visitors with panoramic  
18 views of Historic Anacostia in the foreground and the Monumental Core in the distance. Under  
19 Alternative 1, the new structures at Poplar Point would be visible in the foreground of the view during  
20 daytime hours, but would not obstruct the view or alter its character. However, night views from Fort  
21 Stanton could be substantively altered due to the light emitted from the proposed development. This

1 could detract from distant views of the Monumental Core. Overall, long-term impacts would be minor to  
2 moderate.

3

4 *Key Viewpoints on the West Side of the Anacostia River*

5

6 *Washington Navy Yard:* Views south from the Navy Yard (see Figure 4-5) are currently dominated by the  
7 Anacostia River and a line of trees that borders the water's edge within Anacostia Park. The Anacostia  
8 Highlands appear in the distance. Under Alternative 1, the new buildings would dominate the existing  
9 site features, obstructing views of the Anacostia Highlands and substantially altering the character of the  
10 viewshed (Figure 4-9). Long-term adverse impacts to views from the Washington Navy Yard would thus  
11 be major.

12



13

14 Figure 4-9

15 Alternative 1: View from the West Edge of the Washington Navy Yard

16 Source: AECOM 2010

17

18 *Hains Point/East Potomac Park:* Poplar Point is apparent in views east along the Anacostia River from  
19 Hains Point. Under Alternative 1, the new buildings at Poplar Point would be evident within these  
20 views; however, they would appear as part of an existing urban viewshed that includes the Frederick  
21 Douglass Bridge and Bolling/Anacostia. Night views would also be altered, as the Poplar Point waterfront

1 would no longer appear dark. Overall, there would be long-term minor adverse impacts to these views  
2 resulting from the implementation of Alternative 1.

3

#### 4 *Key Viewpoints within the Monumental Core*

5

6 *Capitol Hill:* The development at Poplar Point under Alternative 1 would not be visible from the majority  
7 of Capitol Hill. The development would potentially be visible at 13<sup>th</sup> and L Streets, SE; however, the  
8 structures would be barely discernible within the existing urban fabric. Impacts to views from Capitol Hill  
9 would thus be negligible.

10 *US Capitol Building:* The development at Poplar Point would potentially be visible from the south side of  
11 the US Capitol Building, however, the structures would be barely discernible within the existing urban  
12 fabric. Impacts to views from the US Capitol Building would thus be negligible.

13 *The Washington Monument:* The development at Poplar Point under Alternative 1 would not be visible  
14 from the Washington Monument. Short and long-term impacts would thus be negligible.

15

16 *The White House:* The development at Poplar Point under Alternative 1 would not be visible from the  
17 White House. Short and long-term impacts would thus be negligible.

18

19 *Lincoln Memorial:* The development at Poplar Point under Alternative 1 would not be visible from the  
20 Lincoln Memorial. Short and long-term impacts would thus be negligible.

21

#### 22 *West of the Potomac River*

23

24 *Washington National Airport:* Views from the old terminal building at National Airport across the  
25 Potomac River currently include Poplar Point and the Anacostia River in the distance. Under Alternative  
26 1, the new structures on the point would partially obscure distant views of the Anacostia River. Night  
27 views could be impacted slightly, however, Bolling/Anacostia, the Frederick Douglass Bridge, and the  
28 Washington Navy Yard are all existing light sources that are visible within this view. Long-term adverse  
29 impacts would be minor to moderate.

30

#### 31 *Distant Viewpoints*

32

33 *The McMillan Reservoir:* The development at Poplar Point under Alternative 1 would not be visible from  
34 the McMillan Reservoir. Short and long-term impacts would thus be negligible.

35

36 *Mount Hamilton:* The development at Poplar Point under Alternative 1 would not be visible from Mount  
37 Hamilton. Short and long-term impacts would thus be negligible.

38

39 *Iwo Jima Memorial:* The development at Poplar Point under Alternative 1 would not be visible from the  
40 Iwo Jima Memorial. Short and long-term impacts would thus be negligible.

1  
2 *Arlington House*: The development at Poplar Point under Alternative 1 would be evident in views from  
3 Arlington House but would blend with the existing urban viewshed. The development would not  
4 obstruct the views or alter their character. Thus, long-term adverse impacts would be minor.

5  
6 Cumulative Impacts

7 The proposed redevelopment of Poplar Point, when considered together with the improvements at the  
8 Frederick Douglass and 11<sup>th</sup> Street Bridges, could contribute to a positive cumulative impact to views  
9 within the site. Depending on the height and alignment of the 11<sup>th</sup> Street Bridge and its infrastructure,  
10 the development at Poplar Point may be more or less visible from the Anacostia Fieldhouse. When  
11 considered together with the development at St. Elizabeths, the Poplar Point development could  
12 contribute to indirect cumulative impacts to views from the west sides of the Anacostia and Potomac  
13 Rivers, as well as from St. Elizabeths itself.

14 Conclusion and Impairment Finding

15 There could be major adverse to moderate positive impacts to visual resources resulting from the  
16 implementation of Alternative 1. These impacts would not result in an impairment of park resources.

17 Mitigation

18 The following possible mitigation measures for the adverse impacts identified above include:

- 19
- 20 • Reinforce the visual connections between Historic Anacostia and Poplar Point through  
consistent streetscape treatment;
  - 21 • Widen the view corridor along W Street through the site to preserve views of the Anacostia  
22 River;
  - 23 • Ensure that the final design maintains greenspace on the waterfront to ensure visual continuity  
24 along the east side of the Anacostia River between the Frederick Douglass Bridge and the  
25 Maryland state line; and
  - 26 • Utilize glazing that minimizes light loss and night glare.

27

28

1 **4.3.4.4 Alternative 2**

2 Direct and Indirect Impacts

3 The following discussion evaluates the potential impacts of the development of the project area under  
4 Alternative 2 on the visual quality of the site and on key viewsheds.

5 *Site*

6 Under Alternative 2, the visual quality of the site would improve. Many of the existing buildings and  
7 structures, including the abandoned nursery buildings, would be removed. In their place, a vibrant  
8 mixed-use development would be installed. The building heights would vary, from one to approximately  
9 nine stories, with taller buildings clustered at the south end of the project area. The waterfront would  
10 be enhanced with improvements such as a riverfront observation deck, a commemorative site, a  
11 waterfront overlook, and an extension of Main Street to the river. Additional features may include a  
12 constructed wetlands habitat, an urban greenway, and a signature museum. The point would remain as  
13 open space, allowing panoramic views along the Anacostia River. Overall, long-term moderate positive  
14 impacts to visual resources on the site would result from the implementation of Alternative 2.

15

1 *Key Viewpoints within Anacostia*

2 *Frederick Douglass National Historic Site (Cedar Hill):* From its elevated location, the Frederick Douglass  
3 National Historic Site affords panoramic views of Historic Anacostia in the foreground and of the  
4 Monumental Core in the distance (see Figure 4-2). Under Alternative 2, there would be no change to the  
5 view that includes the Washington Monument and US Capitol Building (Figure 4-10). Thus, long-term  
6 impacts would be negligible.



7

8 Figure 4-10

9 Alternative 2: View from the Frederick Douglass National Historic Site

10 Source: AECOM 2010

11

12

13

14

15

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18

19

1 *Historic Anacostia (Martin Luther King Jr. Avenue at W Street):* Due to dense development within  
2 Historic Anacostia, views of Poplar Point are limited. However, the proposed development would be  
3 visible at Martin Luther King Jr. Avenue looking south along W Street. The existing view (illustrated in  
4 Figure 4-3) is framed by a five-story building on the west side of the street and a lower scale warehouse  
5 structure on the east side of the roadway. The open parkland at Poplar Point and the river beyond are  
6 visible in the center of the view. Under Alternative 2, the view corridor would be maintained along W  
7 Street towards the river, and the proposed buildings would replace the Metro Parking garage along the  
8 southeast side of the view in the middle distance (Figure 4-11). Overall there would be long-term minor  
9 adverse impacts to this viewshed.  
10



11

12 Figure 4-11

13 Alternative 2: View from Martin Luther King Jr. Avenue at W Street (with visual simulation)

14 Source: AECOM 2010

15

1 *Anacostia Fieldhouse:* Views west from the Anacostia Fieldhouse (see Figure 4-4) currently include an  
2 open expanse of parkland with a line of trees and the 11<sup>th</sup> Street Bridge in the distance. Under  
3 Alternative 2, the proposed buildings at Poplar Point would be visible under the bridge infrastructure,  
4 but would not obscure the view or alter its character (Figure 4-12). Overall, there would be long-term  
5 minor adverse impacts to this viewshed.



6  
7 Figure 4-12  
8 Alternative 2: View from the Anacostia Fieldhouse  
9 Source: AECOM 2010

10  
11 *St. Elizabeths:* Due to its high elevation, St. Elizabeths affords panoramic views of Historic Anacostia in  
12 the foreground and of the Monumental Core in the distance. Under Alternative 2, the proposed  
13 buildings at Poplar Point would be visible in the foreground of the view, but would not obstruct the view  
14 or alter its largely urban character. Thus, long-term adverse impacts would be minor.

15  
16 *Fort Stanton:* Due to its high elevation, the overlook at Fort Stanton provides visitors with panoramic  
17 views of Historic Anacostia in the foreground and the Monumental Core in the distance. Under  
18 Alternative 2, the new structures at Poplar Point would be visible in the foreground of the view during  
19 daytime hours, but would not obstruct the view or alter its character. However, night views from Fort  
20 Stanton could be substantively altered due to the light emitted from the proposed development. This

1 could detract from distant views of the Monumental Core. Overall, long-term impacts would be minor to  
2 moderate.

3

4 *Key Viewpoints on the West Side of the Anacostia River*

5

6 *Washington Navy Yard:* Views south from the Navy Yard (see Figure 4-5) are currently dominated by the  
7 Anacostia River and a line of trees that border the water's edge within Anacostia Park. The Anacostia  
8 Highlands appear in the distance. Under Alternative 2, the buildings would introduce a contrasting or  
9 dominant element, interfering with views of the Anacostia Highlands, and changing the character of the  
10 viewshed (Figure 4-13). Long-term adverse impacts to views from the Washington Navy Yard would thus  
11 be moderate to major.

12



13

14 Figure 4-13

15 Alternative 2: View from the West Edge of the Washington Navy Yard

16 Source: AECOM 2010

17

18

1 *Hains Point/East Potomac Park:* Poplar Point is apparent in views east along the Anacostia River from  
2 Hains Point. Under Alternative 2, the new buildings at Poplar Point would be evident within these  
3 views; however, they would appear to be part of the existing urban viewshed that includes  
4 Bolling/Anacostia and the Frederick Douglass Bridge. Night views would also be altered, as the Poplar  
5 Point waterfront would no longer appear dark. Overall, there would be long-term minor adverse impacts  
6 resulting from the implementation of Alternative 2.  
7

#### 8 *Key Viewpoints within the Monumental Core*

9

10 *Capitol Hill:* The development at Poplar Point under Alternative 2 would not be visible from the majority  
11 of Capitol Hill. The development might be visible at 13<sup>th</sup> and L Streets SE; however, the structures would  
12 be barely discernible within the existing urban fabric. Impacts to views from Capitol Hill would thus be  
13 negligible.

14 *US Capitol Building:* The development at Poplar Point would potentially be visible from the south side of  
15 the US Capitol Building, however, the structures would be barely discernible within the existing urban  
16 fabric. Impacts to views from the US Capitol Building would thus be negligible.

17 *The Washington Monument:* The development at Poplar Point under Alternative 2 would not be visible  
18 from the Washington Monument. Short and long-term impacts would thus be negligible.  
19

20 *The White House:* The development at Poplar Point under Alternative 2 would not be visible from the  
21 White House. Short and long-term impacts would thus be negligible.  
22

23 *Lincoln Memorial:* The development at Poplar Point under Alternative 2 would not be visible from the  
24 Lincoln Memorial. Short and long-term impacts would thus be negligible.  
25

#### 26 *West of the Potomac River*

27

28 *Washington National Airport:* Views from the old terminal building at National Airport across the  
29 Potomac River currently include Poplar Point and the Anacostia River in the distance. Under Alternative  
30 2, the parkland on the point would continue to be visible, with the proposed buildings visible further  
31 behind. Night views could be impacted slightly, however, Bolling/Anacostia, the Frederick Douglass  
32 Bridge, and the Washington Navy Yard are all existing light sources that are visible within this view.  
33 Long-term adverse impacts to views from National Airport would be minor.  
34

#### 35 *Distant Viewpoints*

36

37 *The McMillan Reservoir:* The development at Poplar Point under Alternative 2 would not be visible from  
38 the McMillan Reservoir. Short and long-term impacts would thus be negligible.  
39

1 *Mount Hamilton* The development at Poplar Point under Alternative 2 would be slightly visible from  
2 Mount Hamilton, however, the new buildings would not obstruct the view or alter its character. Short  
3 and long-term impacts would thus be negligible to minor:  
4

5 *Iwo Jima Memorial*: The development at Poplar Point under Alternative 2 would not be visible from the  
6 Iwo Jima Memorial. Short and long-term impacts would thus be negligible.  
7

8 *Arlington House*: The development at Poplar Point under Alternative 2 would be evident in views from  
9 Arlington House but would not obstruct the view or alter its character. Thus, long-term adverse impacts  
10 would be minor.  
11

### 12 Cumulative Impacts

13 The proposed redevelopment of Poplar Point, when considered together with the improvements at the  
14 Frederick Douglass and 11<sup>th</sup> Street Bridges, could contribute to a positive cumulative impact to views  
15 within the site. Depending on the height and alignment of the 11<sup>th</sup> Street Bridge and its infrastructure,  
16 the development at Poplar Point may be more or less visible from the Anacostia Fieldhouse. When  
17 considered together with the development at St. Elizabeths, the Poplar Point development could  
18 contribute to indirect cumulative impacts to views from the west sides of the Anacostia and Potomac  
19 Rivers, as well as from St. Elizabeths itself.

### 20 Conclusion and Impairment Finding

21 Under Alternative 2, long-term impacts could range from moderate to major adverse, to moderate  
22 positive. These impacts would not result in an impairment of park resources.

### 23 Mitigation

24 The following possible mitigation measures for the adverse impacts identified above include:

- 25 • Reinforce the visual connections between Historic Anacostia and Poplar Point through  
26 consistent streetscape treatment;
  - 27 • Widen the view corridor along W Street through the site to preserve views of the Anacostia  
28 River;
  - 29 • Maintain greenspace on the waterfront to ensure visual continuity along the east side of the  
30 Anacostia River between the Frederick Douglass Bridge and the Maryland state line; and
  - 31 • Utilize glazing that minimizes light loss and night glare.
- 32  
33

1 **4.3.4.5 Alternative 3**

2 Direct and Indirect Impacts

3 The following discussion evaluates the potential impacts of the development of the project area under  
4 Alternative 3 on the visual quality of the site and key viewsheds.

5 *Site*

6 Under Alternative 3, the visual quality of the site would improve. Many of the existing buildings and  
7 structures, with the exception of the Engineer's House, would be removed. In their place, a vibrant  
8 mixed-use development would be installed. The building heights would vary, from one to approximately  
9 nine stories, with buildings clustered at the east end of the site. The waterfront would be enhanced  
10 with improvements such as a marina, a pier, a waterfront park, and a waterfront promenade. Other key  
11 features include constructed wetlands, a community park, and commemorative sites. The point would  
12 remain as park land, allowing for panoramic views along the Anacostia River. Overall, long-term  
13 moderate positive impacts to visual resources on the site would result from the implementation of  
14 Alternative 3.

15

1 *Key Viewpoints within Anacostia*

2 *Frederick Douglass National Historic Site (Cedar Hill):* From its elevated location, the Frederick Douglass  
3 National Historic Site affords panoramic views of Historic Anacostia in the foreground and of the  
4 Monumental Core in the distance (see Figure 4-2). Under Alternative 3, the proposed buildings would be  
5 barely noticeable, effectively blending within the existing urban viewshed (Figure 4-14). Thus, long-term  
6 impacts would be negligible.



7  
8 Figure 4-14  
9 Alternative 3: View from the Frederick Douglass National Historic Site  
10 Source: AECOM 2010  
11

1 *Historic Anacostia (Martin Luther King Jr. Avenue at W Street):* Due to dense development within  
2 Historic Anacostia, views of Poplar Point are limited. However, the proposed development under  
3 Alternative 3 would be visible at Martin Luther King Jr. Avenue looking south along W Street. The  
4 existing view (illustrated in Figure 4-3) is framed by a five-story building on the west side of the street  
5 and a lower scale warehouse structure on the east side of the roadway. The open parkland at Poplar  
6 Point and the river beyond are visible in the center of the view. Under Alternative 3, the view corridor  
7 would be maintained along W Street towards the river (Figure 4-15). The new multi-story structures at  
8 Poplar Point would narrow the existing view, partially obscuring the Anacostia River, but the character  
9 of the existing view that combines both multi-story urban buildings in the foreground and open space in  
10 the distance, would not change. Overall, there would be long-term moderate adverse impacts to this  
11 viewshed.

12



13

14 Figure 4-15

15 Alternative 3: View from Martin Luther King Jr. Avenue at W Street

16 Source: AECOM 2010

17

1 *Anacostia Fieldhouse*: Views west from the Anacostia Fieldhouse (see Figure 4-4) currently include an  
2 open expanse of parkland with a line of trees and the 11<sup>th</sup> Street Bridge in the distance. Under  
3 Alternative 3, the new buildings at Poplar Point would be visible under the bridge infrastructure, but  
4 would not obscure the view or alter its character (Figure 4-16). Overall, there would be long-term minor  
5 adverse impacts to this view.

6



7

8 Figure 4-16

9 Alternative 3: View from the Anacostia Fieldhouse

10 Source: AECOM 2010

11

12 *St. Elizabeths*: Due to its high elevation, St. Elizabeths affords panoramic views of Historic Anacostia in  
13 the foreground and of the Monumental Core in the distance. Under Alternative 3, the new buildings at  
14 Poplar Point would be visible in the foreground of the view towards the US Capitol Building, but would  
15 not obstruct the view or alter its largely urban character. Thus, long-term adverse impacts would be  
16 minor.

17

18

1 *Fort Stanton:* Due to its high elevation, the overlook at Fort Stanton provides visitors with panoramic  
2 views of Historic Anacostia in the foreground and the Monumental Core in the distance. Under  
3 Alternative 2, the new structures at Poplar Point would be visible in the foreground of the view during  
4 daytime hours, but would not obstruct the view or alter its character. However, night views from Fort  
5 Stanton could be substantively altered due to the light emitted from the proposed development. This  
6 could detract from distant views of the Monumental Core. Overall, long-term impacts would be minor to  
7 moderate.

8

9 *Key Viewpoints on the West Side of the Anacostia River*

10

11 *Washington Navy Yard:* Views south from the Navy Yard (see Figure 4-5) are currently dominated by the  
12 Anacostia River and a line of trees that border the edge of the water in Anacostia Park. The Anacostia  
13 Highlands appear in the distance. Alternative 3 would introduce a contrasting element thereby altering  
14 the character of the viewshed. In addition, it would partially obstruct distant views of the Anacostia  
15 Highlands (Figure 4-17). Long-term adverse impacts to views from the Washington Navy Yard would thus  
16 be moderate to major.

17



18

19 Figure 4-17

20 Alternative 3: View from the West Edge of the Washington Navy Yard

21 Source: AECOM 2010

22

23

1 *Hains Point/East Potomac Park:* Poplar Point is visible in views east along the Anacostia River from Hains  
2 Point. Under Alternative 3, the new buildings at Poplar Point would be evident within these views;  
3 however, they would appear as part of the existing urban viewshed that includes Bolling/Anacostia and  
4 the Frederick Douglass Bridge. Night views would also be altered, as the Poplar Point waterfront would  
5 no longer appear dark. Overall, there would be long-term minor adverse impacts resulting from the  
6 implementation of Alternative 2.

7  
8 *Key Viewpoints within the Monumental Core*

9  
10 *Capitol Hill:* The development at Poplar Point under Alternative 3 would not be visible from the majority  
11 of Capitol Hill. The development might be visible at 13<sup>th</sup> and L Streets SE; however, the structures would  
12 be barely discernible within the existing urban fabric. Impacts to views from Capitol Hill would thus be  
13 negligible.

14 *US Capitol Building:* The development at Poplar Point would potentially be visible from the south side of  
15 the US Capitol Building, however, the structures would be barely discernible within the existing urban  
16 fabric. Impacts to views from the US Capitol Building would thus be negligible.

17 *The Washington Monument:* The development at Poplar Point under Alternative 3 would not be visible  
18 from the Washington Monument. Short and long-term impacts would thus be negligible.

19  
20 *The White House:* The development at Poplar Point under Alternative 3 would not be visible from the  
21 White House. Short and long-term impacts would thus be negligible.

22  
23 *Lincoln Memorial:* The development at Poplar Point under Alternative 3 would not be visible from the  
24 Lincoln Memorial. Short and long-term impacts would thus be negligible.

25  
26 *West of the Potomac River*

27  
28 *Washington National Airport:* Views from the old terminal building at National Airport across the  
29 Potomac River currently include Poplar Point and the Anacostia River in the distance. Under Alternative  
30 3, the park land on the point would continue to be visible with the new buildings visible further behind.  
31 Night views could be impacted slightly, however, Bolling/Anacostia, the Frederick Douglass Bridge, and  
32 the Washington Navy Yard are all existing light sources that are visible within this view. Long-term  
33 adverse impacts to views from National Airport would be minor.

34  
35 *Distant Viewpoints*

36  
37 *The McMillan Reservoir:* The development at Poplar Point under Alternative 3 would not be visible from  
38 the McMillan Reservoir. Short and long-term impacts would thus be negligible.

1 *Mount Hamilton* The development at Poplar Point under Alternative 3 would not be visible from Mount  
2 Hamilton. Short and long-term impacts would thus be negligible.

3  
4 *Iwo Jima Memorial*: The development at Poplar Point under Alternative 3 would not be visible from the  
5 Iwo Jima Memorial. Short and long-term impacts would thus be negligible.

6  
7 *Arlington House*: Under Alternative 3, the new development at Poplar Point would be evident in views  
8 from Arlington House but would not obstruct the view or alter its character. Thus, long-term adverse  
9 impacts would be minor.

10

### 11 Cumulative Impacts

12 The proposed redevelopment of Poplar Point, when considered together with the improvements at the  
13 Frederick Douglass and 11<sup>th</sup> Street Bridges, could contribute to a positive cumulative impact to views  
14 within the site. Depending on the height and alignment of the 11<sup>th</sup> Street Bridge and its infrastructure,  
15 the development at Poplar Point may be more or less visible from the Anacostia Fieldhouse. When  
16 considered together with the development at St. Elizabeths, the Poplar Point development could  
17 contribute to indirect cumulative impacts to views from the west sides of the Anacostia and Potomac  
18 Rivers, as well as from St. Elizabeths itself.

### 19 Conclusion and Impairment Finding

20 Under Alternative 3, long-term impacts could range from moderate to major adverse, to moderate  
21 positive. These impacts would not result in an impairment of park resources.

### 22 Mitigation

23 The following possible mitigation measures for the adverse impacts identified above include:

- 24 • Reinforce the visual connections between Historic Anacostia and Poplar Point;
- 25 • Widen the view corridor along W Street through the site to preserve views of the Anacostia  
26 River;
- 27 • Maintain greenspace on the waterfront to ensure visual continuity along the east side of the  
28 Anacostia River between the Frederick Douglass Bridge and the Maryland state line; and
- 29 • Utilize glazing that minimizes light loss and night glare.

30

31

32

## 1 4.4 Natural Resources

### 2 4.4.1 Geophysical Resources

#### 3 4.4.1.1 Methodology and Assumptions

4 The following describes the methodology and assumptions used in determining the impacts the action  
5 alternatives would have the site's geophysical resources. This section details the methods used for  
6 evaluation, the geographic area which encompasses these resources, and the thresholds used for  
7 determining the magnitude of the impacts. Site development has the potential to result in impacts to  
8 the site's geology, topography and soils during the construction phase, including demolition,  
9 earthwork/excavation, and foundation installation.

#### 10 Analysis Methods

11 A general analysis to determine the impacts of the action alternatives was conducted for the site's  
12 geophysical resources through on-site investigation, review of existing literature, and resource mapping.  
13 Literature included environmental reports and analyses conducted within the vicinity of the project site  
14 to gain an understanding of the site's context. Resource mapping was accessed through the USGS Web  
15 Soil Survey and provided insight to the site's soil, topographic and geotechnical conditions.

#### 16 Assumptions

17 The geographic area used in the analysis to determine the impacts the action alternatives would have on  
18 geophysical resources is limited to the area of disturbance on the Poplar Point site. It is assumed that no  
19 development activities are proposed outside of the site; therefore, any impacts to the site's soils,  
20 geotechnical resources, and topography would be localized.

#### 21 Impact Thresholds

22 To adequately define the magnitude of each impact on the site's geophysical resources, the following  
23 thresholds were established. These thresholds describe the impacts of the action alternatives relative to  
24 the site's existing conditions.

25 **Negligible:** Geophysical resources would not be impacted or the impact would be below or at the lower  
26 levels of detection.

27 **Minor:** Impacts to geophysical resources would be detectable; however, the impact would be minor and  
28 localized. Undisturbed areas within the study area would not be impacted. Mitigation measures would  
29 be required to offset adverse impacts; however, the effort for implementation would be minimal and  
30 would have a high rate of success.

31 **Moderate:** Impacts to geophysical resources would be apparent over a large area. Mitigation measures  
32 would be required to offset adverse impacts, and would have a high rate of success; however, they  
33 would require moderate effort to implement.

1 **Major:** Impacts to geophysical resources would be apparent and have a major impact on geology,  
2 topography, and soils within the site context. Mitigation measures would be required to offset adverse  
3 impacts.

#### 4 Duration

5 Short-term impacts include those that occur during the construction phases; long-term impacts are  
6 those that would persist beyond construction.

#### 7 **4.4.1.2 No Action Alternative**

##### 8 Direct and Indirect Impacts

9 Under the No Action Alternative, no development or construction activities would occur and the Poplar  
10 Point site would remain in its current state. The topography of the site would remain unchanged  
11 because no development would occur. Furthermore, surface and subsurface soils would not be  
12 disturbed and the geology of the site would remain unchanged. No direct or indirect adverse effects to  
13 geology, topography, or site soils would occur.

##### 14 Cumulative Impacts

15 There would be no direct or indirect cumulative impacts to geophysical resources as a result of the No  
16 Action Alternative. Construction and operation of the cumulative projects would not affect the  
17 geophysical resources at the project site. Furthermore, no construction or development activity would  
18 occur at the site that would affect nearby resources. There would be no cumulative impacts.

##### 19 Conclusion

20 Implementation of the No Action Alternative would not directly or indirectly impact geophysical  
21 resources on the site or in the surrounding area. There would be no cumulative impacts associated with  
22 planned or future actions.

#### 23 **4.4.1.3 Alternative 1**

##### 24 Direct and Indirect Impacts

##### 25 *Geology*

26 Construction under Alternative 1 would occur within portions of the site, one located at the “point”  
27 along the river, and the other located south and west of the existing wetlands. All construction activities  
28 within the Poplar Point site would be required to comply with federal and District building standards  
29 based on the underlying soils type and site constraints.

30 Medium to large structures generally require a deep foundation system, such as piles or caissons, for  
31 support and to eliminate the potential for settling. Alluvium and fill, in general, are so thin that these  
32 foundation systems can easily reach firm, load-bearing materials such as bedrock or compact sediments.  
33 Conversely, soft sediments can spread laterally under even very small loads and potentially lead to

1 instability and settling. Preliminary subsurface investigations have demonstrated the presence of fill and  
2 unconsolidated sediments, such as the Holocene Clay, Upper, Middle, and Lower Permeable Units and  
3 the Cretaceous Clay, throughout the site. Areas where the permeable units encounter the surface fill or  
4 where the layer of Holocene Clay is thin would require deeper foundation systems for new buildings.  
5 The areas where the permeable units come in contact with surface fill are in the southwest portion of  
6 the site. The layer of Holocene Clay is very thin in the south central portion of the site. These conditions  
7 would require pilings for new buildings. Bedrock was not encountered during preliminary testing; as a  
8 result, the required depth for the pilings may increase if bedrock is deemed necessary for support.

9 Compliance with federal and District building standards would ensure that the structures proposed  
10 under Alternative 1 would be supported by the appropriate foundation system for the site soils. The  
11 impact to geology would be minor.

### 12 *Topography*

13 The Poplar Point site is relatively flat and under Alternative 1, there would be no construction on steep  
14 slopes or hillsides. However, development under Alternative 1 would require some alterations to the  
15 site's topography. Because the Poplar Point site is located within a floodplain, all structures must either  
16 be designed to flood or must be constructed above the floodplain elevation. Any changes to the size of  
17 the floodplain must be balanced onsite. For example, if 2 acres of floodplain are removed in one portion  
18 of the site, 2 acres of floodplain must be replaced in another part of the site. Alternative 1 proposes a  
19 mix of residential, retail, and office uses that must not be subject to flooding. Development areas within  
20 the Poplar Point site containing these uses must be constructed above the floodplain elevation.  
21 Therefore, Alternative 1 would involve the creation of a terraced development with elevations ranging  
22 from 11 feet above msl to 20 feet above msl for the retail, residential, and offices uses and associated  
23 facilities. Other areas of the Poplar Point site would be excavated to retain the overall capacity of the  
24 floodplain that currently exists.

25 The elevations within the terraced development can be categorized into three groups. The lowest areas  
26 would be used for floodplain management and would be a maximum of 11 feet above msl, which is the  
27 Poplar Point site's current Base Flood Elevation. Some areas may be excavated in order to reach these  
28 elevations. No residential, office, or retail uses would be constructed within the lowest terrace. In  
29 between the low-lying floodplains and the developed areas would be upland terraces ranging in  
30 elevation from 13 feet to 20 feet above msl. These would be areas designated for stormwater  
31 management, providing a buffer between developed areas, and the Poplar Point site's wetlands and the  
32 areas that would be allowed to flood. The two lower terraces would be retained for open space and  
33 recreation. The highest terraces would have a finished grade above 20 feet above msl and would be the  
34 areas where buildings would be sited. Sub-grade parking would be located on the highest terraces and  
35 would be accomplished by constructing parking levels at the existing grade and placing fill to create a  
36 new higher base floor elevation. This would alleviate the necessity to excavate while placing the parking  
37 above the floodplain elevation. This is illustrated by Figure 4-18 below:



1  
2 Figure 4-18: Proposed Grading Scheme – Alternative 1  
3 Source: AECOM, 2010

4 Although Alternative 1 would modify the existing topography of the Poplar Point site, the impact would  
5 be minor. The total capacity of the floodplain would be retained and buildings for proposed new  
6 development would be located above the floodplain elevation.

#### 7 Soils

8 Demolition, excavation, and grading during construction would create the potential for increased wind  
9 and water erosion. Major earth moving activities on the site would be associated with the creation of  
10 the terraces described above. Under Alternative 1, some excavation would occur along the shoreline  
11 north of the existing wetlands to retain the capacity of the existing floodplain. Conversely, developed  
12 areas at the point and in the eastern part of the site would require fill to create a higher base floor  
13 elevation and allow for construction above the floodplain elevation. As required by the US EPA, the  
14 construction contractor would develop and implement a StormWater Pollution Prevention Plan (SWPPP)  
15 during construction for various project components. Stormwater best management practices would be  
16 undertaken to control runoff and erosion from earth-moving activities. Best management practices and  
17 design measures would minimize the amount of runoff and associated pollutants leaving the  
18 construction site by containing runoff on-site, containing the sediments on-site, or minimizing the  
19 potential for stormwater to come into contact with pollutants. Compliance with the SWPPP  
20 requirements and implementation of Best Management Practices (BMPs) would ensure that the short-  
21 term adverse impact would be minor.

1 Exposed soil and heavy earthwork activity would not be expected to occur as part of operation of the  
2 Poplar Point site under Alternative 1. As such, the potential for soil erosion during operation would be  
3 negligible.

4 This condition would be mitigated through the project design features that would contain and treat  
5 stormwater before it enters the river. The upland terraces would be areas designated for stormwater  
6 management, and would provide a buffer between developed areas and the Poplar Point site's  
7 wetlands. Runoff from the developed areas would be collected and channeled to stormwater  
8 management areas where it would be treated prior to percolation into the groundwater or discharge  
9 into the wetlands. The proposed drainage features would not lead to erosion or sedimentation on- and  
10 off-site because stormwater would flow through lined channels to treatment areas. The adverse impact  
11 would be minor.

### 12 Cumulative Impacts

13 Past construction and development on the project site did result in a change in the site's geology, soils,  
14 and topography, from the clearing, grading, dredging, placement of dredging spoils, and subsurface  
15 activities. Future development within the vicinity of the project site could also increase the potential for  
16 increased sedimentation and erosion. Adherence to federal and District policies on stormwater and  
17 erosion control, specifically during the construction process, would reduce the magnitude of these  
18 effects. Geologic impacts would be limited to the area of disturbance. Compliance with federal and  
19 District policies would ensure that all proposed structures meet current building standards. No adverse  
20 cumulative effects would result. As a result, no long-term, adverse cumulative impacts to the soils,  
21 topography, and geology from past, present, and future development under Alternative 1 would occur.

### 22 Conclusion

23 Alternative 1 would have short-term minor adverse effects to geology, topography and soils.  
24 Development under Alternative 1 would require site grading and earth work to create desired base floor  
25 elevations and shifting of the floodplain elevations to different parts of the site. During the construction  
26 phase, proper stormwater and erosion control best management practices would be used to limit the  
27 impacts to soils. Compliance with federal and District policies would ensure that new structures are  
28 constructed according to current building standards for geologic conditions at the Poplar Point site.

29 Long-term impacts to geology would be negligible as no future development would take place on the  
30 site. The site's topography would be permanently altered; however, this would be considered a long-  
31 term minor impact as well. Under Action Alternative1, no impairment of the site's geophysical resources  
32 would occur.

33

### 34 Mitigation

- 35 • Implementation of appropriate best management practices (BMP) for erosion control would  
36 minimize the potential impacts during construction.

1 **4.4.1.4 Alternative 2**

2 Direct and Indirect Impacts

3 *Geology*

4 Construction under Alternative 2 would involve the installation of foundation pilings to a depth of  
5 consolidated soils to prevent settling of the proposed buildings. Changes in artificial fill and soil structure  
6 would comply with federal and District guidelines and all new structures would comply with federal and  
7 District standards for new building construction.

8 Medium to large structures generally require a deep foundation system, such as piles or caissons, for  
9 support and to eliminate the potential for settling. Alluvium and fill, in general, are so thin that these  
10 foundation systems can easily reach firm, load-bearing materials such as bedrock or compact sediments.  
11 Conversely, soft sediments can spread laterally under even very small loads and potentially lead to  
12 instability and settling. Preliminary subsurface investigations have demonstrated the presence of fill and  
13 unconsolidated sediments, such as the Holocene Clay, Upper, Middle, and Lower Permeable Units and  
14 the Cretaceous Clay, throughout the site. Areas where the permeable units encounter the surface fill or  
15 where the layer of Holocene Clay is thin would require deeper foundation systems. Bedrock was not  
16 encountered at any of the soil borings during preliminary testing; as a result the required depth for the  
17 pilings may increase if bedrock is deemed necessary for support.

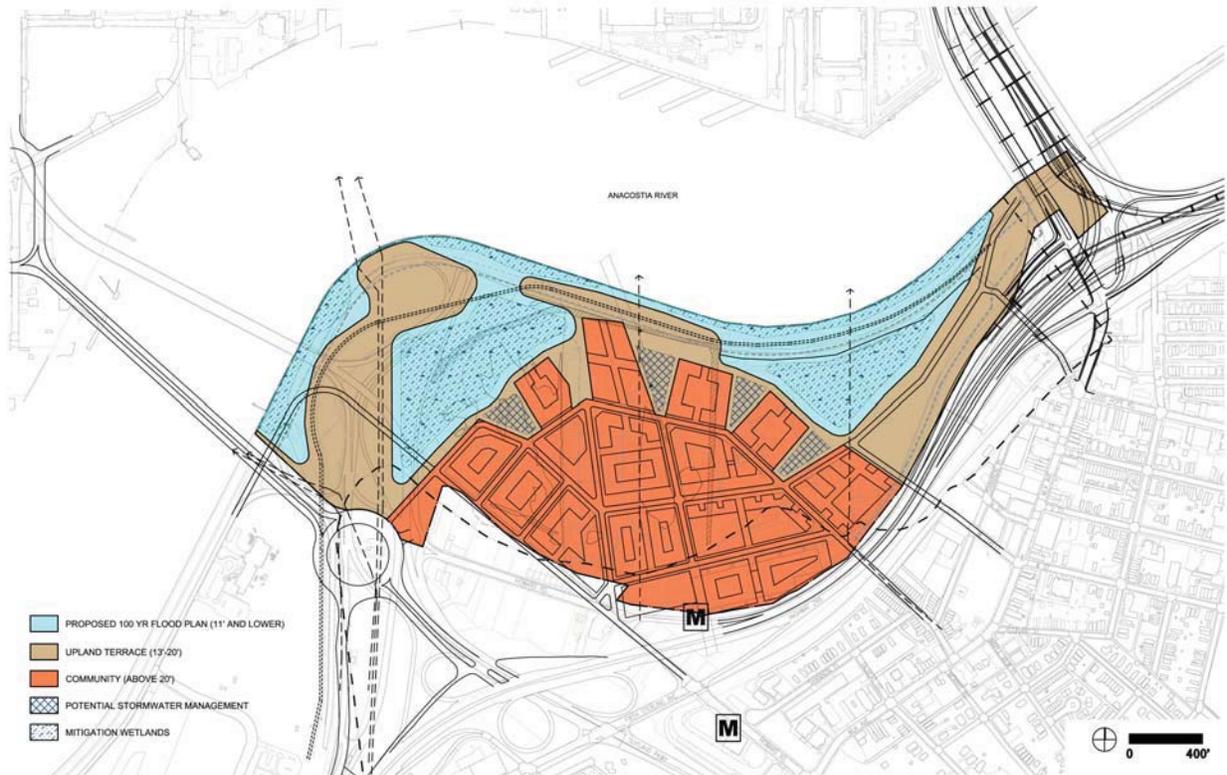
18 Compliance with federal and District building standards would ensure that the structures proposed  
19 under Alternative 2 would be supported by the appropriate foundation system for the site soils. The  
20 adverse impact to geology would be minor.

21 Topography

22 The Poplar Point site is relatively flat and under Alternative 2, there would be no construction on slopes  
23 with a grade of 15% or higher. Development under Alternative 2, however, would alter the site's  
24 topography to provide for sub-grade parking, stormwater management, and modifications to the site's  
25 floodplain. As with Alternative 1, this would involve the creation of a terraced development with  
26 elevations ranging from 11 feet above msl to 20 feet above msl for the residential, retail, and office uses  
27 and parking.

28 Under Alternative 2, the lowest terrace (where flooding would be allowed to occur) would be located  
29 along the shoreline of the Anacostia River. Because the capacity of the existing floodplain located along  
30 the shoreline would be reduced in size, additional capacity is proposed to be located in northeast  
31 portion of the Poplar Point site and along the western edge of the site. Developed areas with elevations  
32 of at least 20 feet above msl (the highest terrace) would be located in and around the Metro garage in  
33 the central portion of the Poplar Point site, extending almost to the shoreline at its widest point. All  
34 other portions of the Poplar Point site would be considered upland terraces and range in elevation  
35 between 13 feet to 20 feet above msl. As previously stated these areas would be used as stormwater  
36 management areas and for recreation. As with Alternative 1, sub-grade parking would be accomplished

- 1 by constructing parking levels at the existing grade and placing fill to create a new higher base floor  
 2 elevation. This would alleviate the necessity to excavate and any problems with flooding associated with  
 3 the high water table. This is illustrated by Figure 4-19 below:



4  
 5 Figure 4-19: Proposed Grading Scheme – Alternative 2  
 6 Source: AECOM, 2010

7 Although Alternative 2 would modify the existing topography of the Poplar Point site, the impact would  
 8 be minor. The total capacity of the floodplain would be retained and structures for proposed new  
 9 development would be located above the floodplain elevation.

#### 10 Soils

11 Demolition, excavation, and grading during construction of Alternative 2 would create the potential for  
 12 increased erosion and sedimentation. Construction at the edges of the development area under  
 13 Alternative 2 would require the most oversight to reduce the potential for increased erosion and  
 14 sedimentation during the construction period.

15 Major earth moving activities on the site would be associated with the creation of the development  
 16 terraces and flood plains. Under Alternative 2, some excavation would occur along the almost the entire  
 17 shoreline to allow for expansion of floodplain in this area to compensate for reductions in the capacity  
 18 of the floodplain in other portions of the Poplar Point site. Conversely, developed areas around the  
 19 Metro garage and in the central portion of the site would require fill to create a higher base floor  
 20 elevation and allow for sub-grade parking. Exposed soils during construction would be subject to

1 erosion. As required by the US EPA, the construction contractor would develop and implement a SWPPP  
2 during construction for various project components. Stormwater best management practices would be  
3 undertaken to control runoff and erosion from earth-moving activities. Best management practices and  
4 design features would minimize the amount of runoff and associated pollutants leaving the construction  
5 site by containing runoff on-site, containing the sediments on-site, or minimizing the potential for  
6 stormwater to come into contact with pollutants. Compliance with the SWPPP requirements and  
7 implementation of Best Management Practices (BMPs) would ensure that the short-term adverse  
8 impact would be minor.

9 Exposed soil and heavy earthwork activity would not be expected to occur as part of operation of the  
10 Poplar Point site under Alternative 2. As such, the potential for soil erosion during operation would be  
11 negligible.

12 This would be mitigated through the successful implementation of stormwater management practices  
13 that would contain and treat stormwater before it enters the river. As discussed above, the lower  
14 terraces would be areas designated for stormwater management, and would provide a buffer between  
15 developed areas and the Poplar Point site's wetlands. Runoff from the developed areas would be  
16 collected and channeled to stormwater management areas where it would be treated prior to  
17 percolation into the groundwater or discharge into the wetlands. The proposed drainage features would  
18 not lead to erosion or sedimentation on- and off-site because stormwater would flow through lined  
19 channels to treatment areas. The adverse impact would be minor.

#### 20 Cumulative Impacts

21 Past construction and development on the project site did result in a change in the site's geology, soils,  
22 and topography, from the clearing, grading, dredging, placement of dredging spoils, and subsurface  
23 manipulation. Future development within the vicinity of the project site could also increase the  
24 potential for increased sedimentation and erosion. Adherence to federal and District policies on  
25 stormwater and erosion control, specifically during the construction process, would reduce the  
26 magnitude of these effects. Geologic impacts would be limited to the area of disturbance. Compliance  
27 with federal and District policies would ensure that all structures meet current building standards. No  
28 adverse cumulative effects would result. As a result, no long-term, adverse cumulative impacts to the  
29 soils, topography, and geology from past, present, and future development under Alternative 2 would  
30 occur.

#### 31 Conclusion

32 Action Alternative 2 would have short-term minor adverse effects to geology, topography and soils.  
33 Development under Alternative 2 would require site grading and earthwork to create desired base floor  
34 elevations and shifting of the floodplain elevations to different parts of the site. During the construction  
35 phase, proper stormwater and erosion control best management practices would be used to limit the  
36 amount of impacts to soil. Compliance with federal and District policies would ensure that new  
37 structures are constructed according to current building standards for geologic conditions at the Poplar  
38 Point site.

1 Long-term impacts to geology would be negligible as no future development take place on the site. The  
2 site's topography would be permanently altered; however, this would be considered a long-term  
3 negligible impact as well. Under Action Alternative 2, no impairment of the site's geophysical resources  
4 would occur.

#### 5 Mitigation

- 6 • Implementation of appropriate best management practices (BMP) for stormwater and erosion  
7 control would minimize the potential impacts during construction.

#### 8 **4.4.1.5 Alternative 3**

#### 9 Direct and Indirect Impacts

##### 10 *Geology*

11 As with Alternatives 1 and 2, construction under Alternative 3 would involve the installation of  
12 foundation pilings to a depth of consolidated soils to prevent the settling of the proposed buildings.  
13 Changes in artificial fill and soil structure would comply with federal and District guidelines and all new  
14 structures would comply with federal and District standards for new building construction.

15 Medium to large structures generally require a deep foundation system, such as piles or caissons, for  
16 support and to eliminate the potential for settling. Alluvium and fill, in general, are so thin that these  
17 foundation systems can easily reach firm, load-bearing materials such as bedrock or compact sediments.  
18 Conversely, soft sediments can spread laterally under even very small loads and potentially lead to  
19 instability and settling. Preliminary subsurface investigations have demonstrated the presence fill and  
20 unconsolidated sediments, such as the Holocene Clay, Upper, Middle, and Lower Permeable Units and  
21 the Cretaceous Clay, throughout the site. Areas where the permeable units encounter the surface fill or  
22 where the layer of Holocene Clay is thin would require deeper foundation systems. Bedrock was not  
23 encountered at any of the soil borings during preliminary testing; as a result the required depth for the  
24 pilings may increase if bedrock is deemed necessary for support.

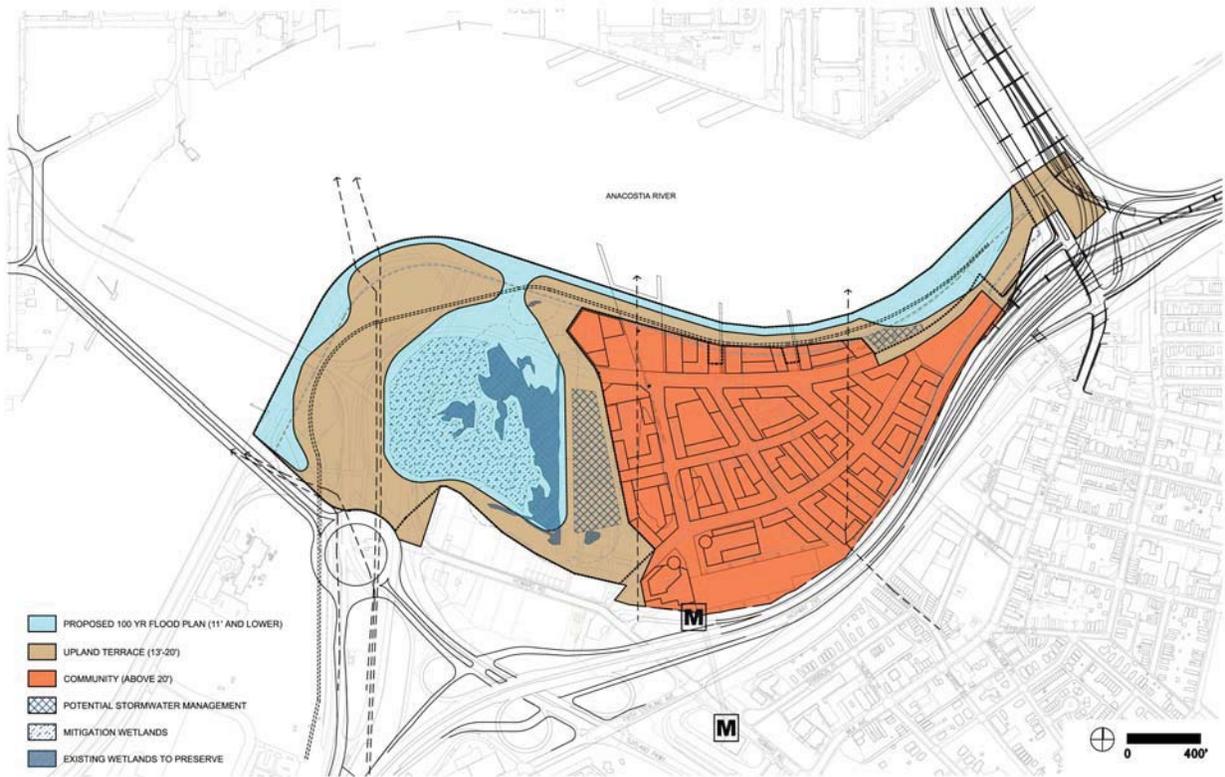
25 Compliance with federal and District building standards would ensure that the structures proposed  
26 under Alternative 3 would be supported by the appropriate foundation system for the site soils. The  
27 impact to geology would be minor.

##### 28 *Topography*

29 The Poplar Point site is relatively flat and under Alternative 3, there would be no construction on slopes  
30 with a grade of 15% or higher. Development under Alternative 3, however, would alter the site's  
31 topography to provide for modifications to the floodplain. As with Alternatives 1 and 2, this alteration  
32 would involve the creation of a terraced development with elevations ranging from 11 feet above msl to  
33 20 feet above msl for the residential, retail, and office uses and parking.

1 The elevations within the terraced development can be categorized into three groups. The lowest areas  
 2 are intended to be used for floodplain management and would be a maximum of 11 feet above msl,  
 3 which is the site’s current Base Flood Elevation. These areas would be permitted to flood and would not  
 4 contain any structures. The highest areas would have a finished grade above 20 feet above msl and  
 5 coincide with the areas where buildings would be sited. In between the low-lying flood plains and the  
 6 developed areas would be upland terraces ranging in elevation from 13 feet above msl to 20 feet above  
 7 msl. These would be areas designated for stormwater management, providing a buffer between  
 8 developed areas and the site’s wetlands and floodplains.

9 Under Alternative 3, the lowest terraces would be located in the central portion of the Poplar Point site,  
 10 around the eastern wetlands. An additional smaller area towards the eastern end of the site and along  
 11 the shoreline would provide flood protection for the developed areas. The highest terraces containing  
 12 developed areas with elevations of at least 20 feet above msl would be located entirely in the eastern  
 13 portion of the Poplar Point site, extending outwards from the Metro garage to the shoreline. All other  
 14 areas would be upland terraces. Sub-grade parking would be accomplished by constructing parking  
 15 levels at the existing grade and placing fill to create a new higher base floor elevation. This is illustrated  
 16 by Figure 4-20 below:



17  
 18 Figure 4-20: Proposed Grading Scheme – Alternative 3  
 19 Source: AECOM, 2010

1 Although Alternative 3 would modify the existing topography of the Poplar Point site, the impact would  
2 be minor. The total capacity of the floodplain would be retained and structures for proposed new  
3 development would be located above the floodplain elevation.

#### 4 *Soils*

5 Demolition, excavation, and grading during construction of Alternative 3 would create the potential for  
6 increased erosion and sedimentation. Construction occurring along the shoreline at the edge of the  
7 development area under Alternative 3 would require the most oversight to reduce the potential for  
8 increased erosion and sedimentation during the construction period.

9 Major earth moving activities on the site would be associated with the creation of the development  
10 terraces and flood plains. Under Alternative 3, some excavation would occur along the shoreline to  
11 create additional floodplain capacity in this area and to compensate for reductions in the capacity of the  
12 floodplain in other portions of the Poplar Point site. Conversely, developed areas in the eastern part of  
13 the site would require fill to create a higher base floor elevation and allow for sub-grade parking.  
14 Exposed soils during construction would be subject to erosion. As required by the US EPA, the  
15 construction contractor would develop and implement a SWPPP during construction for various project  
16 components. Stormwater best management practices would be undertaken to control runoff and  
17 erosion from earth-moving activities. Best management practices and design features would minimize  
18 the amount of runoff and associated pollutants leaving the construction site by containing runoff on-  
19 site, containing the sediments on-site, or minimizing the potential for stormwater to come into contact  
20 with pollutants. Compliance with the SWPPP requirements and implementation of Best Management  
21 Practices (BMPs) would ensure that the short-term impact would be minor.

22 Exposed soil and heavy earthwork activity would not be expected to occur as part of operation of the  
23 Poplar Point site under Alternative 3. As such, the potential for soil erosion during operation would be  
24 negligible.

25 This increase would be mitigated through the successful implementation of stormwater management  
26 practices that would contain and treat stormwater before it enters the river. As discussed above, the  
27 upland terraces would be areas designated for stormwater management, and would provide a buffer  
28 between developed areas and the Poplar Point site's wetlands. Runoff from the developed areas would  
29 be collected and channeled to stormwater management areas where it would be treated prior to  
30 percolation into the groundwater or discharge into the wetlands. The proposed drainage features would  
31 not lead to erosion or sedimentation on- and off-site because stormwater would flow through lined  
32 channels to treatment areas. The adverse impact would be minor.

#### 33 Cumulative Impacts

34 Past construction and development on the project site resulted in a change in the site's geology, soils,  
35 and topography, from the clearing, grading, dredging, placement of dredging spoils, and subsurface  
36 manipulation. Future development within the vicinity of the project site could also increase the  
37 potential for increased sedimentation and erosion. Adherence to federal and District policies on

1 stormwater and erosion control, specifically during the construction process, would reduce the  
2 magnitude of these effects. Geologic impacts would be limited to the area of disturbance. Compliance  
3 with federal and District policies would ensure that all structures meet current building standards. No  
4 adverse cumulative effects would result. As a result, no long-term, adverse cumulative impacts to the  
5 soils, topography, and geology from past, present, and future development under Alternative 3 would  
6 occur.

#### 7 Conclusion

8 Action Alternative 3 would have short-term minor adverse effects to geology, topography and soils.  
9 Development under Alternative 3 would require site grading and earth work to create desired base floor  
10 elevations and shifting of the floodplain elevations to different parts of the site. During the construction  
11 phase, proper stormwater and erosion control best management practices would be used to limit the  
12 amount of impacts to soil. Compliance with federal and District policies would ensure that new  
13 structures are constructed according to current building standards for geologic conditions at the Poplar  
14 Point site.

15 Long-term impacts to geology would be negligible as no future development take place on the site. The  
16 site's topography would be permanently altered; however, this would be considered a long-term  
17 negligible impact as well. Under Action Alternative 3, no impairment of the site's geophysical resources  
18 would occur.

#### 19 Mitigation

- 20 • Implementation of appropriate best management practices (BMP) for stormwater and erosion  
21 control would minimize the potential impacts during construction.

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## 1 4.4.2 Water Resources

### 2 4.4.2.1 Methodology and Assumptions

3 The following describes the methodology and assumptions used in determining the impacts the  
4 proposed action would have the site's water resources. This section details the methods used for  
5 evaluation, the geographic area that encompasses these resources, and the thresholds used for  
6 determining the magnitude of the impacts. Site development has the potential to result impacts to the  
7 site's surface water resources, groundwater resources, water quality, and stormwater.

#### 8 Analysis Methods

9 A general analysis to determine the impacts of the proposed action was conducted for the site's water  
10 resources, through on-site investigation, a review of existing literature, and resource mapping.  
11 Literature included environmental reports and analyses conducted within the vicinity of the Poplar Point  
12 site to gain an understanding of the site's context. Previous analysis conducted on the site occurred in  
13 2003 by RIDOLFI, Inc. The result of this analysis was a Site Characterization Report which summarized  
14 the physical site characteristics, including groundwater resources. Resource mapping was accessed  
15 through FEMA to determine the location of the 100-year floodplain.

#### 16 Assumptions

17 The geographic area used in the analysis to determine the impacts the proposed action would have on  
18 water resources is defined by each resource considered. For surface water and water quality, the area is  
19 defined as surface water bodies found on-site and adjacent to the site. Groundwater and stormwater  
20 impacts were examined within the boundaries of the site; however, it is understood that any impacts  
21 may have a greater reach than the site itself. The floodplains and wetlands examined were limited to  
22 those found on-site.

#### 23 Impact Thresholds

24 To adequately define the magnitude of each impact on the site's water resources, the following  
25 thresholds were established. These thresholds describe the impacts of the proposed action relative to  
26 the site's existing conditions.

27 **Negligible:** Impacts would be imperceptible or not detectable. Mitigation would not be required.

28 **Minor:** Impacts would be slightly perceptible and localized. Minor adverse impacts would pose a slight  
29 risk of degrading water quality by proximity to surface water or involving sources of pollution that are  
30 persistent in the environment. Adverse impacts to wetlands would slightly deteriorate the functioning of  
31 area wetlands. Adverse impacts to floodplains would result in small changes in floodplain values. Minor  
32 positive impacts could slightly improve water quality, the functioning of area wetlands, or the likelihood  
33 of flooding onsite.

1 **Moderate:** Impacts would be apparent and have the potential to become larger. Moderate adverse  
2 impacts would pose likely risk of degrading water quality by their proximity to surface water, involving  
3 sources of pollution that are persistent in the environment. Adverse impacts to wetlands would be  
4 apparent but localized. Adverse impacts to floodplains would result in an increase in flooding potential  
5 and/or a decrease in the ability of the floodplain to convey water. Moderate positive impacts could  
6 measurably improve water quality, the functioning of wetlands, or the likelihood of flooding. Affects  
7 would remain localized.

8 **Major:** Major adverse impacts would pose a substantial risk of degrading water quality by their  
9 proximity to surface water, involving sources of pollution that are persistent in the environment. Major  
10 positive impacts would substantially improve water quality, the size or functioning of wetlands, or the  
11 likelihood of flooding on and offsite. Affects could go beyond the point of impacts.

#### 12 Duration

13 Short-term impacts include those that occur during the development phases; long-term impacts include  
14 those that would persist after the development phase.

#### 15 **4.4.2.2 No Action Alternative**

##### 16 Direct and Indirect Impacts

17 Under the No Action Alternative, there would be no changes to the project site. As such, there would be  
18 no modifications to the existing surface water resources, wetlands, floodplain, or groundwater  
19 resources.

20 Current water resources associated with the site are the Anacostia River and the surface water body  
21 found in the eastern wetland complex. It is possible that this water body was caused by a broken pipe or  
22 water main. If it is determined that this is the case, and if the pipe were subsequently repaired, it is  
23 anticipated that much (if not all) of the water body would evaporate and cease to exist.

24 The No Action Alternative would not result in changes to the site's wetlands. The hazardous materials  
25 found in the site's wetlands would persist and these resources would have to remain inaccessible until  
26 remediated. Wetlands, in general, help to filter out sediment and other pollutants that harm water  
27 bodies. However, when a wetland is contaminated, it presents the potential for stormwater to convey  
28 this contamination to a water body. The water body most likely affected by this would be the Anacostia  
29 River. The indirect adverse impact would be moderate.

30 A portion of the project site lies within the 100-year floodplain. A levee currently protects the facilities  
31 located in the center of the site. Under the No Action alternative, this levee would be maintained to  
32 ensure no flood damage occurs to these facilities.

33 No impacts to groundwater would occur under the No Action Alternative, as none of the recharge rates  
34 would be impacted.

1 In summary, direct impacts to water resources would be negligible under the No Action Alternative  
2 because no changes to the site would occur. However, the long-term indirect impact would be  
3 moderate if contaminated water contained in the wetlands reaches the Anacostia River or groundwater  
4 resources.

#### 5 Cumulative Impacts

6 The No Action Alternative, when considered together with ongoing or planned projects in the area,  
7 would not contribute to a cumulative impact to water resources. No changes to the Poplar Point site  
8 would occur as part of the No Action Alternative. Modifications to the surrounding area as a result of  
9 the ongoing or planned projects in the area would not directly impact the surface water resources,  
10 wetlands, floodplains, or groundwater resources because this activity would not occur on-site. As with  
11 the proposed action, ongoing or planned projects would be required to comply with District water  
12 quality standards to prevent contaminated stormwater from reaching the project site or nearby surface  
13 water resources, such as the Anacostia River, and groundwater resources. Compliance with existing  
14 regulations would ensure that indirect adverse cumulative impacts would be minor.

#### 15 Conclusion

16 Implementation of the No Action Alternative would not result in direct impacts to water resources  
17 because no changes would occur on-site. However, none of the site's preexisting constraints would be  
18 remediated under the No Action Alternative. Therefore, the site would continue to have the potential to  
19 convey contaminated water from the existing wetlands to the Anacostia River through surface water  
20 flows or groundwater. The indirect adverse impact to water resources would be moderate.

#### 21 **4.4.2.3 Alternative 1**

##### 22 Direct and Indirect Impacts

##### 23 *Surface Water*

24 Under Action Alternative 1, Stickfoot Creek would be daylighted and allowed to flow naturally through  
25 the existing wetland system. This would create a new surface water resource not currently found on the  
26 site and could provide a long-term positive impact to the water quality. Alternative 1 also proposes to  
27 rebuild much of the bulkhead along the shoreline; this would provide structural integrity to the shore  
28 and minimize the potential for shoreline erosion into the Anacostia River. There would thus be minor to  
29 moderate long-term positive impacts. All construction work within the Anacostia River would require a  
30 permit from the USACE under Section 404 of the Clean Water Act. Compliance with the USACE permit  
31 requirements would ensure that direct and indirect adverse impacts to the Anacostia River during  
32 construction would be minor.

##### 33 *Water Quality*

34 Water quality can be impacted during the construction phase of a project. Exposed soils are susceptible  
35 to transport via wind or stormwater. As such, appropriate Best Management Practices for soil erosion,

1 sedimentation, chemical and fuel storage, stormwater runoff, and drainage systems would be  
2 implemented in accordance with federal and District requirements. The applicant would be required to  
3 obtain an NPDES permit and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to the start  
4 of construction. Compliance with existing regulations would ensure that the short-term adverse impact  
5 to water quality would be minor.

6 After construction, increases in impervious surfaces would increase the amount of stormwater runoff  
7 generated at the site. This increase is anticipated, as the site would transition from a park comprised  
8 mostly of open space and passive recreation uses to a mixed-use development. This increased amount  
9 of runoff has the potential to carry soil, sediment, and contamination to the Anacostia River. Additional  
10 stormwater management features to trap and treat stormwater prior to it entering the Anacostia River  
11 have been proposed as part of the design of Alternative 1. For example, Alternative 1 proposes to locate  
12 stormwater management areas directly adjacent to the existing wetlands and in the far eastern portion  
13 of the site. Stormwater from developed areas would be collected and channeled to the stormwater  
14 management terraces, where water would be filtered prior to release into the wetlands or before  
15 percolating into the groundwater. These project features would have a positive impact on water quality  
16 by filtering and cleansing water before it is discharged or permitted to percolate into groundwater  
17 resources. The long-term positive impact to water quality would be moderate.

#### 18 *Wetlands*

19 Alternative 1 would preserve the wetlands found on-site in place and locates proposed mixed-use  
20 development at the perimeter of these features. It is the ultimate goal of Alternative 1 to use these  
21 resources for the purpose of passive recreation and as demonstration wetlands for educational  
22 purposes. A remediation strategy, however, would be necessary as the wetlands are currently  
23 contaminated. Because Alternative 1 would retain the wetlands in their existing locations and remediate  
24 these resources, the long-term impact would be moderate positive. All modifications to the  
25 jurisdictional wetlands would require a permit from the USACE under Section 404 of the Clean Water  
26 Act. Compliance with existing regulations would ensure that short-term adverse impacts would be  
27 minor.

#### 28 *Floodplains*

29 As previously discussed, portions of the Poplar Point site are located within the 100-year and 500-year  
30 floodplain. For the purposes of creating a suitable development area and maintaining proper flood  
31 controls, the Poplar Point site would be terraced under Alternative 1. The lowest terraced areas would  
32 be located in the central portion of the site and would be permitted to flood. The highest terraced areas  
33 would have a finished grade above 20 feet above msl and would be the areas where buildings would be  
34 sited. Due to the new elevations created on-site by the terraces, the highest terrace areas would be  
35 located outside of the 100-year floodplain. By creating different terrace levels throughout the Poplar  
36 Point site, the overall capacity of the floodplain would not be diminished and portions of the project site  
37 that would be developed for passive recreation uses would be located within the 100- and 500-year  
38 floodplains. No structures would be developed in these areas; therefore, the floodplain would not be

1 impeded. Areas to be developed that are currently located within the 100- and 500-year floodplains  
2 must comply with all local and federal review and reporting measures for construction in the floodplain,  
3 including review and approval by the DCRA, the Watershed Division of the DC EHA, FEMA, and the US  
4 EPA. Additionally, all base floor elevations would comply with the current base flood elevation. Although  
5 Alternative 1 involves modifications to the floodplain, the long-term adverse impact would be minor.

#### 6 *Groundwater*

7 The location of the Poplar Point site next to the river has led to high groundwater levels in some areas.  
8 To reduce the severity of impacts to groundwater, excavation would be limited. As discussed above, the  
9 Poplar Point site would be terraced under Alternative 1. The elevations within the terraced development  
10 can be categorized into three groups. The lowest areas would be used for floodplain management and  
11 would be a maximum of 11 feet above msl, which is the Poplar Point site's current Base Flood Elevation.  
12 In between the low-lying floodplains and the developed areas would be upland terraces ranging in  
13 elevation from 13 feet to 20 feet above msl. These would be areas designated for stormwater  
14 management, providing a buffer between developed areas and the Poplar Point site's wetlands and the  
15 areas that would be allowed to flood. The two lower terraces would be retained for open space and  
16 recreation. The highest terraces would have a finished grade above 20 feet above msl and would be the  
17 areas where buildings would be sited. Sub-grade parking would be located on the highest terraces and  
18 would be accomplished by constructing parking levels at the existing grade and placing fill to create a  
19 new higher base floor elevation. This would alleviate the necessity to excavate while placing the parking  
20 above the floodplain elevation.

21 If groundwater is encountered during construction, a permit would be obtained from the US EPA and  
22 the District of Columbia Department of Public Works to allow wastewater discharge into the Anacostia  
23 River. Additionally, the DCRA, Water Quality Branch must certify all permits and requires the monitoring  
24 of contaminants during dewatering. This may be of particular concern for Poplar Point as some of the  
25 groundwater samples taken for the Site Characterization Report were contaminated. Appropriate  
26 measures would be taken to ensure that pollutant discharge is at or below accepted levels.  
27 Implementation of project design and compliance with federal and District regulations would ensure  
28 that short-term adverse impacts to groundwater resources would be minor. Long-term impacts to  
29 groundwater would be negligible.

#### 30 Cumulative Impacts

31 Implementation of Alternative 1 would increase the amount of impervious surfaces within the Anacostia  
32 Watershed. This, in turn, would increase the total amount of stormwater produced within the  
33 watershed. This change, when considered together with other projects within the study area, could  
34 contribute to a minor adverse cumulative impact to surface water resources. However, the change  
35 would be marginal as the watershed is approximately 176 square miles and the Poplar Point site is  
36 substantially less than one square mile. Any additional construction in the area would have to  
37 coordinate accurate totals of impervious surface to ensure that the river does not become

1 overburdened and flooding is created in downstream areas. The cumulative impact to surface water  
2 resources would be minor.

3 Additional development activity in the vicinity of the Poplar Point site would have the potential for  
4 stormwater discharges into nearby surface water bodies, such as the Anacostia River. This has the  
5 potential to create adverse impacts to water quality in the area. As with Alternative 1, the ongoing and  
6 planned projects would be required to implement appropriate Best Management Practices for soil  
7 erosion, sedimentation, chemical and fuel storage, stormwater runoff, and drainage systems in  
8 accordance with federal and District requirements. Compliance with existing regulations would ensure  
9 that the cumulative impact to water quality would be minor.

10 The wetlands located on the Poplar Point site are specific to the boundaries of the site. Development of  
11 ongoing and planned projects in the vicinity of Poplar Point would not directly or indirectly impact  
12 wetlands located within the site. As such, no adverse cumulative impact would occur.

13 As with Alternative 1, development of the ongoing and planned projects could occur within the 100- or  
14 500-year floodplains. Areas to be developed that are currently located within the 100- and 500-year  
15 floodplains must comply with all local and federal review and reporting measures for construction in the  
16 floodplain, including review and approval by the DCRA, the Watershed Division of the DC EHA, FEMA,  
17 and the US EPA. As would occur under Alternative 1, the overall capacity of the floodplain must be  
18 retained. Compliance with existing regulation would ensure that the cumulative impact would be minor.

19 Due to the location of the water table close to the ground surface in many parts of the District,  
20 Alternative 1 and the ongoing and planned projects have the potential to impact groundwater resources  
21 by direct contact and through an increase in impervious surfaces. As discussed above, any additional  
22 construction in the area would have to coordinate accurate totals of impervious surface to ensure that  
23 the river does not become overburdened and flooding is created in downstream areas. The cumulative  
24 impact to groundwater recharge would be minor. The ongoing and planned projects, like Alternative 1,  
25 would be required to comply with District guidelines should groundwater be encountered during  
26 construction. Compliance with existing regulations would ensure that the cumulative impact would be  
27 minor.

## 28 Conclusion

29 Alternative 1 would have long-term minor to moderate positive impacts to surface water resources. The  
30 daylighting of Stickfoot Creek would serve as a new water resource on the site. Additionally, the repair  
31 of the bulkhead along the shoreline would reduce the likelihood of erosion. Alternative 1 would also  
32 retain the existing wetlands in their current location and remediate the existing contamination, resulting  
33 in long-term moderate positive impacts to wetlands.

34 Alternative 1 would increase the amount of stormwater generated on-site, however, the inclusion of  
35 stormwater management facilities as part of the project design would provide a long-term moderate  
36 positive impact to water quality by reducing non-point source pollution. Short-term minor adverse  
37 impacts could be generated during the construction period as stormwater has the potential to convey

1 exposed soils to the Anacostia River. In addition, during construction, a minor short-term adverse impact  
2 would occur if groundwater is encountered during site grading. All proper permitting for site-dewatering  
3 would be obtained and after construction long-term impacts are anticipated to be negligible.

#### 4 Mitigation

5 The following mitigation measures are recommended to minimize Action Alternative 1's impact to  
6 Water Resources:

- 7 • Develop an erosion and sediment control plan, a stormwater management plan, and a  
8 floodplain management plan. The plans would include the elements from the preferred  
9 development plan and BMP measures that would reduce the risk of erosion and manage the  
10 quality of stormwater runoff to minimize the effects on the Anacostia River. These requirements  
11 are intended to minimize cumulative impacts of construction and development to surface water  
12 resources and, and are subject to review by the Watershed Protection Division of the DC EHA,  
13 FEMA, the US EPA, and NPS.
- 14 • Appropriate BMPs for groundwater protection should be implemented during the construction  
15 and operation of the facility to protect groundwater quality, thereby indirectly protecting river  
16 water quality.
- 17 • Stormwater runoff from the site's impervious surfaces would be collected and treated on-site  
18 prior to discharge to the Anacostia River.
- 19 • Appropriate dewatering measures are recommended to provide additional groundwater control  
20 (i.e. pump testing to investigate aquifer properties and constructing a continuous cutoff wall  
21 extending into the clay soils).

#### 22 **4.4.2.4 Alternative 2**

##### 23 Direct and Indirect Impacts

###### 24 *Surface Water*

25 Under Alternative 2, Stickfoot Creek would be daylighted and become a filtration component of the  
26 linear "finger" parks. This would create a new surface water resource not currently found on the Poplar  
27 Point site and would provide a long-term positive impact to the site. Alternative 2 also proposes to  
28 terrace the land adjacent to the water, allowing floodwaters to enter the site. The existing seawall  
29 would be replaced with wetlands that would provide a vegetative and hydraulic transition zone from the  
30 Poplar Point site to the river. This would also allow for the creation of new wetlands that would be used  
31 to filter and cleanse onsite pollutants and sediments from stormwater runoff. In addition, the wetlands  
32 would serve to stabilize the shoreline and minimize eroded materials that enter the Anacostia River.  
33 Thus, long-term impacts would be minor to moderate and positive. All construction work within the  
34 Anacostia River would require a permit from the USACE under Section 404 of the Clean Water Act.

1 Compliance with the USACE permit requirements would ensure that direct and indirect adverse impacts  
2 to the Anacostia River during construction would be minor.

### 3 *Water Quality*

4 Construction activities have the potential to impact water quality. Soils may be left exposed and are  
5 susceptible to transport via wind or stormwater. As such, appropriate Best Management Practices for  
6 soil erosion, sedimentation, chemical and fuel storage, stormwater runoff, and drainage systems would  
7 implemented in accordance with federal and District requirements. The applicant would be required to  
8 obtain an NPDES permit and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to the start  
9 of construction. Compliance with existing regulations would ensure that the short-term adverse impact  
10 to water quality would be minor.

11 After construction, increases in impervious surfaces would increase the amount of stormwater runoff  
12 generated at the site. This increase is anticipated, as the site would transition from a park comprised  
13 mostly of open space and passive recreation uses to a mixed-use development. This increased amount  
14 of runoff has the potential to carry soil, sediment, and contamination to the Anacostia River. Additional  
15 stormwater management features to trap and treat stormwater prior to it entering the Anacostia River  
16 have been proposed as part of the design of Alternative 2. Stormwater from developed areas would be  
17 collected and channeled to the stormwater management terraces, where water would be filtered prior  
18 to release into the wetlands or before percolating into the groundwater. These project features would  
19 have a long-term moderate positive impact on water quality by filtering and cleansing water before it is  
20 discharged or permitted to percolate into groundwater resources.

### 21 *Wetlands*

22 Alternative 2 would remove all of the existing wetlands found on the site. By removing the existing  
23 wetlands from the site, any contamination associated with the current wetlands would also be removed.  
24 However, there would be a short-term major impact to water resources associated with the removal of  
25 the wetlands. As part of Alternative 2, new wetlands would be created at a ratio of 3:1 along the  
26 shoreline of the Anacostia River and in other parts of the site. Man-made wetlands can provide the  
27 same ecological benefits as natural wetlands; however, their construction and location must be  
28 monitored closely and they take time to fully establish. Similar to the natural wetlands, the man-made  
29 wetlands would still provide a habitat that is unique within the urban context and perform an ecological  
30 function by retaining and filtering stormwater. As such, long-term positive impacts to wetlands would be  
31 minor.

### 32 *Floodplains*

33 As previously discussed, portions of the Poplar Point site are located within the 100-year and 500-year  
34 floodplain. For the purposes of creating a suitable development area and maintaining proper flood  
35 controls, the Poplar Point site would be terraced under Alternative 2. The lowest terraced areas would  
36 be located in the central portion of the site and would be permitted to flood. The highest terraced areas  
37 would have a finished grade above 20 feet above msl and would be the areas where buildings would be

1 sited. Due to the new elevations created on-site by the terraces, the highest terrace areas would be  
2 located outside of the 100-year floodplain. By creating different terrace levels throughout the Poplar  
3 Point site, the overall capacity of the floodplain would not be diminished and portions of the project site  
4 that would be developed for passive recreation uses would be located within the 100- and 500-year  
5 floodplains. No structures would be developed in these areas; therefore, the floodplain would not be  
6 impeded. Areas to be developed that are currently located within the 100- and 500-year floodplains  
7 must comply with all local and federal review and reporting measures for construction in the floodplain,  
8 including review and approval by the DCRA, the Watershed Division of the DC EHA, FEMA, and the US  
9 EPA. Additionally, all base floor elevations would comply with the current base flood elevation. Although  
10 Alternative 2 involves modifications to the floodplain, the long-term adverse impact would be minor  
11 because the overall capacity of the floodplain would be maintained.

#### 12 *Groundwater Resources*

13 The location of the Poplar Point site next to the river has led to high groundwater levels in some areas.  
14 To reduce the severity of impacts to groundwater, excavation would be limited. As discussed above, the  
15 Poplar Point site would be terraced under Alternative 2. The elevations within the terraced development  
16 can be categorized into three groups. The lowest areas would be used for floodplain management and  
17 would be a maximum of 11 feet above msl, which is the Poplar Point site's current Base Flood Elevation.  
18 In between the low-lying floodplains and the developed areas would be upland terraces ranging in  
19 elevation from 13 feet to 20 feet above msl. These would be areas designated for stormwater  
20 management, providing a buffer between developed areas and the Poplar Point site's wetlands and the  
21 areas that would be allowed to flood. The two lower terraces would be retained for open space and  
22 recreation. The highest terraces would have a finished grade above 20 feet above msl and would be the  
23 areas where buildings would be sited. Sub-grade parking would be located on the highest terraces and  
24 would be accomplished by constructing parking levels at the existing grade and placing fill to create a  
25 new higher base floor elevation. This would alleviate the necessity to excavate while placing the parking  
26 above the floodplain elevation.

27 If groundwater is encountered during construction, a permit would be obtained from the US EPA and  
28 the District of Columbia Department of Public Works to allow wastewater discharge into the Anacostia  
29 River. Additionally, the DCRA, Water Quality Branch must certify all permits and requires the monitoring  
30 of contaminants during dewatering. This may be of particular concern for Poplar Point as some of the  
31 groundwater samples taken for the Site Characterization Report were contaminated. Appropriate  
32 measures would be taken to ensure that pollutant discharge is at or below accepted levels.  
33 Implementation of project design and compliance with federal and District regulations would ensure  
34 that the short-term impact to groundwater resources would be minor. Long-term impacts would be  
35 negligible.

#### 36 Cumulative Impacts

37 Implementation of Alternative 2 would increase the amount of impervious surface within the Anacostia  
38 Watershed. This, in turn, would increase the total amount of stormwater produced within the

1 watershed. This change, when considered with other projects within the study area, could contribute to  
2 a minor long-term adverse impact to water resources. However, the change would be marginal as the  
3 watershed is approximately 176 square miles and the Poplar Point site is substantially less than one  
4 square mile. Any additional construction in the area would have to coordinate accurate totals of  
5 impervious surface to ensure that the river does not become overburdened and flooding is created in  
6 downstream areas. The cumulative impact to surface water resources would be minor.

7 Additional development activity in the vicinity of the Poplar Point site would have the potential to  
8 stormwater discharges into nearby surface water bodies, such as the Anacostia River. This has the  
9 potential to create adverse impacts to water quality in the area. As with Alternative 2, the ongoing and  
10 planned projects would be required to implement appropriate Best Management Practices for soil  
11 erosion, sedimentation, chemical and fuel storage, stormwater runoff, and drainage systems in  
12 accordance with federal and District requirements. Compliance with existing regulations would ensure  
13 that the cumulative impact to water quality would be minor.

14 The wetlands located on the Poplar Point site are specific to the boundaries of the site. Development of  
15 ongoing and planned projects in the vicinity of Poplar Point would not directly or indirectly impact  
16 wetlands located within the site. As such, no adverse cumulative impact would occur.

17 As with Alternative 2, development of the ongoing and planned projects could occur within the 100- or  
18 500-year floodplains. Areas to be developed that are currently located within the 100- and 500-year  
19 floodplains must comply with all local and federal review and reporting measures for construction in the  
20 floodplain, including review and approval by the DCRA, the Watershed Division of the DC EHA, FEMA,  
21 and the US EPA. As would occur under Alternative 2, the overall capacity of the floodplain must be  
22 retained. Compliance with existing regulation would ensure that the cumulative impact is minor.

23 Due to the location of the water table close to the ground surface in many parts of the District,  
24 Alternative 2 and the ongoing and planned projects have the potential to impact groundwater resources  
25 by direct contact and through an increase in impervious surfaces. As discussed above, any additional  
26 construction in the area would have to coordinate accurate totals of impervious surface to ensure that  
27 the river does not become overburdened and flooding is created in downstream areas. The cumulative  
28 impact to groundwater recharge would be minor. The ongoing and planned projects, like Alternative 2,  
29 would be required to comply with District guidelines should groundwater be encountered during  
30 construction. Compliance with existing regulations would ensure that the cumulative impact would be  
31 minor.

## 32 Conclusion

33 Alternative 2 would have long-term minor to moderate positive impacts to surface water resources. The  
34 daylighting of Stickfoot Creek would serve as a new surface water resource on the site that is not  
35 currently present. Additionally, the terrace along the shore would allow floodwater to enter the site.

36 Alternative 2 would increase the amount of stormwater generated on-site; however, the inclusion of  
37 stormwater management facilities as part of project design would provide a long-term moderate

1 positive impact to water quality by reducing non-point source pollution. Short-term moderate adverse  
2 effects could be generated during the construction period as stormwater has the potential to convey  
3 exposed soils to the Anacostia River. During construction a moderate short-term adverse impact would  
4 occur if groundwater is encountered during site grading. All proper permitting for site-dewatering would  
5 be obtained and after construction long-term impacts are anticipated to be negligible.

6 Removal of the site's existing wetlands would have a long-term minor positive impact as they are  
7 contaminated. Replacement of these wetlands with man-made wetlands would provide the same  
8 ecological and stormwater benefits of the existing wetlands. However, there would be a major short-  
9 term adverse impacts during the removal and construction process.

#### 10 Mitigation

11 The following mitigation measures are recommended to minimize Alternative 2's impact to water  
12 resources:

- 13 • Develop an erosion and sediment control plan, a stormwater management plan, and a  
14 floodplain management plan. The plans would include the elements from the preferred  
15 development plan and BMP measures that would reduce the risk of erosion and manage the  
16 quality of stormwater runoff to minimize the effects on the Anacostia River. These requirements  
17 are intended to minimize cumulative impacts of construction and development to surface water  
18 resources and, and are subject to review by the Watershed Protection Division of the DC EHA,  
19 FEMA, the US EPA, and the NPS.
- 20 • Appropriate BMPs for groundwater protection should be implemented during the construction  
21 and operation of the facility to protect groundwater quality, thereby indirectly protecting river  
22 water quality. Stormwater runoff from the site's impervious surfaces would be collected and  
23 treated on-site prior to discharge to the Anacostia River.
- 24 • Appropriate dewatering measures are recommended to provide additional ground water  
25 control (i.e. pump testing to investigate aquifer properties and constructing a continuous cutoff  
26 wall extending into the clay soils).
- 27 • Stormwater runoff from the site's impervious surfaces would be collected and treated on-site  
28 prior to discharge to the Anacostia River.

#### 29 **4.4.2.5 Alternative 3**

##### 30 Direct and Indirect Impacts

##### 31 *Surface Water*

32 Under Alternative 3, Stickfoot Creek would be daylighted and allowed to flow through the newly created  
33 community park in the western part of the site. This would restore one element of the site's historic  
34 hydrology, resulting in a long-term positive impact to water resources. Alternative 3 also proposes to

1 enhance the shoreline by building a promenade along the waterfront. This would provide structural  
2 integrity to the shore and minimize the potential for shoreline erosion. All construction work within the  
3 Anacostia River would require a permit from the USACE under Section 404 of the Clean Water Act.  
4 Compliance with the USACE permit requirements would ensure that direct and indirect impacts to the  
5 Anacostia River during construction would be minor. Long-term impacts would be minor to moderate  
6 and positive.

#### 7 *Water Quality*

8 Water quality can be impacted during the construction phase of a project. Soils may be left exposed and  
9 are susceptible to transport via wind or stormwater. As such, appropriate best management practices  
10 for soil erosion, sedimentation, chemical and fuel storage, stormwater runoff, and drainage systems  
11 would be implemented in accordance with federal and District requirements. The applicant would be  
12 required to obtain an NPDES permit and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior  
13 to the start of construction. Compliance with existing regulations would ensure that the short-term  
14 adverse impact to water quality would be minor.

15 After construction, increases in impervious surfaces would increase the amount of stormwater runoff  
16 generated at the site. This increase is anticipated, as the site would transition from a park comprised  
17 mostly of open space and passive recreation uses to a mixed-use development. This increased amount  
18 of runoff has the potential to carry soil, sediment, and contamination to the Anacostia River. Additional  
19 stormwater management features to trap and treat stormwater prior to it entering the Anacostia River  
20 have been proposed as part of the design of Alternative 3. Stormwater from developed areas would be  
21 collected and channeled to the stormwater management terraces, where water would be filtered prior  
22 to release into the wetlands or before percolating into the groundwater. These project features would  
23 have a positive impact on water quality by filtering and cleansing water before it is discharged or  
24 permitted to percolate into groundwater resources. Therefore, the long-term impact to water quality  
25 would be moderate and positive.

#### 26 *Wetlands*

27 Alternative 3 preserves the highest quality wetlands, Wetlands C and D, found on-site in place. These  
28 wetlands would be expanded at a ratio of 3:1 to replace the wetlands that would be lost to  
29 development. This would be done by allowing floodwaters to enter the site and provide sufficient  
30 hydrology. By removing some of the existing wetlands from the site, any contamination associated with  
31 the current wetlands would also be removed. A remediation strategy would be necessary as the  
32 wetlands are currently contaminated. However, there would be a short-term moderate impact to water  
33 resources associated with the removal of the wetlands. Man-made wetlands can provide the same  
34 ecological benefits as natural wetlands; however, their construction and location must be monitored  
35 closely and they take to fully establish. Similar to the natural wetlands, the man-made wetlands would  
36 still provide a habitat that is unique within the urban context and perform an ecological function by  
37 retaining and filtering stormwater. As such, the long-term impact to wetlands would be minor and  
38 positive under Alternative 3.

1 *Floodplains*

2 As previously discussed, portions of the Poplar Point site are located within the 100-year and 500-year  
3 floodplain. For the purposes of creating a suitable development area and maintaining proper flood  
4 controls, the Poplar Point site would be terraced under Alternative 3. The lowest terraced areas would  
5 be located in the central portion of the site and would be permitted to flood. The highest terraced areas  
6 would have a finished grade above 20 feet above msl and would be the areas where buildings would be  
7 sited. Due to the new elevations created on-site by the terraces, the highest terrace areas would be  
8 located outside of the 100-year floodplain. By creating different terrace levels throughout the Poplar  
9 Point site, the overall capacity of the floodplain would not be diminished and portions of the project site  
10 that would be developed for passive recreation uses would be located within the 100- and 500-year  
11 floodplains. No structures would be developed in these areas; therefore, the floodplain would not be  
12 impeded. Areas to be developed that are currently located within the 100- and 500-year floodplains  
13 must comply with all local and federal review and reporting measures for construction in the floodplain,  
14 including review and approval by the DCRA, the Watershed Division of the DC EHA, FEMA, and the US  
15 EPA. Additionally, all base floor elevations would comply with the current base flood elevation. Although  
16 Alternative 3 involves modifications to the floodplain, the long-term adverse impact would be minor  
17 because the overall capacity of the floodplain would be maintained.

18 *Groundwater Resources*

19 The location of the Poplar Point site next to the river has led to high groundwater levels in some areas.  
20 To reduce the severity of impacts to groundwater, excavation would be limited. As discussed above, the  
21 Poplar Point site would be terraced under Alternative 3. The elevations within the terraced development  
22 can be categorized into three groups. The lowest areas would be used for floodplain management and  
23 would be a maximum of 11 feet above msl, which is the Poplar Point site's current Base Flood Elevation.  
24 In between the low-lying floodplains and the developed areas would be upland terraces ranging in  
25 elevation from 13 feet to 20 feet above msl. These would be areas designated for stormwater  
26 management, providing a buffer between developed areas and the Poplar Point site's wetlands and the  
27 areas that would be allowed to flood. The two lower terraces would be retained for open space and  
28 recreation. The highest terraces would have a finished grade above 20 feet above msl and would be the  
29 areas where buildings would be sited. Sub-grade parking would be located on the highest terraces and  
30 would be accomplished by constructing parking levels at the existing grade and placing fill to create a  
31 new higher base floor elevation. This would alleviate the necessity to excavate while placing the parking  
32 above the floodplain elevation.

33 If groundwater is encountered a permit would be obtained from the US EPA and the District of Columbia  
34 Department of Public Works to allow wastewater discharge into the Anacostia River. Additionally, the  
35 DCRA, Water Quality Branch must certify all permits and requires the monitoring of contaminants during  
36 dewatering. This may be of particular concern for Poplar Point as some of the groundwater samples taken  
37 for the Site Characterization Report were contaminated. Appropriate measures would be taken to  
38 ensure that pollutant discharge is at or below accepted levels. Implementation of project design and

1 compliance with federal and District regulations would ensure that the short-term adverse impact to  
2 groundwater resources would be minor. Long-term impacts would be negligible.

### 3 Cumulative Impacts

4 Implementing Alternative 3 would increase the amount of impervious surface within the Anacostia  
5 Watershed. This, in turn, would increase the total amount of stormwater produced within the  
6 watershed. The change, when considered together with other projects within the study area, could  
7 contribute to a minor adverse cumulative impact to water resources. However, the change would be  
8 marginal as the watershed is approximately 176 square miles and the Poplar Point site is substantially  
9 less than 1 square mile. Any additional construction in the area would have to coordinate accurate totals  
10 of impervious surface to ensure that the river does not become overburdened and flooding is created in  
11 downstream areas. The cumulative impact to surface water resources would be minor.

12 Additional development activity in the vicinity of the Poplar Point site would have the potential to  
13 stormwater discharges into nearby surface water bodies, such as the Anacostia River. This has the  
14 potential to create adverse impacts to water quality in the area. As with Alternative 3, the ongoing and  
15 planned projects would be required to implement appropriate Best Management Practices for soil  
16 erosion, sedimentation, chemical and fuel storage, stormwater runoff, and drainage systems in  
17 accordance with federal and District requirements. Compliance with existing regulations would ensure  
18 that the cumulative impact to water quality would be minor.

19 The wetlands located on the Poplar Point site are specific to the boundaries of the site. Development of  
20 ongoing and planned projects in the vicinity of Poplar Point would not directly or indirectly impact  
21 wetlands located within the site. As such, no adverse cumulative impact would occur.

22 As with Alternative 3, development of the ongoing and planned projects could occur within the 100- or  
23 500-year floodplains. Areas to be developed that are currently located within the 100- and 500-year  
24 floodplains must comply with all local and federal review and reporting measures for construction in the  
25 floodplain, including review and approval by the DCRA, the Watershed Division of the DC EHA, FEMA,  
26 and the US EPA. As would occur under Alternative 3, the overall capacity of the floodplain must be  
27 retained. Compliance with existing regulation would ensure that the cumulative impact is minor.

28 Due to the location of the water table close to the ground surface in many parts of the District,  
29 Alternative 3 and the ongoing and planned projects have the potential to impact groundwater resources  
30 by direct contact and through an increase in impervious surfaces. As discussed above, any additional  
31 construction in the area would have to coordinate accurate totals of impervious surface to ensure that  
32 the river does not become overburdened and flooding is created in downstream areas. The cumulative  
33 impact to groundwater recharge would be minor. The ongoing and planned projects, like Alternative 3,  
34 would be required to comply with District guidelines should groundwater be encountered during  
35 construction. Compliance with existing regulations would ensure that the cumulative impact would be  
36 minor.

37

## 1 Conclusion

2 Alternative 3 would have long-term minor to moderate positive impacts to surface water resources. The  
3 daylighting of Stickfoot Creek would partially restore the historic hydrology of the site. Additionally, the  
4 construction of a promenade along the shore would reduce the likelihood of shoreline erosion.

5 Alternative 3 would increase the amount of stormwater generated on-site; however, the inclusion of  
6 stormwater management facilities as part of project design would provide a long-term moderate  
7 positive impact to surface water resources by reducing non-point source pollution. Short-term minor  
8 adverse effects could be generated during the construction period as stormwater has the potential to  
9 convey exposed soils to the Anacostia River. During construction a minor short-term adverse impact  
10 would occur if groundwater is encountered during site grading. All proper permitting for site-dewatering  
11 would be obtained and after construction long-term impacts are anticipated to be negligible.

12 Remediation of the wetland contamination along with expansion of the highest functioning wetlands  
13 would have a long-term minor positive impact. Replacement of these wetlands with man-made  
14 wetlands would provide the same ecological and stormwater benefits of the existing wetlands.  
15 However, there would be a moderate short-term adverse impact during the remediation process and  
16 associated with the removal of two wetlands.

## 17 Mitigation

18 The following mitigation measures are recommended to minimize Action Alternative 3's impact to water  
19 resources:

- 20 • Develop an erosion and sediment control plan, a stormwater management plan, and a  
21 floodplain management plan. The plans would include the elements from the preferred  
22 development plan and BMP measures that would reduce the risk of erosion and manage the  
23 quality of stormwater runoff to minimize the effects on the Anacostia River. These requirements  
24 are intended to minimize cumulative impacts of construction and development to surface water  
25 resources and, and are subject to review by the Watershed Protection Division of the DC EHA,  
26 FEMA, the US EPA, and NPS.
- 27 • Appropriate BMPs for groundwater protection should be implemented during the construction  
28 and operation of the facility to protect groundwater quality, thereby indirectly protecting river  
29 water quality. Stormwater runoff from the site's impervious surfaces would be collected and  
30 treated on-site prior to discharge to the Anacostia River.
- 31 • Appropriate dewatering measures are recommended to provide additional groundwater control  
32 (i.e. pump testing to investigate aquifer properties and constructing a continuous cutoff wall  
33 extending into the clay soils).
- 34 • Stormwater runoff from the site's impervious surfaces would be collected and treated on-site  
35 prior to discharge to the Anacostia River.

### 1 4.4.3 Vegetation and Wildlife Resources

#### 2 4.4.3.1 Methodology and Assumptions

3 The following describes the methodology and assumptions used in determining the impacts the action  
4 alternatives would have on the site's vegetation and wildlife. This section details the methods used for  
5 evaluation, the geographic area which encompasses these resources, and the thresholds used for  
6 determining the magnitude of the impacts. Site development has the potential to result in impacts to  
7 the site's vegetation and wildlife during construction and operation of the site.

#### 8 Analysis Methods

9 A general analysis to determine the impacts of the action alternatives was conducted for the site's  
10 vegetation and wildlife resources, through on-site investigation and review of existing literature.  
11 Literature included environmental reports and analyses conducted within the vicinity of the project site  
12 to gain an understanding of the site's context. Additionally, a partial species list for the site was obtained  
13 through the National Park Service.

#### 14 Assumptions

15 The geographic area used in the analysis to determine the impacts the action alternatives would have on  
16 vegetation and wildlife resources is limited to the area of disturbance on the Poplar Point site. It is  
17 assumed that no development activities are proposed outside of the site; therefore, any impacts to the  
18 site's vegetation would be localized. Impacts to wildlife were examined with a regional scope due to a  
19 potential loss of habitat.

#### 20 Impact Thresholds

21 To adequately define the magnitude of each impact on the site's vegetation and wildlife resources, the  
22 following thresholds were established. These thresholds describe the impacts of the proposed action  
23 relative to the site's existing conditions.

24 **Negligible:** Vegetation and wildlife resources would not be impacted or the impact would be below or at  
25 the lower levels of detection.

26 **Minor:** The alternative would result in a measurable or perceptible, small, localized change to a biotic  
27 community, wildlife species, or its habitat. The change would be of little consequence.

28 **Moderate:** The action would result in an impact to a biotic community, wildlife species, or its habitat  
29 that is measurable and of consequence, but remains localized.

30 **Major:** The action would result in a measurable change to a biotic community, wildlife species or its  
31 habitat. The change is large and/or widespread and could have serious consequences for the species or  
32 resource.

33

1 Duration

2 Short-term impacts include those that occur during the construction phases; long-term impacts include  
3 those that would persist after construction is complete.

4 **4.4.3.2 No Action Alternative**

5 Direct and Indirect Impacts

6 Under the No Action Alternative, no development would occur on-site. There would be no change to the  
7 current vegetative resources, whether terrestrial or aquatic. Currently, there is no submerged aquatic  
8 vegetation found in the Anacostia River near the project site. This condition would persist with the No  
9 Action Alternative because no remedial action is planned. The site's largest amount of terrestrial  
10 vegetation is found near the central wetlands. This vegetation, however, is comprised mostly of invasive  
11 species. This condition would also persist as the wetland area would remain fenced off from the public  
12 due to its contamination.

13 Aquatic wildlife conditions are also poor and would not change under the No Action Alternative. The  
14 aquatic wildlife near the site is limited in diversity and many individuals have developed major health  
15 problems. Local residents are urged to avoid eating fish from the river due to wildlife health concerns.  
16 Contamination on-site may have impacted the local terrestrial wildlife; however, this assumption has  
17 not been confirmed. It would be logical to assume some level of health problems would be present in  
18 the reptiles and amphibians that inhabit the wetland areas due to the known contaminants. It is  
19 anticipated that under the No Action Alternative, these issues would persist as there are no remediation  
20 efforts planned.

21 Cumulative Impacts

22 The No Action Alternative would result in negligible impacts to vegetation and wildlife. Other projects  
23 planned in the area that would result in the loss of habitat would force terrestrial wildlife to find new  
24 habitat. This may increase the number of species that utilize Poplar Point.

25 Conclusion

26 Under the No Action Alternative, there would be no direct impacts to either the aquatic or terrestrial  
27 vegetation or to the wildlife communities. The aquatic vegetation and wildlife conditions are currently  
28 so poor in the Anacostia River that a substantial remediation effort would be required. This remediation  
29 would occur over the course of many years and currently there are no remediation efforts planned for  
30 Poplar Point planned. Thus, the No Action Alternative would have a negligible impact on aquatic  
31 vegetation and wildlife.

32 The terrestrial vegetation on Poplar Point is characterized by a large amount of invasive species,  
33 specifically in the central wetland portion of the site. This condition would also persist as the wetland  
34 area would remain fenced off to the public due to contamination. There would be no loss of wildlife  
35 habitat under the No Action Alternative, thus negligible adverse impacts are anticipated.

### 1 **4.4.3.3 Alternative 1**

#### 2 Direct and Indirect Impacts

3 The aquatic vegetation and wildlife communities most associated with Poplar Point are found in the  
4 Anacostia River. These communities are suffering from poor health and low diversity. Currently there  
5 are no species of submerged aquatic vegetation near Poplar Point and the aquatic wildlife exhibit signs  
6 of health problems. The major source of this problem is low water quality, the result of pollution from  
7 non-point sources. In the case of the Anacostia River, the urban watershed has led to contaminated  
8 stormwater entering the Anacostia's tributaries and the river itself.

9 Alternative 1 would provide stormwater management facilities to aid in the retention and filtration of  
10 stormwater runoff generated by the developed areas. This has the potential to increase the health and  
11 diversity of the aquatic biota, through the introduction of clean water. One major concern is the wetland  
12 remediation strategy. Wetlands would provide stormwater filtration prior to the runoff entering the  
13 river; however, these wetlands are also contaminated. A remediation strategy must be developed for  
14 water quality, and subsequently aquatic vegetation and wildlife, to improve.

15 The wetland habitat located in the central part of Poplar Point is unusual given the site's urban context.  
16 Alternative 1 proposed to preserve all of the existing wetlands and, in essence, preserve this habitat.  
17 The vegetative species associated with the wetlands, however, are primarily invasive. Invasive species  
18 can dominate an ecosystem and eliminate any of the native species that were once there. Native species  
19 tend to be adapted to their environment and use resources accordingly. Invasive species provide a  
20 threat to an ecosystem due to their excessive resource consumption.

21 Outside of the wetland area, the majority of the habitat is upland and meadows, characterized by open  
22 fields and grasses. Some of these areas, specifically the area near the point and in the far southeastern  
23 corner, would be lost due to development. Part of the land transfer requires the retention of 70 acres of  
24 parkland, leaving half of the site undeveloped.

25 The terrestrial wildlife species that would be impacted the most are those that currently inhabit the  
26 upland meadows. A major component of the 70 acres of parkland under Alternative 1 would be the  
27 central wetland area; as a result, development would occur in the upland areas. Upland species would  
28 be forced to find new habitat. Similar habitat does, however, exist north of Poplar Point in Anacostia  
29 Park. Thus, long-term adverse impacts are anticipated to be minor.

#### 30 Cumulative Impacts

31 Alternative 1 would see the loss of upland meadow habitat, which would force some terrestrial wildlife  
32 off-site. This could yield an adverse impact when analyzed with projects within the vicinity. However,  
33 due to the ample amount of this type of habitat within proximity to Poplar Point, no major adverse  
34 impacts are anticipated.

35

## 1 Conclusion

2 The inclusion of stormwater management features throughout the site's design would have a positive  
3 impact on the Anacostia River's water quality over time. This improvement to water quality would  
4 enhance the current habitat afforded by the Anacostia River. This would yield long-term moderate  
5 positive impacts to the submerged aquatic vegetation and aquatic wildlife. The preservation and  
6 remediation of wetland habitat under Alternative 1 would have a long-term moderate positive impact to  
7 the site; however, moderate short-term adverse impacts may be experienced during the remediation.  
8 Due to the preservation of the wetlands, the majority of the 70 acre park would consist of wetland  
9 habitat under Alternative 1. This would result in a minor long-term impact to upland and meadow  
10 species that may be forced to find new habitat.

## 11 Mitigation

12 The following mitigation measures are recommended to minimize Alternative 1's impact to vegetation  
13 and wildlife resources:

- 14 • To maximize the habitat benefits, proposed plantings should include native vegetation that  
15 would survive well in urban settings, require low maintenance, and encourage native birds to  
16 remain in the area.

## 17 **4.4.3.4 Alternative 2**

### 18 Direct and Indirect Impacts

19 The aquatic vegetation and wildlife communities most associated with Poplar Point are found in the  
20 Anacostia River. These communities are suffering from poor health and low diversity. Currently there  
21 are no species of submerged aquatic vegetation near Poplar Point and the aquatic wildlife exhibit signs  
22 of health problems. The major source of this problem is low water quality, the result of pollution from  
23 non-point sources. The urban watershed has led to contaminated stormwater entering the Anacostia  
24 River's tributaries and the river itself.

25 Alternative 2 would provide stormwater management to aid in the retention and filtration of  
26 stormwater runoff generated by the developed areas. This retention and filtration has the potential to  
27 increase the health and diversity of the aquatic biota, through the introduction of clean water. The  
28 primary filtration would occur within the new man-made wetlands that are proposed under Alternative  
29 2 at the edge of the development and along the shoreline. It is anticipated that the man-made wetlands  
30 will function at the same level as the existing, natural wetlands and will not require remediation.

31 The wetland habitat located in the central part of Poplar Point is unusual given the site's urban context.  
32 Alternative 2 would remove all of the existing wetlands and create new ones along the shoreline and at  
33 the edges of the development. The vegetative species associated with the existing wetlands, however,  
34 are primarily invasive. Invasive species can dominate an ecosystem and eliminate many of the native  
35 species that were once there. Native species tend to be adapted to their environment and use resources  
36 accordingly. Invasive plants provide a threat to an ecosystem due to their excessive resource

1 consumption. Providing new, man-made wetlands would remove many of the invasive species found on-  
2 site, resulting in a moderate long-term positive impact to vegetation.

3 Outside of the wetland area, the majority of the habitat is upland and meadows, characterized by open  
4 fields and grasses. Under Alternative 2, a majority of these areas would be retained or converted to new  
5 wetland areas. The compact design also seeks to maximize open space and to provide contiguous  
6 habitat along the shoreline. Part of the land transfer requires maintaining 70 acres of parkland, meaning  
7 at least half of the site would be undeveloped.

8 The terrestrial wildlife species that may be impacted the most are those that currently inhabit the  
9 wetland community because the functional success of the man-made wetlands is unknown at this time.  
10 It is anticipated that these new wetlands would function at a similar level to the existing wetlands and  
11 would provide similar habitat. A major component to the 70 acres of park land under Alternative 2  
12 would be contiguous open space along the shoreline.

### 13 Cumulative Impacts

14 Alternative 2 would see the loss of natural wetland habitat, which would be offset by the creation of  
15 new wetlands. This may force some terrestrial wildlife off-site. This could yield an adverse impact after  
16 the implementation of other projects within the vicinity, and the impact is compounded by the lack of  
17 wetland habitat in the region.

### 18 Conclusion

19 The inclusion of stormwater management features throughout the site would have a positive impact on  
20 the Anacostia River's water quality over time. This improvement to water quality would enhance the  
21 current habitat afforded by the Anacostia River, yielding long-term moderate positive impacts to the  
22 submerged aquatic vegetation and aquatic wildlife. Due to the removal of the natural wetlands, the  
23 majority of the 70 acre park would consist of upland meadow under Alternative 2. This could result in a  
24 moderate long-term impact to terrestrial wetland species that would be forced to find new habitat,  
25 which is rare in the urban context.

### 26 Mitigation

27 The following mitigation measures are recommended to minimize Alternative 2's impact to vegetation  
28 and wildlife resources:

- 29 • To maximize the habitat benefits, proposed planting should include native vegetation that  
30 would survive well in urban settings, require low maintenance, and encourage native wildlife to  
31 remain in the area.

32

33

34

### 1 **4.4.3.5 Alternative 3**

#### 2 Direct and Indirect Impacts

3 The aquatic vegetation and wildlife communities most associated with Poplar Point are found in the  
4 Anacostia River. These communities are suffering from poor health and low diversity. Currently there  
5 are no species of submerged aquatic vegetation near Poplar Point and the aquatic wildlife exhibits signs  
6 of health problems. The major source of this problem is low water quality, the result of pollution from  
7 non-point sources. The urban watershed has led to contaminated stormwater entering the Anacostia's  
8 tributaries and the river itself.

9 Alternative 3 would provide stormwater management facilities to aid in the retention and filtration of  
10 stormwater runoff generated by the developed areas. This has the potential to increase the health and  
11 diversity of the aquatic biota, through introduction of clean water. The major contributor to the  
12 filtration would be the wetlands, which, under Alternative 3, would be a combination of preserved and  
13 man-made wetlands. It is anticipated that these man-made wetlands would function at the same level  
14 as natural wetlands. A remediation strategy must be developed for the existing wetlands so that water  
15 quality, and subsequently aquatic vegetation and wildlife, improve.

16 The wetland habitat located in the central part of Poplar Point is unusual given the site's urban context.  
17 Alternative 3 proposes to preserve the healthiest existing wetlands and preserve the best performing  
18 habitat. The vegetative species associated with the wetlands, however, are primarily invasive. Invasive  
19 species can dominate an ecosystem and eliminate many of the native species that were once there. For  
20 the man-made wetlands that are proposed as an extension of the preserved wetlands under Alternative  
21 3, the use of native vegetation is imperative. During the construction of the new wetlands, existing  
22 invasive species would be removed when practical.

23 Outside of the wetland area, the majority of the habitat is upland and meadows, characterized by open  
24 fields and grasses. Some of these areas, specifically the western half of the site, would be lost due to  
25 development. Part of the land transfer requires the maintenance of 70 acres of park land; thus at least  
26 half of the site would be undeveloped.

27 Terrestrial wildlife species communities that inhabit the site would be impacted. Half of the current  
28 wetland habitat would be removed under Alternative 3 and all of the meadows located in the eastern  
29 half of the site would be removed. A major portion of the 70 acres of park land under Alternative 3  
30 would be focused on the western side. As a result, development would occur in both the wetland and  
31 upland areas. The wildlife species in these areas would be forced to find new habitat. Similar upland  
32 habitat does, however, exist north of Poplar Point in Anacostia Park.

#### 33 Cumulative Impacts

34 Alternative 3 would see the loss of both upland meadow habitat and wetland habitat, which would force  
35 some terrestrial wildlife off-site. This could yield an adverse impact after the implementation of other  
36 projects within the vicinity. However, due to the ample amount of upland habitat near Poplar Point, no

1 major adverse impacts are anticipated. Species seeking wetland habitat may be forced out if the man-  
2 made wetlands do not function properly. This may yield a long-term moderate adverse impact when  
3 considered with other projects which do not likely contain wetlands.

#### 4 Conclusion

5 The inclusion of stormwater management features throughout the site would have a positive impact on  
6 the Anacostia River's water quality over time. This improvement to water quality would improve the  
7 current habitat afforded by the Anacostia River, yielding long-term moderate positive impacts to the  
8 submerged aquatic vegetation and aquatic wildlife. The expansion of the highest quality wetlands and  
9 remediation of the contaminated wetland habitat under Alternative 3 would have a long-term positive  
10 impact to the site. Moderate short-term positive impacts could occur during the remediation and  
11 construction processes. Due to the preservation of some of the wetlands, the 70 acre park would consist  
12 of both wetland and upland habitat under Alternative 3. This would yield a moderate long-term adverse  
13 impact to upland and meadow species, and a moderate long-term adverse impact to wetland species  
14 that may be forced to find new habitat.

#### 15 Mitigation

16 The following mitigation measures are recommended to minimize Alternative 3's impact to Vegetation  
17 and Wildlife Resources:

- 18 • To maximize the habitat benefits, proposed plantings should include native vegetation that  
19 would survive well in urban settings, require low maintenance, and encourage native wildlife to  
20 remain in the area.

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## 1 4.5 Urban Systems

### 2 4.5.1 Water Supply

#### 3 4.5.1.1 Methodology and Assumptions

4 The following describes the methodology and assumptions used in determining the impacts the  
5 proposed action would have on potable water supply. This section details the methods used for  
6 evaluation, the geographic area that encompasses these resources, and the thresholds used for  
7 determining the magnitude of the impacts.

#### 8 Analysis Methods

9 A general analysis to determine the impacts of the proposed action was conducted through a review of  
10 existing literature and contacting the utility service providers. Literature included environmental reports  
11 and analyses conducted within the vicinity of the Poplar Point site to gain an understanding of the site's  
12 context, and review of the utility service providers' websites and other public data sources.

#### 13 Assumptions

14 The geographic area used in the analysis to determine the impacts the proposed action would have on  
15 water supply includes the project site, as well as the larger service area.

#### 16 Impact Thresholds

17 To adequately define the magnitude of impact on water supply, the following thresholds were  
18 established. These thresholds describe the impacts of the proposed action relative to the site's existing  
19 conditions.

20 **Negligible:** Impacts would be imperceptible or not detectable. There would be no increase in demand  
21 for potable water supply or change to the existing infrastructure required to accommodate the action.  
22 Mitigation would not be required.

23 **Minor:** Impacts would be slightly perceptible and there would be a small increase in demand compared  
24 to existing conditions. Minor adverse impacts would not require additional supply or changes to the  
25 existing utility infrastructure for potable water service. The increase in demand would be  
26 accommodated by existing water sources. Mitigation would not be required.

27 **Moderate:** Impacts would be apparent and would involve an increase in demand compared to existing  
28 conditions. Moderate adverse impacts would result in the need for changes to existing infrastructure to  
29 accommodate the increase in demand. Mitigation measures would be required.

30 **Major:** Major adverse impacts would pose a substantial risk of degrading the overall stability of the  
31 area's water supply and water service infrastructure. New infrastructure would be required to  
32 accommodate demand and the increased demand for potable water could not be accommodated by the

1 service provider. New potable water sources would be required to accommodate the action. Affects  
2 could go beyond the point of impacts.

### 3 Duration

4 Short-term impacts include those that occur during the development phases; long-term impacts include  
5 those that would persist after the development phase.

## 6 **4.5.1.2 No Action Alternative**

### 7 Direct and Indirect Impacts

8 Under the No Action Alternative, there would be no changes to the project site. As such, there would be  
9 no modifications to Poplar Point site and no new uses would be located within the site boundaries. The  
10 entirety of Poplar Point would continue to remain under the control of the NPS. The NPS and the USPP  
11 would remain in their current facilities.

12 Because no new uses would be developed onsite, there would be no increase in demand for water  
13 supply. Further, construction of new water service infrastructure would not be required because there  
14 would be no increase in demand. Short and long-term direct and indirect impacts to water service would  
15 be negligible.

### 16 Cumulative Impacts

17 The No Action Alternative, when considered together with ongoing or planned projects in the area,  
18 would not contribute to a cumulative impact to water supply or water service infrastructure. No changes  
19 to the Poplar Point site would occur as part of the No Action Alternative. As such, there would be no  
20 increase in demand for water at the Poplar Point site. Therefore, the No Action Alternative would not  
21 contribute to a cumulative increase in demand. The cumulative impact would be negligible.

### 22 Conclusion

23 Implementation of the No Action Alternative would have a negligible impact on water supply. No  
24 changes at the site would occur under the No Action Alternative. Therefore, there would be no increase  
25 in demand for water supply and no extension of water supply infrastructure would be required.

## 26 **4.5.1.3 Alternative 1**

### 27 Direct and Indirect Impacts

28 Alternative 1 proposes to develop approximately 40 acres of the site with approximately 6.5 million gsf  
29 of retail, residential, office, and other civic/cultural uses. The remainder of the site would be developed  
30 with park and open space. The new development at the site as part of Alternative 1 would substantially  
31 increase the demand for potable water supply compared to the existing uses. It is expected that demand  
32 would increase by approximately 1.2 mgd per day without accounting for any sustainability initiatives or  
33 other water efficiency measures. It should be noted that under Alternative1, the proposed new

1 development would incorporate sustainable practices where feasible. With application of standard  
2 water conservation measures, including low-flow fixtures in kitchens and bathrooms, Alternative 1 could  
3 obtain in the range of a 20% to 30% reduction in water use that has not been incorporated into the  
4 projected water demand. WASA maintains adequate water supply to meet the system demands for  
5 potable water service and fire-fighting requirements. Further, an authorization report would be required  
6 from WASA to confirm that adequate water supplies are available before development of the project  
7 would commence. As such, there could be adequate water supply for WASA's service area during  
8 operation of Alternative 1.

9 The increase in demand for potable water supply, as well as the location of development under  
10 Alternative 1 would necessitate the extension of water infrastructure to and within the Poplar Point site.  
11 There is currently limited water supply infrastructure located within the site. The only water service in  
12 the central part of the site is provided by an 8-inch cast/ductile iron line dating from approximately  
13 1953, which crosses under I-295 at Chicago Street SE, to serve the complex of NPS buildings in that  
14 section of the site. A new loop system and tunnel would need to be constructed beneath I-295 to bring  
15 potable water to the site at a volume that would meet water pressure requirements for fire-fighting  
16 purposes and commercial and residential service. A portion of the existing 36-inch water line adjacent to  
17 the 11<sup>th</sup> Street Bridges would need to be relocated. In addition, smaller lines would need to be  
18 constructed throughout the two development nodes as part of construction of Alternative 1 to service  
19 these areas. Construction of new water infrastructure has been analyzed as part of the build-out of  
20 Alternative 1 for all resource areas. The direct long-term impact to water supply would be moderate.  
21 However, indirect impacts would occur when new connections would be made to existing water mains.  
22 Temporary service interruptions could occur during the connection of new service. The short-term  
23 indirect impact would be adverse.

#### 24 Cumulative Impacts

25 Implementation of Alternative 1 would increase the demand for potable water service. This, in turn,  
26 would increase the total demand in WASA's service area. Past, present and future development projects  
27 within WASA's service area would place additional demands on water supply and water pressure. This  
28 change, when considered together with other projects within the study area, would contribute to a  
29 moderate adverse cumulative impact to water supply.

#### 30 Conclusion

31 Alternative 1 would substantially increase demand for potable water at the Poplar Point site compared  
32 to existing conditions. As such, it would have long-term moderate operational impact to water supply.  
33 Short-term temporary impacts would occur during the connection of new water supply infrastructure at  
34 the site to WASA's system if service breaks are required. Further, past, present and future development  
35 projects would increase total demand within WASA's service area. The long-term cumulative impact  
36 would be moderate.

37

## 1 Mitigation

2 The following mitigation measures are recommended to minimize Action Alternative 1's impact to water  
3 supply:

- 4 • Obtain Leadership in Energy Efficiency and Design (LEED) certification.
- 5 • Use native and drought-tolerant plants in landscaping.
- 6 • Reuse graywater for irrigation.
- 7 • Install low-flow shower heads and water efficient faucets and toilets in all structures.

### 8 **4.5.1.4 Alternative 2**

#### 9 Direct and Indirect Impacts

10 Alternative 2 proposes to develop approximately 40 acres of the site with approximately 6.1 million gsf  
11 of retail, residential, office, and other civic/cultural uses. The remainder of the site would be developed  
12 with park and open space. The new development at the site as part of Alternative 2 would substantially  
13 increase the demand for potable water supply compared to the existing uses. It is expected that demand  
14 would increase by approximately 1.2 mgd per day without accounting for any sustainability initiatives or  
15 other water efficiency measures. It should be noted that under Alternative 2, the proposed new  
16 development would incorporate sustainable practices where feasible. With application of standard  
17 water conservation measures, including low-flow fixtures in kitchens and bathrooms, Alternative could  
18 obtain in the range of a 20% to 30% reduction in water use that has not been incorporated into the  
19 projected water demand. WASA maintains adequate water supply to meet the system demands for  
20 potable water service and fire-fighting requirements. Further, an authorization report would be required  
21 from WASA to confirm that adequate water supplies are available before development of the project  
22 could commence. As such, there would be adequate water supply for WASA's service area during  
23 operation of Alternative 2.

24 The increase in demand for potable water supply, as well as the location of development under  
25 Alternative 2 would necessitate the extension of water infrastructure to and within the Poplar Point site.  
26 Alternative 2 proposes to cluster new development in the central part of the site near the Metro station.  
27 However, there is currently limited water supply infrastructure located within the site. The only water  
28 service in the central part of the site is provided by an 8-inch cast/ductile iron line dating from  
29 approximately 1953, which crosses under I-295 at Chicago Street SE, to serve the complex of NPS  
30 buildings in that section of the site. A new loop system and tunnel would need to be constructed  
31 beneath I-295 to bring potable water to the site at a volume that would meet water pressure  
32 requirements for fire-fighting purposes and commercial and residential service. Construction of new  
33 water infrastructure has been analyzed as part of the build-out of Alternative 2 for all resource areas.  
34 The direct long-term impact to water supply would be moderate. However, temporary indirect impacts  
35 would occur when new connections would be made to existing water mains. Temporary service  
36 interruptions could occur during the connection of new service. The short-term indirect impact would be  
37 adverse.

## 1 Cumulative Impacts

2 Implementation of Alternative 2 would increase the demand for potable water service. This, in turn,  
3 would increase the total demand in WASA's service area. Past, present and future development projects  
4 within WASA's service area would place additional demands on water supply and water pressure. This  
5 change, when considered together with other projects within the study area, would contribute to a  
6 moderate adverse cumulative impact to water supply.

## 7 Conclusion

8 Alternative 2 would substantially increase demand for potable water at the Poplar Point site compared  
9 to existing conditions. As such, it would have long-term moderate operational impact to waters supply.  
10 Short-term temporary impacts would occur during the connection of new water supply infrastructure at  
11 the site to WASA's system if service breaks are required. Further, past, present and future development  
12 projects would increase total demand within WASA's service area. The long-term cumulative impact  
13 would be moderate.

## 14 Mitigation

15 The following mitigation measures are recommended to minimize Alternative 2's impact to water  
16 supply:

- 17 • Obtain Leadership in Energy Efficiency and Design (LEED) certification.
- 18 • Use native and drought-tolerant plants in landscaping.
- 19 • Reuse graywater for irrigation.
- 20 • Install low-flow shower heads and water efficient faucets and toilets in all structures.

## 21 **4.5.1.5 Alternative 3**

### 22 Direct and Indirect Impacts

23 Alternative 3 proposes to develop approximately 40 acres of the site with approximately 6.1 million gsf  
24 of retail, residential, office, and other civic/cultural uses. The remainder of the site would be developed  
25 with park and open space. The new development at the site as part of Alternative 3 would substantially  
26 increase the demand for potable water supply compared to the existing uses. It is expected that demand  
27 would increase by approximately 1.2 mgd per day without accounting for any sustainability initiatives or  
28 other water efficiency measures. It should be noted that under Alternative 3, the proposed new  
29 development would incorporate sustainable practices where feasible. With application of standard  
30 water conservation measures, including low-flow fixtures in kitchens and bathrooms, Alternative could  
31 obtain in the range of a 20% to 30% reduction in water use that has not been incorporated into the  
32 projected water demand. WASA maintains adequate water supply to meet the system demands for  
33 potable water service and fire-fighting requirements. Further, an authorization report would be required  
34 from WASA to confirm that adequate water supplies are available before development of the project  
35 could commence. As such, there would be adequate water supply for WASA's service area during  
36 operation of Alternative 3.

1 The increase in demand for potable water supply, as well as the location of development under  
2 Alternative 3 would necessitate the extension of water infrastructure to and within the Poplar Point site.  
3 Alternative 3 proposes to cluster new development in the eastern portion of the site near Good Hope  
4 Road SE. However, there is currently limited water supply infrastructure located within the site. The only  
5 water service in the central part of the site is provided by an 8-inch cast/ductile iron line dating from  
6 approximately 1953, which crosses under I-295 at Chicago Street SE, to serve the complex of NPS  
7 buildings in that section of the site. A new loop system and tunnel would need to be constructed  
8 beneath I-295 to bring potable water to the site at a volume that would meet water pressure  
9 requirements for fire-fighting purposes and commercial and residential service. In addition, the existing  
10 36-inch potable water line located the eastern portion of the site would need to be relocated and new  
11 smaller water mains would need to be constructed to service the proposed development. Construction  
12 of new water infrastructure has been analyzed as part of the build-out of Alternative 3 for all resource  
13 areas. The direct long-term impact to water supply would be moderate. However, temporary indirect  
14 impacts would occur when new connections would be made to existing water mains. Temporary service  
15 interruptions could occur during the connection of new service. The short-term indirect impact would be  
16 adverse.

#### 17 Cumulative Impacts

18 Implementation of Alternative 3 would increase the demand for potable water service. This, in turn,  
19 would increase the total demand in WASA's service area. Past, present and future development projects  
20 within WASA's service area would place additional demands on water supply and water pressure. This  
21 change, when considered together with other projects within the study area, would contribute to a  
22 moderate adverse cumulative impact to water supply.

#### 23 Conclusion

24 Alternative 3 would substantially increase demand for potable water at the Poplar Point site compared  
25 to existing conditions. As such, it would have long-term moderate operational impact to waters supply.  
26 Short-term temporary impacts would occur during the connection of new water supply infrastructure at  
27 the site to WASA's system if service breaks are required. Further, past, present and future development  
28 projects would increase total demand within WASA's service area. The long-term cumulative impact  
29 would be moderate.

#### 30 Mitigation

31 The following mitigation measures are recommended to minimize Action Alternative 3's impact to water  
32 supply:

- 33 • Obtain Leadership in Energy Efficiency and Design (LEED) certification at a minimum of Silver
- 34 Level for residential uses and Gold level for office uses.
- 35 • Use native and drought-tolerant plants in landscaping, to the extent practicable
- 36 • Reuse graywater for irrigation in park areas.
- 37 • Install low-flow shower heads and water efficient faucets and toilets in all structures

## 1 4.5.2 Sanitary Sewer and Stormwater Infrastructure

### 2 4.5.2.1 Methodology and Assumptions

3 The following describes the methodology and assumptions used in determining the impacts the  
4 proposed action would have on sanitary sewer treatment capacity and infrastructure, and stormwater  
5 infrastructure. This section details the methods used for evaluation, the geographic area that  
6 encompasses these resources, and the thresholds used for determining the magnitude of the impacts.

#### 7 Analysis Methods

8 A general analysis to determine the impacts of the proposed action was conducted through a review of  
9 existing literature and contacting the utility service providers. Literature included environmental reports  
10 and analyses conducted within the vicinity of the Poplar Point site to gain an understanding of the site's  
11 context, and review of the utility service providers' websites and other public data sources.

#### 12 Assumptions

13 The geographic area used in the analysis to determine the impacts the proposed action would have on  
14 sanitary sewer and stormwater infrastructure include the project site, as well as the larger service.

#### 15 Impact Thresholds

16 To adequately define the magnitude of impact on sanitary sewer and stormwater infrastructure, the  
17 following thresholds were established. These thresholds describe the impacts of the proposed action  
18 relative to the site's existing conditions.

19 **Negligible:** Impacts would be imperceptible or not detectable. There would be no increase in demand  
20 for sanitary sewer service, no change in the amount of stormwater generated, and no change to the  
21 existing infrastructure required to accommodate the action. Mitigation would not be required.

22 **Minor:** Impacts would be slightly perceptible and there would be a small increase in demand compared  
23 to existing conditions. Minor adverse impacts would not require additional capacity or changes to the  
24 existing utility infrastructure for potable water service.

25 **Moderate:** Impacts would be apparent and would involve an increase in demand compared to existing  
26 conditions. Moderate adverse impacts would result in the need for changes to existing infrastructure to  
27 accommodate the increase in demand. Mitigation measures would be required.

28 **Major:** Major adverse impacts would pose a substantial risk of degrading the overall stability of the  
29 area's sanitary sewer and stormwater infrastructure. New infrastructure would be required to  
30 accommodate demand and the increased demand for sanitary sewer and stormwater treatment could  
31 not be accommodated by the service provider. Affects could go beyond the point of impacts.

32

33

1 Duration

2 Short-term impacts include those that occur during the development phases; long-term impacts include  
3 those that would persist after the development phase.

4 **4.5.2.2 No Action Alternative**

5 Direct and Indirect Impacts

6 Under the No Action Alternative, there would be no changes to the project site. The entirety of Poplar  
7 Point would continue to remain under the control of the NPS. The NPS and the USPP would remain in  
8 their current facilities.

9 Because no new uses would be developed onsite, there would be no increase in demand for sanitary  
10 sewer service or upgraded sanitary sewer infrastructure. The amount of impervious surfaces located on-  
11 site would not change. Thus, there would be no increase in demand for stormwater infrastructure.  
12 Short and long-term direct and indirect impacts to sanitary sewer service and stormwater infrastructure  
13 would be negligible.

14 Cumulative Impacts

15 The No Action Alternative, when considered together with ongoing or planned projects in the area,  
16 would not contribute to a cumulative impact to sanitary sewer service or stormwater infrastructure. No  
17 changes to the Poplar Point site would occur as part of the No Action Alternative. As such, there would  
18 be no increase in demand for sanitary sewer service at the Poplar Point site. Further, there would be no  
19 increase in impervious surface area at the site that would contribute to cumulative impacts to  
20 stormwater infrastructure. The cumulative impacts would be negligible.

21 Conclusion

22 Implementation of the No Action Alternative would have a negligible impact on sanitary sewer service  
23 and stormwater infrastructure. No changes at the site would occur under the No Action Alternative.  
24 Therefore, there would be no increase in demand and no extension of infrastructure would be required.

25 **4.5.2.3 Alternative 1**

26 Direct and Indirect Impacts

27 As discussed above, water consumption at the site would be expected to increase by approximately 1.2  
28 mgd per day. The resultant amount of wastewater ultimately discharged into the sanitary sewer system  
29 would be expected to increase by approximately 1.05 mgd per day. This would increase demand at  
30 WASA's Blue Plains WTP. The capacity of Blue Plains WTP exceeds the current demand for wastewater  
31 treatment. As such, there would be adequate capacity for sanitary sewer treatment during operation of  
32 Alternative 1. However, it should be noted that under Alternative 1, the proposed new development  
33 would incorporate sustainable practices where feasible. With application of standard water  
34 conservation measures, such as low-flow fixtures in kitchens and bathrooms, Alternative 1 could obtain

1 in the range of a 20% to 30% reduction in wastewater generation that has not been incorporated into  
2 the projected increase in demand for sanitary sewer service.

3 Under Alternative 1, the existing twin 9-foot and 8-inch by 8-foot and 4-inch interceptor sewers would  
4 be retained in their existing locations. In addition, the 108-inch diameter sanitary Anacostia Force Main  
5 that traverses the site along its northern and western sides parallel to the shoreline would not need to  
6 be relocated as part of Alternative 1. However, repairs would be required to some portions of this force  
7 main in the area of the Point node. Further, the site currently contains sanitary sewer service  
8 connections in the central portion of the site where the NPS and USPP facilities are currently located.  
9 New sewer infrastructure would be required within the two development nodes proposed as part of  
10 Alternative 1. Construction of new sewer infrastructure has been analyzed as part of the build-out of  
11 Alternative 1 for all resource areas. Installation of new sewer infrastructure has been incorporated into  
12 the design of Alternative 1.

13 The long-term direct impact to sanitary sewer service would be moderate. In addition, indirect impacts  
14 would occur when new connections would be made to existing sewer infrastructure. Temporary service  
15 interruptions could occur during the connection of new service. The short-term indirect impact would be  
16 adverse.

17 The increased development on the site that would occur as part of Alternative 1 would increase the  
18 amount of impervious surfaces located at Poplar Point. Additional stormwater would be generated  
19 under this alternative compared to existing conditions. As discussed in Section 4.4.2 Water Resources,  
20 sustainable features have been incorporated into the design of Alternative 1 to minimize stormwater  
21 discharge. This includes designing the release of 2-year post development stormwater flows at the same  
22 level as existing 2-year storm water flows and retaining and treating the first inch of rainfall during a  
23 storm event. In addition, water quality BMPs would be implemented for all pervious surfaces. The total  
24 demand for stormwater treatment and discharge would not be expected to increase during long-term  
25 operation of Alternative 1. The long-term impact would be minor.

26 As a result of the extension of development to the Point and the eastern portion of the site, new  
27 stormwater infrastructure would be added throughout the site. In addition, a portion of the Stickfoot  
28 Branch storm drain in the central portion of the site would need to be relocated, as well as a length of  
29 the Chicago Street storm drain. Construction of new stormwater infrastructure has been analyzed as  
30 part of the build-out of Alternative 1 for all resource areas. Installation of new stormwater infrastructure  
31 has been incorporated into design of Alternative 1. The impact to stormwater infrastructure would be  
32 minor.

### 33 Cumulative Impacts

34 Implementation of Alternative 1 would increase the demand for sanitary sewer treatment. This, in turn,  
35 would increase the total demand in WASA's service area. Past, present and future development projects  
36 within WASA's service area would place additional demands on the Blue Plains WTP. This change, when  
37 considered together with other projects within the study area, could contribute to a moderate adverse  
38 cumulative impact to sanitary sewer service.

## 1 Conclusion

2 Alternative 1 would substantially increase the amount of wastewater generated at the Poplar Point site  
3 compared to existing conditions. As such, it would have long-term moderate operational impact to  
4 sanitary sewer service. Short-term temporary impacts would occur during the connection of new sewer  
5 infrastructure at the site to WASA's system if service breaks are required. Further, past, present and  
6 future development projects would increase total demand within WASA's service area for sanitary sewer  
7 service. The cumulative impact would be moderate.

## 8 Mitigation

9 The following mitigation measures are recommended to minimize Alternative 1's impact to sanitary  
10 sewer and stormwater infrastructure:

- 11 • Rain barrels shall be installed on all buildings or underground cisterns shall be used to collect  
12 stormwater runoff for irrigation purposes.
- 13 • Occupancy sensors shall be installed in all non-residential restroom fixtures.
- 14 • Permeable pavers and other porous paving materials shall be used to the extent practicable.
- 15 • Graywater systems shall be installed for urinals and water closets.

## 16 **4.5.2.4 Alternative 2**

### 17 Direct and Indirect Impacts

18 As discussed above, water consumption at the site would be expected to increase by approximately 1.2  
19 mgd per day. The resultant amount of wastewater ultimately discharged into the sanitary sewer system  
20 would be expected to increase by approximately 1.05 mgd per day. This would increase demand at  
21 WASA's Blue Plains WTP. The capacity of Blue Plains WTP exceeds the current demand for wastewater  
22 treatment. As such, there would be adequate capacity for sanitary sewer treatment during operation of  
23 Alternative 2. However, it should be noted that under Alternative 2, the proposed new development  
24 would incorporate sustainable practices where feasible. With application of standard water  
25 conservation measures, such as low-flow fixtures in kitchens and bathrooms, Alternative 2 could obtain  
26 in the range of a 20% to 30% reduction in wastewater generation that has not been incorporated into  
27 the projected increase in demand for sanitary sewer service.

28 Under Alternative 2, the existing twin 9-foot and 8-inch by 8-foot and 4-inch interceptor sewers would  
29 be retained in their existing locations. In addition, the 108-inch diameter sanitary Anacostia Force Main  
30 that traverses the site along its northern and western sides parallel to the shoreline would not need to  
31 be relocated as part of Alternative 2. Some new sanitary sewer service connections would be required in  
32 the central portion of the site where development is concentrated under Alternative 2. Construction of  
33 new sewer infrastructure has been analyzed as part of the build-out of Alternative 2 for all resource  
34 areas. Installation of new sewer infrastructure has been incorporated into the design of Alternative 2.

35 The long-term direct impact to sanitary sewer service would be moderate. In addition, indirect impacts  
36 would occur when new connections would be made to existing sewer infrastructure. Temporary service

1 interruptions could occur during the connection of new service. The short-term indirect impact would be  
2 adverse.

3 The increased development on the site that would occur as part of Alternative 2 would increase the  
4 amount of impervious surfaces located at Poplar Point. Additional stormwater would be generated  
5 under this alternative compared to existing conditions. As discussed in Section 4.4.2 Water Resources,  
6 sustainable features have been incorporated into the design of Alternative 2 to minimize stormwater  
7 discharge. This includes designing the release of 2-year post development stormwater flows at the same  
8 level as existing 2-year storm water flows and retaining and treating the first inch of rainfall during a  
9 storm event. In addition, water quality BMPs would be implemented for all pervious surfaces. The total  
10 demand for stormwater treatment and discharge would not be expected to increase during long-term  
11 operation of Alternative 2. The long-term impact would be minor.

12 As a result of concentration of development in the central portion of the site, new stormwater  
13 infrastructure would be added. In addition, a portion of the Stickfoot Branch storm drain in the central  
14 portion of the site would need to be relocated, as well as a length of the Chicago Street storm drain.  
15 Construction of new stormwater infrastructure has been analyzed as part of the buildout of Alternative  
16 2 for all resource areas. Installation of new stormwater infrastructure has been incorporated into design  
17 of Alternative 2. The impact to stormwater infrastructure would be minor.

#### 18 Cumulative Impacts

19 Implementation of Alternative 2 would increase the demand for sanitary sewer treatment. This, in turn,  
20 would increase the total demand in WASA's service area. Past, present and future development projects  
21 within WASA's service area would place additional demands on the Blue Plains WTP. This change, when  
22 considered together with other projects within the study area, could contribute to a moderate adverse  
23 cumulative impact to sanitary sewer service.

#### 24 Conclusion

25 Alternative 2 would substantially increase the amount of wastewater generated at the Poplar Point site  
26 compared to existing conditions. As such, it would have long-term moderate operational impact to  
27 sanitary sewer service. Short-term temporary impacts would occur during the connection of new sewer  
28 infrastructure at the site to WASA's system if service breaks are required. Further, past, present and  
29 future development projects would increase total demand within WASA's service area for sanitary  
30 sewer service. The cumulative impact would be moderate.

#### 31 Mitigation

32 The following mitigation measures are recommended to minimize Alternative 2's impact to sanitary  
33 sewer and stormwater infrastructure:

- 34 • Rain barrels shall be installed on all buildings or underground cisterns shall be used to collect  
35 stormwater runoff for irrigation purposes.
- 36 • Occupancy sensors shall be installed in all non-residential restroom fixtures.

- 1 • Permeable pavers and other porous paving materials shall be used to the extent practicable.
- 2 • Graywater systems shall be installed for urinals and water closets.

### 3 **4.5.2.5 Alternative 3**

#### 4 Direct and Indirect Impacts

5 As discussed above, water consumption at the site would be expected to increase by approximately 1.2  
6 mgd per day. The resultant amount of wastewater ultimately discharged into the sanitary sewer system  
7 would be expected to increase by approximately 1.08 mgd per day. This would increase demand at  
8 WASA's Blue Plains WTP. The capacity of Blue Plains WTP exceeds the current demand for wastewater  
9 treatment. As such, there would be adequate capacity for sanitary sewer treatment during operation of  
10 Alternative 3. However, it should be noted that under Alternative 3, the proposed new development  
11 would incorporate sustainable practices where feasible. With application of standard water  
12 conservation measures, such as low-flow fixtures in kitchens and bathrooms, Alternative 3 could obtain  
13 in the range of a 20% to 30% reduction in wastewater generation that has not been incorporated into  
14 the projected increase in demand for sanitary sewer service.

15 Under Alternative 3, the existing twin 9-foot and 8-inch by 8-foot and 4-inch interceptor sewers would  
16 be retained in their existing locations. In addition, the 108-inch diameter sanitary Anacostia Force Main  
17 that traverses the site along its northern and western sides parallel to the shoreline would not need to  
18 be relocated as part of Alternative 3. Some new sanitary sewer service connections would be required in  
19 the eastern portion of the site where development is concentrated under Alternative 3. Construction of  
20 new sewer infrastructure has been analyzed as part of the build-out of Alternative 3 for all resource  
21 areas. Installation of new sewer infrastructure has been incorporated into the design of Alternative 3.

22 The long-term direct impact to sanitary sewer service would be moderate. In addition, indirect impacts  
23 would occur when new connections would be made to existing sewer infrastructure. Temporary service  
24 interruptions could occur during the connection of new service. The short-term indirect impact would be  
25 adverse.

26 The increased development on the site that would occur as part of Alternative 3 would increase the  
27 amount of impervious surfaces located at Poplar Point. Additional stormwater would be generated  
28 under this alternative compared to existing conditions. As discussed in Section 4.4.2 Water Resources,  
29 sustainable features have been incorporated into the design of Alternative 3 to minimize stormwater  
30 discharge. This includes designing the release of 2-year post development stormwater flows at the same  
31 level as existing 2-year storm water flows and retaining and treating the first inch of rainfall during a  
32 storm event. In addition, water quality BMPs would be implemented for all pervious surfaces. The total  
33 demand for stormwater treatment and discharge would not be expected to increase during long-term  
34 operation of Alternative 3. The long-term impact would be minor.

35 As a result of concentration of development in the eastern portion of the site, new stormwater  
36 infrastructure would be added. In addition, the entire length of the Stickfoot Branch storm drain in the  
37 central portion of the site would need to be relocated, as well as the entire length of the Chicago Street

1 storm drain located along the southern boundary of the site. Construction of new stormwater  
2 infrastructure has been analyzed as part of the build-out of Alternative 3 for all resource areas.  
3 Installation of new stormwater infrastructure has been incorporated into design of Alternative 3. The  
4 impact to stormwater infrastructure would be minor.

#### 5 Cumulative Impacts

6 Implementation of Alternative 3 would increase the demand for sanitary sewer treatment. This, in turn,  
7 would increase the total demand in WASA's service area. Past, present and future development projects  
8 within WASA's service area would place additional demands on the Blue Plains WTP. This change, when  
9 considered together with other projects within the study area, could contribute to a moderate adverse  
10 cumulative impact to sanitary sewer service.

#### 11 Conclusion

12 Alternative 3 would substantially increase the amount of wastewater generated at the Poplar Point site  
13 compared to existing conditions. As such, it would have long-term moderate operational impact to  
14 sanitary sewer service. Short-term temporary impacts would occur during the connection of new sewer  
15 infrastructure at the site to WASA's system if service breaks are required. Further, past, present and  
16 future development projects would increase total demand within WASA's service area for sanitary  
17 sewer service. The cumulative impact would be moderate.

#### 18 Mitigation

19 The following mitigation measures are recommended to minimize Alternative 3's impact to sanitary  
20 sewer and stormwater infrastructure:

- 21 • Rain barrels shall be installed on all buildings or underground cisterns shall be used to collect  
22 stormwater runoff for irrigation purposes.
- 23 • Occupancy sensors shall be installed in all non-residential restroom fixtures.
- 24 • Permeable pavers and other porous paving materials shall be used to the extent practicable.
- 25 • Graywater systems shall be installed for urinals and water closets.

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### 1 4.5.3 Solid Waste Disposal

#### 2 4.5.3.1 Methodology and Assumptions

3 The following describes the methodology and assumptions used in determining the impacts the  
4 proposed action would have on solid waste disposal. This section details the methods used for  
5 evaluation, the geographic area that encompasses these resources, and the thresholds used for  
6 determining the magnitude of the impacts.

#### 7 Analysis Methods

8 A general analysis to determine the impacts of the proposed action was conducted through a review of  
9 existing literature and contacting the utility service providers. Literature included environmental reports  
10 and analyses conducted within the vicinity of the Poplar Point site to gain an understanding of the site's  
11 context, and review of the utility service providers' websites and other public data sources.

#### 12 Assumptions

13 The geographic area used in the analysis to determine the impacts the proposed action would have on  
14 solid waste disposal include the project site, as well as the larger service.

#### 15 Impact Thresholds

16 To adequately define the magnitude of impact on solid waste, the following thresholds were  
17 established. These thresholds describe the impacts of the proposed action relative to the site's existing  
18 conditions.

19 **Negligible:** Impacts would be imperceptible or not detectable. There would be no increase in demand  
20 for solid waste disposal. Mitigation would not be required.

21 **Minor:** Impacts would be slightly perceptible and there would be a small increase in demand compared  
22 to existing conditions. Minor adverse impacts would include the creation of additional solid waste, but  
23 would not require exceed the capacity of the regional solid waste disposal infrastructure. The increase in  
24 demand would be accommodated by existing landfills.

25 **Moderate:** Impacts would be apparent and would involve an increase in demand compared to existing  
26 conditions. Moderate adverse impacts would result in the need for additional landfill capacity to  
27 accommodate the increase in demand. Mitigation measures would be required.

28 **Major:** Major adverse impacts would pose a substantial risk of exceeding the total capacity of the  
29 regional solid waste disposal infrastructure. New landfills would be required to accommodate the  
30 increased demand. Affects could go beyond the point of impacts.

#### 31 Duration

32 Short-term impacts include those that occur during the development phases; long-term impacts include  
33 those that would persist after the development phase.

### 1 **4.5.3.2 No Action Alternative**

#### 2 Direct and Indirect Impacts

3 Under the No Action Alternative, there would be no changes to the project site. As such, no new uses  
4 would be located within the site boundaries. The NPS and the USPP would remain in their current  
5 facilities.

6 Because no new uses would be developed onsite, there would be no short- or long-term increases in the  
7 amount of solid waste that would be generated. Thus, there would be no additional demand placed on  
8 the regional solid waste disposal infrastructure. Short and long-term direct and indirect impacts to solid  
9 waste disposal would be negligible.

#### 10 Cumulative Impacts

11 The No Action Alternative, when considered together with ongoing or planned projects in the area,  
12 would not contribute to a cumulative impact to solid waste disposal. No changes to the Poplar Point site  
13 would occur as part of the No Action Alternative. As such, there would be no increase in demand for  
14 landfill capacity. The cumulative impacts would be negligible.

#### 15 Conclusion

16 Implementation of the No Action Alternative would have a negligible impact on solid waste disposal. No  
17 changes at the site would occur under the No Action Alternative. Therefore, there would be no increase  
18 in the amount of solid waste that would be generated and no expansion of existing infrastructure would  
19 be required.

### 20 **4.5.3.3 Alternative 1**

#### 21 Direct and Indirect Impacts

22 The volume of solid waste generated at the Poplar Point site would increase during construction.  
23 Existing structures would be demolished, thereby generating a new short-term moderate waste stream.  
24 Demolished materials would include asbestos-containing materials and lead-based paint that would be  
25 disposed of at an appropriate licensed disposal facility. Contaminated soils uncovered during  
26 construction would be remediated and/or disposed of at a licensed disposal facility. Disposal of  
27 construction-related waste would have a moderate short-term adverse impact on landfill capacity.

28 During operation of Alternative 1, new residential, commercial, and civic/entertainment uses would be  
29 located on-site. The increased development at Poplar Point would generate a substantial amount of net  
30 new tons of solid waste per year compared to the existing NPS and USPP facilities and recreation uses.  
31 Private hauling services would dispose of the waste that is generated on-site. Further, commercial and  
32 residential trash generators are required by law to separate recyclable refuse. The private hauling  
33 service would then deliver it to an appropriate recycling center in the area. However, a direct, long-term

1 adverse impact to solid waste infrastructure would occur due to the increase in total solid waste  
2 produced during operation of Alternative 1.

### 3 Cumulative Impacts

4 Implementation of Alternative 1 would increase the amount of solid waste generated at the site  
5 compared to existing conditions. Combined with the other past, present and future development  
6 projects in the vicinity, there would be a total increase in demand for solid waste disposal. As with  
7 Alternative 1, the cumulative projects would be required to implement recycling and solid waste  
8 diversion projects in accordance with applicable District and federal regulations. However, Alternative 1  
9 would contribute to a long-term moderate cumulative impact to solid waste.

### 10 Conclusion

11 Alternative 1 would substantially increase the amount of solid waste generated at the Poplar Point site  
12 compared to existing conditions. As such, it would have long-term moderate operational impact to solid  
13 waste disposal. Short-term temporary impacts would occur during construction when demolition debris  
14 would be generated. Further, past, present and future development projects would increase total  
15 demand for landfill capacity in the area. The long-term cumulative impact would be moderate.

### 16 Mitigation

17 The following mitigation measures are recommended to minimize Alternative 1's impact to solid waste  
18 disposal:

- 19 • A minimum of 10% of demolition debris shall be salvaged for reuse on- or off-site and a  
20 minimum of 50% of demolition debris shall be recycled.
- 21 • The recycling program shall obtain a minimum 50% diversion rate during operation.
- 22 • All residential structures shall be designed to provide enough space for trash and recycling to  
23 ensure that all residents of the site participate in the recycling program and to ensure that the  
24 site is easily serviceable by the trash hauler.
- 25 • All commercial structures shall be designed to provide enough space for trash and recycling to  
26 ensure that all employees participate in the recycling program and to ensure that the site is  
27 easily serviceable by the trash hauler.
- 28 • The recycling program shall include green waste collection bins.
- 29 • Restaurants shall have a designated compactor to dispose of food waste and other  
30 compostables.
- 31 • Restaurants, residential, and commercial uses shall have a designated compactor to dispose of  
32 regular trash.
- 33 • Restaurants, residential, and commercial uses shall have a designated compactor to dispose of  
34 recyclables.

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#### 1 **4.5.3.4 Alternative 2**

##### 2 Direct and Indirect Impacts

3 The volume of solid waste generated at the Poplar Point site would increase during construction.  
4 Existing structures would be demolished, thereby generating a new short-term moderate waste stream.  
5 Demolished materials would include asbestos-containing materials and lead-based paint that would be  
6 disposed of at an appropriate licensed disposal facility. Contaminated soils uncovered during  
7 construction would be remediated and/or disposed of at a licensed disposal facility. Disposal of  
8 construction-related waste would have a moderate short-term, adverse impact on landfill capacity.

9 During operation of Alternative 2, new residential, commercial, and civic/entertainment uses would be  
10 located on-site. The increased development at Poplar Point would generate a substantial amount of net  
11 new tons of solid waste per year compared to the existing NPS and USPP facilities and recreation uses.  
12 Private hauling services would dispose of the waste that is generated on-site. Further, commercial and  
13 residential trash generators are required by law to separate recyclable refuse. The private hauling  
14 service would then deliver it to an appropriate recycling center in the area. However, a direct, long-term  
15 adverse impact to solid waste infrastructure would occur due to the increase in total solid waste  
16 produced during operation of Alternative 2.

##### 17 Cumulative Impacts

18 Implementation of Alternative 2 would increase the amount of solid waste generated at the site  
19 compared to existing conditions. Combined with the other past, present and future development  
20 projects in the vicinity, there would be a total increase in demand for solid waste disposal. As with  
21 Alternative 2, the cumulative projects would be required to implement recycling and solid waste  
22 diversion projects in accordance with applicable District and federal regulations. However, Alternative 2  
23 would contribute to a long-term moderate cumulative impact to solid waste.

##### 24 Conclusion

25 Alternative 2 would substantially increase the amount of solid waste generated at the Poplar Point site  
26 compared to existing conditions. As such, it would have long-term moderate operational impact to solid  
27 waste disposal. Short-term temporary impacts would occur during construction when demolition debris  
28 would be generated. Further, past, present and future development projects would increase total  
29 demand for landfill capacity in the area. The cumulative impact would be moderate.

##### 30 Mitigation

31 The following mitigation measures are recommended to minimize Alternative 2's impact to solid waste  
32 disposal:

- 33 • A minimum of 10% of demolition debris shall be salvaged for reuse on- or off-site and a  
34 minimum of 50% of demolition debris shall be recycled.
- 35 • The recycling program shall obtain a minimum 50% diversion rate during operation.

- 1 • All residential structures shall be designed to provide enough space for trash and recycling to  
2 ensure that all residents of the site participate in the recycling program and to ensure that the  
3 site is easily serviceable by the trash hauler.
- 4 • All commercial structures shall be designed to provide enough space for trash and recycling to  
5 ensure that all employees participate in the recycling program and to ensure that the site is  
6 easily serviceable by the trash hauler.
- 7 • The recycling program shall include green waste collection bins.
- 8 • Restaurants shall have a designated compactor to dispose of food waste and other  
9 compostables.
- 10 • Restaurants, residential, and commercial uses shall have a designated compactor to dispose of  
11 regular trash.
- 12 • Restaurants, residential, and commercial uses shall have a designated compactor to dispose of  
13 recyclables.

#### 14 **4.5.3.5 Alternative 3**

##### 15 Direct and Indirect Impacts

16 The volume of solid waste generated at the Poplar Point site would increase during construction.  
17 Existing structures would be demolished, thereby generating a new short-term moderate waste stream.  
18 Demolished materials would include asbestos-containing materials and lead-based paint that would be  
19 disposed of at an appropriate licensed disposal facility. Contaminated soils uncovered during  
20 construction would be remediated and/or disposed of at a licensed disposal facility. Disposal of  
21 construction-related waste would have a moderate short-term, adverse impact on landfill capacity.

22 During operation of Alternative 3, new residential, commercial, and civic/entertainment uses would be  
23 located on-site. The increased development at Poplar Point would generate a substantial amount of net  
24 new tons of solid waste per year compared to the existing NPS and USPP facilities and recreation uses.  
25 Private hauling services would dispose of the waste that is generated on-site. Further, commercial and  
26 residential trash generators are required by law to separate recyclable refuse. The private hauling  
27 service would then deliver it to an appropriate recycling center in the area. However, a direct, long-term  
28 adverse impact to solid waste infrastructure would occur due to the increase in total solid waste  
29 produced during operation of Alternative 3.

##### 30 Cumulative Impacts

31 Implementation of Alternative 3 would increase the amount of solid waste generated at the site  
32 compared to existing conditions. Combined with the other past, present and future development  
33 projects in the vicinity, there would be a total increase in demand for solid waste disposal. As with  
34 Alternative 3, the cumulative projects would be required to implement recycling and solid waste  
35 diversion projects in accordance with applicable District and federal regulations. However, Alternative 3  
36 would contribute to a long-term moderate cumulative impact to solid waste.

37

38

1 Conclusion

2 Alternative 3 would substantially increase the amount of solid waste generated at the Poplar Point site  
3 compared to existing conditions. As such, it would have long-term moderate operational impact to solid  
4 waste disposal. Short-term temporary impacts would occur during construction when demolition debris  
5 would be generated. Further, past, present and future development projects would increase total  
6 demand for landfill capacity in the area. The cumulative impact would be moderate.

7 Mitigation

8 The following mitigation measures are recommended to minimize Alternative 3's impact to solid waste  
9 disposal:

- 10
- 11 • A minimum of 10% of demolition debris shall be salvaged for reuse on- or off-site and a  
12 minimum of 50% of demolition debris shall be recycled.
  - 13 • The recycling program shall obtain a minimum 50% diversion rate during operation.
  - 14 • All residential structures shall be designed to provide enough space for trash and recycling to  
15 ensure that all residents of the site participate in the recycling program and to ensure that the  
16 site is easily serviceable by the trash hauler.
  - 17 • All commercial structures shall be designed to provide enough space for trash and recycling to  
18 ensure that all employees participate in the recycling program and to ensure that the site is  
19 easily serviceable by the trash hauler.
  - 20 • The recycling program shall include green waste collection bins.
  - 21 • Restaurants shall have a designated compactor to dispose of food waste and other  
22 compostables.
  - 23 • Restaurants, residential, and commercial uses shall have a designated compactor to dispose of  
24 regular trash.
  - 25 • Restaurants, residential, and commercial uses shall have a designated compactor to dispose of  
26 recyclables.
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## 1 4.5.4 Energy Systems

### 2 4.5.4.1 Methodology and Assumptions

3 The following describes the methodology and assumptions used in determining the impacts the  
4 proposed action would have on electricity and natural gas service. This section details the methods used  
5 for evaluation, the geographic area that encompasses these resources, and the thresholds used for  
6 determining the magnitude of the impacts.

#### 7 Analysis Methods

8 A general analysis to determine the impacts of the proposed action was conducted through a review of  
9 existing literature and contacting the utility service providers. Literature included environmental reports  
10 and analyses conducted within the vicinity of the Poplar Point site to gain an understanding of the site's  
11 context, and review of the utility service providers' websites and other public data sources.

#### 12 Assumptions

13 The geographic area used in the analysis to determine the impacts the proposed action would have on  
14 energy systems include the project site, as well as the larger service areas.

#### 15 Impact Thresholds

16 To adequately define the magnitude of impact on energy systems, the following thresholds were  
17 established. These thresholds describe the impacts of the proposed action relative to the site's existing  
18 conditions.

19 **Negligible:** Impacts would be imperceptible or not detectable. There would be no increase in demand  
20 for electricity or natural gas service. Mitigation would not be required.

21 **Minor:** Impacts would be slightly perceptible and there would be a small increase in demand compared  
22 to existing conditions. Minor adverse impacts would not require the addition of new electricity or  
23 natural gas capacity. The increase in demand could be accommodated by existing energy sources.

24 **Moderate:** Impacts would be apparent and would involve an increase in demand compared to existing  
25 conditions. Moderate adverse impacts would result in the need for additional electricity or natural gas  
26 supply. Mitigation measures would be required.

27 **Major:** Major adverse impacts would pose a substantial risk of exceeding the total capacity of the  
28 regional supply for electricity and natural gas service. New energy sources would be required to  
29 accommodate the increased demand.. Affects could go beyond the point of impacts.

#### 30 Duration

31 Short-term impacts include those that occur during the development phases; long-term impacts include  
32 those that would persist after the development phase.

#### 1 **4.5.4.2 No Action Alternative**

##### 2 Direct and Indirect Impacts

3 Under the No Action Alternative, there would be no changes to the project site. As such, no new uses  
4 would be located within the site boundaries. The NPS and the USPP would remain in their current  
5 facilities.

6 Because no new uses would be developed on-site, there would be no short- or long-term increases in  
7 the amount of electricity or natural gas required to power the current facilities. Thus, there would be no  
8 additional demand placed PEPCO or Washington Gas supply or transmission networks. Short and long-  
9 term direct and indirect impacts to energy systems would be negligible.

##### 10 Cumulative Impacts

11 The No Action Alternative, when considered together with ongoing or planned projects in the area,  
12 would not contribute to a cumulative impact to energy systems. No changes to the Poplar Point site  
13 would occur as part of the No Action Alternative. As such, there would be no increase in demand for  
14 electricity or natural gas service. The cumulative impacts would be negligible.

##### 15 Conclusion

16 Implementation of the No Action Alternative would have a negligible impact on energy systems. No  
17 changes at the site would occur under the No Action Alternative. Therefore, there would be no increase  
18 in the demand for electricity or natural gas service.

#### 19 **4.5.3.3 Alternative 1**

##### 20 Direct and Indirect Impacts

21 Upon buildout of the Poplar Point site under Alternative 1, approximately 6.5 million gsf of new retail,  
22 residential, office, and other civic/cultural uses would be in use on the site. The remainder of the site  
23 would be developed with park and open space. Compared to the existing NPS and USPP facilities, the  
24 demand for electricity and natural gas would increase. Alternative 1 would implement sustainable  
25 building practices that would orient buildings, to the extent practicable, to take advantage of natural  
26 heating, cooling and lighting. Further, all new structures would incorporate modern appliances, HVAC  
27 systems, and fixtures, which are more energy efficient than older models. In addition, Alternative 1  
28 would be required to implement energy conservation strategies in accordance with District and federal  
29 requirements. However, there would be a substantial increase in demand for electricity and natural gas  
30 created by the build-out of Alternative 1 compared to existing conditions. PEPCO and Washington Gas  
31 have indicated that long-range plans account for the increase in demand and supply would be available.  
32 However, the long-term impact to energy systems would be moderate.

33 Specific details as to the location of any new service distribution and connections would be coordinated  
34 with PEPCO and Washington Gas at the time detailed building plans are developed. Electrical and

1 natural gas service is currently provided on-site for the NPS and USPP facilities. Additional connections  
2 and utility lines would be required to reach the Point node and to upgrade the facilities within the entire  
3 site. Construction of new water infrastructure has been analyzed as part of the build-out of Alternative  
4 1 for all resource areas.

#### 5 Cumulative Impacts

6 Past, present and future development places demands on electricity and natural gas service in the  
7 region. While Washington Gas and PEPCO have plans to accommodate regional growth, each future  
8 project would be required to prepare studies to determine if their supply is adequate or if on-site power  
9 generation would be required. Alternative 1 would contribute to a long-term moderate cumulative  
10 impact to electricity and natural gas service.

#### 11 Conclusion

12 Alternative 1 would substantially increase demand for electricity and natural gas at the Poplar Point site  
13 compared to existing conditions. As such, it would have long-term moderate operational impact to  
14 energy systems. Further, past, present and future development projects would increase total demand  
15 for electricity and natural gas service in the area. The long-term cumulative impact would be moderate.

#### 16 Mitigation

17 The following mitigation measures are recommended to minimize Alternative 1's impact to energy  
18 systems:

- 19 • Implement passive heating and cool systems on all residential and office structures.
- 20 • Incorporate energy conservation measures into building design and construction, including but  
21 not limited to, building orientation, energy efficient window glazing, energy efficient lighting,  
22 light occupancy sensors, and Energy Star appliances.

#### 23 **4.5.3.4 Alternative 2**

##### 24 Direct and Indirect Impacts

25 Upon build-out of the Poplar Point site under Alternative 2, approximately 6.1 million gsf of new retail,  
26 residential, office, and other civic/cultural uses would be in use on the site. Compared to the existing  
27 NPS and USPP facilities, the demand for electricity and natural gas would increase. Alternative 2 would  
28 implement sustainable building practices that would orient buildings, to the extent practicable, to take  
29 advantage of natural heating, cooling and lighting. Further, all new structures would incorporate  
30 modern appliances, HVAC systems, and fixtures, which are more energy efficient than older models. In  
31 addition, Alternative 2 would be required to implement energy conservation strategies in accordance  
32 with District and federal requirements. However, there would be a substantial increase in demand for  
33 electricity and natural gas created by the build-out of Alternative 2 compared to existing conditions.  
34 PEPCO and Washington Gas have indicated that long-range plans account for the increase in demand  
35 and supply would be available. However, the long-term impact to energy systems would be moderate.

1 Specific details as to the location of any new service distribution and connections would be coordinated  
2 with PEPCO and Washington Gas at the time detailed building plans are developed. Electrical and  
3 natural gas service is currently provided on-site for the NPS and USPP facilities. Additional connections  
4 and utility lines would be required in the central portion of the site where development would be  
5 concentrated under Alternative 2 and to upgrade the existing energy infrastructure within the site.  
6 Construction of new water infrastructure has been analyzed as part of the build-out of Alternative 2 for  
7 all resource areas.

#### 8 Cumulative Impacts

9 Past, present and future development places demands on electricity and natural gas service in the  
10 region. While Washington Gas and PEPCO have plans to accommodate regional growth, each future  
11 project would be required to prepare studies to determine if their supply is adequate or if on-site power  
12 generation would be required. Alternative 2 would contribute to a long-term moderate cumulative  
13 impact to electricity and natural gas service.

#### 14 Conclusion

15 Alternative 2 would substantially increase demand for electricity and natural gas at the Poplar Point site  
16 compared to existing conditions. As such, it would have long-term moderate operational impact to  
17 energy systems. Further, past, present and future development projects would increase total demand  
18 for electricity and natural gas service in the area. The long-term cumulative impact would be moderate.

#### 19 Mitigation

20 The following mitigation measures are recommended to minimize Alternative 2's impact to energy  
21 systems:

- 22 • Implement passive heating and cool systems on all residential and office structures.
- 23 • Incorporate energy conservation measures into building design and construction, including but  
24 not limited to, building orientation, energy efficient window glazing, energy efficient lighting,  
25 light occupancy sensors, and Energy Star appliances.

#### 26 **4.5.3.5 Alternative 3**

##### 27 Direct and Indirect Impacts

28 Upon build-out of the Poplar Point site under Alternative 3, approximately 6.1 million gsf of new retail,  
29 residential, office, and other civic/cultural uses would be in use on the site. Compared to the existing  
30 NPS and USPP facilities, the demand for electricity and natural gas would increase. Alternative 3 would  
31 implement sustainable building practices that would orient buildings, to the extent practicable, to take  
32 advantage of natural heating, cooling and lighting. Further, all new structures would incorporate  
33 modern appliances, HVAC systems, and fixtures, which are more energy efficient than older models. In  
34 addition, Alternative 3 would be required to implement energy conservation strategies in accordance  
35 with District and federal requirements. However, there would be a substantial increase in demand for

1 electricity and natural gas created by the build-out of Alternative 3 compared to existing conditions.  
2 PEPCO and Washington Gas have indicated that long-range plans account for the increase in demand  
3 and supply would be available. However, the long-term impact to energy systems would be moderate.  
4 Specific details as to the location of any new service distribution and connections would be coordinated  
5 with PEPCO and Washington Gas at the time detailed building plans are developed. Electrical and  
6 natural gas service is currently provided on-site for the NPS and USPP facilities. Additional connections  
7 and utility lines would be required to reach the eastern portion of the site where development would be  
8 concentrated under Alternative 3 and to upgrade the facilities currently located within the site.  
9 Construction of new water infrastructure has been analyzed as part of the build-out of Alternative 3 for  
10 all resource areas.

#### 11 Cumulative Impacts

12 Past, present and future development places demands on electricity and natural gas service in the  
13 region. While Washington Gas and PEPCO have plans to accommodate regional growth, each future  
14 project would be required to prepare studies to determine if their supply is adequate or if on-site power  
15 generation would be required. Alternative 3 would contribute to a long-term moderate cumulative  
16 impact to electricity and natural gas service.

#### 17 Conclusion

18 Alternative 3 would substantially increase demand for electricity and natural gas at the Poplar Point site  
19 compared to existing conditions. As such, it would have long-term moderate operational impact to  
20 energy systems. Further, past, present and future development projects would increase total demand  
21 for electricity and natural gas service in the area. The long-term cumulative impact would be moderate.

#### 22 Mitigation

23 The following mitigation measures are recommended to minimize Alternative 3's impact to energy  
24 systems:

- 25 • Implement passive heating and cool systems on all residential and office structures.
- 26 • Incorporate energy conservation measures into building design and construction, including but  
27 not limited to, building orientation, energy efficient window glazing, energy efficient lighting,  
28 light occupancy sensors, and Energy Star appliances.

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- 1 **4.6 Transportation Systems**
- 2 **4.6.1 Vehicular Circulation**
- 3 **4.6.2 Parking**
- 4 **4.6.3 Public Transportation**
- 5 **4.6.4 Pedestrian and Bicycle Circulation**

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## 1 4.7 Environmental Health

### 2 4.7.1 Noise

#### 3 4.7.1.1 Methodology and Assumptions

4 The following describes the methodology and assumptions used in determining the impacts the action  
5 and no action alternatives would have on noise levels. This section details the methods used for  
6 evaluation, the geographic area which encompasses these resources, and the thresholds used for  
7 determining the magnitude of the impacts. Site development has the potential to result in the  
8 generation of noise during development phases of demolition, earthwork/excavation, foundation  
9 installation, and dewatering. Additionally, the operation of the site after construction also provides a  
10 possibility for noise generation.

#### 11 Analysis Methods

12 A general analysis was used to determine the impacts related to noise generation the action alternatives  
13 would have on the area of analysis. The analysis was conducted by reviewing relevant local and federal  
14 policies and existing literature relating to the site. Literature included environmental reports and  
15 analyses conducted within the vicinity of the project site to gain an understating of the site's context  
16 and the potential impacts. A major component of this analysis is the distinction between impacts  
17 resulting from construction activities, which are short-term in nature, and those that would result from  
18 the operation of the site, which are long-term.

#### 19 Assumptions

20 The geographic area used in the analysis to determine the impacts the action alternatives would have on  
21 noise, is limited to 250 feet around the perimeter of the site. This distance was chosen because at 250  
22 feet the loudest piece of machinery would be around 80 dB, the accepted level per the Washington, DC  
23 Noise Control Act.

24 The Washington, DC Noise Control Act limits weekday construction and demolition noise to 80 dBA  
25 (hourly average) from 7:00 a.m. to 7:00 p.m., and 55 dBA from 7:00 p.m. and 7:00 a.m. unless a variance  
26 is granted. It is expected that the majority of construction activities would be conducted during daylight  
27 hours. Construction equipment commonly used during site preparation and other construction activities  
28 are shown in Table 4-X. The noise levels shown represent equipment operating at full power and are  
29 equivalent to noise experienced on a sidewalk next to a busy urban street. Noise decreases with  
30 distance at a rate of about 6 dB per doubling of distance from the noise source. Therefore, receptors  
31 more than 50 feet from the construction site would experience reduced noise levels from the peak  
32 levels shown in Table 4-X. Equipment operating at less than full power would also have lower noise  
33 levels.

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**Table 4-17: Construction Equipment Noise Emission Levels<sup>1</sup>**

Equipment	Typical Noise Level, Lmax (dBA2) 50 feet from Source
Air Compressor	81
Backhoe	80
Concrete Mixer	85
Mobile Crane	83
Dozer	85
Grader	85
Pile Driver	96-101
Truck	88
Rotary Drilling Rig <sup>3</sup>	87

1 <sup>1</sup> Data from USDOT FTA, 2006. *Transit Noise and Vibration Impact Assessment. Table 12-1.*

2 <sup>2</sup> As described in Chapter 3 of this EIS, A-weighted (dBA) sound pressure levels are typically used to account for the response of the human ear.

3 <sup>3</sup> Yantak, 2007.

5 As shown in Table 4-17, individual pieces of construction equipment when operated at full power could  
 6 result in noise levels that would exceed 80 dBA (hourly average) at a distance of 50 feet from the  
 7 construction site. However, per Section 2704-2 of the Noise Control Act, individual pieces of  
 8 construction equipment are exempt from the construction noise limits at all times. However, per Section  
 9 2704-2, equipment must be operated so as to comply with the noise limits established in Section 2802  
 10 of the Noise Control Act. Construction equipment can achieve the 80 dBA hourly average noise limit by  
 11 operating at reduced power settings, by operating for periods of less than one hour continuously, or a  
 12 combination of both.

13 **Impact Thresholds**

14 To adequately define the magnitude of the impact of noise levels, the following thresholds were  
 15 established. These thresholds will characterize the impacts of the proposed action relative to the site’s  
 16 existing conditions.

17 **Negligible:** The noise generated during construction or operation is not discernable above background  
 18 noise levels.

19 **Minor:** The noise generated during construction or operation is sometimes discernable above  
 20 background noise levels.

21 **Moderate:** The noise is readily apparent and/or is easily discernable by sensitive noise receptors above  
 22 background levels, but remains below levels established by regulatory guidelines. The effects are  
 23 primarily local; however, noise is periodically noticeable offsite.

24 **Major:** The noise generated by the construction or operation of the proposed elements exceeds levels  
 25 established by regulatory guidelines, greatly impacts sensitive noise receptors, or is frequently  
 26 noticeable a great distance from the site.

1 Unless otherwise noted, all impacts relating to noise are assumed to be local impacts that affect only the  
2 immediate area of the noise source. No impacts to regional noise conditions are anticipated from any of  
3 the proposed alternatives.

#### 4 **4.7.1.2 No Action Alternative**

##### 5 Direct and Indirect Impacts

6 Under the No Action Alternative, there would be no construction activities on-site. As a result, the use of  
7 heavy machinery and other noise generating equipment would not be necessary. Thus, short-term  
8 impacts would be negligible.

9 Under the No Action Alternative, no new noise sources would be added to the site. The current land  
10 uses would persist, including the Aviation facility and the associated maintenance hangar. It is assumed  
11 that the levels of noise described in Section 3.6.1 would also persist.

##### 12 Cumulative Impacts

13 There would be negligible short-and long-term impacts to noise levels as a result of the No Action  
14 Alternative. There would thus be negligible cumulative impacts to this resource. Any additional noise  
15 produced in the study area would be the result of the other projects, and not the proposed action.

##### 16 Conclusion

17 Under the No Action Alternative, there would be negligible short-and long-term impacts to noise levels  
18 as no new construction or operational activities are planned for the site.

#### 19 **4.7.1.3 Alternatives 1, 2 and 3**

##### 20 Direct and Indirect Impacts

##### 21 *Construction-Related Impacts*

22 Construction activities, such as pile driving for the installation of foundations and pilings, are anticipated  
23 under each of the action alternative, along with the use of heavy trucks. A substantial amount of grading  
24 and excavation would also occur in the central portion of the site for the creation of stormwater  
25 management areas. Placement of fill would also be necessary to create the desired base floor elevations  
26 in developed areas of the site.

27 The action alternatives propose development in different configurations and on different portions of  
28 the site. However, each alternative includes construction at the southern edge of the site, adjacent to  
29 Historic Anacostia. In this location, current noise levels are elevated due to its proximity to Interstate  
30 295, a major transportation corridor. Given this current elevated noise level, construction noise would  
31 only be periodically discernable above background noise levels. Construction noise is expected to be  
32 greatest during the earthmoving and site preparation phases when operation of heavy earthmoving  
33 equipment would be required. However, by operating construction equipment at less than full load, and

1 by limiting continuous simultaneous operation of equipment, construction of the project is not expected  
2 to exceed the noise limits established by the Noise Control Act. The construction contractor would be  
3 responsible for ensuring compliance with the Noise Control Act. If the construction contractor  
4 determined that it would not be possible to achieve the District's construction noise limits, the  
5 contractor would be required to take additional steps to reduce noise or would be required to obtain a  
6 variance in accordance with the procedures specified in Section 2706 of the Noise Control Act.

7 The movement of heavy trucks transporting construction materials could also cause an adverse noise  
8 impact to residences if the residences are located adjacent to the designated truck route. To the extent  
9 practicable, truck routes would be selected to use major arterial roadways to minimize travel adjacent  
10 to residential areas. Noise impacts associated with truck transport of material would be minimized by  
11 operating heavy trucks within the daytime construction hours specified in the Noise Control Act. In  
12 addition, potential impacts to any given residence would be limited to the time required for a truck to  
13 pass a given point along the route.

14 Overall, short-term construction-related impacts are anticipated to be moderate and adverse.

#### 15 *Operational Impacts*

16 None of the uses proposed as part of the action alternatives are major noise generators. Occasional  
17 elevated noise levels could occur during celebrations or events held at the cultural or entertainment  
18 venues, however, any planned events would be required to comply with all applicable Washington, DC  
19 noise regulations. Overall, long-term adverse impacts to noise levels would be negligible to minor.

#### 20 Cumulative Impacts

21 When considering the short-term impacts to noise levels resulting from the construction at Poplar Point,  
22 together with the 11<sup>th</sup> Street Bridge and Frederick Douglass Bridge construction, there could be a  
23 moderate adverse cumulative impact to noise levels. However, this would only occur if the construction  
24 activities happened simultaneously. In addition, impacts would be short-term in nature. There could be  
25 minor adverse cumulative impacts to noise levels if events occur simultaneously at Poplar Point and the  
26 Nationals Ballpark; however, this would be very infrequent.

#### 27 Conclusion

28 The action alternatives would have moderate short-term adverse impacts during the site preparation  
29 and construction phases. The use of heavy machinery would be detectable against ambient noise levels  
30 off-site. There would be negligible to minor adverse long-term impacts during the site's operation under  
31 each of the action alternatives as none of the proposed uses are significant noise generators.

#### 32 Mitigation

- 33 • The construction team should select truck routes to minimize the potential for noise impacts to  
34 sensitive noise receptors (e.g., residences) from trucks during construction, particularly during

1 truck trips to and from the site to haul demolition waste, excavated soil, and construction  
2 materials.

- 3 • The construction team should attempt to limit truck trips to the hours of 7:00 am to 7:00 pm,  
4 particularly for routes that may be located near residential areas.

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## 1 4.7.2 Air Quality

2 Projected traffic figures are required in order to prepare the Air Quality impacts.

### 3 4.7.2.1 Methodology and Assumptions

4 The following describes the methodology and assumptions used in determining the impacts the action  
5 alternatives would create relative to air quality. This section will detail the methods used for evaluation,  
6 the geographic area which encompasses these resources, and the thresholds used for determining the  
7 magnitude of the impacts.

#### 8 Analysis Methods

9 The Clean Air Act Amendments of 1990 require federal agencies to ensure that their actions are  
10 consistent with the Clean Air Act and with federally enforceable air quality management plans (i.e., State  
11 Implementation Plans). The implementation of this requirement is known as the General Conformity  
12 Rule. The conformity assessment process is intended to ensure that federal agency actions:

- 13 ■ Will not cause or contribute to new violations of NAAQS;
- 14 ■ Will not increase the frequency or severity of any existing violations of ambient air quality  
15 standards; and
- 16 ■ Will not delay the timely attainment of ambient air quality standards, which are the same  
17 criteria used to assess a significant air quality impact under NEPA.

18 The US EPA has determined specific federal actions, or portions thereof, to be exempt from the General  
19 Conformity Rule. Actions are exempt where the total of all reasonably foreseeable direct and indirect  
20 emissions:

- 21 ■ Would be less than specified emission rate thresholds, known as de minimis limits (outlined in  
22 Section 3.6.2); and
- 23 ■ Would be less than ten percent of the area's annual emission budget (outlined in Section 3.6.2).

#### 24 Assumptions

25 The geographic area used in the analysis to determine the impacts the action alternatives would have on  
26 air quality is defined by the MWAQC. This region includes the District of Columbia, along with several  
27 counties in northern Virginia and Maryland. The region is roughly defined by the boundaries for the DC-  
28 MD-VA Metropolitan Statistical Area and was required to prepare an air quality plan under Section 174  
29 of the federal Clean Air Act Amendments of 1990.

#### 30 Impact Thresholds

31 To adequately define the magnitude of each impact related to air quality, the following thresholds were  
32 established. These thresholds describe the impacts of the action alternatives relative to the MWAQC  
33 region. Positive impacts would improve air quality and reduce the emission of particulate matter and  
34 pollutants of concern for the region.

- 1 **Negligible:** Air quality would not be affected, or the effects would be below detection limits.
- 2 **Minor:** The impact or risk is slight but detectable and/or the alternative would result in small impacts on  
3 air quality in a localized area.
- 4 **Moderate:** The impact is readily apparent and/or would be easily detectable. The effects would be  
5 primarily local; however, there could be offsite impacts as well.  
6
- 7 **Major:** There would be substantial effects on air quality. The impacts may have local as well as regional  
8 consequences.  
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10 Duration

11 Short-term impacts include those that occur during the development phases; long-term impacts include  
12 those that would persist after construction is complete.  
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### 1 4.7.3 Hazardous Materials

#### 2 4.7.3.1 Methodology and Assumptions

3 The following describes the methodology and assumptions used in determining the impacts the action  
4 alternatives would create relative to hazardous materials. This section will detail the methods used for  
5 evaluation, the geographic area which encompasses these resources, and the thresholds used for  
6 determining the magnitude of the impacts.

#### 7 Analysis Methods

8 A general analysis was used to determine the potential impacts related to exposure to hazardous  
9 materials the action alternatives would have on the area of analysis. The analysis was conducted by  
10 reviewing relevant local and federal policies, and existing reports and analyses conducted for the project  
11 site. A major component of this analysis is the distinction between impacts resulting from construction  
12 activities (short-term) versus operational activities (long-term).

#### 13 Assumptions

14 The geographic area used in the analysis to determine the impacts the action alternatives would have on  
15 hazardous materials includes the area of disturbance on the project site. Impacts within the site include  
16 airborne particles (dust), dermal contact, incidental ingestion associated with surface and subsurface  
17 soils, and dermal contact and incidental ingestion associated with water resources. Soil disturbance  
18 during construction and operation at the site has the potential to generate airborne particles that may  
19 contain hazardous materials. Thus, the analysis also considers potential impacts to adjacent properties.

#### 20 Impact Thresholds

21 To adequately define the magnitude of each impact related to hazardous materials, the following  
22 thresholds were established. These thresholds describe the impacts of the action alternatives relative to  
23 the site's existing conditions. Positive impacts would improve public health and safety and reduce the  
24 risk of hazardous materials spills, while adverse impacts would have the potential to increase the risk of  
25 spills or other incidents.

26 **Negligible:** Public health and safety would not be affected, or the effects would be below detection  
27 limits.

28 **Minor:** The impact or risk is slight but detectable and/or the alternative would result in small impacts on  
29 public health and safety in a localized area.

30 **Moderate:** The impact is readily apparent and/or would be easily detectable. The effects would be  
31 primarily local; however, there could be offsite impacts as well.

32  
33 **Major:** There would be a substantial effects on public health and safety. The impacts may have local as  
34 well as regional consequences.

35

1 Duration

2 Short-term impacts include those that occur during the development phases; long-term impacts include  
3 those that would persist after construction is complete.

4 **4.7.3.2 No Action Alternative**

5 Direct and Indirect Impacts

6 As discussed in Section 3.6.3, portions of the project site contain hazardous materials, including metals,  
7 pesticides, organics, and PAHs in surface and subsurface soils. Groundwater samples taken from the site  
8 also contained concentrations of petroleum products in excess of local and federal standards. No  
9 disturbance to the site's soil or groundwater resources would result as a result of the No action  
10 Alternative because no construction or other ground disturbing activities would take place. However,  
11 portions of the site would remain contaminated. Park employees could be exposed to hazardous  
12 materials through site maintenance activities. Potential exposure pathways include dermal contact,  
13 inhalation, or accidental inhalation from surface soil, subsurface soil, or groundwater resources  
14 containing metals, pesticides, PAHs, and organics. Further, park visitors could be exposed to hazardous  
15 materials through dermal contact or accidental ingestion of surface soil or groundwater resources. In  
16 order to minimize potential adverse effects to park workers and visitors, contaminated areas would  
17 remain fenced off to limit access by park employees or visitors, thereby limited access to large portions  
18 of the site. However, contaminated conditions at the site would remain. Therefore, the No Action  
19 Alternative would have a moderate long-term adverse impact to human health associated with  
20 hazardous materials.

21 Cumulative Impacts

22 Although the project site would remain contaminated, and the potential for human health impacts  
23 would persist, these impacts, when considered together with ongoing or planned projects in the study  
24 area, would not contribute to a cumulative impact to human health.

25 Conclusion

26 Implementing the No Action Alternative would not introduce any new impacts to the site related to  
27 hazardous materials. Because no ground disturbing activities would occur, contamination within the  
28 site's soils and groundwater would not become airborne or be readily exposed to construction workers,  
29 park employees, or visitors. However, the No Action Alternative would not involve remediation of  
30 known hazardous materials located within the project site. Because existing contamination has the  
31 potential to pose a health hazard to park employees and visitors from daily use of the site, portions of  
32 the Poplar Point site would remain fenced off to protect human health, thereby limiting the amount of  
33 the site that could be used for recreational purposes and postponing any future development potential  
34 of the site.

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## Mitigation

- Hazardous waste materials found onsite, including asbestos-containing materials (ACM) and lead-based paints, should be removed and contained by licensed contractors and trained personnel in a manner consistent with applicable handling regulations.
- Any asbestos-containing materials or lead-based paint shall be collected, transported, and disposed of by a specially licensed contractor in accordance with the requirements of Title 40 CFR Volume 23 Part 763. Hazardous materials removed from the site should be shipped in a manner consistent with applicable transfer regulations to appropriate waste disposal facilities.
- Maintain fences around contaminated areas to minimize hazardous materials impacts to visitors and park personnel.

### **4.6.7.3 Alternative 1**

#### Direct and Indirect Impacts

##### *Construction-Related Impacts*

Construction under Alternative 1 would involve substantial ground disturbing activities in the northwestern and southeastern portions of the project site to construct a mix of residential and commercial uses. In addition, the central portion of the project site would be set aside for park uses and recreation improvements would be implemented. Therefore, Alternative 1 would involve substantial ground disturbing activities during the construction phase.

As discussed in Section 3.6.3, the Poplar Point site is known to contain hazardous materials, including metals, petroleum products, pesticides, and organics in the surface and subsurface soil and ground water associated with the previous use of the site as plant nurseries and other historic operations. As discussed in Chapter 2, all of the existing wetlands would be preserved in place for their ecological value and would be used for educational purposes as part of Alternative 1. Therefore, the contamination found within the wetlands would not be disturbed. However, ground disturbing activities within other parts of the project site, particularly in the areas of the former Architect of the Capitol property and DC Lanham Tree Nursery property, would have the potential to expose construction workers to hazardous materials through direct contact with surface and subsurface soils and groundwater resources. In addition, construction could generate dust that would expose adjacent property owners to hazardous materials through inhalation of airborne particles containing pollutants. Therefore, without remediation of the site, Alternative 1 could have a major short-term adverse impact related to human health associated with hazardous materials. However, since the site would be fully remediated prior to the commencement of construction activities, Alternative 1 would have a negligible short-term adverse impact on human health.

##### *Operational Impacts*

Under Alternative 1, the project site would be developed with a mix of residential, retail, office, and park uses. This alternative would introduce permanent residential uses at the site and generate a new

1 population of employees and retail customers that do not currently visit the site on a daily basis. Due to  
2 the redevelopment of and improvement of park uses, there would be an increase in park users  
3 compared to existing conditions.

4 Because the site is contaminated with metals, pesticides, petroleum products and organics, Alternative  
5 1 would increase the number of people potentially exposed to hazardous conditions. Exposure could  
6 include dermal contact, accidental ingestion, and inhalation. To address this contamination, the site  
7 would be remediated to local and federal standards for human habitation. Thus, Alternative 1 would  
8 have a major long-term positive impact on human health over existing site conditions.

#### 9 Cumulative Impacts

10 Construction activities under Alternative 1 could have the potential to adversely impact human health  
11 through the disturbance of known contaminants. Exposure to these contaminants could include dermal  
12 contact, accidental ingestion, and inhalation. Construction of ongoing or planned projects within the  
13 study could contribute to a short-term cumulative adverse impact to human health. However, since the  
14 site would be remediated to local and federal standards for human habitation, adverse impacts would  
15 be negligible.

#### 16 Conclusion

17 Without full remediation of the site, Alternative 1 could have major short-term adverse impacts to  
18 human health and a moderate long-term adverse impact. However, since the site would be remediated  
19 to meet local standards for human habitation, short-term adverse impacts would be negligible and long-  
20 term positive impacts would be major.

#### 21 Mitigation

- 22 • Hazardous waste materials found onsite, including asbestos-containing materials (ACM) and  
23 lead-based paints, should be removed and contained by licensed contractors and trained  
24 personnel in a manner consistent with applicable handling regulations.
- 25 • Hazardous and non-hazardous waste should be disposed of according to local and federal  
26 regulations, and should be transported with permanent labeling to an appropriate disposal  
27 facility by a licensed hazardous waste hauler.
- 28

#### 29 **4.6.7.4 Alternative 2**

##### 30 Direct and Indirect Impacts

##### 31 *Construction*

32 Construction under Action Alternative 2 would involve substantial ground disturbing activities in the  
33 southern portion of the Poplar Point site to construct a mix of residential, retail, and office uses near the  
34 Metrorail station. As part of Alternative 2, development would occur where the wetlands currently exist,  
35 necessitating the removal of the existing wetlands and the construction of new wetlands in the  
36 northwestern and northeastern portions of the project site near the Anacostia River. Alternative 2

1 would involve substantial ground disturbing activities during the construction phase—more ground  
2 disturbing activities than would occur as part of Alternative 1.

3 As discussed in Section 3.6.3, the Poplar Point site is known to contain hazardous materials, including  
4 metals, petroleum products, pesticides, and organics in the surface and subsurface soil and ground  
5 water associated with the previous use of the site as plant nurseries and other historic operations.  
6 Contamination is known to exist within the wetland areas in the central portion of the project site, and  
7 is concentrated primarily in the former Architect of the Capitol property and the former DC Lanham Tree  
8 Nursery property, also located in the central portion of the Poplar Point site. This portion of the site  
9 would be the location of the proposed residential, retail, and office uses. It would be fully remediated to  
10 local and federal standards for human habitation to prior to commencing construction, and thus short-  
11 term impacts would be negligible.

## 12 Operation

13 Under Alternative 2, the project site would be developed with a mix of residential, retail, office, and park  
14 uses. New development would occur primarily in the central portion of the project site, where the site is  
15 known to be contaminated. Since the site would be fully remediated prior to commencing construction,  
16 Alternative 2 would result in major long-term positive impacts to public health.

## 17 Cumulative Impacts

18 Construction activities under Alternative 2 could have the potential to adversely impact human health  
19 through the disturbance of known contaminants on site, unless the site is fully remediated.  
20 Construction of ongoing or planned projects within the study could contribute to a short-term  
21 cumulative impact. However, if those sites are fully remediated prior to construction, impacts would be  
22 negligible. Construction of ongoing or planned projects within the study area could contribute to a  
23 short-term cumulative impact to human health. However, since the site would be remediated to local  
24 and federal standards for human habitation, impacts would be negligible.

## 25 Conclusion

26 Without full remediation of the site, Alternative 2 could have major short-term adverse impacts to  
27 human health and a moderate long-term adverse impact. However, since the site would be remediated  
28 to meet local and federal standards for human habitation, short-term adverse impacts would be  
29 negligible and long-term positive impacts would be major.

## 30 **Mitigation**

- 31 • Hazardous waste materials found onsite, including asbestos-containing materials (ACM) and  
32 lead-based paints, should be removed and contained by licensed contractors and trained  
33 personnel consistent with applicable handling regulations.
- 34 • Hazardous and non-hazardous waste should be disposed of according to local and federal  
35 regulations, and should be transported with permanent labeling to an appropriate disposal  
36 facility by a licensed hazardous waste hauler.
- 37

### 1 **4.6.7.5 Alternative 3**

#### 2 Direct and Indirect Impacts

##### 3 *Construction-Related Impacts*

4 As part of Alternative 3, new residential, retail, and office development would be concentrated in the  
5 eastern portion of the site, where the distance between the Anacostia neighborhood and the waterfront  
6 is the shortest. The entire western portion of the project site would be reserved for open space and  
7 recreational uses. Alternative 3 would preserve the healthiest wetlands and create new wetlands to  
8 offset the wetlands lost by development. Alternative 3 would involve substantial ground disturbing  
9 activities during the construction phase.

10 As discussed in Section 3.6.3, the Poplar Point site is known to contain hazardous materials, including  
11 metals, petroleum products, pesticides, and organics in the surface and subsurface soil and ground  
12 water associated with the previous use of the site as plant nurseries and other historic operations. Some  
13 contamination is concentrated in the existing wetlands that would not be disturbed as part of  
14 Alternative 3. However, ground disturbing activities within other parts of the project site, particularly in  
15 the areas of the former Architect of the Capitol property and DC Lanham Tree Nursery property, would  
16 have the potential to expose construction workers to hazardous materials through direct contact with  
17 surface and subsurface soils and groundwater resources. In addition, construction could generate dust  
18 that would expose adjacent property owners to hazardous materials through inhalation of airborne  
19 particles containing pollutants. Therefore, without remediation of the site, Alternative 3 would have a  
20 major short-term adverse impact related to human health associated with hazardous materials.  
21 However, since the site would be remediated to local and federal standards for human habitation, short-  
22 term adverse impacts would be negligible.

##### 23 *Operational Impacts*

24 Under Alternative 3, the Poplar Point site would be developed with a mix of residential, retail, office,  
25 and park uses. This alternative would introduce permanent residential uses at the site and generate a  
26 new population of employees and retail customers that do not currently visit the site on a daily basis.  
27 Due to the redevelopment of and improvement of park uses, there would be an increase in park users  
28 compared to existing conditions. Because the site is contaminated with metals, pesticides, petroleum  
29 products and organics, Alternative 3 would increase the number of people potentially exposed to  
30 hazardous conditions. Exposure could include dermal contact, accidental ingestion, and inhalation. To  
31 address this contamination, the site would be remediated to local and federal standards for human  
32 habitation. Due to the remediation, Alternative 3 would have a major long-term positive impact on  
33 human health over existing site conditions.

#### 34 Cumulative Impacts

35 Construction activities could have the potential to adversely impact human health through the  
36 disturbance of known contaminants. Exposure to these contaminants could include dermal contact,

1 accidental ingestion, and inhalation. Construction of ongoing or planned projects within the study area  
2 could contribute to a short-term cumulative adverse impact to human health. However, since the site  
3 would be remediated to local and federal standards for human habitation, cumulative impacts would be  
4 negligible.

#### 5 Conclusion

6 Without full remediation, Alternative 3 could have major short-term adverse impacts to human health  
7 and moderate long-term adverse impacts. However, since the site would be remediated, short-term  
8 impacts would be negligible and long-term positive impacts would be major.

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#### 10 Mitigation

- 11 • Hazardous waste materials found onsite, including asbestos-containing materials (ACM) and  
12 lead-based paints, should be removed and contained by licensed contractors and trained  
13 personnel consistent with applicable handling regulations.
- 14 • Hazardous and non-hazardous waste should be disposed of according to local and federal  
15 regulations, and should be transported with permanent labeling to an appropriate disposal  
16 facility by a licensed hazardous waste hauler.

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**1 4.8 Unavoidable Adverse Impacts****2 4.8.1 No Action Alternative**

3 Under the No Action Alternative, Poplar Point would not be redeveloped. Thus, there would be no  
4 unavoidable adverse impacts.

**5 4.8.2 Alternative 1**

6 Unavoidable adverse impacts under Alternative 1 could come from the removal of meadow habitat. This  
7 would force the current vegetative and wildlife communities to find new habitat, which, given the urban  
8 nature of the site location, may be difficult. Other unavoidable adverse impacts under Alternative 1  
9 would result from construction activities, such as the introduction of new noise sources and the  
10 increased likelihood of sediment displacement from stormwater runoff. The transformation of the site  
11 from an undeveloped park to a multi-building, mixed-use development would have an unavoidable  
12 change to visual resources and will result in the modification of some views.

**13 4.8.3 Alternative 2**

14 Unavoidable adverse impacts under Alternative 2 could come from the removal of wetland habitat. This  
15 would force the current vegetative and wildlife communities to find new habitat, which, given the urban  
16 nature of the site location, would be difficult. The unique habitat afforded by the wetlands on-site may  
17 be mitigated from the construction of a new wetland complex; however, the functional of the current  
18 wetlands is unknown. Other unavoidable adverse impacts under Alternative 2 would result from  
19 construction activities, such as the introduction of new noise sources and the increased likelihood of  
20 sediment displacement from stormwater runoff. The transformation of the site from an undeveloped  
21 park to a multi-building, mixed-use development would have an unavoidable change to visual resources  
22 and will result in the modification of some views.

**23 4.8.4 Alternative 3**

24 Unavoidable adverse impacts under Alternative 3 could come from the removal of both meadow and  
25 wetland habitat. This would force the current vegetative and wildlife communities to find new habitat,  
26 which, given the urban nature of the site location, may be difficult. The unique habitat afforded by the  
27 wetlands on-site may be mitigated from the construction of a new wetland complex; however, the  
28 functional of the current wetlands is unknown. Other unavoidable adverse impacts under Alternative 3  
29 would result from construction activities, such as the introduction of new noise sources and the  
30 increased likelihood of sediment displacement from stormwater runoff. The transformation of the site  
31 from an undeveloped park to a multi-building, mixed-use development would have an unavoidable  
32 change to visual resources and will result in the modification of some views.

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1 **4.9 Irreversible and Irretrievable Commitments of Resources and Short-Term Uses of the**  
2 **Environment Versus Long-Term Productivity**

3 **4.9.1 No Action Alternative**

4 Irreversible commitments of resources are actions that result in the permanent loss of resources.  
5 Irretrievable commitments of resources are actions that result in the loss of resources for a period of  
6 time. Under the No Action Alternative no construction activities or commitment of additional resources  
7 would occur.

8 **4.9.2 Alternative 1**

9 Construction of the various elements under Alternative 1 would result in an irreversible and irretrievable  
10 commitment of resources used in the construction of the facilities. However, since these resources are  
11 put to positive use, the commitment of these resources is not considered to be a significant adverse  
12 impact of this alternative. In addition, Alternative 1 would require the demolition of the Engineer's  
13 House and thus the irreversible loss of this cultural resource.

14 Under Alternative 1, Poplar Point would be developed with a combination of commercial, residential,  
15 cultural, and recreational uses. Although the overall size of Anacostia Park would be reduced by 130  
16 acres, the property would continue to serve as a community resource, preserving and enhancing  
17 important natural features on the site.

18 **4.9.3 Alternative 2**

19 Construction of the various elements under Alternative 2 would result in an irreversible and irretrievable  
20 commitment of resources used in the construction of the facilities. However, since these resources are  
21 put to positive use, the commitment of these resources is not considered to be a significant adverse  
22 impact of this alternative. In addition, Alternative 2 would result in the removal of the Anacostia  
23 Seawall and thus the irreversible loss of this cultural resource.

24 Under Alternative 2, Poplar Point would be developed with a combination of commercial, residential,  
25 cultural, and recreational uses. Although the overall size of Anacostia Park would be reduced by 130  
26 acres, the property would continue to serve as a community resource, preserving and enhancing  
27 important natural features on the site.

28 **4.9.4 Alternative 3**

29 Construction of the various elements of Alternative 3 would result in an irreversible and irretrievable  
30 commitment of resources used in the construction of the facilities. However, since these resources are  
31 put to positive use, the commitment of these resources is not considered to be a significant adverse  
32 impact of this alternative.

33 Under Alternative 3, Poplar Point would be developed with a combination of commercial, residential,  
34 cultural, and recreational uses. Although the overall size of Anacostia Park would be reduced by 130

1 acres, the property would continue to serve as a community resource, preserving and enhancing  
2 important natural features on the site.

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#### 1 **4.10 Sustainability and Long-Term Management**

2 In accordance with NEPA, and as further explained in Director's Order 12, consideration of long-term  
3 impacts and the effects of foreclosing future options should pervade any NEPA document. According to  
4 Director's Order 12, and as defined by the World Commission on Environment and Development,  
5 "sustainable development is that which meets the needs of the present without compromising the  
6 ability of future generations to meet their needs." For each alternative considered in a NEPA document,  
7 considerations of sustainability must demonstrate the relationship between local short-term uses of the  
8 environment and the maintenance and enhancement of long-term productivity. This is described below  
9 for each alternative.

10 The NPS must consider if the effects of the alternatives involve tradeoffs of the long-term productivity  
11 and sustainability of park resources for the immediate short-term use of those resources. It must also  
12 consider if the effects of the alternatives are sustainable over the long term without causing adverse  
13 environmental effects for future generations (NEPA section 102(c)(iv)).

##### 14 **4.10.1 No Action Alternative**

15 Poplar Point would continue to be used by the public as a recreational and open space resource, and the  
16 National Park Service would continue to use their facilities currently located there. The NPS would  
17 continue to manage the Park, preserving these recreational and open space resources. Actions, such as  
18 the long-term remediation of the wetlands, would need to be undertaken in a manner that does not  
19 adversely affect the long-term utilization of recreational and open space resources at the site.

##### 20 **4.10.2 Alternative 1**

21 Under Alternative 1 Poplar Point would continue to be used by the public as a recreational and open  
22 space resource because the land transfer requires 70 acres of parkland to remain on the site. The NPS  
23 would continue to manage the Park, preserving these recreational and open space resources. Some of  
24 the positive impacts of Alternative 1, such as the remediation of the wetlands found on-site, would  
25 improve and ensure the long-term use and health of the park's resources. Also, the proposed land use  
26 changes would attract more visitors to the site.

##### 27 **4.10.2 Alternative 2**

28 Under Alternative 2 Poplar Point would continue to be used by the public as a recreational and open  
29 space resource because the land transfer requires 70 acres of parkland to remain on the site. The NPS  
30 would continue to manage the Park, preserving these recreational and open space resources. Some of  
31 the positive impacts of Alternative 2, such as the removal of contaminated wetlands found on-site and  
32 the construction of new wetlands, would improve and ensure the long-term use of the park's resources.  
33 Also, the proposed land use changes and transit-oriented design would attract more visitors to the site.

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1 **4.10.2 Alternative 3**

2 Under Alternative 3 Poplar Point would continue to be used by the public as a recreational and open  
3 space resource because the land transfer requires 70 acres of parkland to remain on the site. The NPS  
4 would continue to manage the Park, preserving these recreational and open space resources. Some of  
5 the positive impacts of Alternative 3, such as the remediation of some of wetlands found on-site and  
6 construction of new wetlands, would improve and ensure the long-term use of the park's resources.  
7 Also, the proposed land use changes would attract more visitors to the site.

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## **5.0**

# **CONSULTATION AND COORDINATION**

## 1 **5.0 Consultation and Coordination**

### 2 **5.1 Public Process**

3 A Notice of Intent (NOI) was published pursuant to the National Environmental Policy Act of 1969  
4 (NEPA), 42 U.S.C. 4321 et seq. in the Federal Register on June 11, 2008 (Vol. 73, No. 113). The purpose  
5 of the NOI was to formally announce the preparation of an Environmental Impact Statement for the  
6 Poplar Point site. In addition, the NOI announced the designation of the National Park Service and the  
7 District of Columbia government as joint Lead Agencies for this initiative. As required by Title III of the  
8 Federal and District of Columbia Real Property Act, Pub. L. 109-396, 120 Stat. 2711, the preparation of  
9 an EIS will aid in the agencies' selection of the alternative that best suits the community's needs. Finally,  
10 the NOI initiated the EIS Scoping Period, a process that allows the public to express their concerns about  
11 the project and provide input on the design and development program.

12 A series of five public meetings that focused on the site and development alternatives were held to  
13 inform agencies and the public about the condition of the Site and gather information on their interests  
14 related to potential features planned for the Site. Two of the meetings Public Scoping meetings,  
15 required under NEPA, and were held on June 24, 2008 and July 18, 2009. The first focused on the site  
16 and the second focused on the proposed alternatives. Three of the meetings were Small Area Planning  
17 meetings, held on July 29, 2008; October 7, 2008; and November 20, 2008.

#### 18 Environmental Impact Statement Meetings

19 The first Poplar Point EIS Public scoping meeting was held on June 24, 2008 at Thurgood Marshall  
20 Academy. The purpose of the meeting was to obtain public input on the scope of issues to be addressed  
21 in the EIS and proposed relocation of certain National Park Service and USPP facilities. In addition, it was  
22 the first of several meetings related to the EIS and planning for Poplar Point. The meeting built on  
23 previous plans, including the AWI Framework Plan (2003), the DC Comprehensive Plan (2006), the AWC  
24 Concept Plan (2003) and the District RFEI Process (2007) as the foundation. Additionally, the meeting  
25 took into account the public input obtained to date, as well as discussed and explained the EIS process.  
26 The formal public scoping period lasted for 45 days, from June 11 to July 26, 2008.

27 The format of the meeting included five stations, including Socio-Economics, Natural Resources,  
28 Transportation Resources, Utilities/Infrastructure, and Cultural Resources. Members of the public were  
29 asked to express their concerns about the potential impacts the Proposed Action would have on each of  
30 these resource. This feedback served as the basis for identifying the relevant resources topics to be  
31 evaluated.

32 A second Poplar Point Scoping was held on July 18, 2009 at Thurgood Marshall Academy. The purpose of  
33 this meeting was to solicit feedback from the public about the proposed development alternatives. The  
34 format of the meeting involved a formal presentation of the various alternatives, followed by break-out  
35 sessions organized around the alternatives. In addition to the presentation, boards used in the previous  
36 meetings were brought to answer any questions or concerns attendees may have had over existing site  
37 conditions or the NEPA process.

1 Upon arrival, attendees were assigned an alternative where they would begin the public input portion of  
2 the meeting. Each alternative was assigned a classroom and while visiting each classroom attendees  
3 were encouraged to review the alternative and provide feedback or ask for clarification. Once  
4 completed, the attendees reconvened in the central presentation area where a brief question and  
5 answer session took place. The comments that had been received were sorted and some of the most  
6 prevalent comments were projected onto a screen for clarification.

#### 7 Small Area Planning Meetings

8 In conjunction with the EIS process, the first two of the three Small Area Planning meetings were held on  
9 July 29, 2008 and October 7<sup>th</sup>, 2008 at Matthews Memorial Baptist Church. These meeting discussed  
10 planning principles for the Poplar Point small area plan and included roundtable discussions to collect  
11 input from community members on Poplar Point planning preferences and priorities. This input was  
12 utilized by the planning team as the basis for the development alternatives, which were discussed in  
13 further depth at subsequent meetings.

14 A third Small Area Planning meeting was held on November 20, 2008 at Birney Elementary School. This  
15 meeting was an open house format that included interactive stations with display boards that illustrated  
16 potential planning options for Poplar Point. The issues of focus included Environment, Transportation  
17 and Connections, Parks, Cultural Significance, and Neighborhoods and Development. Major points of  
18 interest identified through this process identified environmental sustainability, Transit Oriented  
19 Development (TOD), and a preference for making the site bicycle and pedestrian friendly.

#### 20 Section 106 Consultation

21 In addition to the formal scoping process, consultation has occurred in accordance with Section 106 of  
22 the National Historic Preservation Act (NHPA). The NHPA of 1966, as amended, is the guiding legislation  
23 for the preservation of historic properties. Pursuant to Section 106 of the NHPA, federal agencies are  
24 required to consider the effects of proposed actions on properties listed in, or eligible for listing in, the  
25 National Register of Historic Places. Maintained by the National Park Service, the National Register is the  
26 nation's official list of cultural resources worthy of preservation. If a project may affect a historic  
27 property, the lead agency must enter into consultation with the State Historic Preservation Officer, the  
28 Advisory Council on Historic Preservation, and other interested agencies and individuals. The  
29 consultation is intended to identify historic properties that could potentially be affected by a proposed  
30 action, assess potential effects, and resolve adverse effects through avoidance or mitigation.

31 The Section 106 process was initiated by the National Park Service in a letter to the DC SHPO dated  
32 September 22, 2008. An initial Section 106 consultation meeting was held on August 6, 2009 at the  
33 offices of the DC SHPO where the proposed alternatives for the project were described and the area of  
34 potential effects (APE) was discussed. Additional meetings occurred in December 2009 and January  
35 2010. A meeting with the DC SHPO, NPS, District of Columbia officials, consulting parties, and members  
36 of the public was held on March 10<sup>th</sup>, 2010. In addition to the identified Section 106 meetings, issues  
37 pertaining to cultural resources were raised at a scoping meeting held June 24, 2008. Consultation  
38 meetings will continue through the environmental review process.

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## **6.0**

# **APPENDICES**

1 **6.0 Appendices**

2 **6.1 List of Acronyms**

3	AASHTO	American Association of State Highway and Transportation
4		Officials
5	ACHP	Advisory Council on Historic Preservation
6	ADA	Americans with Disabilities Act
7	ADC	Aid to Dependant Children
8	AEDC	Anacostia Economic Development Corporation
9	AFB	Air force base
10	AFDC	Aid to Families with Dependant Children
11	ANC	Advisory Neighborhood Commission
12	APE	Area of Potential Effect
13	AST	Above-ground Storage Tank
14	AWI	Anacostia Waterfront Initiative
15	AWC	Anacostia Waterfront Corporation
16	AWRC	Anacostia Watershed Restoration Commission
17		
18	B-IBI	Benthic Index of Biotic Integrity
19	BEF	Bonus Expeditionary Force
20	BID	Business Improvement District
21	BMP	Best Management Practice
22		
23	CAA	Clean Air Act
24	CAAA	Clean Air Act Amendments
25	CCC	Civilian Conservation Corps
26	CE	Categorical Exclusion
27	CEQ	Council on Environmental Quality
28	CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
29	CERCLIS	Comprehensive Environmental Response, Compensation, and Liability
30		Information System
31	CFA	Commission of Fine Arts
32	CFR	Code of Federal Regulations
33	CG	Capital Gateway Overlay District
34	CO	Carbon Monoxide
35	COC	Chemical of Concern
36	CSO	Combined Sewer Outflow
37	CWA	Clean Water Act
38		
39	dB	Decibels
40	DBE	Disadvantaged Business Enterprise
41	DC	District of Columbia
42	DCDHP	District of Columbia Department of Historic Preservation
43	DCDOH	District Department of Health
44	DCDPW	District of Columbia Department of Public Works
45	DCOP	District of Columbia Office of Planning
46	DCRA	Department of Consumer and Regulatory Affairs
47	DCHA	District of Columbia Housing Authority
48	DCMSA	District of Columbia Metropolitan Statistical Area

1	DCPS	District of Columbia Public School System
2	DDOE	District of Columbia Department of Environment
3	DDOT	District Department of Transportation
4	DCOZ	District of Columbia Office of Zoning
5	DEIS	Draft Environmental Impact Statement
6	DOD	(US) Department of Defense
7	DO-12	NPS Environmental Compliance Field Guide - Director's Order 12
8	DPR	District Department of Parks and Recreation
9		
10	EAC	Elizabeth Anderson Comer Archaeology
11	EIS	Environmental Impact Statement
12	EJ	Environmental Justice
13	EO	Executive Order
14	ESA	Environmental Site Assessment
15	ERA	Economic Research Associates
16		
17	FAR	Floor Area Ratio
18	FEIS	Final Environmental Impact Statement
19	FEMA	Federal Emergency Management Agency
20	FHWA	Federal Highway Administration
21	FMR	Fair Market Rate
22	FPPA	Farmland Protection Policy Act
23		
24	FY	Fiscal Year
25		
26	GIS	Geographic Information System
27	GLA	Gross Leasable Area
28	GPD	Gallons Per Day
29	GSA	General Services Administration
30		
31	HABS	Historic American Building Survey
32	HAER	Historic American Engineering Record
33	HUD	U.S. Department of Housing and Urban Development
34		
35	JMA	John Milner Associates
36		
37	LID	Low Impact Development
38	LTCP	Long Term Control Plan
39		
40	MBTE	Methyl Tert-Butyl Ether
41	MLK	Martin Luther King, Jr.
42	MOA	Memorandum of Agreement
43	MOU	Memorandum of Understanding
44	MPD	Metropolitan Police Department
45	MPO	Metropolitan Planning Organization
46	MSL	Mean Sea Level
47	MS4	Municipal Separate Storm Sewer System
48	MWAQC	Metropolitan Washington Air Quality Committee
49	MWCOG	Metropolitan Washington Council of Governments
50		

1	NAAQS	National Ambient Air Quality Standards
2	NCPC	National Capital Planning Commission
3	NCPE	National Capital Parks - East
4	NDW	Naval District Washington
5	NEPA	National Environmental Policy Act
6	NHL	National Historic Landmark
7	NHPA	National Historic Preservation Act
8	NMFS	National Marine Fisheries Service
9	NOAA	National Oceanic and Atmospheric Administration
10	NOI	Notice of Intent
11	NO <sub>2</sub>	Nitrogen Dioxide
12	NO <sub>x</sub>	Nitrogen Oxide
13	NPDES	National Pollution Discharge Elimination System
14	NPL	National Priority List
15	NPS	National Park Service
16	NRCS	Natural Resources Conservation Service
17	NRHP	National Register of Historic Places
18	NSF	Naval Support Facility
19	NWI	National Wetland Inventory
20		
21	O <sub>3</sub>	Ozone
22	OP	District of Columbia Office of Planning
23		
24	PAH	Polycyclic Aromatic Hydrocarbons
25	Pb	Lead
26	PCB	Polychlorinated Biphenyls
27	PDEIS	Preliminary Draft Environmental Impact Statement
28	PEM	Palustrine Emergent
29	PEPCO	Potomac Electric Power Company
30	PFO	Palustrine Forested Wetland
31	PHA	Public Housing Authority
32	PM	Particulate Matter
33	PSA	Police Service Areas
34	PSS	Palustrine Scrub-Shrub
35	PUD	Planned Unit Development
36		
37	ROD	Record of Decision
38		
39	SAV	Submerged Aquatic Vegetation
40	SE	Southeast
41	SEFC	Southeast Federal Center
42	SHPO	State Historic Preservation Office
43	SIP	State Implementation Plan
44	SNAP	Strategic Neighborhood Action Plan
45	SO <sub>2</sub>	Sulfur Dioxide
46	SVOC	Semi-Volatile Organic Compound
47	SW	Southwest
48		
49	TANF	Temporary Assistance for Needy Families
50	TMDL	Total Maximum Daily Loads

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1		
2	USACE	United States Army Corps of Engineers
3	USC	United States Code
4	USDA	United States Department of Agriculture
5	USDHHS	United States Department of Health and Human Services
6	USDOJ	United States Department of the Interior
7	USDOT	United States Department of Transportation
8	USEPA	United States Environmental Protection Agency
9	USFWS	United State Fish and Wildlife Service
10	USGS	United States Geological Survey
11	UST	Underground Storage Tank
12		
13	VIMS	Virginia Institute of Marine Services
14	VOC	Volatile Organic Compound
15		
16	WASA	Water and Sewer Authority (District of Columbia)
17	WMATA	Washington Metropolitan Area Transit Authority
18	WPA	Works Project Administration
19	WSSI	Wetland Studies and Solutions, Inc.
20	WQS	Water Quality Standards
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