

D. Wetland Statement of Findings

STATEMENT OF FINDINGS FOR EXECUTIVE ORDER 11990 (PROTECTION OF WETLANDS) AND DIRECTOR'S ORDER #77-1: WETLAND PROTECTION

**The Woodrow Wilson Bridge Replacement Project
Jones Point Park**

May 2007

Recommended:

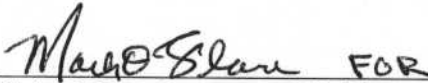


Superintendent,
George Washington Memorial Parkway

6-5-07

Date

Certified for Technical Adequacy and Servicewide Consistency:


Chief, Water Resources Division
(BY DIRECTION)

MAY 24, 2007

Date

Approved:



Regional Director, National Capital Region

6/25/07

Date

WETLAND STATEMENT OF FINDINGS

The Woodrow Wilson Bridge Replacement Project, Jones Point Park

Introduction

The National Park Service (NPS) proposes to improve and enhance Jones Point Park (JPP) located in the southeastern corner of the City of Alexandria, Virginia (Figure 1). The project includes recreational features, an interpretive plan related to cultural resources, and proposed modifications to parking and access within the park. The elevated Woodrow Wilson Bridge (WWB) traverses JPP. The Federal Highway Administration (FHWA) has approved improvements to the Woodrow Wilson Bridge (WWB) and affected interchanges within a 7½ mile portion of I-95/I-495 (Capital Beltway). The proposed improvements to JPP are mitigation commitments to the NPS from FHWA for impacts to the park from the WWB Replacement Project.

The NPS signed the initial JPP EA on September 10, 2001. Terrorists attacked on September 11, 2001 crashing commercial airplanes into the World Trade Center in New York City, the Pentagon in Washington, D.C., and a field in Pennsylvania. The initial EA, which evaluated three action alternatives: Alternatives 1, 2 and 3, was circulated for public comment between January 11, 2002 and February 11, 2002. In August 2003, the federal TSA performed a vulnerability assessment and recommended the removal of all parking from beneath the new WWB. After careful evaluation of the risks of parking in JPP, a recommendation was set forth to eliminate all parking and vehicular access within 80 feet of the north and south parapet driplines of the new WWB.

The need for the proposed action is based on: the lack of a current comprehensive management plan for JPP, required mitigation commitments for impacts from the WWB Replacement Project (protection of JPP resources and recreational opportunities), and required security measures in JPP due to recommendations contained within the *Vulnerability Reduction Design Considerations for the Woodrow Wilson Bridge Replacement Project* (June 2002).

The primary purposes of the proposed action are to: develop a long-range plan for JPP, identify desired resource conditions and visitor experiences, consider feasible alternatives for future development of JPP and provide educational and recreational opportunities for visitors while protecting park resources.

The proposed improvements to JPP include: a park manager's office/comfort station, a tot lot, promenade/boardwalk, access to the Mt. Vernon Trail, shoreline stabilization, proposed bulkhead, canoe/kayak launch, a fishing pier, the rehabilitation and preservation of the D.C. South Cornerstone and the Jones Point Lighthouse, and drainage improvements along the new access road. The proposed improvements to JPP would cause direct adverse environmental effects but not have any indirect adverse environmental effects. The Environmental Assessment discusses the potential environmental effects from the proposed improvements to JPP.

The proposed wetland fill is a result of a new access road, parking areas, and promenade. Compensatory wetland mitigation appears feasible north of the bridge and east of the Lee Street pathway within an open power line area and adjacent openings in the forest.

Alternatives

No-Action

The No-Action Alternative maintains the two existing soccer fields located south of the WWB; therefore, no additional environmental, social, or construction impacts would be expected due to new park improvements. The No-Action Alternative does not address the purpose or need for improvements in JPP.

The No-Action Alternative does not comply with the NPS 1984 *Development Concept Plan* that outlined specific park improvements for expanded use and enjoyment of the park (refer to the Environmental Assessment).

The No-Action Alternative does not address the Resolution No. 1908 adopted by the Alexandria City Council or the park program and design elements recommended by the JPP Development Group.

The No-Action Alternative does not meet the design goals contained in the WWB Record of Decision, which identified enhancements to JPP to mitigate impacts from the WWB Replacement Project.

Finally, the No-Action Alternative does not address TSA's security recommendation to remove all parking from beneath the new WWB.

Four additional action alternatives were originally under consideration. Alternative 1 (Figure 2) features access from Royal Street with two entry points leading to three parking areas. A total of 110 parking spaces would be located in the park between Royal Street and Lee Street, north of the new WWB. The existing soccer fields located south of the existing WWB would be replaced with multi-use fields on the north side of the bridge. One multi-use field would be located parallel to the WWB and a second multi-use field would be placed perpendicular to the WWB, east of the first multi-use field. The westernmost multi-use field would be oriented in an east-west direction while the adjacent multi-use field would be oriented in a north-south direction. An event lawn would replace the current soccer fields south of the new bridge. A tot lot would be sited east of the easternmost multi-use field. This alternative contains the other items common to all action alternatives.

Alternative 2 (Figure 3) features access from Royal Street and an access road that extends to the Potomac River and terminates at a parking area to be located just west of the Mt. Vernon Trail. A 38-space parking area would be built on the west side of the westernmost multi-use field and a 72-space parking area would be built on the east end of the easternmost field. The existing soccer fields would be relocated north of the WWB. Two multi-use fields, located east of the parking area, would be oriented east-west, parallel to the WWB. The westernmost field would require clearing a partially forested area, while the easternmost field would be located in an existing open area. An event lawn would replace the current soccer fields south of the new bridge. This alternative contains the other items common to all action alternatives.

Alternative 3 (Figure 4) features access from Royal Street by a roadway extending east of Lee Street. The access road would run south of the Royal Street community garden and shift south, ending west of the multi-use field. The access road would connect to a 50-space parking area south of the road and the 60-space parking area, located approximately 30 feet west of the multi-use field. A single 110 x 60 yard multi-use field would be located east of the proposed 60-space parking area, located north of and oriented parallel to the WWB. A tot lot would be sited east of this multi-use field, north of the WWB. This alternative contains the other items common to all action alternatives.

Alternative 4 (Figure 5) features access from Royal Street via an access road extending to an 81-space parking area located just west of the Potomac River. The access road to the parking lot would extend from a new cul-de-sac at Royal Street. A multi-use field would be located south of the bridge in a similar location as the existing field. The 80 x 40 yard field would be oriented in a northwest/southeast direction. A tot lot would be located between the parking lot and the Potomac River north of the bridge. This alternative contains the other items common to all action alternatives.

NPS Selected Alternative – Modified Preferred Alternative 4A (*Multi-use fields north and south of the WWB*)

Modified Preferred Alternative 4A features an access road that connects to a new cul-de-sac at the south end of Royal Street and extends eastward to a 110-space parking area and a vehicular turnaround located just west of the Potomac River (see Figure 6). The cul-de-sac, perimeter barrier system, guardhouse, and landscape plantings to be located just south of the turnaround, would be similar to Alternative 4.

From the Royal Street cul-de-sac, motorists would be able to reach the 110-space parking area via the access road. The access road would be similar in location and length to Alternative 4 and would require extending the Lee Street community garden north to keep it the same size as the original garden.

A tot-lot and an 80 x 40 yard multi-use field, oriented east/west, would be located north of the parking area; and a 110 x 60 yard multi-use field, oriented northwest/southeast, would be located south of the WWB in a similar location as the existing field.

The vehicular turnaround and 159 additional parking spaces to be located under the WWB, the landscape plantings, the perimeter barrier system, and connection to the Mt. Vernon Trail would be similar to Alternative 4. Alternative 4A contains the other items common to all action alternatives.

Wetland Delineation

Methods

Wetland boundaries were delineated using the 1987 U.S. Army Corps of Engineers (USACE) *Wetland Delineation Manual*. The wetlands also were classified and delineated according to the U.S. Fish and Wildlife Service's publication, *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et.al. 1979), which is the NPS approved method of classifying and delineating wetlands (Figure 6). Data forms for a routine wetland determination, from the 1987 USACE *Wetland Delineation Manual*, were completed for each wetland in the project area based on field observations and techniques mentioned in the above references. Boundaries of wetlands were flagged, field surveyed, and converted to CADD files, which were overlaid on topographic mapping. Direct and indirect impacts associated with Alternative 4 were analyzed from a CADD overlay of the proposed project activity onto all mapped Waters of the U.S., including wetlands resources.

Timeline for Onsite Investigations

All wetlands and Waters of the U.S. within JPP outside of the immediate footprint of the bridge originally were delineated in January and February 1999, and received a jurisdictional determination from the USACE later that year. A re-delineation of a portion of the forested nontidal wetlands just east of the Lee

Street community gardens was conducted in August of 2005 as part of a reevaluation of the wetlands and Waters of the U.S. by the USACE. The USACE verified the expanded wetland boundaries and accepted the remainder of the wetlands and waterways within JPP as previously delineated in 1999.

Soil, hydrology, and vegetation characteristics of all potential wetlands in the project area were examined for wetland indicator status according to the guidelines set forth in the USACE *Wetland Delineation Manual*, 1987, and the *Classification of Wetlands and Deepwater Habitats of the United States*, 1979, by Cowardin.

Status of Permits

The permit approvals obtained for the WWB Replacement Project include a USACE Permit (June 2000), Virginia Department of Environmental Quality Water Protection Permit (June 2000), Virginia Coastal Resources Management Consistency Certification (June 2000) and Virginia Pollutant Discharge Elimination System (July 2000).

A modification for this slight increase of wetland impacts would be distributed to the Virginia Marine Resources Commission, the USACE, and the Virginia Department of Environmental Quality for approval.

JPP Wetlands

Wetlands exist within JPP primarily north of the bridge and along Hunting Creek south of the bridge. On the north side, wetlands exist in shallow depressions or gently sloping drainage swales. These systems are primarily palustrine forested wetlands with broad-leaved deciduous vegetation including *Platanus occidentalis* (sycamore), *Acer negundo* (box elder), *Acer rubrum* (red maple), *Cornus amomum* (silky dogwood), and *Toxicodendron radicans* (poison ivy). Underlying soil samples were mostly silt loam in texture and had hydric indicators including low chroma colors and redoximorphic features. Hydrologic indicators included inundation, water marks on trees, drift lines, sediment deposits, and drainage patterns. Functions and values provided by the non-tidal forested wetlands within the park were assessed through best professional judgment. Principal functions include nutrient removal and transformation and wildlife habitat, specifically as breeding habitat for some forest interior dwelling species such as *Vireo olivaceus* (red-eyed vireo), *Hylocichla mustelina* (wood thrush), and *Parula americana* (northern parula). The larger trees along the Potomac River may also occasionally be used by the federally threatened bald eagle. The principal value is aesthetics.

One riverine tidal freshwater emergent wetland (R1EM2) occurs north of the bridge along the Potomac River. This wetland formed within the Potomac River behind concrete structures of the finishing pier left over from the ship building operation. The wetland is comprised of *Sagittaria latifolia* (arrowhead) and *Saururus cernuus* (lizard's tail) vegetation and is underlain by gleyed soils. Hydrologic indicators included inundation, saturation, water marks, drift lines, sediment deposits, water-stained leaves, and drainage patterns. Principal functions were identified through best professional judgment and include sediment/toxicant retention, nutrient removal and transformation, and finfish habitat.

On the south side, wetlands are primarily tidally influenced and occur adjacent to Hunting Creek and along the Potomac River. Tidal freshwater wetlands include large areas of palustrine emergent marsh comprised of *Pontederia cordata* (pickerelweed), *Polygonum arifolium* (halberd-leaf tearthumb), *Typha* sp. (cattail), *Hibiscus moscheutos* (rosemallow), and *Polygonum sagittatum* (arrow-leaf tearthumb). Tidally influenced forested wetlands also occur along the shoreline of Hunting Creek. Dominant vegetation within this wetland includes *Ulmus americana* (American elm), *Acer saccharinum* (silver maple), and red maple. Portions of these areas immediately south of the existing bridge have already

been impacted for construction of the new bridge span. Additionally, isolated wetland depressions occurred in the interior of the park site just south of the existing bridge. These palustrine forested wetlands also have already been impacted for construction of the new bridge span. Impacts to wetlands beneath the new bridge span were accounted for under the permit for construction of the bridge project itself, and are not accounted for in this park improvement project.

Soil samples had low chroma matrix colors and exhibited a silt loam texture. Hydrologic indicators included drift lines, sediment deposits, and water marks. Wetland functions and values provided by the tidal wetlands along Hunting Creek include floodflow alteration, sediment/toxicant retention, nutrient removal and transformation, wildlife habitat, and aesthetics. Wildlife use of these emergent wetlands includes nesting sites for mallard and Canada goose and foraging habitat for great blue heron. No known rare, threatened, or endangered species regularly use the wetlands. Isolated depressional non-tidal palustrine forested wetlands were dominated by silver maple, box elder, sycamore, *Fraxinus pennsylvanica* (green ash), red maple, silky dogwood, poison ivy, and *Lonicera japonica* (Japanese honeysuckle). Soils were clayey in texture and appeared to hold surface runoff for sufficient time to create wetland conditions. Because of the small size and isolated nature of these forested wetlands, they were of little functional significance. However, in conjunction with adjacent upland forest, they did serve as breeding habitat for some bird species including red-eyed vireo.

Non-wetland waterways also occur within and adjacent to the park, including the tidal portions of the Potomac River and Hunting Creek. Other non-wetland drainage swales are located north of the bridge adjacent to the Potomac River and between Lee Street and Royal Street. Submerged aquatic vegetation (SAV) also occurs along the eastern and southern shoreline of JPP within the Potomac River. Common SAV species include *Hydrilla verticillata* (hydrilla), *Ceratophyllum demersum* (coontail), *Myriophyllum spicatum* (Eurasian watermilfoil), *Vallisneria americana* (wild celery), and *Heteranthera dubia* (water stargrass).

Wetland Mitigation and Compensation

Total direct wetland impacts under Alternative 4A would be approximately 0.4 acre, comprising about three percent of the total wetland area (12 acres) within the park.

The proposed promenade/boardwalk would result in approximately 0.2 acre of impact to tidal freshwater emergent wetland and the tidal Potomac River. In addition, approximately 0.2 acre of palustrine forested non-tidal wetlands would be impacted from the new access road and perimeter barriers.

Complete avoidance of all wetlands and other waters of the U.S. within the park is not possible while still accomplishing the Purpose and Need of the proposed project. Because of restrictions on access beneath the WWB brought on by homeland security requirements, the new access road and parking for the planned improvements must be provided in some of the undeveloped portions of the park. Vehicle access would only be available by way of a new entrance road off of Royal Street, and to allow sufficient access and parking, impacts would occur to forested non-tidal wetlands located within the forested area of the park between Royal Street and the Lee Street pathway. Also, improvements to the finishing pier to create a promenade along the Potomac River would result in unavoidable impacts to tidal emergent wetlands that have formed between the deteriorating piers. While complete avoidance of wetland impacts is not possible, Alternative 4A minimizes wetland impacts by shifting some of the planned parking from an area of wetlands between Royal Street and the Lee Street pathway to an area of uplands adjacent to the Potomac River. Wetland impacts will also be avoided by the placement of playing fields within upland areas north and south of the bridge. Alternative 4A would have less impact than Alternative 2 (0.5 acre)

and the same impact as Alternative 3 and 4 (0.4 acre). However, Alternative 1 would have slightly less impact (0.3 acre) than Alternative 4A.

In the Fall of 2006, the Environmental Assessment went through a public review process. During this period, the park received 393 comments, which were then analyzed by park staff. The public review process created a change from the preferred Alternative 4 to Alternative 4A.

The main body of comment focused on the location and amount of active and passive recreational uses of Jones Point Park. Commenters who support active uses desire athletic fields, in particular, north of the bridge. Those preferring passive uses desire less or no fields in Jones Point Park. The two prevailing points of view, were for the most part, split down the middle in terms of the number of comments received. Other significant impact issues included the affects of proposed developments on the adjacent neighborhood, which are most impacted by the Woodrow Wilson Bridge expansion, as referenced in the mitigations promised from the project's related impacts. Most notable of these was maintaining to the maximum extent possible, natural buffers for noise and natural environments that could possibly control flooding potential from the Potomac River. Another project commitment included providing vehicular parking and access to the river for handicap visitors.

In reviewing public comment, the park modified the preferred alternative to further resource protection interests and minimize impacts to the adjacent neighborhoods while balancing both active and passive uses. The primary difference in terms of wetland impact between Alternatives 4A and Alternative 1 is the access road and parking. In Alternative 4A, park development north of the bridge (fields, access and parking) is as far away as possible from adjacent neighborhoods in order to maximize the amount of buffer area, and reduce bridge-related and park improvement impacts on the adjacent community. Also, the location of the road and parking in Alternative 4A will have less impact from run-off into the adjacent wetlands than Alternative 1, which was situated tightly within a non-tidal forested wetland. Alternative 4A also has less forest impact than Alternative 1 (2.9 acres versus 5.1 acres) and impacts fewer significant trees with a diameter of 24 inches or greater (six versus four).

The NPS feels that Alternative 4A minimizes adverse impacts to park resources including forests, minimizes impacts to the adjacent neighborhoods, and provides the best balance of recreational opportunities thereby, justifying the 0.1 acre increase in wetland impacts, which will be fully mitigated on-site.

While complete avoidance of all wetland impacts is not possible, impacts can be reduced through wetland mitigation. According to guidance provided in the NPS *Procedural Manual #77-1: Wetland Protection*, wetland impacts must be replaced at a minimum 1:1 replacement ratio. Compensation for 0.4 acre of wetland impact appears feasible north of the bridge and east of the Lee Street pathway within an open power line area and adjacent openings in the forest created by the loss of trees. The existing trees have recently died and fallen as a result of smothering by invasive vines. The mitigation proposal would seek to use the open land now covered in vines and connect the proposed mitigation site to the larger, contiguous seasonally flooded non-tidal wetland (Area 1 according to the wetland delineation report prepared March 1999). Refer to Figure 7. Area 1 is located in the northern portion of JPP and extends from the western park boundary to the footpath in the eastern portion of the park. Although Area 1 is classified as non-tidal it may receive tidal influence from the Potomac River during very large storm events.

Between Area 1 and the proposed mitigation area is an upland forest strip that varies in width from 20 to 50 feet. The connection of the proposed mitigation site with Area 1 will be accomplished through the grading of shallow channels through the upland forest strip. The channels will be designed to avoid

impacts to trees where possible. Grading of the upland mitigation site to match the grade of the existing forested non-tidal wetland would require less than three feet of cut. Requisite hydrology of the existing non-tidal forested wetland appears to be supported by the perching of surface water. The hydrology of the wetland restoration will also be supported by a perched water table. This will be accomplished through the compaction of subsoils to minimize infiltration of surface water. Soil amendments will be specified on the restoration plans to ensure that a proper topsoil planting medium is provided prior to the planting of appropriate wetland vegetation. Wetland vegetation will be selected for the restoration site following an assessment of water levels within the newly graded site. Once the hydroperiod has been established, appropriate woody shrubs and tree saplings will be selected and installed within the restoration site. This would result in the establishment of an approximately 0.5 acre non-tidal forested wetland depression. This wetland restoration would be sufficient to compensate for impacts to both forested and emergent non-tidal wetland impacts. An additional benefit from the proposed mitigation option is the removal of the invasive vines that threaten the remainder of the forest within the park.

Funding for the wetland mitigation project will be accomplished through the existing funding mechanisms established for the Woodrow Wilson Bridge replacement project. Specifically, the mitigation will be made part of the Virginia Department of Transportation's (VDOT) Jones Point Park Ultimate Improvements contract. Once completed, the success of the mitigation site will be monitored for a minimum of five years post construction to ensure that the site is succeeding to a forested wetland condition. Mitigation monitoring guidelines were developed for the Woodrow Wilson Bridge project for wetland creation/restoration sites, and have received agency approval. These protocols will be followed for the Jones Point Park mitigation site as well. While the time frame for restoration of a forested wetland is measured in decades rather than years, the site will be determined successful if the hydrology, planting medium, and vegetation meet the goals of the mitigation project after five years.

Potential impacts to tidal emergent wetlands, associated with construction of the promenade, could be mitigated within this same non-tidal forested wetland restoration rather than creating tidal emergent wetlands off-site since there are insufficient areas onsite to compensate in-kind for the loss of tidal emergent wetlands.

Guidance contained in the *Procedural Manual #77-1: Wetland Protection* indicates that wetland compensation typically refers to the restoration of natural wetland functions in degraded or former natural wetland habitats on NPS lands. Much of JPP was historically part of the Potomac River and its associated wetlands prior to filling in the early 1900s for creation of the shipyard. Therefore, since much of the land now characterized by disturbed forest or open land north of the bridge was originally part of the river and its associated wetlands, mitigation in the form of wetland restoration within the shipyard fill seems an appropriate form of compensation for minor unavoidable wetland impacts. Restored functions of the forested wetland that will be provided over time will include flood flow alteration for large storm events and expanded habitat for canopy nesting birds.

Conclusion

The NPS finds that there are no practicable alternatives to the loss of 0.4 acre of palustrine forested and riverine emergent wetlands resulting from the park improvements at JPP. All wetland loss could not be avoided. Wetland loss has been minimized and the wetland impacts that could not be avoided would be compensated for through the restoration of an existing disturbed upland fill area back to its historic wetland condition. The compensatory mitigation would provide a wetland gain to loss ratio of 1.4:1 (i.e., 0.5 acre restored to 0.4 acre filled). Specifically, 0.2 acre of palustrine forested wetland and 0.2 acre of riverine emergent wetland loss would be replaced with 0.5 acre of palustrine forested wetland. This is consistent with NPS wetland guidance (*Procedural Manual #77-1*), including the "no-net-loss" of wetland

policy. The NPS, therefore, finds that this project is in compliance with Executive Order 11990: "Protection of Wetlands" and Director's Order #77-1: Wetland Protection.

Preparers

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Floam		

References

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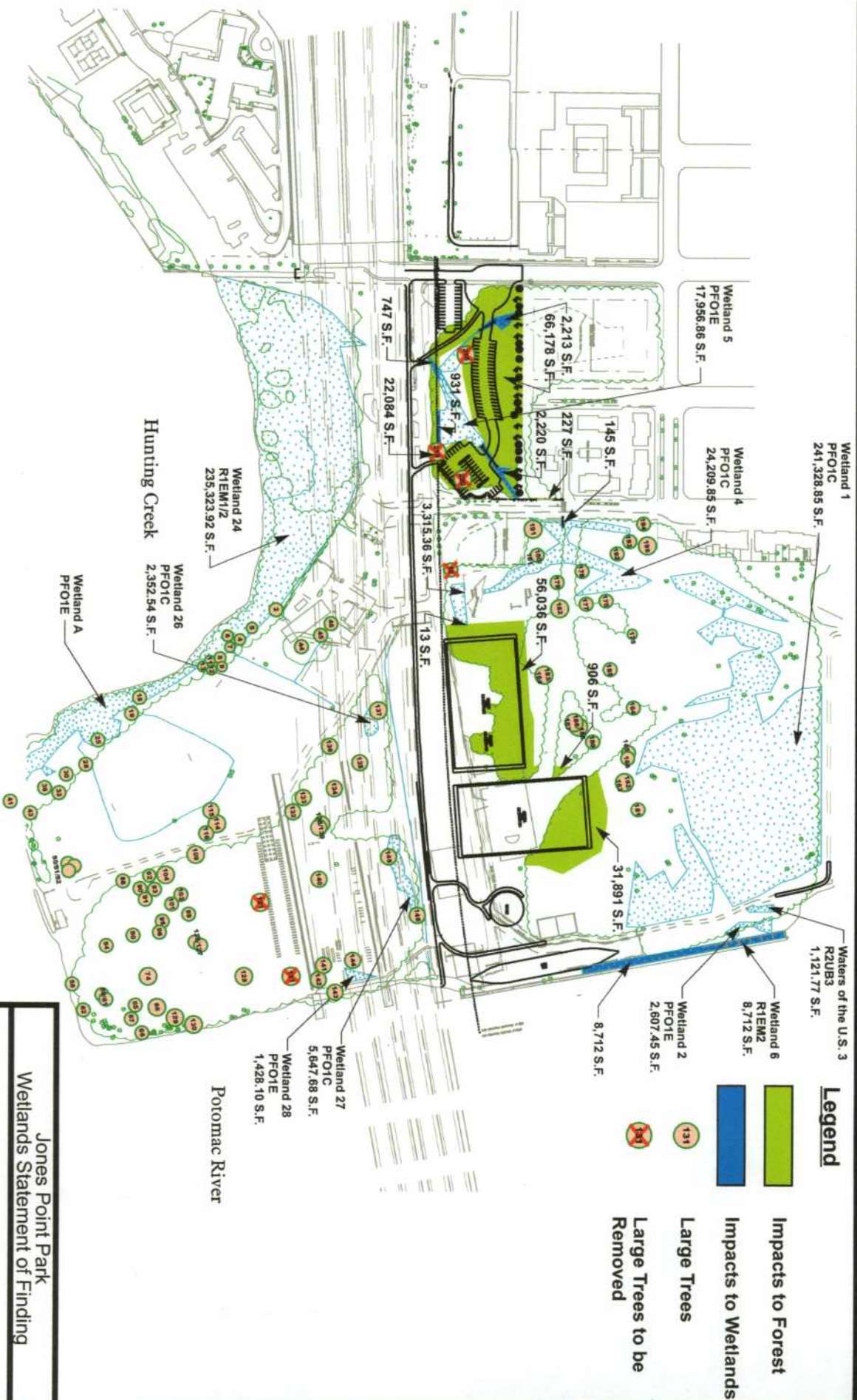
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Vicinity Map
(Preconstruction Conditions)
June, 2001

August, 2006

Not To Scale

Figure 1



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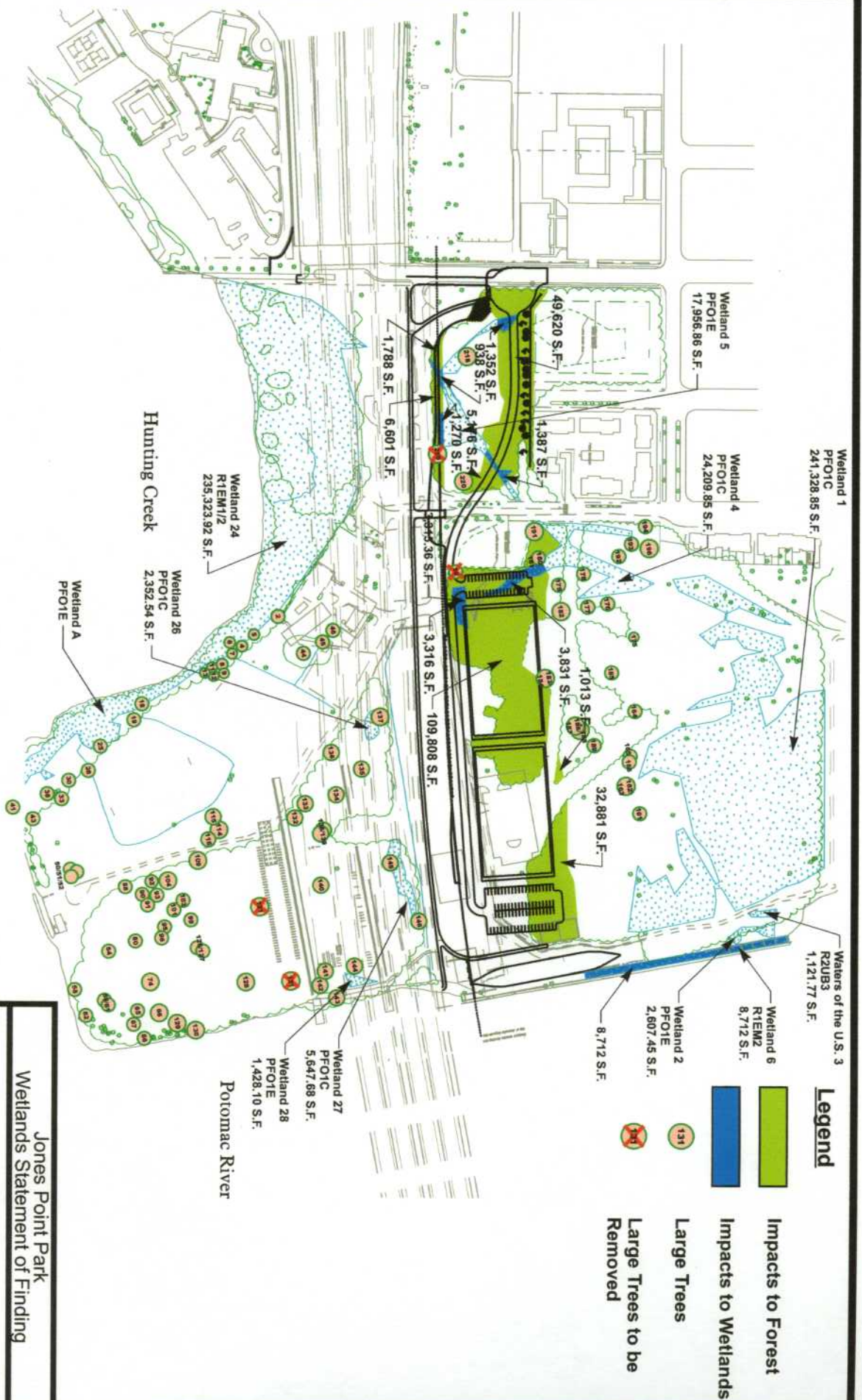
Jones Point Park
Wetlands Statement of Finding

Alternative 1:
Forest and Wetland Impacts

August, 2006

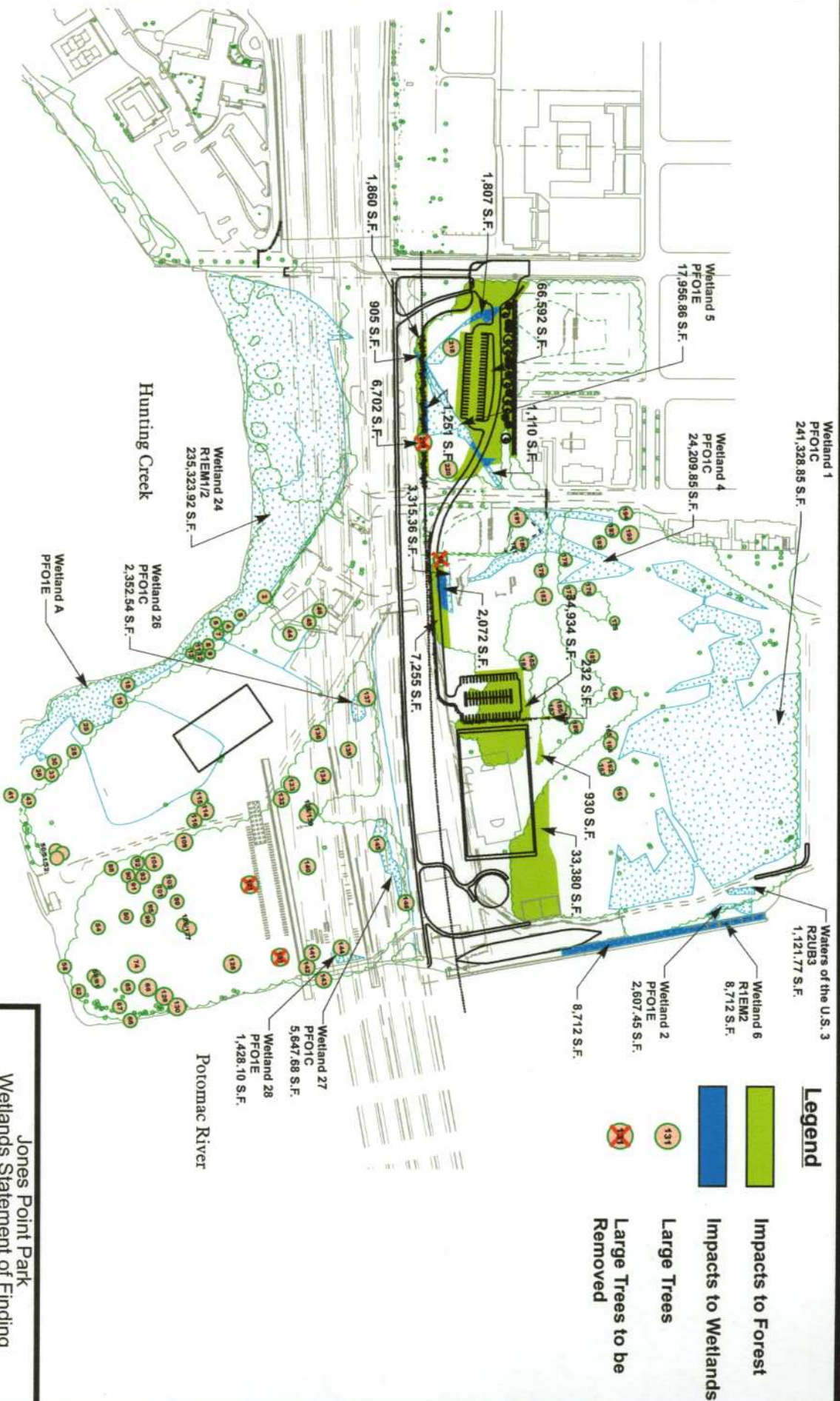
Scale As Shown

Figure 2



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Alternative 2:
Forest and Wetland Impacts



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Alternative 3:
Forest and Wetland Impacts

August, 2006

Scale As Shown

Figure 4



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Alternative 4 - Preferred Alternative Forest and Wetland Impacts

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Scale As Shown

Figure 5



**NPS Selected Alternative
Modified Preferred Alternative 4A
Forest and Wetland Impacts**

Figure 6



Legend

- Potential Reforestation Area
- Potential Wetland Mitigation Area

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Potential Wetland Mitigation and Reforestation Area		
August, 2006	Scale As Shown	Figure 07