TIDAL DELAWARE RIVER RECONNAISSANCE SURVEY
EXECUTIVE SUMMARY

A reconnaissance survey of the Tidal Delaware River was conducted by the National Park Service (NPS) at the request of Representatives Murphy (PA-8), Schwartz (PA-13), and Andrews (NJ-1). Each requested that the section of the Delaware River below Trenton, New Jersey to the mouth of the Delaware Bay near Delaware City, Delaware and Salem, New Jersey (a distance of roughly 70 miles), be evaluated for likelihood that its natural, cultural, and recreational resources would meet the criteria for establishment and administration of national recreation areas. Because those criteria applied only to one of the potential designations that are managed by the NPS, the survey team also evaluated the likelihood that those resources would meet the criteria for new parklands.

This reconnaissance survey determined that the survey area would be unlikely to meet the criteria for spaciousness, or demonstrate the presence of outstanding cultural and natural resources necessary for a national recreation area. It concludes that the area does have the likelihood to provide significant recreational opportunities.

The survey effort evaluated the likelihood that the resources in the reconnaissance survey area would meet the four criteria for new parklands; national significance, suitability, feasibility, and need for NPS management, and concludes that the study area was unlikely to meet any of the four criteria.

The area is unlikely to meet criteria for the establishment of a new national recreation area or other unit of the National Park System. The NPS is unable to recommend that Congress consider authorizing a special resource study for this resource. No further studies are recommended.

There are a number of nonprofit organizations, municipalities and state and federal agencies that are already working to improve the condition of the river and enhance resource-based recreational opportunities for the metropolitan areas within the reconnaissance survey area. The NPS supports and contributes to these ongoing efforts through partnerships and the programs it assists in or administers. The survey report describes many of these efforts, as well as new initiatives that could further resource protection and resource-based recreational opportunities along the river.
TABLE OF CONTENTS

EXECUTIVE SUMMARY ................................................................................................................. i
CHAPTER I: INTRODUCTION AND STUDY PROCESS ...................................................................... 1
Background ..................................................................................................................................... 1
Resources Within the Reconnaissance Survey Area ........................................................................... 2
Existing Authorities .......................................................................................................................... 8
Previous National Park Service Studies of the Tidal Delaware River ............................................... 11
CHAPTER II: FINDINGS OF CRITERIA ............................................................................................ 13
Criteria for New Parklands ............................................................................................................ 13
Application of Criteria ................................................................................................................... 14
Criteria for New Recreation Areas .................................................................................................. 17
Application of Criteria ................................................................................................................... 17
CHAPTER III: CONCLUSIONS ...................................................................................................... 19

LIST OF FIGURES

Figure 1: Location of reconnaissance survey area ............................................................................ iv
Figure 2: Location of marine terminals and EPA National Priority List sites ....................................... 3
Figure 3: Location of nationally significant natural resources ............................................................ 4
Figure 4: Location of nationally significant and other important cultural resources ............................ 6
Figure 5: Location of existing parklands and boat access locations .................................................. 8
Figure 1: Location of reconnaissance survey area. Survey area extent indicated by red line.
CHAPTER I

INTRODUCTION AND STUDY PROCESS

Background

In June, 2010, The National Park Service (NPS) received a request from Congressman Patrick J. Murphy (PA-8) requesting a reconnaissance survey of the Tidal Delaware River to determine whether the region meets the criteria for designation as a National Recreation Area (Appendix II). Subsequent requests were received from Representatives Allyson Schwartz (PA-13) and Robert Andrews (NJ-1). Based on the request the survey area was defined as the Delaware River and its immediately adjacent lands lying from Salem, New Jersey and Delaware City, Delaware north to Trenton, NJ (Figure 1).

Study Process

A reconnaissance study determines whether a resource is likely or unlikely to meet congressionally required criteria for the designation of potential units of the National Park System and to recommend if a congressionally authorized Special Resource Study should or should not be considered for authorization by Congress. These criteria include determinations of national significance, suitability, feasibility and need for NPS management. Should a resource be deemed not likely to meet any one of the criteria, the NPS does not normally recommend that a Special Resource Study be authorized.

General Conditions

The Delaware River extends roughly 326 miles from its headwaters in New York State to its mouth at the Delaware Capes. The Delaware River Watershed is 12,757 square miles with half of the watershed in Pennsylvania, slightly less than one quarter in New Jersey, and the rest divided between New York and Delaware. The watershed contains all or parts of forty-two counties and 838 municipalities. The river is divided into three physiographic areas; the Upper, Central, and Lower Regions. The Upper Region is located in the highlands of the Catskill and Pocono Mountains with a maximum elevation of 4,200 feet running through narrow valleys. The Central Region extends from Port Jervis, New York, south to the Fall Line at Trenton, New Jersey where it drops sharply onto the Coastal Plain. This section of the River has been designated as units of the National Wild and Scenic River System. The Lower Region (also called the Delaware Estuary) covers the area from the Fall Line at Trenton to the Capes of the Delaware (approximately 134 miles long) and includes the reconnaissance survey area. The river here is tidal and traverses soft rock consisting of overlapping beds of clays, silts, sands, and gravels until it enters the Atlantic Ocean. The Delaware Estuary itself is divided into three zones: the Upper Zone extending from Trenton, NJ, to Marcus Hook, Pennsylvania; the Transitional Zone extending from Marcus Hook to Artificial Island; and the Lower Zone extending from Artificial Island to the Delaware Capes. The estuary supports one of the world’s greatest concentrations of heavy industry, the world’s largest freshwater port, and the second largest refining-petrochemical center in the United States.

The reconnaissance survey area is located in the Lower Region of the Delaware River and includes all of the Upper Zone and all but the last five miles (the southern boundary was defined by the location of the Chesapeake and Delaware Canal that enters the river at Delaware City, Delaware) of the Transitional Zone of the Delaware Estuary; a distance of approximately 70 miles. Within the survey area, the Delaware River joins four major tributaries; Neshaminy Creek, the Schuylkill River, Rancocas Creek, and the Christina River. The survey area includes portions of nine counties (three in Pennsylvania: Bucks, Philadelphia, Delaware; one in Delaware: New Castle; and five in
Resources Within the Reconnaissance Survey Area

A reconnaissance survey does not catalog all of the resources within the study area. Its goal is to identify the range and extent of representative resources that reflect the natural, cultural and recreational values of the study area.

Natural Resources

In the non-industrialized reaches of the river, there are substantial wetlands and freshwater enclosures. These have historically provided habitat for a wide variety of species, many of which provided economic benefit to the region. Currently, much of the area is listed as Impaired Waters by the Environmental Protection Agency (EPA) and a number of the subbasins have been identified by the EPA as exceeding total maximum daily loads (TMDL’s) of pollutants. For many of the urban stretches, these designations indicate that water quality standards set by the states are not met and the maximum amount of pollutants are exceeded.

The Environmental Protection Agency’s National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The project area contains 22 sites on the 2012 list that are either immediately adjacent to the Delaware River or wetlands that drain into it (Figure 2). A number of these sites have, or have the potential, to discharge pollutants into the watershed.

Despite these water quality issues, the survey area contains two nationally significant wetlands that have been protected as part of the National Wildlife Refuge System (Figure 3):

* The John Heinz National Wildlife Refuge (NWR) at Tinicum was established in 1972 to preserve the final remaining 200 acres of freshwater marsh in Pennsylvania, and it is authorized to expand to 1200 acres.
acres. Managed by the Fish and Wildlife Service, in addition to preserving habitat and contributing to the improving water quality of the river, it provides public access for fishing, canoeing, and birding. It is also a National Natural Landmark.

* Supawna Meadows National Wildlife Refuge is part of the larger Cape May National Wildlife Refuge managed by the Fish and Wildlife Service. It is recognized as wetlands of international importance and an international shorebird reserve. The refuge currently owns approximately 3,000 acres. The tidal marshes that comprise nearly 80 percent of the refuge provide waterfowl with an important feeding and resting area, particularly during the fall and spring migrations. It offers public hiking, birding, hunting, and a boat ramp. The other units of the Cape May NWR lie outside of the survey area.

The Delaware River Basin Commission actively supports habitat restoration efforts within the watershed; as habitat restoration in the Delaware Basin progresses, it is possible that national natural resource values may expand along the river and its tributaries.
Cultural Resources
Native Americans have inhabited the survey area since the end of the Holocene or about 12,000 BC. Archeological remains of their hunting camps and settlements have been occasionally identified along the river corridor from Philadelphia to Trenton, but none have been identified as nationally significant. Abbott Farm is a Middle Woodland settlement and has been designated a National Historic Landmark, but it lies north of the survey area.

Early European colonization of the Delaware River region was shaped by competition to capture the fur trade of the Indian tribes, beginning with the Dutch and the Swedes. Settlements were established by the Dutch at Burlington Island, NJ in 1624, at Fort Nassau in Gloucester County, NJ in 1626, at Lewes, DE in 1631, and at Fort Casimir in New Castle, DE in 1653. The Swedes countered by establishing settlements at Fort Christina at Wilmington, DE in 1638, at Salem, NJ and Tinicum Island, PA in 1643, and capturing Fort Casimir (renaming it Fort Trinity) in 1654. In 1655 the Dutch recaptured Fort Casimir and Fort Christina which they held until the British gained control of the region in 1664.

Between 1664 and the American Revolution, the study area was an English Colony. Philadelphia was
founded in 1682 and by 1750 had become the most important seaport in the colony for commerce, shipping, and shipbuilding. The region played an important political and military role in the revolution, and Philadelphia served as the first capital of the United States from 1790 to 1800.

Throughout the 1800s Philadelphia and the surrounding area became a leading manufacturer of steel, textiles, locomotives, and ships. The Philadelphia Naval Shipyard was established in 1801, moving to its current location in 1871. Shipping and water-borne commerce remained vital throughout the nineteenth century and into the present. To combat the spread of tropical disease arriving through the port, the City of Philadelphia constructed the Lazaretto in 1799 to quarantine ships, passengers, and cargo. Listed on the National Register of Historic Places, the facility is the most visible link to the vitality of the seaport in the nineteenth century. The city of Camden was founded in 1828 as a secondary economic and transportation hub to Philadelphia.

Seven National Historic Landmarks are directly adjacent to the Delaware River or a major tributary and are significant for themes associated with early settlement (Peopling Places), river commerce (Developing the American Economy), or military events (Shaping the Political Landscape)(Figure 4). The USS Olympia and the USS Becuna, are National Historic Landmarks but are not included in this survey because they are movable resources and their significance is not based on their actual location.

Fort Christina (Delaware): Site of the first Swedish military outpost (1638) in the Delaware Valley, which became the nucleus of the first Swedish settlement in North America and its trading and commercial center. It fell into disrepair after the English conquest in 1664, and, except for some rocks jutting into the river that served as a landing site, all but the last vestiges of the fort disappeared. It is a state park and is not open to the public.

The Printzhof (Pennsylvania): Constructed about 1643 of hewn logs, the Printzhof was the residence of Johan Printz, Governor of New Sweden, the first permanent European settlement in what was to become Pennsylvania. Today, the only visible remains of the settlement are the stone foundations of this house. It is a state park open to the public.

New Castle Court House (Delaware): The Assembly of the Three Lower Counties (Delaware) met here from 1704 until May 1777. The first State legislature under the newly framed state constitution met here on October 28, 1776. It is significant as the site of the trials of Thomas Garrett and John Hunn, noted abolitionists, for their assistance to fugitive slaves. It is a state museum open to the public and now part of First State National Monument.

New Castle Historic District (Delaware): New Castle, founded by Peter Stuyvesant in 1651 as the seat of New Netherlands government, served as the colonial capital of Delaware until 1766. The Historic District offers a broad range of architectural styles with essentially unchanged from the 17th, 18th and 19th centuries. It also contains the site of Fort Casimir. The district includes the New Castle Court House complex comprised of the courthouse, Sheriff’s House, and the green, all of which are now part of the national monument.

Fort Mifflin (Pennsylvania): In October and November 1777, Fort Mifflin was the scene of a spirited defense by the Americans against a British fleet intent on opening the Delaware River supply line into newly captured Philadelphia. Although the British captured and destroyed the fort, this battle, along with those at Brandywine and Germantown, cost the British time and men and frustrated their efforts to disrupt the rebel government and its army. After the Revolution, the fort was rebuilt according to the designs of Pierre L’Enfant. Several of the extant buildings inside the fort date back to this time; others were erected subsequently throughout the 19th century. It is a city park and is open to the public.
Red Bank Battlefield (New Jersey): On October 22, 1777, Fort Mercer, an earthen fort erected to guard the river approach to Philadelphia, was successfully defended by Americans in the Battle of the Red Bank. Their victory delayed the opening of the Delaware River as a route of supply for General Howe's army, which had occupied Philadelphia on September 26th. It is a county park and is open to the public.

Andalusia (Pennsylvania): From 1821 to 1844, this was the residence of Nicholas Biddle (1786-1844), head of the Second Bank of the United States (1823-1836), and famous as Andrew Jackson's opponent in the so-called "Bank Wars". Biddle's defeat in the epic political-economic struggle paved the way for Jacksonian democracy. To the original house, designed for the Craig family in 1806 by Benjamin H. Latrobe in the English Regency Style, Biddle added the south or river side double drawing rooms, kitchen and library wings and a giant wooden Doric style portico copied from the Hephaesteum in the Agora at Athens. Designed by Thomas U. Walter and built 1834-1836, Andalusia is one of the earliest and most pristine examples of the Greek Revival style in the country. It is privately owned and is not open to the public.

There are also historic resources listed on the National
Register that are associated with the river that are not National Historic Landmarks but have state and local significance. These include the Lazaretto (Pennsylvania), Fort Delaware (Delaware), and Fort Mott (New Jersey).

Recreational Resources
There are no established criteria for assessing the national significance of recreation resources. The following is a list of existing recreation sites that provide access to the river for local users.

Water-Based Recreation
There are at least 42 river access points available to the public within the project area, averaging one every two miles (Technical Report for the Delaware Estuary 2012)(Figure 5). Many of these charge fees for their use ranging from seven dollars per day to $25.00 per day for out-of-state residents. A limited number accommodate trailered boats. Most are clustered in the northern part of the survey area. There are at least 22 private marinas and yacht/boating clubs within the project area.

Tidal Delaware Water Trail – As part of the Pennsylvania Water Trails Program this route follows the Pennsylvania bank of the Delaware River from Trenton, NJ to Marcus Hook, PA. The trail is coordinated by the Pennsylvania Environmental Council.

Land-based Recreation
State, County, and Municipal Parks – The study area contains at least 39 land-based recreational and historical parks within the study area managed by state, county, and municipal governments (Figure 5). These provide opportunities for active recreation like hiking, and bicycling, and for natural resource-based recreation like fishing and birdwatching. Some (eight) have boat launch facilities.

Delaware River Heritage Trail – When completed, this will be a 60-mile multi-use loop highlighting the cultural and natural resources along the upper portion of the Delaware River estuary linking 24 communities, from Trenton to Palmyra on the New Jersey side and from Morrisville to Philadelphia’s Tacony neighborhood in Pennsylvania. Trail construction is done by county and municipal government agencies. The Delaware River Greenway Partnership coordinated initial planning for the trail and is now working on Heritage Trail interpretation, which includes trail signage and a website.

East Coast Greenway – The East Coast Greenway is an urban trail project connecting existing and planned shared-use trails from Calais, Maine to Key West, Florida. It is an advocacy network that promotes the construction and maintenance of the trail by the communities that it travels through. Within the study area, the trail roughly parallels the river from lower Bucks County, through Philadelphia to Marcus Hook, through Wilmington and New Castle, Delaware, then to Newark, Delaware outside of the study area. Most of the trail in Pennsylvania is on public roads (Bike Route E), with portions (some 19 miles in Delaware) on dedicated trails in Delaware.

Transportation Access to Study Area Resources
All of the significant resources within the study area are accessible by automobile. Many of the significant resources located in the metropolitan areas are accessible by public transportation; however outside of those areas, service is intermittent or absent. Fort Delaware State Park and Fox Point State Park in Delaware, Fort Mifflin and Pennsbury Manor in Pennsylvania, and Fort Billings Park, Riverfront Park, Fort Mott State Park, and Supawna Meadows National Wildlife Refuge in New Jersey are not accessible by public transportation. Fort Delaware is accessed only by park ferry from the parking lot; private boats are not allowed to dock at the park. The Camden-Trenton River Line, a train line operated by New Jersey Transit, provides excellent access to a
number of the public parks and communities in the northern portion of the survey area in New Jersey.

Existing Authorities

The Delaware River Basin Commission is a federal agency created by an intergovernmental compact with New York State (including New York City), New Jersey, Pennsylvania, and the federal government for planning, conservation, utilization, development, management, and control of the water resources of the Delaware River Basin. Its purpose is to bring the resource under collective and balanced control, and to ensure fair usage by its controlling members. The primary responsibilities of the commission are the development of plans, policies, and projects which relate to the basin’s water resources. It also adapts and promotes uniform, coordinated policies of water conservation, and encourages the planning, development, and financing of water resources projects which affect the basin. The Commission’s 2004 Water Resources Plan for the Delaware River Basin identified three priorities:

* Prevent or minimize flood-induced loss of life and property, and protect floodplain ecology;
* Enhance water-based recreation in the river and its tributaries, and
* Protect, conserve, and restore healthy and
biologically diverse riparian and equatic ecosystems.

The plan identified the isolated nature of the waterways and their difficulty of access through private property and the hazards in urban areas posed by dams, high-speed roads, and railroads. It determined that a serious coordinated effort by public and private entities was needed to expand access and enhance the recreational experience of the river-using public and that the vehicle for cooperation was the commission whose purpose was the coordination of federal agencies. Its long-term goals for recreation included development of a water use and public access plan for the Basin and a continuous network of water trails for the river. It emphasized the need to enhance the social, historic, cultural, recreational, and economic connections of communities to the Basin’s waterways through restoring waterfront connection in urban areas through river walks and bike trails, boat access points, fishing piers, and interpretive signage. The National Park Service is a member of both its Watershed Advisory Council and the Recreation Focus Group that contributed to the 2004 plan.

The Delaware Estuary Program is part of the Environmental Protection Agency’s National Estuary Program (NEP) established under the 1987 Clean Water Act (CWA) Amendments whose purpose is to identify, restore, and protect nationally significant estuaries of the United States. The Partnership for the Delaware Estuary is a nonprofit organization that implements the act within the estuary that extends from the fall line at Trenton to Cape May and Cape Henlopen, and includes the entire study area. The 1996 Comprehensive Conservation and Management Plan for the Delaware Estuary identified public access and recreational use as vital to the restoration efforts of the estuary. In its 2012 Technical Report for the Delaware Estuary, the program recommended creation of additional river access points within the study area to increase their density from one site per two miles to one site per mile. The plan emphasized the need for the conservation community to work with its Congressional Delegation to continue to advocate for passage of the Delaware River Basin Conservation Act (152). Since 2000, the program has restored more than 66,000 acres of habitat within the estuary.

Fish and Wildlife National Wildlife Refuge System: The U.S. Fish and Wildlife Service enforces Federal wildlife laws; manages migratory bird populations; restores and manages nationally significant fisheries; conserves and restores vital wildlife habitat through the National Wildlife Refuge System. It protects and recovers endangered species and helps other governments with conservation efforts. It administers a Federal Assistance program that distributes funds to states for fish and wildlife restoration, boating access, hunter education, and related projects. The agency works with other public and private landowners to help conserve plant and wildlife ecosystems outside Service lands. It evaluates the effects of Federal activities on fish and wildlife species and their habitats, as well as monitor environmental contaminants affecting fish and wildlife. National Wildlife Refuges offer resource-based recreation like birdwatching, fishing, hunting, and photography. Within the project area, the Fish and Wildlife Service manages the John Heinz National Wildlife Refuge at Tinicum and Supawna Meadows National Wildlife Refuge. It is the only federal conservation agency that owns land within the study area.

United States Coast Guard: Within the project area, the Coast Guard is responsible for enforcement of maritime law, marine environmental protection, port security, marine safety, aids to navigation, and search and rescue. Responsibility for boating safety on the Delaware River is shared by the Pennsylvania Fish and Boat Commission, the New Jersey State Police Marine Services Bureau, the Delaware Department of Natural Resources and Environmental Control Division of Fish and Wildlife, and the US Coast Guard. These state agencies focus on the registration of boats, boater education, and the maintenance of boat ramps. The Coast Guard enforces regulations that govern operating both commercial and private boats.
Army Corps of Engineers: The U.S. Army Corps of Engineers is the Federal government’s largest water resources development and management agency, representing Federal interests in commercial navigation, flood damage reduction, and ecosystem restoration. Within the project area, the Corps of Engineers is responsible for maintaining the Delaware River shipping channel and for permitting discharge of dredged or fill materials into navigable waterways. The COE is conducting the Delaware River Deepening Project which will deepen through dredging, a 102-mile section of the river, including portions of the study area.

National Park Service: The National Park Service administers one park unit - First State National Monument, and three programs relevant to this survey: the National Historic Landmark Program, the National Natural Landmark Program, and the National Heritage Area Program.

The First State National Monument, established under Presidential proclamation on March, 2013, includes the New Castle Court House complex within the New Castle Historic District. The new park will tell the story of the early Dutch, Swedish, Finnish, and English settlement of the colony of Delaware as well as Delaware’s role as the first state to ratify the Constitution.

The National Historic Landmark Program was authorized by the U.S. Congress in 1935 to designate nationally significant historic sites, buildings, and objects and promote their preservation for the inspiration and benefit of the people of the United States. It is a cooperative endeavor of government agencies, professionals, and independent organizations sharing knowledge with the Service and working jointly to identify and preserve these exceptional places. Owners of National Historic Landmarks are free to manage their property as they choose, but projects potentially affecting landmarks are subject to official review if they involve federal licensing, permitting, or funding. Federal agencies whose projects affect a National Historic Landmark must give the Advisory Council on Historic Preservation an opportunity to comment on the project and its effects on the property. Owners of National Historic Landmarks may be able to obtain federal historic preservation funding when funds are available and are eligible for tax credits for preservation. There are seven National Historic Landmarks in the survey area. The New Castle Court House NHL, within the New Castle Historic District NHL, is within the recently-established national monument and will be managed in partnership with the National Park Service. Four others are existing municipal or state parks, and one is privately owned.

National Heritage Areas (NHAs) are Congressionally authorized public-private partnerships designed to enhance community-driven historic preservation, recreation, natural resource protection, and education. They are managed by a local management entity with financial and technical support from the NPS for a specified length of time. These areas must have a nationally distinctive natural, cultural, historic, and scenic resources which, taken together, tell a unique story about the nation. The Schuylkill River National and State Heritage Area intersects the reconnaissance survey area near its center. Extending for 128 miles along the Schuylkill River it has a diverse collection of historic, recreational, and cultural resources. Its goals, stated in its 2003 Management Plan, are resource conservation and enhancement, education and interpretation, recreation, community revitalization, and heritage tourism.

The National Natural Landmarks (NNL) Program recognizes and encourages the conservation of sites that contain outstanding biological and geological resources, regardless of landownership type. The John Heinz National Wildlife Refuge at Tinicum is an NNL.
Previous National Park Service Studies of the Tidal Delaware River

The National Park Service has conducted four planning studies relevant to the reconnaissance area; the National Urban Recreation Study: Philadelphia/Wilmington/Trenton, the Lower Delaware National Wild and Scenic River Study Report, the Delaware National Coastal Special Resource Study and Environmental Assessment, and the Fort Mifflin Master Plan.

The National Urban Recreation Study: Philadelphia/Wilmington/Trenton, published in 1977 and led by the Bureau of Outdoor Recreation (its successor agency is the National Park Service), conducted a study of the urban recreational needs that include the survey area. The conclusions that are relevant to this survey are:

a. Numerous open-space resources with outstanding natural and cultural characteristics exist within the area. In the areas that can meet urban needs, major recreational open spaces must be created from an array of vacant lands, buildings, existing historic and cultural areas, and previously ignored and often abused natural resources.

b. The federal aid system for urban recreation is fragmented and does not adequately provide recreational services, facilities, or assistance.

c. There is a lack of coordination among various governmental entities, leading to an underutilization of human and physical resources and a duplication of facilities and programs.

The Lower Delaware National Wild and Scenic River Study Report was authorized by Congress in 1992 as P.L. 102-460 and was completed in 1999. It evaluated the river from Washington’s Crossing State Park in Pennsylvania upstream to the Delaware Water Gap for designation to the National Wild and Scenic Rivers System. The current survey area was excluded from the study because it was considered too industrial and too developed to meet the criteria for a recreational river (defined in the Wild and Scenic Rivers Act as those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past). The study resulted in the designation of eight segments to the National Wild and Scenic Rivers System, all upstream of the survey area because they exhibited exceptional natural, historic, scenic, and recreational values.

The Fort Mifflin Master Plan in 1972 evaluated the suitability and feasibility of including Fort Mifflin into the National Park System. It recommended that the fort be included as a unit of Independence National Historical Park because of its national significance.

The Delaware National Coastal Special Resource Study and Environmental Assessment evaluated the natural and cultural resources in coastal Delaware for potential addition to the National Park System. Completed in 2008 by the National Park Service, the study area included all of the current reconnaissance survey area in Delaware. It identified a mosaic of nationally significant historic sites (including several within the reconnaissance survey area) that represented the national themes of “Peopling Places” and “Shaping the Political Landscape”; and determined that collectively those sites met the criteria for inclusion into the National Park System. The study also concluded that the natural resources located within Bombay Hook National Wildlife Refuge (NWR) and Prime Hook NWR were adequately managed by the Fish and Wildlife Service and that there was no need for NPS management.

Among the nationally significant properties that met the criteria are the New Castle Historic District and the New Castle Court House, both National Historic Landmarks. The New Castle Court House complex within the district is now part of First State National Monument.
CHAPTER II
FINDINGS OF CRITERIA

Representatives Murphy, Schwartz, and Andrews requested that the survey area be evaluated for the potential to meet the specialized criteria for a recreation area. Because other less specialized designations may be considered in the future, the survey team also evaluated the potential for inclusion as new parkland. Both evaluations are presented below.

Criteria for New Parklands

Areas comprising the present 401-unit National Park System are cumulative expressions of a single national heritage. Potential additions to the System should, therefore, contribute in their own special way to a system that fully represents the broad spectrum of natural and cultural resources that characterize our nation. The NPS is responsible for conducting professional studies of potential additions to the National Park System when specifically authorized by an Act of Congress, and for making recommendations regarding new areas to the Secretary of the Interior, the President, and Congress. Several laws outline criteria for potential units of the National Park System.

To receive a favorable recommendation from the NPS, a proposed addition to the National Park System must (1) possess nationally significant natural or cultural resources; (2) be a suitable addition to the system; (3) be a feasible addition to the system; and (4) require direct NPS management, instead of alternative protection by other public agencies or the private sector. These criteria are designed to ensure that the National Park System includes only the most outstanding examples of the nation’s natural and cultural resources. They also recognize that there are other alternatives, short of designation as a unit of the National Park System, for preserving the nation’s outstanding resources.

An area or resource may be considered nationally significant if it is an outstanding example of a particular type of resource; possesses exceptional value or quality in illustrating or interpreting the natural or cultural themes of our nation’s heritage; offers superlative opportunities for public enjoyment, or for scientific study; and retains a high degree of integrity as a true, accurate, and relatively unspoiled example of a resource. National significance for cultural resources is evaluated in a Special Resource Study by applying the National Historic Landmarks process contained in 36 CFR Part 65. Natural Area examples may include an outstanding site that illustrates the characteristics of a landform or biotic area that is still widespread; a rare remnant natural landscape or biotic area of a type that was once widespread but is now vanishing due to human settlement and development; a landform or biotic area that has always been extremely uncommon in the region or nation; a site that possesses exceptional diversity of ecological components (species, communities, or habitats) or geological features (landforms, observable manifestations of geologic processes); a site that contains biotic species or communities whose natural distribution at that location makes them unusual (for example, a community relatively large population at the limit of its range or a disjunction isolated population); a site that harbors a concentrated population of a rare plant or animal species, particularly one officially recognized as threatened or endangered; a critical refuge that is necessary for the continued survival of a species; a site that contains rare or unusually abundant fossil deposits; an area that has outstanding scenic qualities such as dramatic topographic features, unusual contrasts in landforms or vegetation,

TIDAL DELAWARE RIVER RECONNAISSANCE SURVEY
spectacular vistas, or other special landscape features; a site that has an invaluable ecological or geological importance benchmark due to an extensive and long-term record of research and scientific discovery.

An area or resource may be considered suitable for potential addition to the National Park System if it represents a natural or cultural resource type that is not already adequately represented in the System, or is not comparably represented and protected for public enjoyment by other federal agencies; tribal, state, or local governments; or the private sector. Adequacy is represented by comparing the potential addition to other comparably managed areas; in this case these are National Recreation Areas.

To be feasible as a new unit of the National Park System, an area or resource must be of sufficient size and appropriate configuration to ensure sustainable resource protection and visitor enjoyment (taking into account current and potential impacts from sources beyond its boundaries), and be capable of efficient administration by the NPS at a reasonable cost.

Finally, when evaluating an area or resource, the need for NPS management is considered. There are many excellent examples of the successful management of important natural and cultural resources by other public agencies, private conservation organizations, and individuals. The NPS applauds these accomplishments, and actively encourages the expansion of conservation activities by state, local, and private entities, and by other federal agencies. Unless direct NPS management of a studied area is identified as the clearly superior alternative, the Service will recommend that one or more of these other entities assume a lead management role, and that the area not be recommended as a potential unit of the National Park System.

Application of Criteria

**National Significance** - Seven National Historic Landmarks are located within the study area and by definition are of national significance. There is a thematic continuity from the earliest settlements like the New Castle National Historic Landmark District, Fort Christina, and The Printzoff, to the struggle for Independence at Fort Mifflin and Red Bank Battlefield, and economic growth of the new nation at Andulasia. However, these clusters are significantly isolated from one another making it difficult to convey a unified interpretive experience throughout the survey area. The New Castle Court House complex within the NHL district is now part of the First State National Monument.

The John Heinz National Natural Landmark is by definition nationally significant. It is a rare remnant natural landscape or biotic area of a type once widespread but is now vanishing due to human settlement and development. The Delaware River is not considered to have the potential for inclusion in the National Wild and Scenic Rivers System because the river in the survey area does not exhibit exceptional natural, historic, scenic, and recreational values.

**Conclusion:** There are resources located within the survey area that possess national significance as individual resources or as smaller pairings of resources (The New Castle Court House complex within the NHL district is now part of the First State National Monument), but there are no nationally significant resources distributed throughout the survey area that could be considered as a discontinuous landmark district under a unified theme without additional study which is outside the scope of this survey. The existing significant natural resource is an isolated example of freshwater marsh, but may become more extensive through the efforts of the Delaware River Basin Commission. The survey area as a whole does not currently possess nationally significant natural resources and is unlikely to meet
the criterion for national significance.

Reconnaissance surveys are typically terminated after a preliminary likelihood of a negative finding of national significance. However, because the evaluative criteria for Recreation Areas are similar the remaining special resource study criteria will be examined.

**Suitability** - There are eighteen National Recreation Areas in the National Park System. There are four recreation areas and one National Heritage Area either geographically close to the survey area or comparable in extent and complexity to the survey area were selected for comparison.

The Delaware Water Gap National Recreation Area is located 70 miles north of the northernmost part of the project area. Managed by the National Park Service, it provides recreational opportunities on approximately 32 continuous miles of the Delaware River and adjacent lands in Pennsylvania and New Jersey including swimming, hiking, bicycling, boating, fishing, and hunting. The park was created from existing federal lands acquired for the Tock's Island Dam and currently contains 66,740 acres of which 56,188 acres are federally owned. The park is not accessible by public transportation and is used primarily by day visitors traveling by car from the New York City Metropolitan Area. Annual visitation in 2011 was 4,986,700. The park has staff of 113 and an annual operating budget of $9,863,000.

Gateway National Recreation Area is located approximately 50 miles north of the northernmost part of the project area. Managed by the National Park Service, it is made of five separate units that collectively provide outdoor recreation to the City of New York. Annual visitation was 7,697,727 in 2011. Activities supported include swimming, hiking, bicycling, fishing, and boating. The entire park is accessible by automobile and with the exception of the Sandy Hook Unit in New Jersey, is accessible by public transportation. The park was created by the conversion of existing federal lands, primarily military reserves; remains of the fortifications form the principal historic features of the park. It contains 26,608 acres of which 20,404 are federally owned. It has a staff of 316 and an annual operating budget of $26,538,000.

The Mississippi National River and Recreation Area encompasses 72 miles of the Mississippi River corridor through the Twin Cities Metropolitan region. It provides educational, recreational, and historical preservation programs for an array of nationally significant resources owned by over 60 different entities. It also coordinates alternative transportation access along its length. It contains 53,755 acres of which 35 are federally owned. It has a staff of 28 and an annual operating budget of $2,091,000. Because the park is spread over at least 60 non-contiguous units managed by partner organizations, its annual visitation is not known.

The Chattahoochee River National Recreation Area flows through 48 miles of river in the northern suburbs of Atlanta, Georgia. The park supports boating, hiking, and picnicking over 15 discontinuous units. It is composed of 9,271 acres of which 4,817 are federally owned. It has a staff of 39 and an annual operating budget of $3,451,000. It had 3,011,393 visitors in 2010.

The Schuylkill River National and State Heritage Area extends for 128 miles along the Schuylkill River from Port Carbon to Philadelphia. It is a Congressionally authorized public-private partnership designed to enhance community-driven historic preservation, recreation, natural resource protection, and education. Managed by the Schuylkill River Greenway Association (a 501(c)3 non-profit), its partners provide resource-based recreation along its length. It provides a comparable experience over a set of resources similar to the northern portion of the study area, including water-based recreation.

The NPS administers two recreation areas within 100
miles of the survey area, however both primarily serve the New York metropolitan area and are either not accessible from the Philadelphia metropolitan area by public transportation, or accessed only with difficulty. The experience on the Delaware would be comparable to that available on the Chattahoochee and Mississippi Rivers.

Conclusion: It is unlikely that the resources in the survey area would meet the special resource study criterion for suitability. There are two existing, water-based recreation areas and a water-themed heritage area in the region. These resources, although heavily used, have not exceeded their capacity under current demand. River access appears to be adequate through the existing mix of public trails, boat ramps, and parks throughout the reconnaissance survey area.

Feasibility - To be feasible, a unit of the National Park System must be of sufficient size and appropriate configuration to ensure sustainable resource protection and visitor enjoyment and capable of efficient administration by the NPS at a reasonable cost. For safe and efficient operations, national recreation areas generally have continuous, or near continuous, access to the resources that are being made available to the public.

Virtually all of the lands adjacent to the Delaware River or its associated natural and cultural resources are in private ownership or are inaccessible to the public for reasons of safety or security. Public lands that may be available are intermittent along the river and without detailed study do not appear to be configured to support the public access desirable for a national recreation area. There are extensive stretches of lands along the river that may have environmental liabilities. Many stretches contain water hazards including remains of piers and other submerged or partially-submerged structures. It is unlikely that a special resource study could identify a potential boundary composed of suitable lands configured in a way that would meet this requirement. A specific concern is the need to avoid conflict with the commercial river traffic which has the right-of-way on the river. Although the shipping channel is clearly marked, the difficulty in aiding boaters in distress for unit-managed water activities or mitigating conflicts with ships approaching dockside berths can be expected. Commercial shipping, flood control, water flow, water quality, and habitat restoration are the highest priorities of the existing federal agencies that manage the river.

Comparison with the Mississippi River National Recreation Area (the most comparable existing NRA) suggests that the management of a unit approximating the survey area would cost at least $2,091,000 with a staff of 28. Comparable units that possess significant resources are the Delaware Water Gap and Gateway NRA’s. These units require operating budgets of ten and twenty-six million dollars respectively with staffs ranging from 113 to 316.

Conclusion: Management of the reconnaissance survey area using the Mississippi River model or the Gateway/Delaware Water Gap models is not likely to meet the special resource study criterion of feasibility, particularly in providing for efficient administration by NPS at a reasonable cost.

Need for NPS Management - The existing recreation opportunities are locally-based efforts by grass roots organizations, municipalities, and states. As recognized in the 1977 report on urban recreation, there would be considerable benefit from coordinating the planning, permitting, funding, operations, and promotion of recreation in the region. However, given the probable high cost of establishing an NPS presence combined with limited availability of suitable land along the river and its tributaries, the NPS’s involvement in that role could not be extensive. Those same resources could be better used to assist the existing locally-based efforts. The primary federal emphasis on the Delaware River and the corridor in general by the existing federal agencies is industrial (transportation, commercial), water quality, flood control, and habitat restoration. Until
the request for this survey, there has not been a public
demand for a federal recreational role outside of the
existing efforts by the Delaware River Basin
Authority, the Delaware Estuary Program, the Fish
and Wildlife Service and the Schuylkill Heritage
Area.

The Delaware River Basin Commission’s 2004 Water
Resources Plan for the Delaware River Basin
identifies goals for increasing recreation and
ecosystem restoration, and the NPS is already part of
this federal commission. The survey effort
determined that it is unlikely that a special resource
study would find that there is a need for NPS
management of the area.

In conclusion, the area is unlikely to meet the criteria
for new parklands. The study area as a whole does
not meet the criterion for national significance; it is
not suitable because it duplicates existing federal,
state, and local recreational opportunities; it is not
feasible because of expected cost and inability to
provide safe continuous access to resources, and there
is not a need for NPS management because other
federal, state, local, and entities are already providing
resource protection and recreational opportunities.

Criteria for New Recreation Areas

The criteria for the establishment and administration
of recreation areas was initially established by the
Federal Executive Branch Recreation Advisory
Council through the document “Policy on the
Establishment and Administration of Recreation
Areas, Federal Executive Branch Policy Governing
the Selection, Establishment, and Administration of
National Recreation Areas by the Recreation Advisory
Council, Circular No, 1, March 26, 1963.” In 1978,
the National Park Service condensed the qualities
identified in the 1963 circular into four criteria:
* Criterion 1: National Recreation Areas should be
spacious areas containing outstanding natural and/or
cultural features and providing significant recreation
opportunities. For this report, the criterion is broken
into four categories; Spacious extent, outstanding
natural features, outstanding cultural features, and
significant recreational opportunities.
* Criterion 2: National Recreation Areas should
be located and designed to achieve comparatively heavy
recreation use and should be located where they can
contribute significantly to the recreation needs of
urban populations.
* Criterion 3: National Recreation Areas should
provide recreation opportunities significant enough to
assure national, as well as regional visitation.
* Criterion 4: The scale of investment, development,
and operational responsibility should be sufficiently
high to require either direct Federal involvement or
substantial Federal participation to assure optimum
public benefit.

Application of Criteria

Criterion 1A: Spacious – The survey area was defined
by the Delaware River and a buffer of at least one
acre along either bank, plus its major tributaries; this
area exceeds the minimum acreage requirement of
20,000 acres identified in the 1963 circular. However,
the overwhelming majority of those lands are
privately owned and many are burdened with
industrial pollutants that preclude their inclusion as
federal lands. With the exception of the river itself,
the available public land within the study area is
significantly less than the spaciousness criteria
requires. Moreover, most of the public land is already
preserved by the Fish and Wildlife Service.

Criterion 1B: Outstanding Natural Features – The
natural resources of the Tidal Delaware River have
been significantly compromised through residential,
industrial, and urban development. Except for the
southern portions of the study area at the head of the
Delaware Bay, the areas with natural resources are
fragmented and limited to the areas adjacent to the
mouths of its tributaries. From the southern boundary
of Wilmington, DE northward the river is not free-
flowing. Limited sections below Wilmington to the
southern terminus of the study area contains extensive salt-water marsh and meets the definition of free-flowing. Only the southernmost portion of the survey area contain natural features that are likely to be found outstanding.

**Criteria 1C: Outstanding Cultural Resources** – Within the survey area, these are defined as those properties meeting the criteria for National Historic Landmarks. Within the survey area, seven properties meet this criterion. Two are federal properties; only Andalusia is private and not currently open to the public. Five are directly accessible by river. The study area contains outstanding cultural resources but further study is likely to find that they are too geographically isolated from each other to convey their combined national significance.

**Criterion 1D: Significant Recreational Opportunities**
- The study area contains recreational opportunities including developed land-based and water-based trails. Most of these resources are accessible by public transportation and all are accessible by automobile. Improvements to water quality is expected to improve fishing in the river.

**Criterion 2: Anticipated Heavy Use** – The study area is within the sixth largest metropolitan area in the nation and has the potential to serve a population exceeding six million people. The population centers have the greatest degree of commercial development along its banks and commercial shipping on its water. Consequently, most of the population is isolated from the river’s resources. Those areas suitable for a quality experience are isolated and limited to the confluences of the river’s tributaries and have a limited carrying capacity. The capacity of the public and private marinas serving the boating community does not appear to have been exceeded. It is not likely that further study would find that a feasible configuration would receive heavy use.

**Criterion 3: Qualities Significant Enough to Draw Regionally and Nationally** – The survey area would likely appeal to only a local or regional audience. Other outstanding land and water-based recreation is available nearby at Gateway National Recreation Area, the Delaware Water Gap National Recreation Area, the Schuylkill Heritage Area and the New Jersey and Delaware shores. Addition of a new area would likely capture a few existing local or regional users for a varied experience, not attract new ones.

**Criterion 4: Need for Federal Involvement** – The existing recreation opportunities are locally-based efforts managed by grass roots organizations, municipalities, and states. The 1977 report on urban recreation states that there would be considerable benefit from coordinating the planning, permitting, funding, operations, and promotion of recreation in the region. However, given the probable high cost of establishing an NPS presence combined with limited availability of suitable land along the river and its tributaries, the NPS’s involvement in that role could not be extensive. Those same resources could be better used to assist existing locally-based efforts. The primary federal emphasis on the Delaware River and the corridor in general by the existing federal agencies is industrial (transportation, commercial), water quality, flood control, and habitat restoration. Until the request for this survey, there has not been a public demand for a federal recreational role outside of the existing efforts by the DBRA, the Delaware Estuary Program, the Fish and Wildlife Service and the Schuylkill Heritage Area. These existing authorities have acknowledged their desire to continue adding recreation and resource management to their portfolios. It is unlikely that additional study would find that there is a need for NPS management.

In conclusion, the area is unlikely to meet the criteria for establishment as a national recreation area. Protection by existing public agencies is adequate to protect resources; expenditure of a reasonable amount of money would not substantially change the potential future condition of those resources. There is a role for federal investment to protect critical resources by other entities.
CHAPTER III
CONCLUSIONS

Evaluation of the criteria for new parklands by the survey indicate that further study of the resources in the reconnaissance survey area are unlikely to meet the criteria for national significance, suitability, feasibility, or need for NPS management. The area is unlikely to meet criteria for establishment of a new national recreation area or other unit of the National Park System. The NPS is unable to recommend that Congress consider authorizing a special resource study for this resource. No further studies are recommended.

Along the Delaware, there are a number of nonprofit organizations, municipalities and state and federal agencies that are already improving the condition of the river and enhancing its public image. The NPS supports and contributes these ongoing efforts in several ways. The following topics describe many of these efforts and point to new initiatives that could further resource protection and public use and enjoyment of the river.

* ECONOMIC DEVELOPMENT: The Tidal Delaware is an economic engine for the region and the nation. Development of its economic value in a manner that also conserves the resource and provides for recreational opportunity would be a benefit to the business community and to the residents of the region as a whole. The NPS, through its position on the Delaware River Basin Commission, can continue to support compatible river development efforts of the port authorities, waterfront corporation, development associations, transportation departments, planning commissions and a host of municipal, county and state agencies identified in greenway plans, condition assessments, and development proposals.

* RESOURCE CONSERVATION: The wetlands and fresh water enclosures along the main channel and its tributaries are some of the most valuable resources along the Tidal Delaware. They provide valuable habitat, are fundamental to the river’s ability to absorb flood waters and are critical to filtering and other mechanisms that improve water quality. The NPS supports efforts of the Delaware Bay Estuary Program to expand its wetland conservation efforts into this section of the river. NPS also supports the effort of sister federal agencies (i.e. Fish and Wildlife Service, EPA, US Army Corps of Engineers, etc.) to continue their ground breaking research on wetland management and restoration. Finally, as part of the DRBC, NPS supports the Special Water Status for the Delaware River.

* COMMUNITY SUPPORT: Conservation requires public support and advocacy. There are a number of nonprofit organizations that are advocates for the river and many municipalities and counties are actively promoting the health of the river, and NPS applauds their work. The NPS encourages this community action and assists local efforts to promote and enhance the image of the river through community outreach programs including the Rivers and Trails Conservation Assistance Program, the Certified Local Governments and National Historic Landmarks technical assistance efforts, and the local and state efforts funded by the Land and Water Conservation Fund.

* RECREATION: The river is an underused resource for recreation. As water quality and the river’s image improve, demand will increase. Programs such as the Blue Trails initiative sponsored by American Rivers (a non-profit organization) and others may be appropriate to encourage recreational use.

* INTERPRETATION and EDUCATION: Conservation and support require an understanding of
the resource and its context. The NPS offers interpretation and education assistance through its existing programs to state and federal agencies and to community based efforts throughout the region, including ongoing programs at nature centers, museums, and protected areas. Interpretation of the natural and cultural resources of the Delaware River could be included in the First State National Monument.

* INVENTORY AND MONITORING: Existing inventory efforts by the Nature Conservancy, the Delaware River Basin Commission and the Delaware Estuary Program have led to completed studies that provide a comprehensive assessment of the condition of the river and identify priorities for action. The NPS’s Inventory and Monitoring Program could share information with these efforts to enhance the region’s conservation and recreation efforts like the Delaware Basin Restoration Initiative and conservation goals identified in state wildlife action plans, greenway plans, and site-based conservation plans.
APPENDIX I: CONTRIBUTORS AND TEAM MEMBERS

Allen H. Cooper, Chief Park Planning and Special Studies, National Park Service, Northeast Region.
Peter Iris-Williams, Outdoor Recreation Planner, National Park Service, Northeast Region.
Chuck Barcze, Division Chief, National Wild and Scenic Rivers Program.

APPENDIX II: SELECTED REFERENCES

Bureau of Outdoor Recreation

Delaware Estuary Program

Delaware River Basin Commission
Water Resources Plan for the Delaware Basin. Delaware River Basin Commission, West Trenton, NJ. 2004

Economy League of Greater Philadelphia.

National Park Service
The Honorable Jon Jarvis  
Director, National Park Service  
1849 C Street NW  
Washington, DC 20240

Dear Director Jarvis:

I am writing to request that the National Park Service (NPS) undertake a Reconnaissance Survey to identify the nationally significant resources of the Tidal Delaware River in order to determine whether the region merits being designated as a National Recreation Area.

As a Representative from Pennsylvania, I believe the Tidal Delaware would be worthy of NPS’ consideration as a potential National Recreation (NRA). I believe this because the river serves the tri-state region in many critical capacities including commerce, drinking water and recreation. It also provides unique opportunities for users to reconnect with the region’s rich maritime history and vibrant waterfront communities.

For example, during our early settlement it was Salem, New Jersey and New Castle, Delaware that were early ports and gateways prior to the settlement of Philadelphia. It was the River that later enabled Philadelphia to become the largest English speaking city outside London at the height of the British Empire. During our nation’s quest for independence, it was at Fort Mifflin where the Continental Army sustained the largest naval bombardment in North American history and held off the British until General George Washington could retreat to Valley Forge. In the 19th Century it was the industrial prowess of Camden, Philadelphia and Wilmington’s factories along the Delaware River that earned the area the nickname: The Workshop of the World.

Our region celebrates and preserves that history through the Delaware and Lehigh National Heritage Corridor, the Schuylkill River National Heritage Area, the Washington Rochambeau Revolutionary Route National Historic Trail, and the Independence and the Valley Forge National Historic Parks. Philadelphia is also home the Heinz National Wildlife Refuge and Fairmount Park System, one of the nation’s largest. All of these are important national treasures, but none directly address the cultural and natural significance of the tidal Delaware River.

By establishing the River as NRA, NPS could play a role in coordinating the shared interests of these institutions, three states, and dozens of local communities located along the River. That is why NPS should begin to examine how best to there connect and manage these resources in the historically significant and complicated urban landscape. The NRA designation has worked successfully in San Francisco and New York City, which demonstrates that it could be a good fit for the tri-state region as well.
I request that you respond to me in writing to let me know whether NPS would be willing to conduct a reconnaissance survey of the Tidal Delaware in order to determine whether an NRA designation would be appropriate for the region. Thank you in advance for your consideration of our request and I look forward to working with you on the initiative.

Sincerely,

Patrick J. Murphy
MEMBER OF CONGRESS