

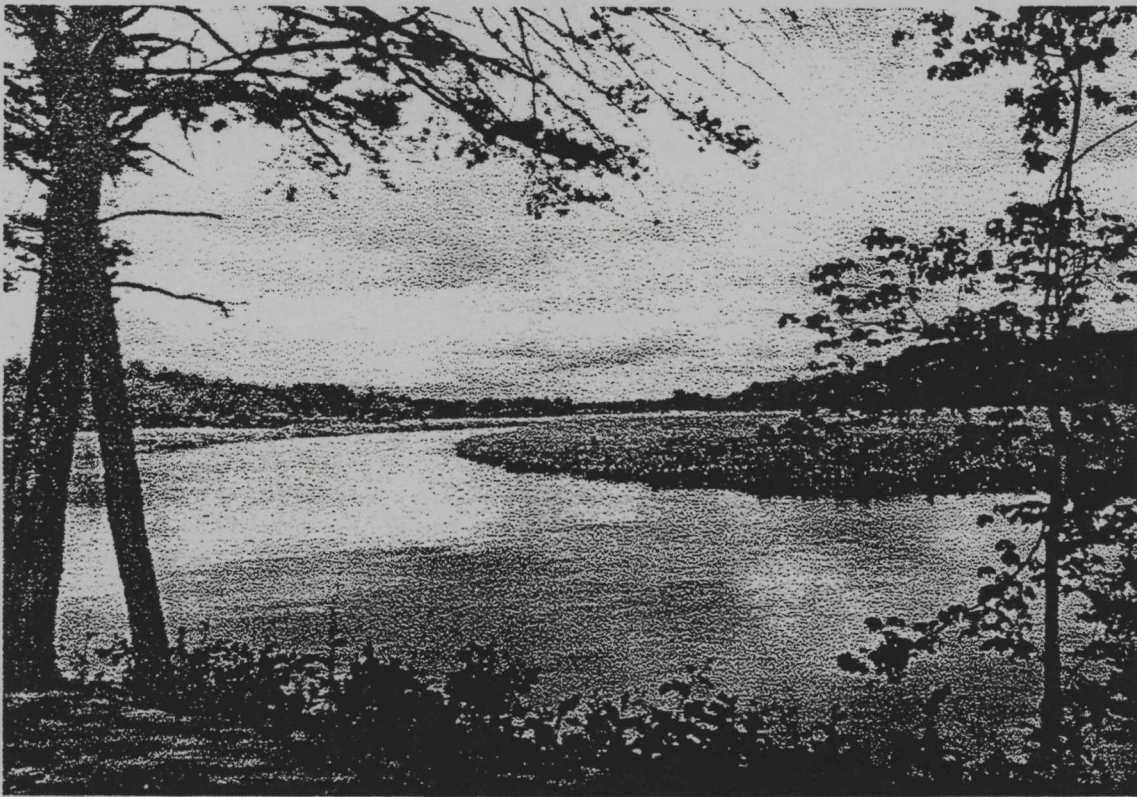


Maurice River & its Tributaries

W I L D & S C E N I C R I V E R S T U D Y

FINAL STUDY REPORT

NOVEMBER 1993



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THE MAURICE RIVER & ITS TRIBUTARIES
NATIONAL WILD AND SCENIC RIVER STUDY
FINAL REPORT

November 1993

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EXECUTIVE SUMMARY

THE MAURICE RIVER & ITS TRIBUTARIES NATIONAL WILD AND SCENIC RIVER STUDY

Finding of Eligibility

Various segments of the Maurice River, and its tributaries - the Menantico Creek, Manumuskin River and Muskee Creek - are eligible for inclusion into the National Wild and Scenic Rivers System (National System). The study area possesses many outstandingly remarkable resources. For example, at the regional landscape scale, the Maurice River system functions as the critical link between the Pinelands National Reserve and the Delaware Estuary, both of which are nationally and internationally important.

Within the context of the Western Hemisphere, the study area is part of the Delaware River Estuary which functions as critical migration-related habitat for shorebirds, songbirds, waterfowl, raptors, rails and fish. The important and interrelated factors of water quality and land use, coupled with the area's estuarine nature and geographic location along the Atlantic flyway, have a direct relationship to the health and viability of these animal populations.

The many natural and cultural resources of the study area are intertwined, resulting in a sum greater than a discrete set of "outstandingly remarkable resources." The study area can only be described as an "outstandingly remarkable place," requiring an ecosystem-level approach for adequate conservation. The study area is locally, regionally, nationally and hemispherically significant. If designated into the National System, the river segments of the study area would be classified as either scenic or recreational.

Finding of Suitability

The Maurice River in the City of Millville, Commercial Township, and Maurice River Township; the Menantico Creek in the cities of Millville and Vineland; the Manumuskin River in Maurice River Township, Buena Vista Township, and the City of Vineland; and the Muskee Creek in Maurice River Township have been found suitable for designation into the National System. Each of the municipalities support the inclusion of these portions of the study area into the National System, subject to conditions outlined in this report and their local river management plan.

The suitability phase of this study involved extensive public participation and a detailed review of existing local, state, and federal statutes and programs that contribute to the conservation of the river's resources. The study found that it would be possible to achieve conservation of the entire study area and its outstandingly remarkable resources through a combination of:

- a. minor adjustments to local zoning;
- b. agreements to cooperatively conserve the river corridor among all levels of government and non-profit conservation programs; and
- c. consistent treatment of the study area by all federal agencies and programs.

To accomplish the above, implementation of a comprehensive river management plan is necessary.

The finding of suitability is based on the Park Service's commitment at the outset of the study to a public planning process, emphasizing home rule and municipal choice. This finding reflects the decisions of municipal governments.

Recommendations

It is recommended that those portions of the study area lying within the municipalities that have indicated a willingness to be a part of the National System be designated as a component of the National Wild and Scenic Rivers System. Those river segments currently falling within this category are the Maurice River in the City of Millville, the Menantico Creek in the cities of Millville and Vineland, the Manumuskin River in Maurice River Township and the City of Vineland, and the Muskee Creek in Maurice River Township.

In summary:

1. The study area is important at local, state, federal, and international levels.
2. Major development proposals will continue to be made in the river system.
3. Existing regulations alone cannot provide an adequate balance between industrial development and resource conservation.
4. Of the five municipalities involved with this study, the elected officials of Buena Vista decided not to support establishing a National Scenic and Recreation River within their jurisdictions. The officials of Commercial Township decided similarly, but have since indicated that additional dialogue is appropriate. Officials from Maurice River Township and the cities of Vineland and Millville decided

to support the designation of portions of the study area into the National System.

Given the primary commitment by the National Park Service to local choice at the beginning of this study, the Service is unable to recommend designation for those municipalities not wishing to be included in the National System, even though the entire study area is eligible for the National System and in need of such protection. Non-participating municipalities will have the option of being included in the national system in the future. Therefore, the preferred alternative is Alternative 3 (page 58), partial designation but comprehensive adoption of a local river management plan. This alternative calls for the adoption of a comprehensive local river management plan by all of the municipalities, but that National Scenic and Recreation River status be conferred only to those places of the study area that are within municipalities supporting National Wild and Scenic river status.

The River
Management Plan

A river management plan for the study area has been developed. If the area becomes a National Scenic and Recreation River, the river management plan will be finalized with the county government and participating municipal governments. Agreements to cooperatively implement the River Management Plan will be formalized by the signing of an intergovernmental Memorandum of Understanding. The two major elements of the river management plan proposed below are: (1) a local river conservation zone that would be implemented by the local governments; and (2) a set of conservation, education, and economic programs for the designated National Scenic and Recreation River segments which would be conducted by a partnership of local, state and federal governments.

Local River Conservation Zone

A complete local river management plan has been developed by Cumberland County and the municipalities and is now in the process of adoption. The local land use regulations that are proposed as part of a comprehensive river management plan are presented in Appendix Two. The overall purpose of the River Conservation Zone is to protect the significant river-related resources by municipal ordinance. Seven areas of environmental, economic, and regional importance have been identified as being relevant to municipal land-use regulation and river management. These considerations are:

- septic system pollution;
- wetland protection;
- control of erosion and sedimentation;
- control of non-point source water pollutants;
- protection of upland habitat;

- maintenance of visual buffers; and
- promotion of economic vitality.

In order to address these considerations, the River Conservation Zone provides for the following key land use measures:

- minimum building lot size of five acres per dwelling;
- minimum river lot frontage;
- adequate setback distances from the river for buildings and septic systems;
- provision for natural vegetation filter and buffer strips along the shoreline;
- maximum limits for vegetation clearing per building lot;
- regulation of kinds of land-use; and
- cluster options for planned developments.

Proposed Inter-government Programs for the National Scenic and Recreation River Segments:

If all or a section of the Maurice River system is designated as a National Scenic and Recreation River, the National Park Service would play an advocacy role for private- and public-sector programs that could enhance traditional river-related businesses *along with* cultural and natural resource conservation. Proposed programs include:

- conservation program
 - voluntary conservation easements
 - Cumberland County Natural Heritage Project
 - educational and interpretive projects
 - "Adopt-A-Pop" (plant or animal population) Project
- "welcome" facility
- scenic byways & interpretive loops
- environmental enterprise zones
- programmatic treatment of community development
- permit streamlining

In addition to these programs, the National Park Service would ensure that the federal government's activities (such as for water resources development) would not degrade the river's important natural and cultural resources through consultation with other federal agencies that issue grants, licenses or permits.

INTRODUCTION

In May of 1987, Public Law 100-33 was enacted by the United States Congress, authorizing the National Park Service to study portions of the Maurice, Manumuskin and Menantico Rivers in Cumberland County, New Jersey, in order to determine their eligibility and suitability for inclusion in the National Wild and Scenic Rivers System (the National System). The study was conducted by the National Park Service in cooperation with the Cumberland County Department of Planning and Development. This report provides background information about the study and describes: (a) the study process; (b) the study area and the physical, biological and cultural resources that make it eligible for the National System; (c) the suitability of the study area for the National System; (d) a set of National Park Service recommended alternatives for managing the study area; and (e) a proposed river management plan, including language for a municipal conservation zone.

Background

As the land of the Mid-Atlantic region of the United States has been converted to one of the most densely populated regions in North America, the relatively undisturbed surroundings of the study area (Figure 1a. and 1b.) have come under greater and greater pressure from proposed development. Developments, individually or together over time, could result in major and irreversible changes to natural processes and cultural patterns now existing along the Maurice River and its tributaries. The study area is presently an outstandingly remarkable example of an Atlantic coastal tributary under tidal influence, manifested by natural resources that are nationally, and in some cases, hemispherically significant.

Controversial development proposals have created a continuing debate about appropriate and inappropriate land uses along the river corridor. When the State of New Jersey proposed building a hazardous waste entombment facility adjacent to the Manumuskin and Maurice River confluence, local citizens, elected officials, and private non-profit organizations demanded that some type of long-term plan be formulated to manage future growth in order to protect the important resources of the

Figure 1. Regional context map

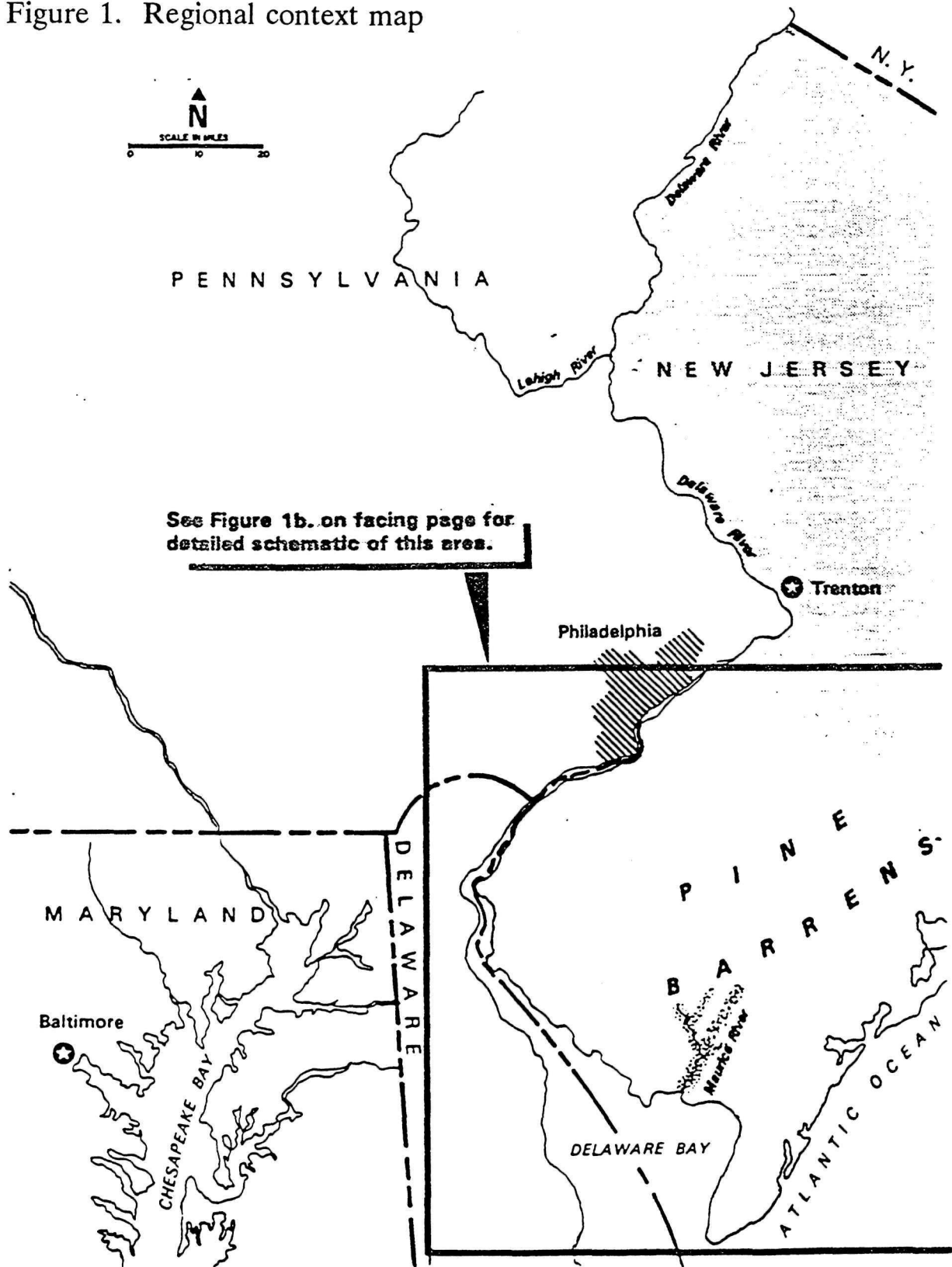
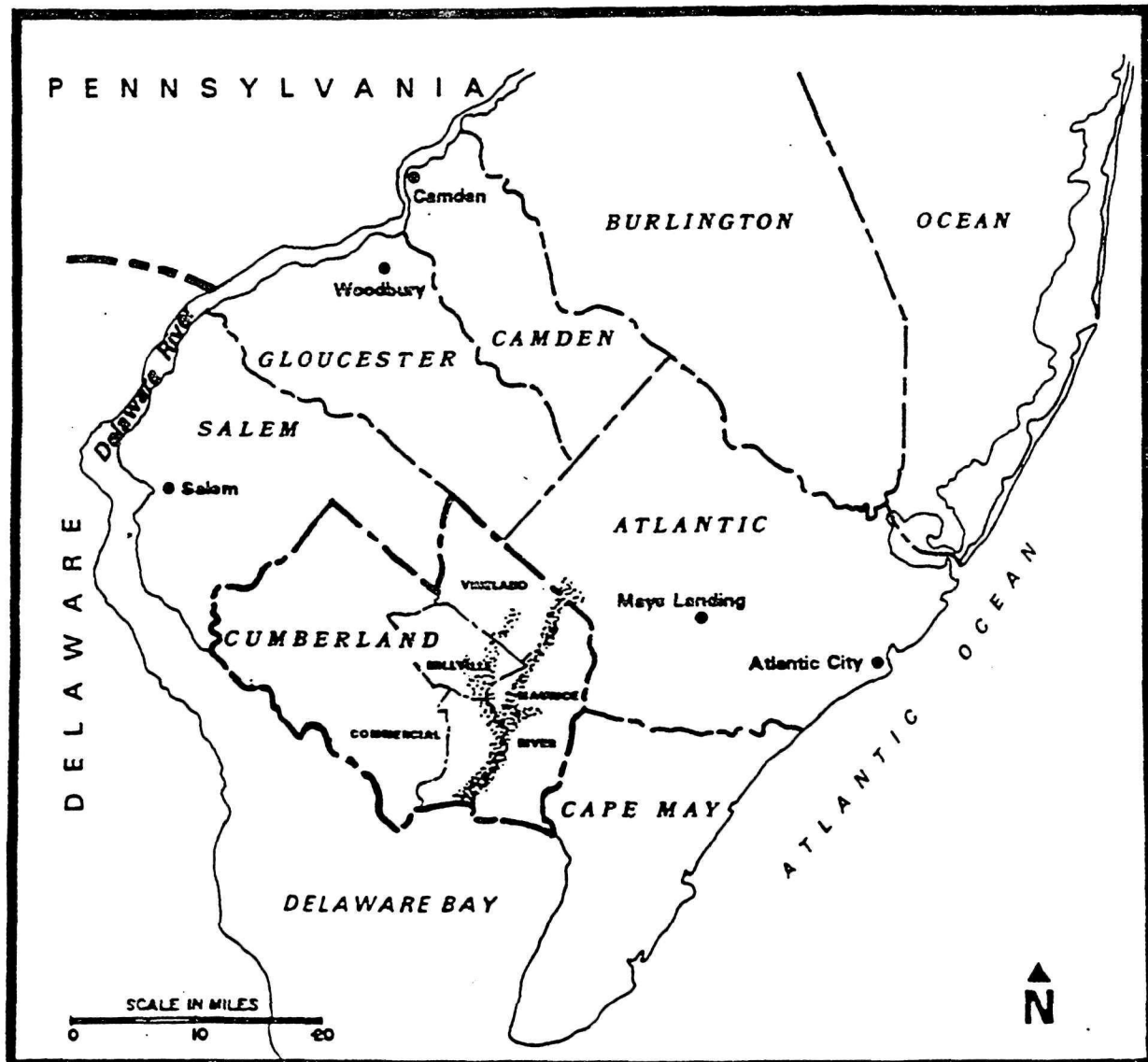


Figure 1b. Location of the study area



area and to formally recognize the special nature of the river system. The U.S. Congress responded by authorizing this study. From 1987 to 1991, additional large-scale industrial development projects were proposed, resulting in substantial local controversy. These issues will be described in the Suitability section.

It is likely that proposals for major industrial facilities development will continue to be made within the area. In light of this, it is important to frame this study in the context of the major land and water resource planning questions central to this case in particular and the issue of private lands conservation in general. The first question is: How can the people of a river corridor area that is rich in cultural and natural heritage conserve that heritage while fostering prosperity? The second question is: What is the best way to maintain home rule for privately owned lands and achieve conservation of nationally significant resources at the same time; can different local (city or township) governments act in unison to achieve real conservation of nationally or globally significant resources? Throughout the study process, described in the next section, the National Park Service has sought to address these questions.

The Study Process

The National Wild and Scenic Rivers System was created in 1968 by Public Law 90-542 to protect certain free-flowing rivers that have outstandingly remarkable natural, cultural, scenic and recreational features for the benefit and enjoyment of future generations. It provides a way for communities to manage their rivers in a manner that reflects the concerns and the needs of people that live, work and recreate along the river. The system provides a framework for making decisions about the future of a river and a way to develop a sensible conservation strategy for the river and its resources. The National Wild and Scenic Rivers Act also outlines the responsibility that all federal agencies have to act in a manner consistent with the river management plan and to prevent the loss of important river resources as a result of either a direct federal activity or by issuing a federal grant, permit or license.

This study was conducted in two phases. First, the river corridor was defined as extending one quarter-mile from the river [in accordance with the Wild and Scenic Rivers Act, Section 4(d)], and it was examined to establish its eligibility for the National System. Specific river reaches were classified as being eligible for scenic or recreation categories according to the Wild and Scenic Rivers Act and subsequent federal guidelines (U.S. Department of Interior and U.S. Department of Agriculture, 1982). These classifications are determined by the level of human development along each river reach. The results of this phase were published as the *Maurice River and Its Tributaries Final Eligibility and Classification Report*, which is summarized in the Eligibility and Classification section below.

The second phase, suitability, involved extensive public participation in order to determine the suitability of the study area for the National System. To conduct this phase, the National Park Service used a public participation and planning process described in the publication *Riverwork Book* (1988). This phase was conducted jointly with the Cumberland County Department of Planning and Development. The results of this phase of the study are discussed in the Suitability section.

The five most likely choices concerning river corridor conservation and adoption of a river management plan are presented in the Alternatives section. Municipal, county, state, federal and private non-profit agency roles are described in a proposed river management plan. It should be noted that in the legislative history for this study's authorization, the U.S. Congress specified that alternatives for direct federal management involving land acquisition were not to be considered as necessary or desirable.

Appendix One contains questions asked by municipal governments during this study and answers to those questions. Appendix Two contains the language for municipal governments' river conservation zone ordinances.

ELIGIBILITY AND CLASSIFICATION

The study area was found to be eligible for the National System. The *Final Eligibility and Classification Report* provides details of existing conditions and describes the outstandingly remarkable resource values, as required by the National Wild and Scenic Rivers Act. Map 1 and Table 1 provide geographic descriptions of the eligible river segments and their proposed classifications of either scenic or recreational (note: all maps are located at the end of the text). The Upper Maurice segment was extended, and the Upper Manumuskin No. 2, and Muskee Creek segments (denoted in Table 1 by an asterisk) were added to the congressionally authorized study area because: a) the municipal governments petitioned the federal government to include them in the study; and b) the Park Service found them to be eligible for the National System. A condensed narrative about the context of the study area follows.

Study Area Context

The Maurice River headwaters rise in Gloucester County, New Jersey, and the river flows southward through Salem and Cumberland counties into the Delaware Bay, draining an area of about 380 square miles. Two of its major tributaries, the Manumuskin River and Menantico Creek originate in Atlantic and Cumberland counties and flow southwest through Cumberland County. The congressionally authorized study area is mostly within Cumberland County, with a small area of the Menantico headwaters in Atlantic County (Map 1).

The cities of Vineland and Millville are the largest population centers near or within the study area. A few small towns occur along the Maurice River. Cumberland County is serviced by the Winchester and Western short-line railroad, Conrail, and most significantly, by the newly completed Route 55 highway. Route 55 is a major north-south limited access highway that provides a one-hour access time to the study area from the greater Philadelphia/Camden metropolitan area. In addition, the study area is within a two-and-a-half hour drive from New York City and Baltimore, and a three-and-a-half hour drive from Washington D.C.

Table 1. Segments of the Maurice River and their proposed classifications

River Segment	Segment Description	Proposed Classification	Miles
Lower Maurice	From U.S. Geological Survey Station at Shellpile to Route 548 bridge at Mauricetown	Recreation	7.0
Middle Maurice No. 1	From Route 548 Bridge at Mauricetown to 3.6 river miles upstream (at drainage ditch just upstream of Fralinger Farm)	Scenic	3.8
Middle Maurice No. 2	From drainage ditch just upstream of Fralinger Farm to 3.1 river miles upstream (0.5 miles upstream from U.S. Geological Survey Station at Burcham Farm)	Recreation	3.1
Upper Maurice	From 0.5 river miles upstream from U.S. Geological Survey Station at Burcham Farm to the south side of the Millville sewage treatment plant	Scenic	3.6
Lower Manumuskin	From the Manumuskin confluence to 2.0 river miles upstream	Recreation	2.0
Upper Manumuskin No. 1	From 2.0 river miles upstream of its confluence to the Route 49 bridge at Cumberland Pond	Scenic	4.6
Upper Manumuskin No. 2 *	From the backwater of Cumberland Pond near Route 49 to headwaters, near Route 557	Scenic	7.7
Lower Menantico	From its confluence to the bridge at Route 55	Recreation	1.4
Upper Menantico	From the bridge at Route 55 to the base of the impoundment at Menantico Lake	Scenic	6.5
Muskee Creek *	From its confluence to the Pennsylvania Reading Seashore Line railroad bridge	Scenic	2.7
TOTAL MILES			42.4

In a regional context, the study area functions as an important biological link between the Pinelands and the Delaware Bay. The rivers drain extensive forest and shrub wetlands. Their shorelines and the shorelines of their smaller tributaries are dominated by woody vegetation that overhangs the banks and shades the water, maintaining low water temperatures, trapping sediment and other pollutants, and delivering fine-to-coarse organic matter to the streams in a manner characteristic of undisturbed riverine systems. One consequence is that very high-quality water is delivered to the Delaware Bay by the Maurice River system. This water is critically important to regional oyster, crab and fin-fish industries. These traditional industries presently have considerable social and economic importance in Cumberland County, as they have had for at least five human generations.

It is the overall biological integrity of this river system that makes it important to the natural and cultural resources of the Delaware Estuary. The Delaware Estuary is recognized as nationally important by the National Estuary Program (the National Estuary Program was established by amendments to the Clean Water Act, 1988). The estuary qualifies and has been nominated to the Convention of Wetlands of International Significance, also known as the Ramsar Convention of 1971. (The convention is an inter-governmental treaty that provides the foundation for international recognition and cooperation for conserving wetland habitats of global importance.)

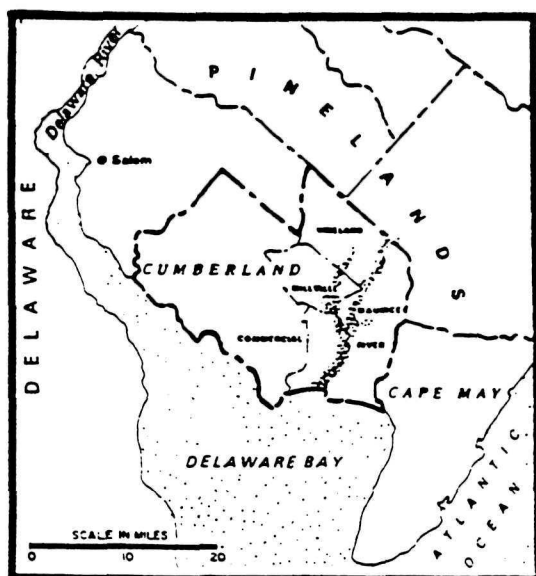
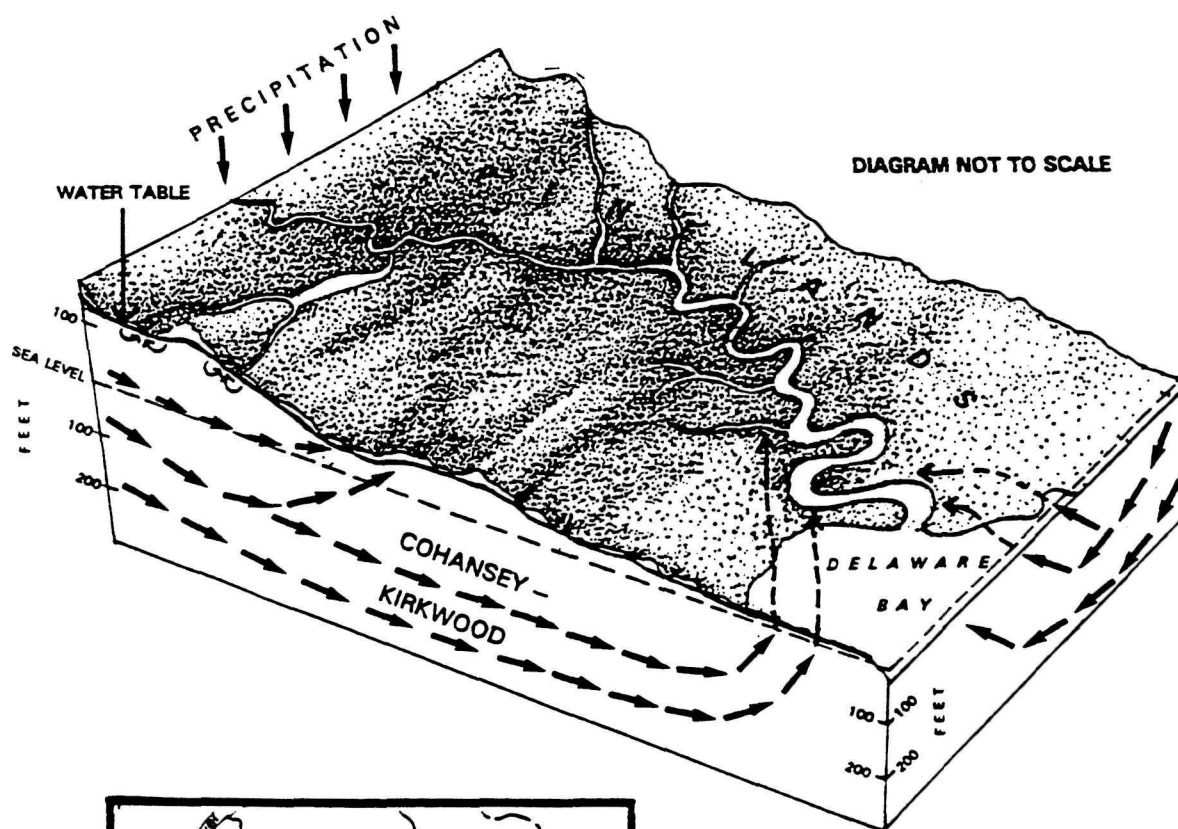
Within the context of the Western Hemisphere, the study area functions as critical migration-related habitat for shorebirds, songbirds, waterfowl, raptors, rails and fish. The important and interrelated factors of water quality and land use, coupled with the area's estuarine nature and geographic location along the Atlantic flyway, have a direct relationship to the health and viability of these animal populations.

The Maurice River and its tributaries drain the southwest portion of the Pinelands National Reserve, which is also an International Biosphere Reserve under the United Nations Man and the Biosphere Program. The Pinelands National Reserve is about 1.1 million acres in size, and was established in 1978 because it is in the national interest to "protect, preserve and enhance the significant values of the land and water resources of the

Pinelands area [Public Law 95-625, Section 502(b)]." The Maurice and the Manumuskin Rivers form the southwestern boundary of the Pinelands National Reserve.

The Pinelands Commission considers the entire Manumuskin watershed to be an ecologically critical area which supports important aquatic communities characteristic of the Pinelands (see Maps 2 and 3, Pinelands Ecological Critical Areas, and Characteristic Pinelands Aquatic Communities). The Pinelands Comprehensive Management Plan (Pinelands Commission, 1980) identifies the Maurice River drainage basin as an adjacent area of importance (see Map 4, Pinelands Adjacent Areas of Importance). Such areas are defined as important to the maintenance of the Pinelands environment. The Pinelands management plan notes that, "The high quality water and the numerous threatened or endangered animals and plants, which include the tiger salamander, the corn and pine snakes, and the sensitive-joint vetch, qualify the area for special protection" (page 264). At the regional landscape scale, the Maurice River system functions as the critical link between the Pinelands and the Delaware Estuary (Figures 2 and 3), both of which are nationally and internationally significant. Finally, the Maurice River system functions in direct relation to the Cohansey aquifer, the region's source of groundwater. Because of the sandy substrate, the Maurice River system both contributes to and draws from the Cohansey aquifer, depending on localized physiography and the seasonal distribution of precipitation.

Figure 2. This hydrologic diagram of the Maurice River system shows how it connects the Pinelands, biologically and physically to the Delaware Bay. The river both contributes to and draws from the Cohansey-Kirkwood aquifer, depending on local physiography and precipitation.



Regional context map

Outstandingly Remarkable Resources

Descriptions of the outstandingly remarkable resources of the study area follow.

1. Surface water quality of the Manumuskin and Menantico Rivers.
2. Rare, threatened, or endangered plants:
sensitive joint vetch, *Aeschynomene virginica*;
Parker's pipewort, *Eriocaulon parkeri*;
a sedge, *Carex barrattii*; and
a bonset, *Eupatorium resinosum*.
3. Wildlife and wildlife habitat:
bald eagle, *Haliaeetus leucocephalus*;
peregrine falcon, *Falco peregrinus*;
black duck, *Anas rubripes*;
habitat for migrating shorebirds; and
habitat for state-level threatened or endangered reptiles and amphibians.
4. Fish:
shortnose sturgeon, *Acipenser brevirostrum*; and
striped bass, *Morone saxatilis*.
5. Cultural resources:
Fralinger Farm, site of a prehistoric American Indian settlement; and
the rich heritage from early European settlement related to fishing
and boat-building.
6. Pinelands National Reserve.

The Maurice River and its tributaries are among the most important natural and cultural areas in New Jersey, the Delaware Bay, and the Atlantic flyway. Both the *Eligibility and Classification Report* and the *Priority Resources Report* (see page 25 for a summary) identify water quality, cultural and historic resources, and plant and animal life as components of the area's exceptional resources.

The Manumuskin is one of two rivers within the Pinelands National Reserve found to meet water quality standards of "pristine: a completely undisturbed natural river system" (page 36, Pinelands Comprehensive Management Plan, 1980). The Menantico Creek meets pristine standards in all areas except total suspended solids, which are the result of natural processes (localized water turbulence and velocity). In addition to the plant species listed above, the river system supports New Jersey's most extensive stand of wild rice, which is critical to migrating and wintering waterfowl.

The area also supports a variety of state-level threatened (T), or endangered (E) wildlife species such as:

Atlantic sturgeon, *Acipenser oxyrhynchus* (T)
Eastern tiger salamander, *Ambystoma tigrinum* (E)
Pine Barrens tree frog, *Hyla andersonii* (E)
Southern gray tree frog, *Hyla chrysoscelis* (E)
Corn snake, *Elaphe guttata* (E)
Timber rattlesnake, *Crotalus horridus* (E)
Northern pine snake, *Pituophis melanoleucus* (T)
Pied-billed grebe, *Podilymbus podiceps* (E)
Great blue heron, *Ardea herodias* (T)
Black rail, *Laterallus jamaicensis* (T)
Cooper's hawk, *Accipiter cooperii* (E)
Northern harrier, *Circus cyaneus* (E)
Red-shouldered hawk, *Buteo lineatus* (E)
Upland sandpiper, *Bartramia longicauda* (E)
Least tern, *Sterna albifrons* (E)
Red-headed woodpecker, *Melanerpes erythrocephalus* (T)
Barred owl, *Strix varia* (T)
Short-eared owl, *Asio flammeus* (E)
Sedge wren, *Cistothorus platensis* (E)
Grasshopper sparrow, *Ammodramus savannarum* (T)

The study area is believed to support 53 percent of the animal species that the state has recognized as endangered, not including marine mammals. In addition, habitats within the study area support 38 percent of the state-recognized threatened animal species. Although it is important to list species and other natural and cultural elements that are of concern and

which are dependent on the continued integrity of the study area, such lists cannot adequately describe how and why the biological and cultural resources of the study area are important. In the following narrative an overview necessary for an adequate understanding is presented for the general categories of birds, amphibians and reptiles, fish, plants, and cultural components of the study area.

Birds

The watershed of the Maurice River has for many years been identified by the New Jersey Department of Environmental Protection as the last remaining suitable habitat for the bald eagle in the state. The bald eagle is a federally recognized endangered species and is subject to protection under the Endangered Species Act (Public Law 93-205). The U.S. Fish and Wildlife Service and the New Jersey Department of Environmental Protection presently operate an eagle re-introduction program in the study area. One pair of eagles has been nesting within the Maurice River watershed in recent years, and until the 1991 nesting season this was the last remaining pair of nesting eagles in New Jersey. In 1991, however, a second pair established a nest nearby. In addition to nesting, components of the study area are now a vital wintering ground for eagles. In 1991 the study area supported a population of 14 wintering eagles. Most of these wintering eagles were juveniles and this was the greatest concentration of eagles observed in the Delaware Bay vicinity in recent times, demonstrating the study area's importance for recovering eagle populations. The undisturbed river banks and associated wetlands within the study area are presently a crucial habitat for eagle hunting, feeding, perching, and roosting (see Map 5). Maintaining this habitat is also critical to meeting reproductive needs, such as the nesting of a future eagle population, if recovery efforts are to be successful.

The study area plays an irreplaceable global role in supporting over a million migrating shorebirds. Although the shorebirds may only use the area for relatively brief periods during the year, the perturbation of these habitats for shorebird use would seriously jeopardize the viability of entire populations, many of which are presently in serious decline. For example, semi-palmated plovers, dowitchers, yellow legs, least sandpipers, red knots, and ruddy turnstones funnel through the Maurice River corridor in massive numbers as they move between northern tundra wetlands and the grasslands

and shorelines of the Llanos of Colombia and Venezuela, the estuaries of the Orinoco and Amazon Rivers, the Pantanal of Bolivia and Brazil, and the Pampas and Gran Chaco of Argentina and Paraguay (see Map 6).

The tidal portion of the Maurice River and associated wetlands has been identified as the most important habitat for rails and soras in the Mid-Atlantic region (Dr. Paul Kerlinger, Cape May Bird Observatory, personal communication). As with other migratory birds, because of the lack of human intrusion, high water quality, and geographic location, large proportions of Virginia rail, clapper rail, black rail, and sora populations depend on this area.

Because shorebirds and waterfowl concentrate heavily in this area, it is also important to predators such as the Peregrine falcon, which like the bald eagle is a federally protected endangered species. Peregrine falcons nest in the area, hunting along the river and its associated wetlands. The area is used as a re-introduction, or "hacking", site for the Peregrine. Hawk and falcon numbers along the lower Maurice River during migration periods reach some of the greatest densities observed in the Mid-Atlantic region (Kerlinger, personal communication). Most of these birds come from the northern tundra and migrate to Central and South America where they play important roles in the food chain processes of tropical ecosystems (Map 6).

Southern New Jersey is renowned for bird-watching opportunities, especially for fall warblers. These and other songbirds crowd into the area before launching long-distance flights to the forests of South America. The habitat they require in South Jersey is primarily that of forest interiors, where they feed on tree scales, mites, beetles, spiders and moths of the forest canopy. Before launching themselves over the Atlantic, they must feed intensively in order to gain enough body fat to sustain their long-distance flights. As they begin grouping together and forming migratory flocks, they must wait for just the right combination of factors to begin their flight. The exact combination of these factors is not well understood, however, it includes weather, the build-up of bird densities, the availability of food needed to reach the right body weight, and possibly proper star and moon configurations (many birds migrate at night). As these birds wait to launch their trans-oceanic flights, they must continue intensive feeding. Thus, they must utilize the large tracts of both bottomland and upland forests within

and adjacent to the study area. Because of this, the habitats of the study area are of great importance to songbirds of the Atlantic flyway for short but critical periods of their life cycles.

Amphibians and Reptiles

The study area has been identified as high-quality habitat for at least five amphibian species that are considered threatened at the state level. The scarlet snake (*Cemophora coccinea*) was also collected from the study area during this study. The finding was a surprise as this may be the only place in New Jersey where the species occurs. Its exact status in the state has yet to be determined, and future work on its distribution and behavior will add significantly to knowledge about this secretive snake. The diversity of reptile and amphibian species is higher in the Maurice River watershed than any other watershed in New Jersey (*Priority Resources Report*, see page 25 of this report). This diversity is attributed to the excellent water quality, freshwater wetlands, and the undisturbed nature of the area. Given the present rapid decline in amphibian populations and shrinkage in geographical ranges of many amphibian species world-wide (Blaustein and Wake, 1990), the Maurice River watershed may be important as genetic refugia and as a monitoring and indicator site for amphibians, as well as an area of scientific and educational value in conservation biology.

Fish

The shortnose sturgeon (*Acipenser brevirostrum*), a species considered endangered under the federal Endangered Species Act, historically inhabited the Maurice River. The present status of this fish within the study area is unknown. The Maurice River is one of only three rivers in New Jersey where striped bass (*Morone saxatilis*) still spawn and over-winter. Striped bass are an important coastal sport and commercial fish that live in salt water during the adult life-stage, but spawn in fresh water and remain there during the juvenile life-stage. Once abundant along the Atlantic coast, in the last decade populations have declined rapidly. Because of its high water quality and production of food organisms, the Maurice river system has become an important source for striped bass stock.

Plants

Within Cumberland County, there are 147 known occurrences of 58 different state-recognized rare plant species. Of these species, 31 are

considered endangered by the state. Within the study area, swamp pink (*Helonias bullata*) is listed as a threatened plant species by the federal government under the Endangered Species Act. Additionally, sensitive joint vetch (*Aeschynomene virginica*), New Jersey rush (*Juncus caesariensis*), and chaffseed (*Schwalbea americana*) are considered candidates for federal recognition as threatened or endangered species, pending further study. Of these three candidate species, the local occurrence of sensitive joint vetch along the tidal Manumuskin River is particularly important as this is the largest viable population left in the world, probably containing the greatest genetic diversity for this species (Tom Breeden, New Jersey Office of Natural Lands Management, personal communication).

Cultural Resources

There are also many places of cultural and historic importance within the study area. The Fralinger Farm, on the Maurice River, is the site of a prehistoric American Indian settlement eligible for designation as a National Historic Landmark. It had been occupied for over 3,000 years and is one of ten such sites within the study area listed on the New Jersey State Museum's Site Survey.

Dorchester-Leesburg and Port Elizabeth-Bricksboro are designated Pinelands Villages. The Pinelands Commission identified these villages as potentially eligible for the National Register of Historic Places. The village of Mauricetown on the west bank of the Maurice River is an old sea captain's village with many fine nineteenth-century homes. Mauricetown was developed around the once thriving oyster industry. This industry helped develop some of the unique folklife of the area, as documented in *Pinelands Folklife* (Moonsammy and others, 1987). The Maurice River area is highlighted in folklife literature for traditional hunting, trapping, shipping, shipbuilding, fishing, oyster harvesting and salt hay farming.

Eligibility Finding

In summary, the many natural and cultural resources of the study area are intertwined, resulting in a sum greater than a discrete set of "outstandingly remarkable resources." The study area can only be described as an "outstandingly remarkable place," requiring a system-level approach for adequate conservation. It is eligible to be part of the National Wild and

Scenic River System.

SUITABILITY

This section presents an analysis of the fit between the potential designation of the study area as a National Wild and Scenic River and the conservation-related issues of local citizens and their municipal governments. It describes results from the public involvement process used for this study.

A citizen's Task Force was formed and six basic principles, or assumptions, were agreed to, by which the study would be conducted. The Task Force then formed subcommittees that researched and reported on resources of concern, local issues, landowner attitudes, goals for river management, land use recommendations, river-related state and federal laws and programs, and local land use regulations. Then nineteen specific recommendations for the river management plan, resulting from a synthesis of information on resources of concern, local issues, and government programs were produced. All of these results are presented in the Task Force, Assumptions, and Summary of Local Citizen Task Force Work sub-sections that follow.

Relevant information from the Cumberland County Public Opinion Survey is presented because it reveals important county-wide attitudes about directions in natural resources management. Three proposals for the development of industrial facilities are reviewed, since they have engendered the most controversy and have been a central topic throughout this study, greatly influencing the study's origin and outcome. The sub-section Concerns of Local Governments summarizes the concerns they expressed. A full set of questions asked by the municipal governments and answers to these questions is included in Appendix One, Municipality Questions and Agency Answers to Potential Designation as a National Wild and Scenic River. Existing land ownership and major growth management programs are reviewed, and finally, the findings of the study area's suitability for the National System are summarized.

Task Force

The Task Force was made up of elected officials from each municipal government and the county government, representatives from local businesses and industry, members of local conservation groups, individual concerned citizens, and local, state and federal agency personnel. The Task Force was comprised of approximately sixty members. From the Task Force, a Management Committee of thirteen members was established. In addition to specific Task Force activities, Cumberland County and National Park Service staff participated in public meetings and in municipal government planning board and council meetings. They had frequent contact with local, state and federal elected officials and their staffs and they met with local citizen groups. Subcommittees were formed to research and report on the following:

1. resources of concern (*Priority Resources Report*);
2. issues (*Issues Report*);
3. landowner attitudes (*Landowners' Survey Report*);
4. goals (*Goals Statement*);
5. recommendations for land uses within the study area (*Land Use: Recommendation for Management Plan Guidelines*);
6. existing statutes and government programs that already contribute to the conservation of river-related resources (a. *Existing State and Federal Programs Review*, and b. *Local Land Use Regulations Review*); and
7. specific recommendations for a river management plan (*Synthesis of Issues, Resources, and Government Programs*).

Each of these reports is treated in the Summary of Local Citizen Task Force Work subsection, beginning on page 25.

Study Assumptions

The Task Force established six basic assumptions by which the study would proceed. These are:

A. No Federal Acquisition - In response to local demands and at the direction of members of Congress, the National Park Service made it clear from the beginning that it has no intention of acquiring land in the study area for purposes related to the National Wild and Scenic Rivers Act.

B. Local Management - The *Landowners' Survey Report* (see summary, page 24) concluded that, while local citizens are very concerned with pollution and environmental protection, they are also concerned with government over-regulation and the possible loss of property rights. Landowners want to protect the environmental integrity of the area while having an active role in determining the type of protective measures that will be used and while protecting their property rights. Therefore, a river management plan should be developed with the county and municipal governments before the river becomes part of the National Rivers System.

C. Use of Existing Programs - The river management plan should make every effort to utilize existing local, state and federal government statutes and programs to achieve comprehensive protection of the river corridor's important resources. The intent of this assumption is to avoid additional bureaucracy or regulation while meeting the needs of river conservation and local economic vitality.

D. Traditional Uses Maintained - A primary reason for the Maurice River Wild and Scenic Rivers Study was in response to the desires of local citizens to maintain and conserve the river values that are important to them. One premise of the river conservation management plan will be to maintain traditional uses.

E. Protection of Landowner Rights - The intent of any future conservation strategy for the Maurice River study area is to ensure that the important resource values are protected, while simultaneously protecting the property rights of landowners.

F. Recognition of Economic Need - The river management plan must recognize that, by-and-large, in this part of Cumberland County river related activities are the most *significant component* of the economy. In setting up a system to enhance protection of the river, a system that will protect the traditional economy must also be addressed, whether those

businesses are oysters, crabs, fishing, recreation or tourism. Scenic and recreational river designation can and should be used to foster local economic revitalization efforts.

Summary of Local Citizen Task Force Work

Priority Resources Report

This report documented resources of concern to the Task Force, presenting information on physiography, geology, hydrogeology, surface hydrology, water quality, floodplains, wetlands, soils, vegetation, wildlife, rare and endangered species, archaeology, early settlement, villages, industry, public sewer and water facilities, and recreation. These data were to provide an account of the resources of concern by local citizens, and were intended to be used to define the river corridor for a management plan.

Issues Report

This report is a compilation of five individual reports that dealt with the general categories of land use, management, navigation, recreation, resource protection, and water quality. Nineteen specific issues of public concern regarding the future management of the river corridor emerged from this effort. They are:

- control of air pollution
- control of channel modifications
- control of erosion and sedimentation
- control of "other" water pollutants
- control of septic system pollution
- control of sewage treatment plant effluent
- control of stormwater runoff
- control of water withdrawals
- maintenance of existing land use patterns and reduction of future conflict
- maintenance of hunting, fishing, and trapping
- maintenance of visual buffers
- prohibition of solid and toxic waste facilities
- promotion of economic vitality
- protection of cultural resources
- protection of upland habitat
- provision of recreation and access facilities
- regulation of adjacent land uses
- special controls or programs for endangered species

Landowners' Survey Report

This report describes the results of a survey of landowners within the study area. The survey was conducted by the Cumberland County Department of Planning and Development. The report's major findings:

- Of 339 surveys that were mailed, there were 138 responses (38.9 percent).
- When categorized by municipality, a majority (47.7 percent) of the respondents own property in Maurice River Township, geographically the largest municipal jurisdiction within the study area.
- In terms of overall distribution, the majority (60.7 percent) of the respondents own property along the Maurice River, with the greatest number located between Laurel Lake and Shellpile.
- Respondents indicated that they settled in this area because they like the privacy and solitude and enjoy living near a river; others indicated they enjoy river-related recreation, feel it is a pleasant community, or have family ties to the area.
- A majority (65.9 percent) of respondents indicated that their property would remain in their ownership in its present condition.
- Respondents frequently use the river for fishing, boating, swimming, crabbing, nature watching, and photography.
- Forty-five percent of the respondents own five acres of land or less.
- Forty percent of the respondents own between 100 and 500 feet of river frontage; 23.5 percent own more than 1,000 feet of frontage.
- Almost half (49.2 percent) of the respondents characterized their property as residential.
- Forty-five percent of the respondents strongly disagreed with aggressive development of the study area. Yet 38.6 percent of the respondents disagreed with using strict land-use regulations to conserve and protect the river, while 38.6 percent agreed with using

an overall river corridor conservation plan that would allow for some new residential, commercial and industrial growth.

- Twenty-five percent of the respondents agreed with lower density zoning of their property to protect the river area.
- Forty percent of the respondents indicated that, given the choice between jobs and development or environmental protection, their decision would depend on the type of development and the area to be affected.

The survey also showed that landowners along the river are concerned about its future. They believe that pollution and environmental protection are the two most important issues facing the area. At the same time, they are concerned about government over-regulation and the loss of property rights. The survey showed that these landowners want to protect the integrity of the area while having an active role in determining the type of protective measures to be implemented.

Goals Statement

The Task Force articulated four goals to be achieved in managing the river corridor:

1. Foster the protection and enhancement of the natural, cultural and recreational resources of the rivers and their adjacent lands for future generations;
2. Promote economic vitality by acknowledging rights of traditional businesses and stimulating future compatible opportunities;
3. Balance residential, commercial and industrial activities with the protection of the area's important resources to ensure and enhance the quality of life for the river communities; and
4. Encourage coordination and consistency among existing levels of government, businesses, organizations and individuals to facilitate implementation of the management plan, without creating a new regulatory agency or infringing on individual property rights.

Citizen's Task Force Land Use Recommendations

Within the study area, the Task Force defined priority areas for conservation and areas of existing development (for conservation districts and development districts, see Map 7). The Task Force generally expressed a desire to prevent landfills, waste storage, waste incineration, heavy industry, and high-density residential land uses from occurring within the river corridor (one-quarter mile from each bank of the river), with the exception of residential and commercial uses within and near established towns (i.e., development districts, Table 2). All other uses, except campgrounds, were seen as compatible within development districts. Hunting clubs and conservation activities were seen as compatible within priority districts, as were low-density residential uses: existing residences should remain, new residences allowed if no adverse effect to the critical resources could be demonstrated. Other land uses within conservation districts were seen as incompatible; although of these, the Task Force stated that existing uses should continue until abandoned by the present users.

Existing State and Federal Statutes and Programs Review

This review was conducted for the Task Force by the Forum for Policy Research of Rutgers University at Camden, New Jersey. The review found twenty-one relevant statutes and programs. Its major finding was that among these statutes and programs there is a possibility of conflicting, overlapping, duplicating, and even competing jurisdictional interests interfering with an orderly process of river resource protection. To insure adequate protection for the rivers and their resources a broad regional coordinating mechanism is needed for better coordination between regulating agencies. State and federal statutes and programs are shown in Tables 3 and 4, respectively, along with the corresponding resources they affect.

Local Land Use Regulations Review

This report, produced by the Cumberland County Department of Planning and Development, reviewed local zoning and land use ordinances with respect to the river conservation goals. The report found that for areas lying outside existing towns (i.e., the proposed conservation districts, Map 7) few zoning changes would be necessary to achieve a low density residential scenario (a minimum five-acre building lot size). Most municipalities already have various types of protection in place, but these are not

Table 2. Citizens Task Force land use recommendations for the river corridor

Land Use	Development Areas	Transition Areas ¹	Priority Areas
Agriculture	○	⊙	⊙
Landfills	●	●	●
Waste Storage or Incineration	●	●	●
Retail Stores	○	⊙	⊙
Service Establishments	○	○	⊙
Professional Establishments	○	⊙	⊙
Wholesale Establishments	○	⊙	⊙
Light Industry	○	⊙	⊙
Heavy Industry	●	●	●
Government Buildings	○	⊙	●
High-Density Residential	●	●	●
Medium-Density Residential	○	⊙	●
Low-Density Residential	○	⊙	⊙
Traditional Ship Building	○	⊙	●
Sand and Gravel Mining	○	⊙	⊙
Hunting Clubs	○	○	○
Marinas	⊙	⊙	●
Campgrounds	⊙	⊙	⊙
Conservation Activities	○	○	○

¹ Transition Areas were later combined with Priority Areas to define the Conservation District.

- compatible
- ⊙ existing operations should continue; new operations seen as incompatible
- ⊙ existing operations should continue; new operations may be compatible IF no adverse effect to critical resources can be demonstrated
- incompatible

Table 3. State laws relevant to river conservation

Legal and Regulatory Programs	Groundwater	Soils	Wetlands	Uplands	Floodplains	Agricultural	Resources			Historic Villages	Historic Structures	Archeological	Public Lands	Scenic	Recreational
							Fishery	Vegetation	Wildlife						
Coastal Area Facilities Review Act		X	X	X	X		X	X	X	X	X	X	X	X	X
Endangered & Non-game Species Act			X	X	X		X	X	X						
Flood Hazard Area Control Act		X	X		X										
Freshwater Wetlands Protective Act			X				X	X	X						
Municipal Conservation Commission Act													X	X	
Municipal Land Use Law		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Natural Area Systems Act		X	X				X	X	X				X	X	X
Open Lands Management Act		X					X	X	X					X	X
Pinelands Protection Act	X	X	X	X		X	X	X	X	X	X	X	X	X	X
Soil Erosion & Sediment Control Act			X	X	X			X							
State Planning Commission Act			X	X		X									
Water Pollution Control Act	X		X		X										
Water Quality Planning Act	X														
Wild & Scenic Rivers Act					X		X	X	X				X	X	X

Table 4. Federal legal and regulatory programs relevant to river conservation

Legal and Regulatory Programs	Groundwater	Soils	Wetlands	Uplands	Floodplains	Resources			Wildlife	Historic Villages	Historic Structures	Archeological	Public Lands	Scenic	Recreational
						Agricultural	Fishery	Vegetation							
Archeological Resources Protection Act											X	X			
Clean Water Act	X		X		X		X	X	X						
Endangered Species Act			X	X			X	X	X						
Farmland Protection Act		X				X		X							
National Estuary Program		X	X		X		X	X	X						
National Historical Preservation Act										X	X	X			
Rivers & Harbors Act			X				X								

necessarily focused on the river corridor in a fashion consistent with adjacent jurisdictions. To achieve a consistent protection of river resources at the local government level, some additional land use regulations would have to be implemented by the different municipalities. Consistent municipal treatment of environmentally sensitive areas by means of vegetation buffer strips, building and septic system setbacks, limitations on the clearing of natural vegetation, minimum lot river frontage, signs, and incentives for cluster development, is identified as necessary for achieving conservation at the municipal level of government. The parameters for such treatment are presented in detailed municipal zoning language in Appendix Two, The Local Government River Conservation Zone.

Synthesis of Issues, Resources, and Government Programs

This report provided an iterative issue-by-issue and reach-by-reach review of existing state and federal statutes and programs. The underlying question asked was: Are the existing statutes and programs adequate to address the given issues and the related resources within all of the distinct parts of the river corridor? (See *Issues Report* summary, page 24.) Where the existing statutes and programs were found to need improvement, recommendations for management actions that would address the issue were provided. From this iterative process (issue-by-issue, reach-by-reach), nineteen specific recommendations were developed. They are:

1. Adequate setback distances for septic system drainfields from surface water and wetlands should be established by local zoning measures throughout the study corridor.
2. Local governments should adopt a cooperative river conservation zone that would minimize the potential for wetland disturbance from upstream and adjacent upland sources. This conservation zone should address housing densities, vegetation buffers for surface water, and environmentally sensitive areas.
3. Stormwater management planning should be updated in the county's site plan regulations for proposed developments.
4. Support for development of the Cumberland and Bay Area Rare, Threatened and Endangered Species Program and coordination with the Delaware Estuary Program should continue.

5. Local historic preservation groups and the New Jersey State Office of Historic Preservation should be encouraged to develop a cultural resource protection and enhancement plan.
6. Adequate vegetation buffers and filter strips should be maintained with standardized setbacks of structures from surface water by local government land use regulations.
7. The management plan should encourage local governments to regulate adjacent land uses through conservation zoning by providing for a gradation of land use intensities adjacent to the river corridor.
8. The management plan should support ongoing programs such as: local government review of site plans for proposed developments; local government efforts to promote new development setbacks from surface water; the New Jersey Department of Environmental Protection's 205J process and 604 pass-through grant programs for clean water; the Delaware Estuary Program; and the Soil Conservation Service's Best Management Practices for agriculture.
9. (a) Exporting water from the Maurice River basin (out-of-basin transfers of water) should be discouraged. (b) The management plan should encourage the State of New Jersey to recognize the Maurice River watershed as a critical water recharge area in the statewide water supply master plan update.
10. The Maurice River corridor management plan should support traditional hunting, fin and shell fishing, and trapping uses within the corridor. The conservation of fish and wildlife resources for traditional uses should be an integral part of the management plan.
11. A river district conservation zone should be adopted by local governments. The conservation zone should offer consistency across local government jurisdictions for regulation of housing density, vegetation buffers, environmentally sensitive areas, and other landscape elements.
12. The management plan should identify ways to assist local revitalization efforts in existing developed areas in further redevelopment, quality of life, historic preservation, and tourism goals.
13. (a) Within the Reach One Development Area, structures related to traditional uses should be maintained, and traditional architectural styles should be encouraged for new structures. (b) Local governments should require native vegetation buffers and an adequate setback for structures within the river corridor.

14. The New Jersey Green Acres Program should be requested to explore options for recreation and access facilities.
15. The management plan should support existing state and federal air pollution control programs.
16. Upland habitats should be protected by local conservation zoning and voluntary landowner initiatives such as the granting of conservation easements. Site-specific considerations for environmentally sensitive areas should be provided.
17. The management plan should recognize the need for maintenance dredging within the river corridor to support traditional river-related businesses. In addition, the potential for a deeper dredge depth at the mouth of the river should be recognized by the plan. Shorelines that will be maintained in their natural state through local zoning should be identified.
18. The management plan should encourage enforcement of existing programs to control sewage treatment effluent.
19. The management plan should encourage prohibition of solid and toxic waste facilities by federal, state and local governments in the river corridor.

Cumberland County Public Opinion Survey

During mid-1990, the Cumberland County Planning Board contracted with the Rutgers University Forum For Policy Research and Public Service to conduct a public opinion survey. The Planning Board undertook this survey to develop scientific non-biased information about residents' opinions on issues of growth management. Although this survey was not conducted in relation to the rivers study, the findings are directly relevant and useful to the study because they reveal county-wide attitudes about issues of open space, the importance of jobs, open space versus development, regulation of open space, and growth location. These findings are presented below in Figures 3 through 9.

The survey results show that while the citizens of Cumberland County are very concerned about jobs, they also consider the preservation of open space to be of great importance. A majority of citizens agreed that land use should be regulated to preserve open space.

Figure 3. Approximately 74 percent of the respondents ranked the preservation of open space with the two highest possible scores, 15 percent gave it a middle ranking, while about 11 percent gave this issue the two lowest rankings.

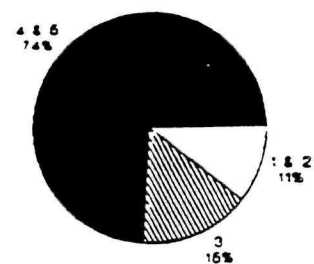


Figure 4. When asked to rank the importance of jobs in the county, about 87 percent ranked jobs in the two highest categories, and about 5 percent ranked the importance of jobs in the two lowest categories.

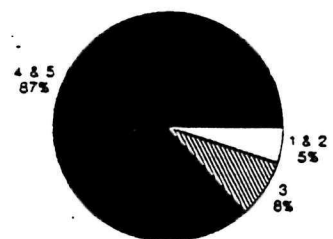


Figure 5. Citizens were asked "If you had to choose between preserving open space or allowing increased development which would result in additional jobs, which would you choose?" Approximately 51 percent would choose open space, 45 percent would choose development, and 4 percent said they did not know.

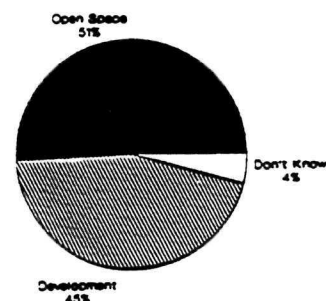


Figure 6. Of the 51 percent who chose open space over development in the preceding question, 39 percent said farmland preservation was most important, 36 percent said environmental preservation was most important, 14 percent said parks and playgrounds were most important, and 10 percent said they did not know.

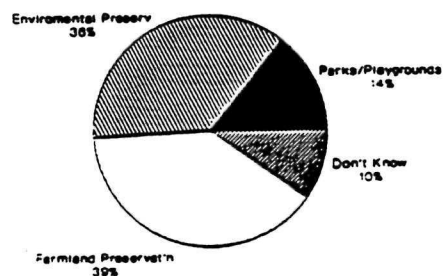
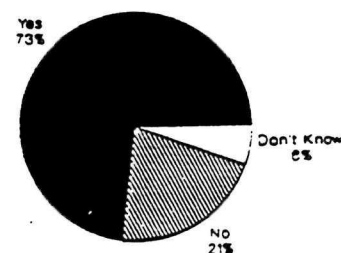
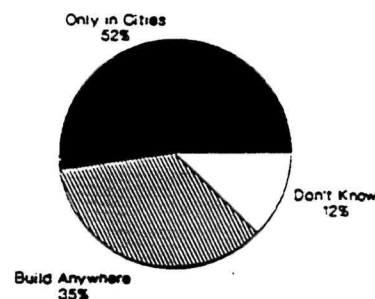


Figure 7. Survey participants were asked "Some people think that the growth in the county should be regulated to preserve farmland and open space. Others think that growth should be allowed to develop freely without a lot of regulations. Which approach would you prefer?" 73 percent of the respondents chose the regulation of growth to preserve open space, 21 percent chose development



without a lot of regulation, and about 6 percent did not know.

Figure 8. Approximately 52 percent of the survey participants thought that new houses should be built only in cities and towns, about 35 percent thought that they should be built anywhere, and about 12 percent did not know.



Proposals for Industrial Facilities

There have been three proposals for the siting of major industrial facilities that have significantly affected the process and outcome, to date, of this study. Because of their importance to the study --and more importantly, their potential impacts to river-related resources-- each of these proposals is briefly reviewed below. Map 8 shows the locations of each proposed facility.

Hazardous Waste Entombment Facility

In 1986, the New Jersey State Hazardous Waste Facilities Siting Commission identified the area lying between the Manumuskin River and the Menantico Creek, near their confluences with the Maurice River and along the Maurice River, as a potential site for hazardous waste disposal. Reaction by local citizens, elected officials, and conservation groups was intense and negative. The issue focused attention on the value of existing resources of the river corridor, the value of the river's heritage, and concern for the way that future human development would affect the river area. One result was the authorization of the Maurice River study under the National Wild and Scenic Rivers Act.

In September of 1987, the Hazardous Waste Facilities Siting Commission decided to eliminate the site from consideration. The Commission did so explicitly because they concluded that the effects of the proposed development at the site would be unacceptable. The Commission's concern was for the unique and irreplaceable habitats existing on and near the site.

Barge Loading Facility

In 1987, Genstar Stone Products Company (GSPC) of Hunt Valley, Maryland, announced its intent to construct a sand and gravel mine and a four-hundred-foot bulkhead with a shuttle conveyor to load barges along the Maurice River shoreline within the study area. In June of 1988, the U.S. Army Corps of Engineers issued a public notice requesting review and comments on GSPC's application for a permit to construct the facility, as required under Section 10 of the Rivers And Harbors Act of 1899. Substantial public controversy followed. In August of 1988, the U.S. Army Corps of Engineers denied GSPC the development permit required to proceed with the proposal. The basis for denial was: (a) a finding by the New Jersey Department of Environmental Protection that the proposal was inconsistent with the New Jersey Coastal Zone Management Program; and (b) a finding by the U.S. Department of the Interior that the proposal would result in direct and adverse effects to nationally significant resources, including federally protected endangered species.

Fossil Fuel Electric Power Generating Station

In January of 1988, the Atlantic City Electric Company (ACE) contacted the National Park Service with concerns about how the possible designation of the Maurice River study area as a unit of the National System might affect ACE's possible plans for any future coal-fired electric generating station along Route 49 in Millville. The National Park Service responded to these concerns by providing ACE with extensive consultation and detailed review of ACE's preliminary plans.

In May of 1989, ACE published *Questions and Answers About Generating Plans For Atlantic Electric's Millville Property*. In this publication, ACE stated that a 75-megawatt combustion turbine was then being constructed at its Millville property. The publication also described possible plans to construct a 220-megawatt combustion turbine and a 150-megawatt coal-fired generating plant. According to the publication, these plans were heavily dependent on the materialization of other electric power sources and future demand for electricity. Presently, the 75-megawatt combustion turbine is operational, and ACE is seeking a "Certificate of Need," required by the New Jersey Board of Public Utilities, for the 220-megawatt combustion turbine. However, ACE has not proceeded with any plans for a coal-fired

electric generating facility at its Millville site and are not expected to do so within the foreseeable future.

As with the proposed hazardous waste and barge loading facilities, ACE possible use of the site for a future coal-fired electric facility is controversial. Opponents of the ACE proposal hoped to use the ongoing river study as a means to defeat the proposed power station, while proponents of the ACE proposal saw the inclusion of the study area into the National System as a burden or a threat to installation of the power station. Under Section 7 of the National Wild and Scenic Rivers Act (Public Law 90-542), if the ACE proposal resulted in a direct and adverse effect to the nationally significant river-related resources of the study area -- either during the study period or in the eventuality that the river corridor is included as a part of the National Rivers System-- federal permits or licenses needed to complete the project could be denied.

A common perception has been that ACE's proposal and the designation of the study area as a component of the National System are mutually exclusive. The objective analysis that is needed to determine this relationship would be provided under the National Environmental Policy Act (NEPA).

The Wild and Scenic Rivers Act requires that components of the National System be managed to protect the values that caused them to be included in the National System without limiting other uses as long as the other uses do not substantially interfere with public use and enjoyment of those values. Because of this policy and because the recognition of economic need is a basic premise of this study (see page 23), during the period of public dialogue on the ACE proposal, and during consultations between ACE and government agency representatives, the Park Service has: (a) sought to work cooperatively and in good faith with ACE, the New Jersey Board of Public Utilities, and other agencies to ensure a balanced treatment of the ACE proposal; and (b) identified certain natural resources of concern that *could* be affected by the ACE proposal, pending sufficient evaluation.¹

¹ This concern has been expressed in:

a. The National Park Service Preliminary Review of the Atlantic City Electric Cumberland Site Proposal, February, 1989;
b. Testimony by the National Park Service Regional Director before the New Jersey Public Utility Board, December, 1989.
c. The National Park Service's invited review of the New Jersey Board of Public Utilities Early Assessment Report of Atlantic

Other than the proposed hazardous waste facility, which was the catalyst for congressional authorization of this study, the power generating station proposal has been the most significant local issue in ongoing "development versus environment" controversies. It has exerted a strong and polarizing influence on local support and non-support for potential designation of the study area as a part of the National System. The issue of local support and non-support will be discussed further in the next section, Concerns of Local Governments.

Summary

The three proposals for industrial development exemplify the type of pressure that is likely to affect the Maurice River system in the future. Pressure for such development is likely to continue because of: (a) continuing long-term population and economic growth in the Mid-Atlantic seaboard region; (b) the study area's proximity to markets, yet its concurrent remoteness; (c) improved highway access; (d) the availability of highway, railroad and water transportation; (e) the cost advantages of both land and labor in Cumberland County; (f) the availability of natural resources such as water, sand and aggregate; and (g) the quality of life the area has to offer employees.

Although responsible economic development, including industrial facilities, should be encouraged in Cumberland County, effective conservation of the river system cannot be achieved without balancing the siting and design of such facilities with the realistic needs of maintaining the river ecosystem. The conservation of this river system will not be achieved unless economic benefits, such as the tax revenues a municipality would realize from an industrial development, are fairly weighed against long-term qualitative and quantitative measures of the proposed development's effects on existing natural and cultural resources. While tax revenue from an industrial development may benefit a municipality fiscally, its impacts would likely affect areas far beyond the local government's jurisdiction. The state and local governments do not have the complete jurisdictional capability to

Electric Company's Notice of Intent for a Combined Cycle Facility in Millville, New Jersey, April, 1990.

d. The National Park Service's review of the Atlantic City Electric Company's Plan of Study for Cumberland Combined Cycle Facility, February, 1990.

achieve such a balance, as evidenced by various state and federal grants, permits and licenses which can directly and adversely affect nationally important resources of the area.

A comprehensive assessment is needed when major development is proposed that could affect an environmentally significant area such as the Maurice River system. At the federal level of government this can be provided under NEPA, however, a consistent treatment of the area by all levels of government can best be accomplished by defining the area in a special way, such as under the National System, as part of the Pinelands National Reserve, or as a Coastal Zone Management Area.

Concerns of Local Governments

On October 19, 1987 the Township of Commercial, Maurice River Township, the City of Millville, the City of Vineland, Cumberland County, and the National Park Service entered into a Memorandum of Understanding to work cooperatively to complete the Maurice River study. This agreement represented a good-faith commitment between the local governments and the federal government to meet the original concerns by local citizens and their county and municipal governments that some type of long-term plan be formulated to manage future growth in order to conserve the important resources of the study area.

In the last half of 1990, the National Park Service and the Cumberland County Department of Planning and Development began to bring the suitability phase of this study to a close. They jointly produced the *Assumptions and Alternatives Report* in order to:

1. summarize the study process to date;
2. restate the six basic assumptions under which the study was operating (see Study Assumptions, page 23);
3. sketch the key elements of a river conservation plan; and,
4. articulate the likely set of alternatives for river management.

Cumberland County and National Park Service staff then met with each municipal government to present an analysis of current zoning and local river management; to define the National Park Service role should the river corridor become part of the National System; and to discuss the study with locally elected officials and members of the public as fully as possible. Given the commitment by all parties to local river management, Cumberland County and the National Park Service sought to address the concerns of each municipality prior to developing a comprehensive river management plan for the entire study area.

These concerns and the outcome of these meetings are summarized below for each of the five municipalities, followed by a brief analysis of each municipality's consequent position. A full understanding of the basis for each of the municipalities' political decision is critical to both local representation and adequate federal decision-making about the future of this river system. A set of questions raised by each municipality and complete answers for these questions is provided in Appendix One. Along with an understanding for the physical and biological resources of the study area, an understanding of the local governments' political choices is one of the most important parts of this study.

Township of Buena Vista

Buena Vista contains about 11 percent of the total study area, the smallest portion of any municipality (see Map 1), however, that portion comprises the forested headwaters of the Manumuskin River.

Cumberland County and National Park Service staff met with the Township Committee to present the key elements of a river management plan; to review the National Park Service role should the study area become a unit of the National Scenic and Recreation River System; and to thoroughly discuss river conservation issues with the Council. At its next regular meeting, the Council decided not to support including the study area in the National System.

The reasons for not supporting such designation given by the Mayor of Buena Vista were that the Township Committee did not want any additional form of government involved with their decision-making. In addition, Buena Vista officials felt that, since the area was under the jurisdiction of

the Pinelands Commission, it was adequately protected. In understanding the Council's position, it is of some significance to note that, as a Pinelands community, Buena Vista had not reached compliance with the Pinelands Comprehensive Plan for the ten year period since the Comprehensive Plan was implemented. However, the township eventually did achieve compliance with the Pinelands Plan and did agree to designation of the Manumuskin River into the National Wild and Scenic River System.

Township of Commercial

The Township of Commercial's jurisdiction lies along the southwestern portion of the Maurice River main stem, from Laurel Lake to Shellpile (Map 1). Cumberland County and National Park Service staff met with Township officials at a regular Township public meeting. The Township Committee and members of the public were presented with the key elements of a river conservation zone, a detailed analysis of current zoning relative to the needs of river conservation, and the National Park Service role should the study area become a part of the system.

Several days later, the Township of Commercial's mayor presented Cumberland County and National Park Service staff with the following six requisites to be met before the Township would support including the study area in the National System (excerpted):

1. Dredge river minimum depth 9 feet (mouth to Dorchester) with future option if need necessitates 11 foot. Spoils to be used to rebuild banks on Maurice River Township.
2. Create, establish or build a regional sewage facility with federal or state funds to serve river area (Bivalve, Shellpile).
3. Create a Free Environmental Enterprise Zone to develop commercial seafood processing, tourism and recreation interests. Peak-of-Moon to mouth.
4. Allow commercial vessels to continue to have full access of the entire river.

5. Streamline permit process (federal & state) and NJ DEPE (New Jersey Department of Environmental Protection and Energy) to address and give special relief to and understanding of this area including, but not limited to wetlands, etc.
6. Continue present township zoning regulations - housing set back, etc.

In addition, the Mayor added the following points:

- Approval of Wild & Scenic River ONLY if ALL the above conditions are met.
- All Conditions must be written in the final management report and administration policies of the plan - no vague statements will be accepted.
- There must be provision available and guidelines established to outline in detail steps that can be taken to get out of the designation in the future if conditions warranted.
- Commercial Township must be represented on management task force and administration of the plan.

Cumberland County, with the concurrence of the National Park Service, responded to the Township of Commercial by indicating that, because of the federal budget appropriations process, it would be difficult to guarantee special funding for a new dredge project by designating the river a National Wild and Scenic River. However, a river management plan could recognize the need for maintenance dredging at the mouth of the Maurice River in order to maintain traditional businesses and ways of life there, thus providing support for the project. In addition, the county offered to explore the funding of such a project with the Township of Commercial. It is important to note that much of the Township's proposed dredge project area (requisite No. 1, previous page) is located outside of the study area; during the formative stage of the legislation which authorized this study, the lower four miles of the Maurice River (Shellpile to the Delaware Bay) were excluded because of apprehension that management under the National Wild and Scenic Rivers Act would preclude dredging in this area.

The County and Park Service response indicated that agreements could be reached regarding the following: adequate wastewater treatment; advocating for establishment of an environmental enterprise zone; assurance of commercial navigation on the river; the maintenance of locally-based zoning; and the streamlining of coastal zone permitting with the New Jersey Department of Environmental Protection through a mutually agreed upon river management plan. Although maintenance dredging and construction of a wastewater treatment plant are not prohibited by the Wild and Scenic Rivers Act, and may be appropriate forms of river management, the provision of federal funding for such projects had to remain a congressional prerogative. The response stressed that designation as a National Wild and Scenic River would not be compatible with new large-scale industrialization of the river corridor, rather that such designation would support and foster traditional commercial, industrial, and recreational uses of the river, including fishing, seafood processing, commercial navigation, and tourism.

Eventually Commercial Township agreed to designation of the Maurice River into the National Wild And Scenic River System.

Maurice River Township

Maurice River Township comprises the largest portion of the study area. It includes the eastern bank of the Maurice River main stem from the study area's southern end to the Menantico River confluence (about 13 river miles). Maurice River Township wholly contains Muskee Creek and the Manumuskin River segments, and includes a portion of the southeast bank of the Menantico Creek (Map 1).

At a regular meeting of the Township Planning Board, Cumberland County and National Park Service staff presented the *Assumptions and Alternatives Report* and an analysis of the Township's current zoning relative to the established Task Force goals. The Planning Board and members of the public discussed details of a river management plan and designation of the study area in depth with Cumberland County and Park Service staff, including a vigorous question and answer session. On August 16, 1990, the Maurice River Township Committee passed a resolution which reads in part:

Maurice River Township through its Township Committee shall seek inclusion into the National Wild and Scenic River System for the designated waterways known as the Maurice River, Manumuskin Creek, Muskee Creek and the Menantico Creek for the entire river corridor study area subject to, but not limited to the conditions as set forth in Resolution No. 26-90 of the Maurice River Township Planning Board which Resolution was adopted by the Planning Board on August 1, 1990, and which Resolution is made apart hereof as if specifically set forth here at length. (Maurice River Township Resolution 56-90.)

The Planning Board set forth ten conditions that inclusion into the National Rivers System should be subject to. They are:

1. the 19 recommendations described in the *Assumptions and Alternatives Report* (also see page 32 of this report);
2. local control and administration of regulations;
3. [allowance for] a nine-foot river dredge project to Dorchester as previously proposed;

4. location of a visitors/welcome center in the area;
5. location of a Maritime Museum in the area;
6. creation of an Environmental Enterprise Zone subject to state enabling legislation;
7. technical assistance to be provided by the National Park Service;
8. stream-lining of the [state coastal zone] permit process;
9. prohibition against the confiscation of land; and
10. a 150-foot minimum set-back for buildings and septic systems from mean high water, and a 200-foot minimum lot frontage on the river within a river conservation zone.

Cumberland County and the National Park Service responded that these are constructive and workable conditions. On August 15, 1991, the Maurice River Township Committee passed another resolution supporting a local river management plan and calling for the designation of the Manumuskin River and Menantico and Muskee creeks as part of the National Rivers System.

City of Millville

The City of Millville's jurisdiction within the study area comprises the northern portion of the Maurice River main stem, from the Menantico Creek to the study area's northern terminus, about four river miles. In addition, Millville's jurisdiction stretches for about eleven river miles along the lower part of Menantico Creek (Map 1).

In September of 1990, the City of Millville submitted "Wild and Scenic River Designation Conditions and Concerns" to Cumberland County and National Park Service staff. These issues and concerns can be found in Appendix One. Millville city officials were concerned that designation of the study area would impede development of the proposed fossil fuel electric power generating station (also, see page 37). It is estimated that this proposed industrial development would contribute between \$3-5,000,000

in revenue to the City of Millville. In November of 1989, city officials adopted a resolution endorsing the proposed generating station site and construction of two generating turbines.

On November 15, 1990, Cumberland County and National Park Service staff met with the City of Millville Commissioners at a public meeting to present the key elements of a river conservation plan; an analysis of existing local zoning relative to the needs of a river conservation zone; the National Park Service role should the study area be included in the National Rivers System; and to provide an in-depth discussion with the Commissioners and the public. On December 4, 1990, the Commissioners decided not to support including the study area in the National System.

On September 3, 1991, the Commissioners adopted a local river management plan and a zoning ordinance similar to the one presented in Appendix Two of this report. On December 3, 1991, the Commissioners passed Resolution Number 9941, endorsing federal designation of the Manumuskine River and Muskege Creek into the National System, neither of which occur within the City of Millville. Further, the resolution states:

That all Rights-of-Way to existing and recognized public utilities, their facilities and operations, and maintenance and the upgrade thereof shall not be impinged upon. Input from the National Park Service may be received but it shall not be binding on this governing body, the Planning Board and the Zoning Board of Adjustment.

In keeping with the municipal resolution, the Park Service recognizes the interests being presented by the City. Were the area in question to become part of the National System, the operation and maintenance of existing utility rights-of-ways would not be affected. Privately owned utility rights-of-way are routinely operated and maintained throughout the United States without direct regulation by the federal government. Since the National Wild and Scenic Rivers Act only regulates the actions of *federal* (not state or local) agencies with respect to ". . . a direct and adverse effect on the values for which such river was established . . ." (Wild and Scenic Rivers Act, Section 7), input from the National Park Service could not be "directly binding" on the City of Millville.

In addition to operation and maintenance, upgrades to existing utility rights-of-way generally do not involve the federal government unless the proposal requires a federal permit under existing law. The federal agency that issues permits is responsible for ensuring that the important river-related resources would not be diminished. In all cases, environmental review would be implemented according to the due process of existing federal, state, and local legislation and code, and according to regular and well established processes.

The Park Service believes that the Wild and Scenic River designation of the study area can be implemented in a way that will provide for the kinds of activities associated with the routine operation, maintenance and upgrade of utility lines as addressed by the city's resolution.

On November 16, 1992, the Millville Board of Commissioners passed resolution No. A-351 supporting designation of the Maurice River and Menantico Creek with conditions. The resolution reads in part:

- 1) That the City hereby supports the inclusion of the eligible segments of the Maurice River and Menantico Creek within the City of Millville into the National Wild and Scenic River System providing the following conditions are met:
 - a) there is no Federal condemnation of property along the eligible segments of the river and its tributaries;
 - b) that the local River Management Plan, adopted September 03, 1991 establishing a River Conservation Zoning District, be the land use policy and regulatory plan accepted by the National Park Service, as meeting the requirements of Section 6(c) of the Wild and Scenic Rivers Act and implemented by the appropriate City Planning and Zoning offices;
 - c) that such designation shall not create a financial burden on the local taxpayers, nor negatively impact the operation of existing businesses located adjacent to the river. Any direct costs associated with the requisite planning and implementation of designation shall be borne by the Secretary of Interior through the appropriation of such sums as may be necessary;
 - d) that inclusion in the National Wild and Scenic Rivers System shall not cause the Maurice River to be classified as an outstanding

natural resource water or category "a" water body under either State or Federal law, or to apply the "no degradation" provisions of State and Federal anti-degradation rules presently found at N.J.A.C. 7:9-4.5 and 40 C.F.R. 131.12. Such classification would cause a significant, unjustified, adverse social and economic impact on taxpayers of the City, on urban development and growth and prevent the reasonable use of assimilative capacity of the Maurice River. Applicable water quality standards, including any site specific standards, will serve as the sole basis for all effluent discharge and non-point source control determinations.

City of Vineland

The City of Vineland's jurisdiction within the study area is along both banks of Menantico Creek, north of the City of Millville, to Menantico Lake. It also extends, along the west bank of the Manumuskin River to its headwaters in Buena Vista Township (Map 1). As with the other municipalities, Cumberland County and National Park Service staff met with the City of Vineland Council and members of the public to present the study's progress and discuss options for future river conservation. Consequently, the City of Vineland submitted the questions presented in Appendix 1.

On October 9, 1990, the City of Vineland passed, "A resolution of the City Council . . . authorizing conceptual endorsement of designation of the Menantico Creek and Manumuskin River into the federal Wild and Scenic River System, contingent upon meeting of municipal conditions and development of a regional consensus of the content of the river management plan." (Resolution 90-653).

On November 26, 1991, the City passed Resolution Number 91-680, endorsing federal designation of the Manumuskin River into the National Wild and Scenic Rivers System. Additionally, the City resolved ". . . That all rights-of-way to existing recognized public utilities and their facilities and operations, and the maintenance and the upgrade thereof, shall not be impinged upon; however, input shall be received from the National Wild and Scenic River System which shall not be binding in nature by this governing body . . ." This language is similar to that used by the City of

Millville in their resolution of September 3, 1991.

As stated above, the operation and maintenance of existing utility rights-of-way and transmission facilities such as electric power lines would not be affected by scenic and recreation river designation. Further, the federal government does not directly regulate utility rights-of-way and transmission facilities in and of themselves. Work in a utility right-of-way could only be affected if the proposed project required a federal permit or if federal money were somehow used for the proposed project. In such a case, the proposal could not be prohibited outright by the Park Service. Under its regular environmental review process, the federal agency issuing the permit would ensure that the important river-related resources would not be diminished. While the Park Service may seek to provide input to the state or local review processes, its review would not be binding on the local governing body. This approach is in keeping with this study's assumption C (page 24) that the river management plan should make every effort to utilize existing local, state and federal government statutes and programs to achieve comprehensive protection of the river corridor's important resources.

On February 9, 1992, the Vineland City Council passed a resolution supporting designation of the Menantico Creek that reads in part:

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Vineland that said Council does hereby endorse federal designation of the Menantico Creek into the National Wild and Scenic Rivers System, subject to the following conditions:

1. THAT all rights-of-way to existing recognized public utilities and their facilities and operations, and maintenance and the upgrade thereof, shall not be impinged upon; however, input shall be received from the National Park Service which shall not be binding in nature by this governing body, the Zoning Board of Adjustment, the Planning Board, and the Department of Licenses and Inspections.

2. THAT the National Park Service be petitioned to provide priority preference for public purpose projects since they are of vital importance to the life of the community surrounding the area under consideration for Wild and Scenic designation. The City of Vineland is as concerned for the life of its residents as we are concerned for preservation of natural areas in our community. It is important that public purpose

projects be made eligible for priority consideration.

Cumberland County

In addition to the Memorandum of Understanding among Cumberland County, the municipal governments and the Park Service, the county and the Park Service entered into a Cooperative Agreement to prepare certain components of the river conservation plan. The county worked closely with the Park Service throughout this study. The river management plan section of this report (see page 60) reflects the high level of cooperation between the Park Service and county staff.

On December 12, 1991, the County Freeholders passed Resolution No. 459 (unanimous with one absent) supporting the inclusion of the Manumuskin River and Muskee Creek in the National Wild and Scenic Rivers System.

Summary of the Local Government's Concerns

Of the five municipalities with jurisdictions within the study area, two decided not to support designation of the study area into the National Rivers System. Three have decided to support designating the parts of the study area in their jurisdiction, pending certain conditions. A thorough understanding of the reasons behind the political decision of each municipality will be critical to efforts for conserving this river system because these reasons differ substantially between municipalities. The Cumberland County government voted to support designating part of the study area into the National System.

The reasons for the two local governments not supporting designation are mostly unrelated to the actual resource values of the river system. Most significantly the reasons include, but are not limited to: (a) rejection of additional forms of governance; (b) opposition to conservation-related consistency in federal review of federal actions that could directly and adversely affect the resources which may be outstandingly remarkable; (c) demands for federally funded infrastructure in exchange for supporting designation; and (d) removal of the original threat of siting a hazardous waste entombment facility in the area.

Existing Land Ownership and Major Growth Management Programs

Ownership

General land ownership patterns in the study area and its vicinity may be seen in Map 9. This map shows that approximately 5.6 percent of the study area is owned by public agencies for conservation purposes, about 8.0 percent is owned by private non-profit conservation organizations, about 2.7 percent is owned by sand mining companies, and about 83.7 percent is owned by individual citizens.

Zoning

Existing zoning of the study area, prior to and during this study, is shown in Map 10. The agriculture zone comprises approximately 5.9 percent of the study area, commercial zones makes up about 1.7 percent, industrial zones make up about 5.4 percent, public lands make up about 8.3 percent, medium density residential zones make up about 4.0 percent, low density residential zones make up about 7.4 percent, while very low density residential zones make up about 67.3 percent. Medium density is defined as half-acre building lots or less, low density is defined as three- to five-acre building lots, and very low density residential is defined as five-acre lots or larger.

Pinelands National Reserve

Approximately 80 percent of the study area falls within the Pinelands National Reserve (also see page 14), which was created for the purpose of protecting the significant natural and cultural resources of the New Jersey Pine Barrens region (Public Law 95-625). The Pinelands National Reserve is managed by the State of New Jersey under two separate state programs.

The part of the Pinelands National Reserve occurring along the New Jersey coastal zone is administered by the state under the New Jersey Coastal Area Facility Review Act (CAFRA, N.J.S.A. 13:19-1 et. seq.). However, most of the National Reserve is administered by the state under the New Jersey Pinelands Protection Act (New Jersey Pinelands, N.J.S.A. 13:18A-1 et. seq.). The land-use planning of this area, known as the New Jersey Pinelands, is governed by the New Jersey Pinelands Commission. Land-use performance standards are described in the Pinelands Comprehensive Management Plan (Pinelands Commission, 1980) and are implemented through municipal

governments. Map 11 shows those portions of the study area that fall within the jurisdictions of each of these New Jersey laws.

Approximately half of the Maurice River study area is within the New Jersey Pinelands, and land use in this area is subject to review by the Pinelands Commission. The Pinelands Commission is made up of members appointed by: a) participating local governments, b) the New Jersey governor, and c) the Secretary of the Interior. Relative to the Maurice River study, it is significant that on September 10, 1990, the New Jersey Pinelands Commission voted (10 aye, 0 nay, 4 not present) to recommend adoption of Alternative 1 as the most effective approach to the management of the Maurice River study area. Alternative 1 calls for National Wild and Scenic River designation with a locally developed river management plan for the entire study area (see page 55).

About 30 percent of the Maurice River study area is within the jurisdiction of New Jersey's Coastal Area Facility Review Act (CAFRA, Map 11), which requires state-level permits for certain development activities. CAFRA is intended to implement the New Jersey Coastal Management Program, which is a consolidation of several state programs such as the Waterfront Development Permit Program, the Wetlands Act, and the Coastal Area Facility Review Act. These programs are generally meant to provide for the orderly development of New Jersey's coastal resources. Within the coastal zone CAFRA governs items such as the use of tidelands and floodways, pollution discharge, water withdrawal, some recreation, use of state lands, and shore protection through a state permitting process.

Summary

Most of the land within the study area is owned by individuals and is zoned for low-density residential use. A great deal of the study area occurs within the Pinelands National Reserve which is administered by two different state programs.

These two state laws significantly affect human development patterns within some portions of the study area. However, two of the proposals for industrial development which could significantly affect the integrity of the Maurice River system were located in an area not regulated by either the Pinelands Protection Act or the Coastal Area Facility Review Act.

A brief summary of the conservation-related aspects of the New Jersey Pinelands Act and the CAFRA law is provided in Tables 3 and 4 (pages 30 and 31), from the *Existing State and Federal Statutes and Programs Review* report. Relative to resource protection, the conclusion of the existing programs report was that ". . . a risk of inadequate protection for the rivers and their resources exists unless a broad regional coordinating mechanism is developed." As a natural system, the river corridor is presently governed in a disparate manner. Designation of the study area as a National Wild and Scenic River would accomplish this broad regional coordination of existing conservation-related local, state and federal statutes and programs.

Suitability Finding

1. It would be possible to achieve conservation of the river system and its outstandingly remarkable resources through a combination of:
 - a. minor adjustments to local zoning;
 - b. cooperative agreements among existing county, state and federal agencies and private non-profit conservation programs; and
 - c. consistent treatment of the study area by all federal agencies and programs.

The above could be accomplished through a mutually agreed upon river management plan. Based on these criteria, along with the ecological importance of the area and its need for conservation, the study area is suitable for the National System.

2. Based on the Park Service's commitment, at the outset of the study, to a public planning process emphasizing home rule and municipal government choice:
 - a. Maurice River Township and the cities of Vineland and Millville support the concept of designating the study area into the National System, subject to certain conditions, and the National Rivers System is suitable for these municipalities; but
 - b. The townships of Commercial and Buena Vista do not support such a designation, and the National System is not suitable for these municipalities.

The reasons for each municipality's choice are substantially different (see Summary of the Local Government's Concerns, page 51).

ALTERNATIVES

This section presents the range of likely choices available in deciding on the future of the river system. These choices were arrived at after going through the study process and considering all of the above information, especially the Task Force goals (page 27) and basic assumptions (page 23). Again, it should be noted that in the legislative history for this study's authorization, the U.S. Congress specified that alternatives for direct federal management involving land acquisition were not to be considered as necessary or desirable.

Alternatives 1, 2 and 3 involve two major components: a local river management plan and inclusion in the National System. These two components will be presented in the next section, The River Management Plan. Alternative 4 is a "no action" alternative, and Alternative 5 relies exclusively on the actions of local governments for resource conservation.

Alternative 1

Wild and Scenic River designation with a locally developed river management plan for the entire river corridor study area.

Since this option entails the entire river corridor study area, it would be implemented only if all five municipalities choose to adopt a local river management plan and if the U.S. Congress amends the National Wild and Scenic Rivers Act to include the study area. This would be the most comprehensive river conservation effort, consisting of the different programs that are detailed under the River Management Plan section, and in Appendix Two, The Local Government River Conservation Zones. These proposed programs are examples of benefits resulting from recognition as a National Wild and Scenic River, and include:

- a locally designed and implemented river conservation zone (see Appendix Two);
- a conservation program;
- a welcome facility;
- scenic byways and interpretive travel loops;
- environmental enterprize zones;

- programmatic treatment of community development; and
- development permit streamlining.

Alternative 2

Wild and Scenic River designation and a local river management plan for only part of the corridor.

Under this alternative, only some of the five municipalities would opt for a local river management plan and a national designation of their jurisdictional areas. This would apply only to river segments that are wholly contained by the towns or townships that support national designation and implementation of a local river management plan. These river segments would include areas shared by adjacent towns or townships that opt for Wild and Scenic designation. The outcome of this alternative would depend on agreements reached between municipal, county and federal governments on the extent of the river corridor.

Alternative 3

Partial federal designation but comprehensive adoption of a local river management plan.

This option is similar to Alternative 2, however, it means that while not all municipalities would support designation of the study area, all of them would adopt a local river management plan.

Alternative 4

No Wild and Scenic river designation and no adoption of a local river management plan.

This is a "no action" alternative. Under this alternative, no part of the river corridor would be included into the National System, and none of the local governments would adopt river management plans.

Alternative 5

No Wild and Scenic designation, but adoption of a local river management plan.

Under Alternative 5, no part of the river would be included in the National System, but some or all of the towns and townships would adopt a local river management plan.

STUDY FINDINGS AND RECOMMENDATIONS

Study Findings

1. The study area has outstandingly remarkable values and is important at local, state, national, and international levels.
2. The river system will continue to be threatened by major developments.
3. Local land use regulations alone can not provide an adequate balance between industrial development and resource conservation.
4. Each of the five municipalities involved with this study, Buena Vista Township, Commercial Township, Maurice River Township, and the cities of Millville and Vineland have voted to support the designation of the study area into the National System, provided certain conditions are met.

Study Recommendations

Those portions of the study area lying within the municipalities that indicate a willingness to be a part of the National System should be designated a National Wild and Scenic River as conditioned in their respective resolutions. Given the primary commitment by the National Park Service to local choice during this study, the Service is unable to recommend designation for those municipalities not wishing to be included in the National System at this time, even though the entire study area is eligible for the National System.

The preferred alternative is Alternative 3, partial designation of the study area but comprehensive adoption of a local river management plan. The segments recommended for designation are described in Table 5 and in Map 1.

Table 5: Segments of the Maurice River study area and proposed classifications recommended for National Wild and Scenic River designation.

River Segment	Segment Description	Proposed Classification	Miles
Lower Maurice	From U.S. Geological Survey Station at Shellpile to Route 548 bridge at Mauricetown	Recreation	7.0
Middle Maurice No. 1	From Route 548 Bridge at Mauricetown to 3.6 river miles upstream (at drainage ditch just upstream of Fralinger Farm)	Scenic	3.8
Middle Maurice No. 2	From drainage ditch just upstream of Fralinger Farm to 3.1 river miles upstream (0.5 miles upstream from U.S. Geological Survey Station at Burcham Farm)	Recreation	3.1
Upper Maurice	From 0.5 river miles upstream from U.S. Geological Survey Station at Burcham Farm to the south side of the Millville sewage treatment plant	Scenic	3.6
Lower Manumuskin	From the Manumuskin confluence to 2.0 river miles upstream	Recreation	2.0
Upper Manumuskin No. 1	From 2.0 river miles upstream of its confluence to the Route 49 bridge at Cumberland Pond	Scenic	4.6
Upper Manumuskin No. 2 *	From the backwater of Cumberland Pond near Route 49 to headwaters, near Route 557	Scenic	7.7
Lower Menantico	From its confluence to the bridge at Route 55	Recreation	1.4
Upper Menantico	From the bridge at Route 55 to the base of the impoundment at Menantico Lake	Scenic	6.5
Muskee Creek *	From its confluence to the Pennsylvania Reading Seashore Line railroad bridge	Scenic	2.7
TOTAL MILES			42.4

THE RIVER MANAGEMENT PLAN

If the area becomes a National Wild and Scenic River, a final river management plan will be completed that incorporates the Local Management Plan for the Maurice River prepared by Cumberland County and adopted by participating municipal governments. The management plan will be formalized by the signing of an intergovernmental Memorandum of Understanding. The two major elements of the river management plan are: (1) a local river conservation zone, and (2) a set of conservation, education, and economic programs which would be conducted by a partnership of local, state, and federal governments.

Local River Conservation Zone

A complete local river management plan has been developed by Cumberland County (Local Management Plan for the Maurice River and Its Tributaries, Cumberland County Department of Planning and Development, 1991). Language for the municipal river conservation zone is included in its entirety in Appendix Two. The overall purpose of the River Conservation Zone is to protect the significant river-related resources to the extent possible by municipal ordinance. Its intent is to provide a balanced strategy between environmental protection and appropriate levels of resource-related economic development. Another intention is that the local river management plan is to provide consistent and uniform treatment of the river corridor and its resources among the different municipalities. This local river management plan will not by itself protect the river system from proposed developments that are regulated by state and federal governments.

Land Use Considerations and Key Provisions of the River Conservation Zone

Seven areas of environmental, economic, and regional importance have been identified as being relevant to municipal land-use regulation and river management. These considerations provide the purpose and intent of the River Conservation Zone. These considerations are:

- septic system pollution;
- wetland protection;
- control of erosion and sedimentation;
- control of non-point source water pollutants;

- protection of upland habitat;
- maintenance of visual buffers; and
- promotion of economic vitality.

In order to address these considerations, the River Conservation Zone provides for the following key land use measures:

- minimum building lot size of five acres per dwelling;
- minimum river lot frontage;
- adequate setback distances from the river for buildings and septic systems;
- provision for natural vegetation filter and buffer strips along the shoreline;
- maximum limits for vegetation clearing per building lot;
- regulation of kinds of land use; and
- cluster options for planned developments.

Implementation and Administration of the River Conservation Zone

The River Management Plan would be adopted and implemented within the procedures outlined in the Municipal Land Use Law, Chapter 291 of the State of New Jersey. Following these procedures, the River Management Plan would be incorporated into the Master Plans of each municipality and the River Conservation Zone would be incorporated into a municipal zoning ordinance. Municipal planning and zoning boards would administer the zoning ordinances in the same manner as any other land use regulation. A model river conservation zone ordinance is included in Appendix Two.

Proposed Intergovernment Programs for the National Wild and Scenic River

With designation as a National Wild and Scenic River, the National Park Service would play an advocacy role for private- and public-sector programs that could enhance traditional river-related businesses *along with* natural and cultural resource conservation. Proposed programs include:

Conservation Program

Under this program a number of innovative conservation initiatives would be developed. These efforts would address the various conservation needs that the natural and cultural resources within the study area have.

For example, a Conservation Easement Program would provide a service to landowners who are interested in managing their land for conservation purposes. It would be supported by a coalition of conservation organizations such as the Natural Lands Trust, the New Jersey Division of Natural Lands, the New Jersey Green Acres Program, the New Jersey Conservation Foundation, Cumberland County Department of Planning and Development, The Nature Conservancy, the U.S. Fish and Wildlife Service, and the National Park Service. These organizations would help landowners identify the unique natural features of their land and the natural processes that may cause or affect unique natural features. The Conservation Easement Program would offer both technical and legal assistance to landowners who request assistance with or information for the management of their property.

The Conservation Program would provide support for the ongoing Cumberland County Rare, Threatened, and Endangered Species Program (CCRTE). The CCRTE is a county-level program begun in collaboration with the National Park Service and with support from the U.S. Environmental Protection Agency. This program seeks to identify critical plant and animal populations, to track their biological and physical status, and to provide a means for their conservation by voluntary efforts, local governance, and private non-profit organizations. It is modeled after the state-level Natural Heritage Programs fostered by The Nature Conservancy, and it utilizes the Natural Heritage methodology.

The Conservation Program would develop a suite of educational and interpretive materials to be used in local schools. The program could develop an "Adopt-A-Pop" project, whereby a local school class could adopt a local population of a critical plant or animal, thereby learning about the species and conservation issues while providing a service for its conservation.

Welcome Facility

If the Maurice River corridor and/or its tributaries are designated a National Wild and Scenic River, the National Park Service would advocate establishing a welcome facility in cooperation with ongoing state and federal tourism development efforts. The facility would be located within an already developed area of the river corridor. In addition to providing

visitors with information about the area and its resources, the facility would give an orderly focus to recreation within the river corridor, and would maintain local citizen's oversight of river recreation.

Scenic Byways & Interpretive Loops

Under alternatives that include designation as a nationally-recognized river, the Park Service proposes that a set of pamphlets be developed showing scenic driving tours and items of interest within the river corridor. Road signs and vehicle pull-outs for the self-guided driving tours would also be included.

Environmental Enterprise Zones

Environmental Enterprise Zones are areas which would be established within the Development Districts along the river. Within these zones, traditional businesses and industries would be provided with various tax credits and financial incentives for being part of and promoting a healthy economy and environment. These zones could be opened to marinas, fishing operations, clamming and oystering plants, seafood processing and distribution facilities, boat and shipbuilding and repair, restaurants, bed and breakfast and other lodging facilities, tourist related businesses, and other uses which are compatible with designation.

The purpose behind such zones would be to promote business and economic development that would be compatible with river conservation. In the same way that urban enterprise zones work, money credited to a municipality from sales tax reductions could be used by that municipality for a variety of river improvement and conservation projects.

The National Park Service proposes that this concept be developed cooperatively with the State of New Jersey. Although it may require state legislation, it could offer a positive and constructive objective toward which local, county and state government could work to address the issues of maintaining traditional values within the river corridor while fostering economic well-being.

Programmatic Treatment of Community Development

Under this program, federal and state agencies would be directed to give preferential consideration through existing local assistance or development

programs to the following river-related projects:

- hamlet revitalization;
- local industrial heritage projects;
- urban waterfront revitalization;
- waterfront recreation access;
- roadway improvements; and
- river recreation carrying capacity study.

Permit Streamlining

Under this program the local, state and federal agencies would work together to make the permitting process easier to deal with. The rationale behind this effort is that the river management plan would protect the river environment in a comprehensive way and development choices would be more clear-cut.

This program would provide a single contact point at county offices for local citizens seeking development permits. Local, state and federal agencies would recognize that coastal resources within the designated corridor would be sufficiently protected by the local river management plan and by the river's status as part of the National Rivers System. With this recognition, permits for development within the corridor would be coordinated through a single agency position, and the review of permits would be expedited because many permit requirements would already have been met under the local river management plan.

Federal Consistency and the National Park Service Role

If the Maurice River and/or its tributaries are designated a national wild and scenic river, federal agencies would be required to act in a manner consistent with the river management plan. For example, federal agencies that issue permits, licenses, or grants for water resource development projects would ensure that by doing so they would not be degrading the important resources of the river within the Wild and Scenic River area. Because the Park Service would be the federal administering agency for the river, other federal agencies may consult with the Park Service if there is a question about the possible effects to river-related resources by issuing a federal permit, license, or grant.

Since 1978, the Maurice River and its tributaries have been included in the Nationwide Rivers Inventory, which is an inventory of rivers having cultural and natural resources that qualify them for possible inclusion into the National System. Because of this recognition, the National Park Service reviews and provides comments (as it does with all rivers on the Nationwide Rivers Inventory) on a regular basis to federal agencies that issue grants, licenses or permits for projects that could affect values that may qualify the river for inclusion in the National Wild and Scenic Rivers System. Under this inventory system the National Park Service can request design changes for proposed projects that may adversely affect an important river-related resource. This process involves a dialogue between the National Park Service, the federal agency that will issue the grant, permit or license, and the applicant.

The Park Service has been reviewing permits since 1978. This process will not change even if the study area is not designated as a National Wild and Scenic River. What would change is that ". . . no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established . . ." (Wild and Scenic Rivers Act, Public Law 90-542, Section 7). In all cases, though, the National Park Service maintains a policy of extensive dialogue and negotiation with all involved parties. National Wild and Scenic River status for the Maurice River and its tributaries would not change this process.

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APPENDIX ONE

Municipality Questions and Agency Answers to Potential Designation of the Study Area as a National Scenic and Recreation River

The following is a compilation of the written questions and issues and the full text of responses to them by Cumberland County and National Park Service staff. Although they are not formatted by municipality, some of the questions apply to concerns or conditions specific to a particular city or township.

Q: If Vineland's Landis Sewerage Authority discharges treated effluent into the Maurice River, and if the lower Maurice River is under wild and scenic protection, could/would the federal government's restrictions on discharge reach up beyond its wild and scenic boundaries and be able to prevent the Landis Sewerage Authority from doing this?

A: Designation will not add any new water quality restrictions. The National Park Service will work through existing regulations at the state and federal level to promote good water quality. It is recommended that the Landis Sewerage Authority proposal, even if it exists as a very sketchy concept at this time, be incorporated into the management plan, so that everyone has a clear understanding that this may be a future possibility. So, the answer is "no". The Landis Sewerage Authority will not be restricted beyond whatever regulation exists at that time.

Q: If a municipality getting federal funds gets a project rejected by a federal agency because of the wild and scenic designation, what is the appeal procedure? To whom is the appeal made? Would the reasons be given for rejection?

A: A federal permit or federal funding would only be denied after a very detailed analysis of impacts which would occur as a result of the existing permit or funding application process. Therefore, there would be significant and specific reasons offered for denying such an application, and those reasons would be made clear to the municipality through reports, ongoing dialogue, and, possibly, an environmental impact statement. If there is no environmental impact statement involved, the appeal is directly to the federal agency responsible for issuing the permit or funding. If there is an environmental impact statement, and there was a difference of opinion on the part of federal agencies (e.g., one agency wants to issue a permit and another does not), the appeal is made to the Council on Environmental Quality, an office of the Executive Branch of the federal government. If there is unanimity among the federal agencies about the permit or funding denial, the appeal process would be through the court system.

Q: What control does the National Park Service have on private, state and federally funded projects? How far does this control extend?

- A: The authority of the National Park Service, under what is commonly referred to as Section 7 of the National Wild and Scenic Rivers Act, is relative only to federally funded projects which affect river-related resources (see the *Eligibility and Classification Report*). The National Park Service would have no authority over private or state funded projects, unless some kind of federal license, permit or grant were required.
- Q: If the provisions of the River Management Plan are adopted under wild and scenic designation, does a municipality need the concurrence of the other four municipalities or the National Park Service in order to change the provisions?
- A: Because this is the first time a plan has been developed prior to designation, the process gives us considerable flexibility in setting forth the conditions under which designation is acceptable. We are looking for the opinions of the city in this regard.
- Q: Will wild and scenic designation affect state water quality regulations for designated segments or upstream areas? How?
- A: No. We are not aware of any legislation or regulation that would alter the state regulations regarding water quality as a result of designation.
- Q: How far above the designated segment will the wild and scenic regulatory control extend?
- A: Any regulation, or effect on federal funding, licensing and permitting, will be limited to the impacts or potential impacts to the designated river segment whether they originate from within the river corridor or not. In other words, if some federally licensed or funded project was going to have an adverse impact on river resources north of the designated area, but not on the designated area, the authority of the National Park Service could not be extended.
- Q: Can there be a "pull-out" clause? If the federal or state governments make substantial changes concerning designation requirements or regulations, can a municipality pull out of designation?
- A: In essence, it would have to occur through an Act of Congress unless Congress delegates responsibility to the Secretary of the Interior.

- Q: Would there be anything binding on state regulatory programs (those not yet developed or that would be revised in the future)?
- A: We are continuing to hold discussions with various state agencies, such as the Division of Coastal Resources and the Pinelands Commission, regarding their acceptance of the local river management plan as a vehicle for implementing certain state agency missions. So far the response has been positive, and agencies may be bound to the extent that they will commit to policies regarding this plan.
- Q: Can more than the one quarter mile boundary on either side of a designated river be put into the River Management Plan?
- A: Yes, either by a request of a municipality to Congress and/or through direct regulation of the areas by the municipality under the Municipal Land Use Law.
- Q: What is currently being asked of the City of Vineland regarding wild and scenic?
- What is the deadline?
 - Does the deadline refer to acceptance or does it mean that a River Management Plan must be complete by that date?
- A: We are looking for the good faith support of the City for Alternative 1, involving designation of the river system and development of a management plan. We would like that support as soon as possible. If the support for this alternative involves conditions or the resolution of concerns, we welcome conditional support. A resolution from the city supporting designation, but reserving the right to have certain expressed conditions addressed in the management plan is perfectly acceptable. The National Park Service is supposed to report to Congress by the end of October concerning the likely future of designation in this area. The city, however, will not be asked to support the final Management Plan until it is complete.
- Q: Freshwater Wetlands is a "pass through" program. The Army Corps of Engineers still has jurisdiction. Would it therefore be under the purview of the National Park Service?
- A: No. The Army Corps of Engineers would still be the federal permitting agency involved. However, keep in mind that even without river designation, the Environmental Protection Agency classifies and regulates the wetlands within the Maurice River Watershed as priority wetlands.

Q: It designation permanent, or can it be deactivated?

A: Designation may be deactivated by an Act of Congress.

Q: What type of organizational structure will be established to implement, monitor and enforce the land management plan?

A: There will be no new agencies or organizations established. The management plan will serve as a good faith compact between all levels of government.

Q: Will designation of only portions of the river system be accepted by Congress?

A: One of the options discussed in the *Alternatives and Assumption Report* is designation of only a part of the river corridor. Congress may or may not accept such a recommendation.

Q: Effects of existing waterfront industries/buildings:

- Will expansions be permitted?
- Will NJ DEPE/EPA require further cleanup?
- Will river transportation be permitted?
- Will "scenic vistas" require renovation to existing buildings or accessory structures?

A: Review of aerial photographs (March 1987) of the Maurice River and Menantico Creek corridors show that there are no waterfront industries currently located within the study corridors. In fact, the aerials show that there is very little development of any kind. The only development existing along the Maurice River consists of limited development near Laurel Lake, a small portion of a trailer park on the east of the Maurice, and the existence of two farming operations. There is also very little existing development within the Menantico Creek corridor. The aerial photos for this area show the existence of a few abandoned sand mining operations and very sparse residential development near Routes 49 and 47.

Review of the latest tax maps on file with the Cumberland County Engineering Department shows that the vast majority of the Maurice River corridor within Millville consists of large, non-subdivided parcels ranging in size from one hundred and ten acres to approximately six acres. Two exceptions to this large parcel pattern are evident in the Laurel Lake area. The original Laurel Lake subdivision of the 1920's created many lots measuring two thousand square feet each. A portion of this subdivision falls within the corridor. There is also a small subdivision

located north of Laurel Lake where approximately four or five lots of approximately two acres in size are partially within the quarter mile corridor.

Similar to the Maurice River corridor, the Menantico Creek corridor in Millville consists mostly of large, non-subdivided parcels. These range in size from two hundred and sixty acres to approximately six acres. A very large portion of the eastern side of the corridor is owned by the State of New Jersey (Menantico Fish and Wildlife Management Area). A small cluster of lots near Route 49 is the exception to this large parcel pattern.

All existing industrial/commercial uses near the Maurice River are located outside the corridor. Future expansion, renovations, or "cleanup" will not be necessitated or hindered by the River Management Plan. If existing uses are located within the corridor and are incompatible with the Overlay Zone (such as small lot residential development), they would be grandfathered and allowed to expand with conditional approval by the planning board.

The designation of the Maurice River and the local river management plan would not restrict commercial navigation of the river. In fact, even if this were considered, it would not be possible under the existing Federal Freedom of Navigation and Interstate Commerce regulations. However, large scale commercial or industrial port facilities are regulated through land use ordinances and related permits. Construction of a industrial port facility can be prohibited or encouraged by land use controls. If it is the intent of the City of Millville to plan for a highly industrialized river, then the designation of the Maurice River as a component of the national rivers system is not an appropriate course of action.

It is not the intent of the management plan being prepared to regulate scenic vistas beyond the river corridor. The plan may make recommendations for development outside the corridor that would encourage compatible land use practices, but these recommendations would be advisory and part of a good faith compact between governments.

- Q: How is the land management plan and the National Park Service role made legally binding and enforceable?
- A: The land management plan and the National Park Service role can be made legally binding and enforceable by an Act of Congress, resulting in river designation.

APPENDIX TWO

Local Government

River Conservation Zone

THE RIVER CONSERVATION ZONE

The following is the River Conservation Zone ordinance language excerpted from the *Local Management Plan for the Maurice River and Its Tributaries*. The plan was developed as part of the Maurice River study process by the Cumberland County Department of Planning and Development, with assistance from the National Park Service and with cooperation from the municipal governments, citizens and the study's Task Force. It has been adopted by the study area's municipal governments in Cumberland County, New Jersey.

The plan represents the basis for a coordinated land use regulation strategy at the local level of government. For the purposes of the Maurice Wild and Scenic River Study this ordinance language is especially relevant to Section 6(c) of the National Wild and Scenic Rivers Act. Section 6(c) states that the Secretary of the Interior may not acquire lands by condemnation for the purpose of including such lands in a national wild, scenic or recreational river area if such lands are located within an incorporated municipality that has in force a zoning ordinance that protects the important river-related resources. This ordinance would accomplish such protection insofar as is possible within the purview of the municipal governments.

It is important to note that this ordinance cannot, nor is it intended to, constitute complete protection of the identified important resources of the study area. Such protection requires, at a minimum, an agreed upon approach, or partnership, between the local, state, and federal governments and non-government organizations. The importance of this is recognized in the *Local Management Plan for the Maurice River and Its Tributaries*, in the section *Limitations of Local Control* (p. 23):

Local planning and zoning can be effective tools to control "traditional" types of land developments. However, the ability of local governments to exercise these functions is only possible with the consent of the State through planning and zoning enabling legislation. The State of New Jersey has withheld the ability of local governments to control every aspect of land use within their borders. This applies to most actions performed by the State or Federal governments, or special authorities serving a greater public interest. Examples of this "override" of local zoning are the various siting commissions of the State for the location of hazardous , radioactive, or toxic waste facilities. In these instances, a site for a facility can be chosen regardless of what the local zoning may call for. Among many other examples, local zoning can not control the construction of dams, highways, solid waste facilities, water withdrawals, and numerous potential State or Federal actions. These higher levels of governments accomplish their actions through regulations, funding, and the powers of eminent domain.

Additionally, local zoning is often unable to effectively manage natural resources or environmentally sensitive areas that function as part of a landscape which is made up of an area larger than the local jurisdiction. Floodplains, wetlands, and river systems are examples of resource areas that may require management beyond the local zoning level.

The complete local management plan is available from the Cumberland County Department of Planning and Development, 800 East Commerce St., Bridgeton, New Jersey 08302, or from the National Park Service, Division of Park and Resource Planning, 143 S. Third Street., Philadelphia, Pennsylvania 19106.

1. Purpose and Intent

The specific purpose and intent of this Article is to provide for the protection of the natural resources of the Maurice River and its tributaries while providing regulations for the future development of the adjacent area.

On May 7, 1987 the U.S. Congress passed legislation authorizing the study of the Maurice, Manumuskin, and Menantico Rivers (subsequently referred to here as "The Rivers") as potential additions to the National Wild and Scenic Rivers System. The resultant River management Plan provides clear goals, objectives, and guidelines for the development of the immediate region. The River Conservation Zone (RCZ) has been established to provide the land use controls which are necessary for implementation of the River Management Plan. The purposes of this Article are summarized below:

1.1 Purposes

1.1.1 Protect the health, safety and welfare of River corridor residents.

1.1.2 Protect and enhance the valuable natural resources of the River Protection District.

1.1.3 Protect and encourage the continuation of existing traditional land and water uses within the River Protection District.

1.1.4 Identify those future land uses which would conform with this Article; those uses which with conditions, would be deemed to conform; and identify examples of those uses which would not conform.

1.1.5 Identify specific development and site design standards to be applied within the River Protection District.

1.1.6 Provide regional management of the river through local land use controls.

1.2 The River Conservation Zone is established as an overlay zone, imposing a set of development requirements in addition to those of the existing, underlying zoning district. Any development standards not expressly provided in the River Conservation Zone shall be governed by the underlying zoning district. Where the RCZ overlay established standards for lot size, density, building location, lists of permitted uses, and open space; these shall hold precedence over the standards of the underlying zone.

2. Limitations

This Article shall apply only to activities within the landward boundaries of the rivers as mapped in the River Management Plan and the municipal zoning map. Nothing contained herein shall limit rights of landowners to maintain lawfully established uses.

3. Non-conforming Uses

Existing land uses which do not meet the standards outlined in this Article are to be identified as "non-conforming uses."

4. Principle Uses

Any land use identified within this Article as a principle use is allowed, subject to the restrictions of the applicable sub-district restrictions.

5. Special Permits

Any land use identified within this Article as requiring a special permit is allowed only upon showing that the specified location will comply with all the conditions and standards or the location and operation of such use as specified by this zoning ordinance and authorized by the planning board through the Maurice River Township Development Regulations Ordinance.

6. Prohibited Uses

All uses identified in the river Conservation Schedule of Prohibited Land Uses (Section 8.2) as a prohibited use are expressly forbidden. In addition, all uses which are not

expressly permitted as either a Principle use or by Special permit in this zoning ordinance are also prohibited.

7. Sub-Districts

Within the River Conservation Zone two sub-districts are hereby established to set forth the type of use and manner in which it is permitted throughout the district. The applicable standards are in addition to the existing, underlying zoning district regulations.

8. Resource Protection District

8.1 Principle Uses

8.1.1 Low Density Residential with the following restrictions:

- a. Minimum lot Size of 5 acres per unit;
- b. Minimum Building Setback of 300 feet;
- c. Maximum Clearing of vegetation of 20 percent of lot area;
- d. Minimum Septic system Setback of 300 feet.

8.1.2 Conservation Activities.

8.2 Prohibited Uses:

- a. Landfills;
- b. Waste Storage/Incineration;
- c. Sludge Farming;
- d. Radioactive waste facilities.

8.3 Setbacks

All building setbacks and septic system setbacks shall be measured from the Mean High Water line. This is the line formed by the intersection of the tidal plane of mean high water with the shore.

8.4 Clearing of vegetation

All principal uses shall be limited to a maximum amount of removal of natural, indigenous vegetation (see 8.1.1, c, above). Replanting of ornamental species shall not constitute adequate mitigation for exceeding this requirement.

8.5 Buffers and Natural Filter Strips

A vegetation buffer, composed of indigenous species, shall be maintained parallel to the mean High Water line for a width of not less than 50 feet. for the purposes of normal pedestrian access to the water front, an opening of not more than 10 feet may be excluded from the buffer requirements.

8.6 Minimum River Frontage

A minimum river frontage of 300 ft. shall be required for all principal uses.

9. Medium Density Residential/Cluster Development

Medium Density Residential development shall be permitted within the Resource Protection District as a conditional use when utilizing the Cluster Development Criteria described in the River Management Plan.

9.1 Minor Subdivision

The creation of three (3) or more lots for residential use, whether or not constituting a major subdivision, or construction of three (3) or more dwelling units within a five-year period from or on a property or set of contiguous properties in common ownership as of October 1, 1990, within the Resource Protection District, shall be allowed only on special permit by the Planning Board, in accordance with the criteria set forth below.

9.2 Data Requirements

Applicants for Special permit shall file with the Municipal Clerk the appropriate number of copies of the following documents as outlined in the municipal Development Regulations Ordinance:

9.2.1 A Development Plan conforming to the requirements for a preliminary major subdivision plan under the municipal Subdivision Rules and Regulations.

9.2.2 An Environmental Analysis to include the following information, in addition to any other information required by the municipal site Plan and Subdivision Rules and Regulations.

9.2.3 On-Site Wastewater Treatment and Holding Facilities-location, size, type and capacity of facilities in addition to the results of soil logs and permeability test required by N.J.A.C. 7:9A for the siting of individual on-site wastewater disposal systems. This information shall be submitted with tract map showing location, logs, and elevations of

all test pits, indicating where ground water was encountered, and estimating the seasonal high water table.

9.2.4 Soils maps including a county soils survey in conformance with the guidelines of the United States Department of Agriculture Soil Conservation Service, at the same size and scale as the project site base map, delineating all soil series at an appropriate level of detail with sufficient soil borings to confirm the accuracy of the soils maps.

9.2.5 A topographic map, at the same size and scale of the project site base map, indicating contour elevations at two foot intervals and shaded to show slope categories of 0-3 percent, 3-8 percent, 8-15 percent, 15-25 percent, and 25 percent plus.

9.2.6 Vegetation map, at the same size and scale as the project site base map, showing existing vegetation, identifying the predominant vegetation species in the area and identifying all trees with diameters at breast height in excess of twelve inches and all other vegetation which is to be removed or disturbed as a result of the proposed development, and the tree line before and after development.

9.2.7 Stormwater drainage patterns map, at the same size and scale as the project site base map, showing existing storm water drainage patterns and calculations and the applicant's proposed storm water run-off management plan, including results of percolation tests and soil borings performed in the recharge area together with letters of review and comment from the County Soil Conservation District and the County Engineer. All calculations for stormwater management shall conform to the requirements of the Cumberland County Site Plan Review And Approval Rules, Regulations, Standards and Procedures.

9.2.8 Wetlands delineation map, at the same size and scale as the project site base map, showing existing freshwater wetlands and tidal wetlands, wetland resource values and related transition area requirements, United States Environmental Protection Agency priority wetlands classification, and all letters of wetlands interpretation from the New Jersey Department of Environmental Protection as required in N.J.A.C. 7:7a.

9.2.9 Landscaping Plan on map, of the same size and scale as the project site base map, identifying the species of plants to be installed and the quantity and location of all plants proposed to be planted, demonstrating that the landscaping will be carried on within six months of the completion of construction, and demonstrating that the landscaping will stabilize soils.

9.3 Narrative description

In addition to the mapped requirements of section 9.2, the following narrative information shall be required.

9.3.1 Soil, slope and groundwater resources not presented on the base maps.

9.3.2 Existing on-site and adjacent land uses.

9.3.3 Water bodies, sedimentation control measures, and alterations to shoreline.

9.3.4 Legal instruments, such as homeowner's association charters and agreements, proposed declaration of covenants, deeds, and other documents and instruments of conveyance.

9.3.5 All public utility agreements, or other documentation, evidencing the availability of electric, gas, water, sewer and other necessary public services.

9.3.6 If the proposed development includes fifty or more dwelling units, a fiscal impact analysis comparing the cost of the proposed development and the revenues to be generated by the proposed development during the ten-year period immediately subsequent to completion of the development.

9.3.7 If the proposed development includes fifty or more dwelling units or more than one hundred and fifty parking spaces, an Air Quality impact analysis.

9.4 Criteria

Application for Special Permits for residential construction in the Resource Protection District shall meet all of the following criteria.

9.4.1 The development plan shall demonstrate that, where applicable, the proposed development meets all of the requirements of municipal Site Plan and Subdivision rules and regulations.

9.4.2 The minimum area of land for Special Permit development shall be twenty five (25) acres.

9.4.3 The total number of dwelling units shall be determined at the rate of one (1) unit per every two (2) acres of buildable land, after excluding from this computation all wetlands, wetlands transition areas, and flood-prone land, as defined by N.J.A.C. 7:7A, N.J.A.C.58:16a, and N.J.A.C. 13:9A.

9.4.4 The total area of residual open space with the development shall be at least 50 percent of the total area of buildable land in the proposed development, excluding from this all computation of wetlands, wetland transition area, and flood-prone land.

9.4.5 All residual land which is to be used only for passive recreation or natural open space shall be managed in accordance with the guidelines set forth in the municipal Development Regulations Ordinance.

9.4.6 Special Permit applicants shall provide copies of deed covenants with prospective purchased or conservation easements with the municipality, describing land management practices to be followed by whichever party or parties are responsible for maintenance of the residual open land.

9.4.7 Further subdivision of residual land, or its use for other than non-commercial, passive recreation, or conservation shall be prohibited. These restrictions shall be recorded in a Conservation Easement to which the municipality is a signatory party.

9.5 Design Guidelines

The proposed development shall meet the following applicable design guidelines:

9.5.1 Dwelling units shall be grouped so that, on average, they consume no more than one (1) acre of land per dwelling unit, including roads, and that a maximum of 50 percent of the parcel results in impervious coverage.

9.5.2 Lots shall be laid out, to the greatest extent feasible, to achieve the following objectives (listed below in order of priority, as it is recognized that some may conflict with others on any given site):

- a. on the most suitable soils for sub-surface septic disposal as provided in the County Soil Survey;
- b. on the least important soils for natural vegetation important to wildlife as provided in the County Soil Survey;
- c. within any upland woodland contained in the parcel to reduce impact upon the visual quality of the river, to provide summer shade and shelter from winter wind, and to enable new construction to be visually absorbed by natural landscape features;
- d. in locations least likely to block or interrupt scenic vistas, as seen from the river;
- e. other criteria which may be listed in the municipal Site Plan rules and regulations for the promotion of the public health, safety and welfare.

9.6 Issuance of Special Permits

Special Permits may be issued in accordance with procedures outlined in Chapter 291, Laws of N.J. 1975, Municipal Land Use Law.

10. Development District

All uses regulated by the existing zoning of the municipality shall remain in effect without additional restrictions imposed by this Article.

11. Exceptions and Variances

Exceptions and variances to the provisions of this Article may be granted through the following.

11.1 Where an applicant demonstrates through a survey of the property in question, performed in accordance with N.J.A.C. 46.23, that the property is misclassified and is not located within the River Conservation Zone, then the property is governed by the existing zoning of the municipality.

11.2 Variances to the River Conservation Zone shall be heard in accordance with Chapter 291, Laws of N.J. 1975, Municipal Land Use Law.

APPENDIX THREE

Review Comments and Responses

This final study report was prepared after comments were received from state and local governments, private industry, and other federal agencies. Copies of their letters are included.

Reviewers addressed the draft study report, federal designation and local management plans. Their comments included qualified and unqualified support for designation of portions of the river system. There were no letters of opposition to the proposed recommendations.

The additions, deletions, and corrections suggested by the respondents are included in the final report or discussed as follows:

Resources Beyond the One-Quarter Mile Study Corridor

Comments:

"Suggest deletion of this map "Characteristic Pinelands Aquatic Communities" as it has little correlation to the 1/4 mile wide study corridor."

"Suggest the insertion of the words "within the 1/4 mile wide study corridor..."

"...it should be clarified that the study area is defined as the 1/4 mile wide corridor adjacent to various segments of the Maurice River system."

Response:

The maps identifying significant Pinelands resources also identify where important resources lie in the one-quarter-wide mile study corridor and highlight the value of those resources. Further, 80 percent of the study area lies within the boundaries of the Pinelands National Reserve.

Clearly the focus of the study area is the corridor extending one-quarter mile from each bank of the river. However, the significance of those resources cannot be fully evaluated without reference to the surrounding environment. Section 4(d) of the Wild and Scenic

Rivers Act does not limit the possible scope of a study report to only the area within one-quarter mile of the ordinary high water mark on each side of the river.

Consensus

Comments:

"This is a subjective opinion of the NPS. Many individuals, task force members and municipalities disagree with this statement."

"...it should be clarified that there were often significant differences of opinion and that consensus was not achieved on all issues."

Response:

Although 100 percent agreement was not received on all issues, there was at least majority agreement on most concerns.

Designation Withdrawal

Comments:

"...there should be a sentence added that discusses the process for withdrawal in the future."

Response:

As discussed in Appendix 1 on page 70, once designation is made it takes an Act of Congress to remove the Wild and Scenic designation from a river segment unless Congress delegates that responsibility to the Secretary of the Interior.

Local Management Plan

Comments:

"It should be clarified as to what impact wild and scenic designation will have on the Local River Management Plan."

Response:

The *Local Management Plan for the Maurice River and Its Tributaries* was prepared following a lengthy process of public involvement and through the considerable effort of the Maurice River Wild and Scenic Task Force. Therefore, only minor modifications will be required to the local plan once designation is made to add the role of federal and state agencies in the river management process.

National Park Service Role After Designation

Comments:

"It should be indicated whether the NPS will provide funding for the proposed programs."

"Will the state and/or federal agencies, including the NPS, be able to usurp local control?"

"However, with designation, the NPS would have the authority to force the federal permit issuing agency to deny a permit application."

Response:

The Wild and Scenic Rivers Act does not grant the National Park Service veto power over the actions of other federal agencies. It simply provides the National Park Service the opportunity to review and comment upon the actions of other federal agencies prior to the implementation of those actions. However, the Section 7 of the Act does state that "no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established..."

The funding of programs by the National Park Service requires an appropriation by Congress. Therefore, the National Park Service cannot commit to funding programs in this document.

Existing Regulations

Comments:

"...collectively local, state, and federal laws, regulations, etc. already achieve conservation. Clearly these laws, regulations, etc. have resulted in the protection of the Maurice River system as it exists today."

"...residential, commercial and industrial development are major components of the local economy ... these developments can be conducted in a manner that is compatible with environmental and resource protection within the framework of the already existing local, state and federal laws, regulations, etc."

Response:

Thus far existing laws and regulations have addressed the conservation of resources of the Maurice River corridor, however, not in an integrated or coordinated fashion. Further, controversial proposals and projects have been proposed that have created a continuing debate about the appropriate land uses along the river corridor. Therefore, many local officials, elected officials, and other interested parties believe the Wild and Scenic Rivers program offers a sensible approach, based on local control, for assuring coordination and consistency in dealing with complex and controversial issues impacting the river corridor.



CERTIFIED MAIL NO. P 421 526 596

July 29, 1992

Mr. Joseph W. Gorrall, Acting Regional Director
U. S. Department of the Interior
National Park Service
Mid-Atlantic Region
U. S. Customs House, Room 251
Philadelphia, PA 19106



RE: The Maurice River and Its Tributaries
National Wild & Scenic River Study
Draft Report
Your Request For Comments

Dear Mr. Gorrall:


The Atlantic City Electric Company (the Company) as a member of the Maurice River System Wild and Scenic River Task Force, welcomes the opportunity to provide timely and relevant comments on the referenced draft report. As indicated in your June 17th letter, receipt of comments was requested by September 30, 1992.

For ease of reference, our comments, which are included as Attachment I to this letter, are numbered chronologically and are cross-referenced in the attached copy of the draft report (Attachment II).

As the Wild and Scenic designation process comes to a conclusion, I would like to express my appreciation to the National Park Service for its involvement in fostering a continued awareness of the importance of the Maurice River system to the ecological and economic vitality of southern New Jersey.

If you or your staff have any questions on our comments or need clarifications, do not hesitate to contact me at (609) 625-6372.

Very truly yours,


Robert F. Daugherty
Manager of
Environmental Affairs

RFD/clg

Attachments

cc: Ms. Patricia Weber, Chief
National River & Trails Branch
National Park Service

Atlantic Electric
1199 Black Horse Pike
P.O. Box 1500 - MLC
Pleasantville, New Jersey 08232
609-645-4100



The Pinelands Commission

P.O. Box 7, New Lisbon, N.J. 08064 (609) 894-9342

September 30, 1992



Ms. Patricia Weber
Chief
National Rivers and Trails Branch
NPS-MARO
U.S. Customs House, Room 251
Philadelphia, PA 19106

Re: Maurice River & Its Tributaries, National Wild and
Scenic River, Draft Report

Dear Ms. Weber:

Thank you for sending the Commission a copy of the "Maurice River & Its Tributaries, National Wild and Scenic River, Draft Report" for our review. I am impressed with the level of effort that the NPS and County planning board has committed to completing this document and the "Local Management Plan for the Maurice River and its Tributaries". Together, the two reports constitute a noteworthy approach to riverway resource management planning.

If if may, I would like to take the opportunity to comment on just a few points.

On page 29, the draft report should be amended to recognize the Pinelands Protection Act's role in the preservation of agricultural resources, and cultural resources such as historic villages, historic structures and archaeological resources. The Act provides cultural resources some of the strongest protection in the State from both public and private development.

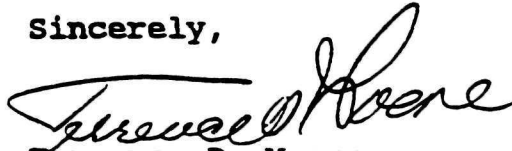
It is also understood that the CMP standards overlay those regulations in the draft plan for areas within the Pinelands Area, and that any local zoning amendments in Pinelands Area municipalities must be in conformance with the CMP. Therefore, references to zoning densities, road and riverway setbacks, wetlands and buffers, vegetation clearing, etc. may need to be revised before they are adopted by Pinelands municipalities.

I would suggest amending section 1.2 of the draft plan by adding the sentence, "The River Conservation Zone development regulations, however, shall be in conformance with the minimum standards of the Pinelands Comprehensive Management Plan (N.J.A.C. 7:50) in the Pinelands Area.", to make the draft plan in conformance with the CMP. This language also puts municipalities and property owners on notice that the CMP regulations are still applicable in the River Conservation Zone.

I also welcome the suggestion for permit streamlining. We have had discussions with Cumberland County on the possibility of their implementing our "administrative officer" provisions which would make a good first step towards this goal.

If you have any further questions, please contact Larry Liggett or Ed Fox of my staff. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Terrence D. Moore". The signature is fluid and cursive, with a large, stylized "T" and "M".

Terrence D. Moore
Executive Director

TDM/gmg
FP2A

cc: Commissioner K. Brian McFadden
Stephen L. Kehs
Kathy Swigon
Ed Fox



COUNTY OF CUMBERLAND
DEPARTMENT OF PLANNING AND DEVELOPMENT
800 EAST COMMERCE STREET
BRIDGETON, NEW JERSEY 08302

(609) 453-2175
FAX 609-451-0967

STEPHEN L. KEHS, AICP
EXECUTIVE DIRECTOR

August 10, 1992

Ms. Patricia Weber
National Park Service
U.S. Customs House - Room 260
Second & Chestnut Streets
Philadelphia, PA 19106

Dear Ms. Weber:

My office has reviewed the draft report to Congress for the Maurice River and its tributaries, prepared by the National Park Service. I would like to offer the following comments and suggestions:

1. (p. 1). The "Finding of Suitability" is not very precise. Revised wording suggested to read: "Maurice River Township and the City of Vineland support the inclusion of a portion of the study area in the National System, subject to the conditions outlined in this report and their local river management plans. Vineland has endorsed inclusion of the Manumuskin, and Maurice River supports the Manumuskin, Muskee and Menantico. The main stem of the Maurice River in the City of Millville and in Commercial and Maurice River Townships, the Menantico Creek, and the headwaters of the Manumuskin River in Buena Vista are not suitable for designation at this time because most of the affected municipalities have not supported their designation." The reasons....
2. (p. 3). "Alternative 3" is mentioned for the first time on this page. There should be a short explanation of Alternative 3, or a page reference where it can be found.
3. (p. 10). Cumberland County is served by the Winchester and Western short-line railroad and Conrail.
4. (p. 28). The graduation in dot patterns is illogical. If solid black is incompatible and solid white is compatible, then solid "pattern" should be "existing operations should continue; new operations seen as incompatible."
5. (p. 40). The "forested headwaters" of the Manumuskin Creek are in Buena Vista. While the Menantico may also have its headwaters in Buena Vista, that portion of the Menantico Creek is not part of the study.

6. (p. 58). "Alternative 6." This alternative has never been publicly discussed. The County has not been involved in any discussion of this alternative. It was not mentioned in the Assumptions and Alternatives Report. Therefore, its inclusion in this report is inappropriate.
7. (p. 60). Paragraph One, under "The River Management Plan" is misleading. A plan similar to or identical has been adopted by all municipalities. Therefore, any memorandum of understanding needs to reflect the plans that are in place, not a new document as is implied by the report's current wording. Vineland is the only Cumberland County municipality that has not enacted standards to implement its plan. The NPS may have to work with Vineland to ensure that appropriate land use regulations are in place after designation. (Vineland's segment of the Manumuskin Creek is wholly within the Pinelands, and currently conforms to the Pinelands Plan.)

I would appreciate your making these changes or discussing them with me if you have any questions.

Thank you for your continued hard work and dedication to this area.

Sincerely yours,



Stephen L. Kehs
Executive Director

SLK/es



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of the Chief Scientist
Washington, D.C. 20230

July 10, 1992

UPS
Ms. Jennifer Salisbury
Deputy Assistant Secretary
for Fish and Wildlife and Parks
Department of the Interior
Washington, D.C. 20240

Dear Ms. Salisbury:

Thank you for the opportunity to comment on the draft report on "The Maurice River & its Tributaries National Wild and Scenic River Study". The study area encompasses significant estuarine habitat in Delaware Bay, critical as a nursery ground for many marine fish, as well as habitat for several threatened and endangered fish, birds and plants. We are pleased to endorse the inclusion of this area in the National Wild and Scenic River System.

Sincerely,

David Cottingham
Director
Ecology and Conservation Office



FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D. C. 20426

NPS
JUN 28 1992

Ms. Jennifer Salisbury
Deputy Assistant Secretary for Fish
and Wildlife and Parks
Office of the Secretary
U.S. Department of the Interior
Washington, DC 20240

Dear Ms. Salisbury:

This is in response to your June 17, 1992, request for comments on the Wild and Scenic River Study Draft Report on the Maurice River and its Tributaries, located in Cumberland County, New Jersey. To date, there are no pending or issued hydroelectric licenses or exemptions in the Maurice River Basin. Therefore, the recommendation of the National Park Service that segments of the Manumuskin River and Muskee Creek be included in the National Wild and Scenic Rivers System does not conflict with any existing or proposed hydropower development. Thank you for the opportunity to comment.

Sincerely,



Fred E. Springer
Director, Office of
Hydropower Licensing



U.S. Department of
Transportation

Office of the Secretary
of Transportation

Assistant Secretary

400 Seventh St., S.W.
Washington, D.C. 20590

SEP. - 3 1992

NPS

Ms. Jennifer A. Salisbury
Deputy Assistant Secretary
for Fish and Wildlife and Parks
Department of the Interior
Washington, D.C. 20240

Dear Ms. Salisbury:

Thank you for your letter to Secretary of Transportation Card requesting comment on the draft report on the Maurice, Manumuskin, and Menantico Rivers in New Jersey. The report recommends that certain segments of these rivers be designated as part of the National Wild and Scenic Rivers System.

The report states that scenic byways would be part of a proposed management program for the rivers, if designated as a component of the national system. Section 1047 of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) establishes a scenic byways program. A Scenic Byways Advisory Committee is established to develop criteria for designating highways as scenic byways and "All-American Roads." Eligible activities include development of scenic byways programs, safety improvements, construction of pedestrian and bicycle facilities, rest areas, overlooks, interpretive facilities, recreation access improvements (including water access), and historic and cultural resources enhancement. Another section of the ISTEA requires that at least 10 percent of surface transportation funds must be used for "transportation enhancement activities," which include scenic highway programs.

We recommend coordination with the New Jersey Department of Transportation concerning its scenic byways program and any highway improvements planned in the vicinity of the rivers. The address is:

New Jersey Department of Transportation
1035 Parkway Avenue
Trenton, NJ 08625

We appreciate the opportunity to review the draft report.

Sincerely,

Joseph F. Canny
Deputy Assistant Secretary
for Policy and International Affairs



Department of Energy
Washington, DC 20585

100301A3

IVCR

AUG 10 1992

Jennifer A. Salisbury
Deputy Assistant Secretary for
Fish and Wildlife and Parks
U.S. Department of the Interior
Office of the Secretary
Washington, DC 20240

Dear Ms. Salisbury:

The Office of Environmental Guidance has completed a review of the Department of the Interior's draft report entitled "The Maurice River & Its Tributaries National Wild and Scenic River Study" as requested in your letter to Admiral Watkins dated June 12, 1992. We have no comments on the draft report.

We appreciate the opportunity to comment on the draft report. If you need further information, please contact Lois Thompson of my staff at (202)586-9581.

Sincerely,

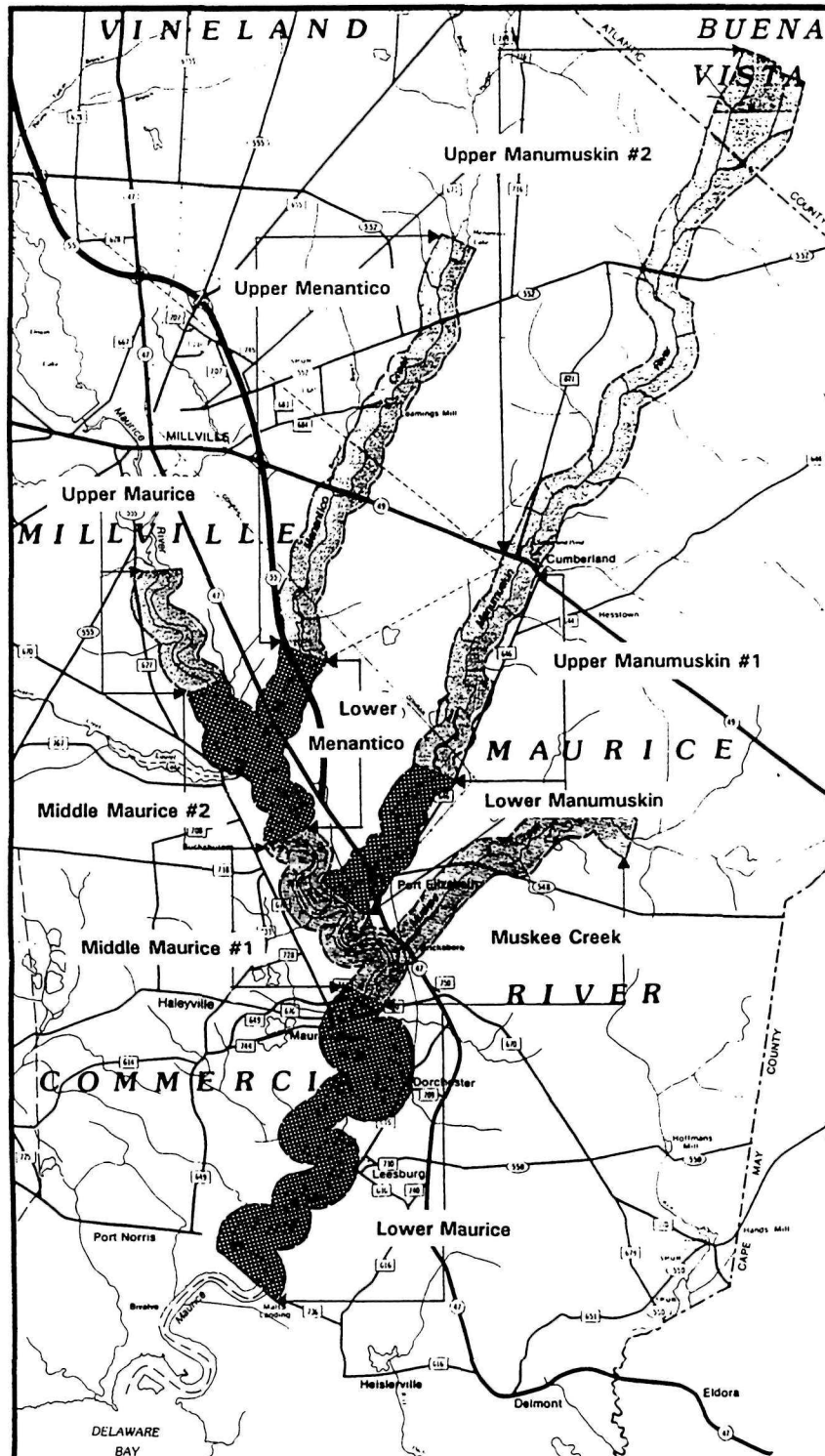
A handwritten signature in black ink, appearing to read "Ray F. Pelletier", is written over the typed name.

Raymond F. Pelletier
Director
Office of Environmental Guidance

APPENDIX FOUR

Thematic Maps of the Study Area

1. The study area, showing eligible and suitable scenic and recreational segments recommended for National Wild and Scenic River designation
2. Pinelands Ecological Critical Areas
3. Characteristic Pinelands Aquatic Communities
4. Pinelands Adjacent Areas of Importance
5. Bald eagle usage in the Maurice River area
6. Bird migration and the study area
7. Proposed conservation and development districts of the River Conservation Zone
8. Locations of proposed industrial facilities
9. General land ownership patterns of the study area
10. Local zoning at the time of the study
11. Areas of jurisdiction of: (a) the New Jersey Pinelands Protection Act; and (b) the New Jersey Coastal Areas Facility Review Act

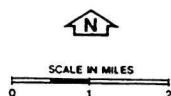


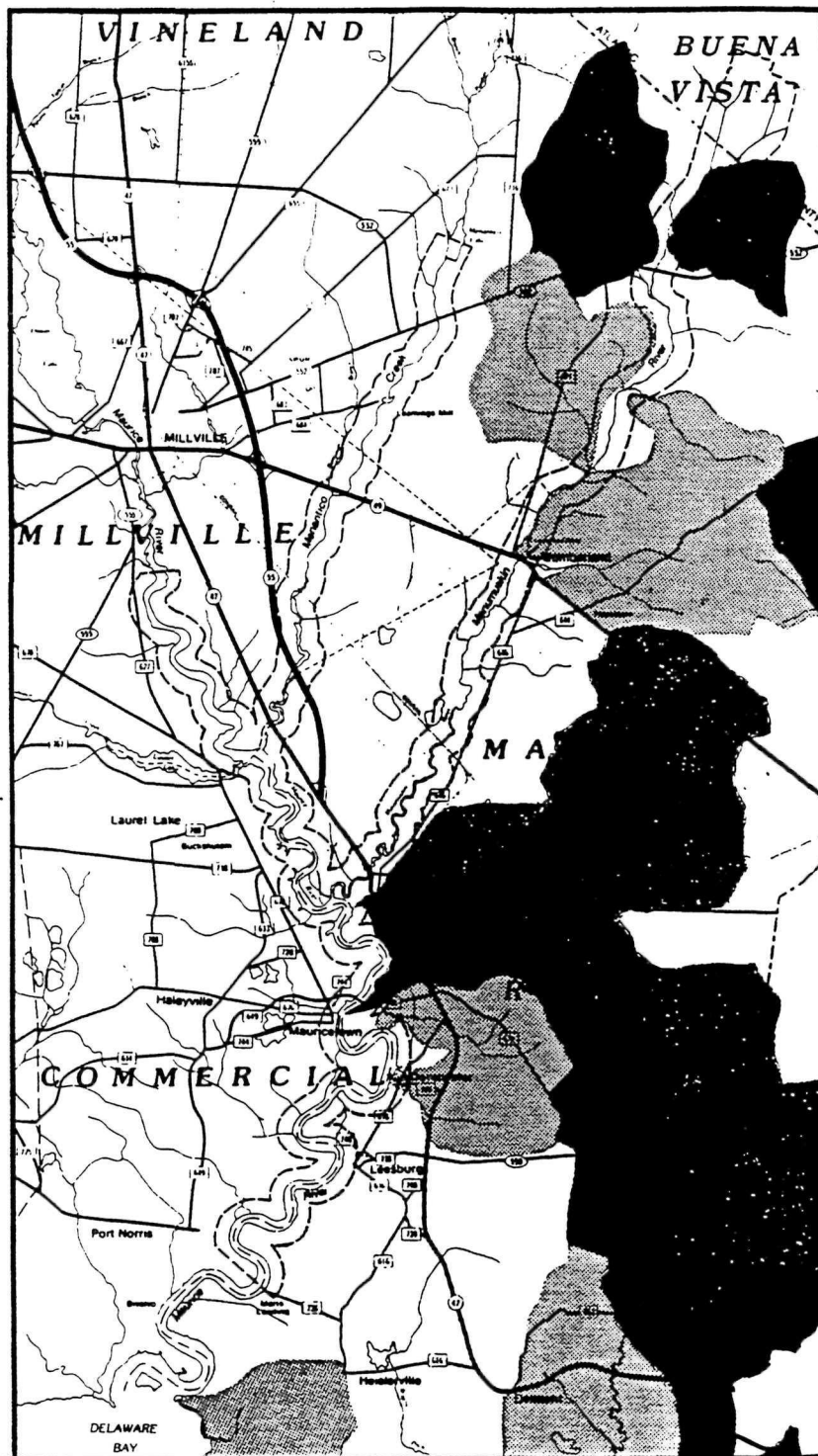
Map 1. Scenic and recreational segments of the study area recommended for National Wild and Scenic River Designation



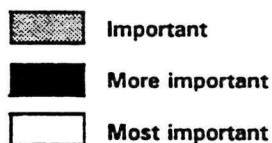
MAURICE, MANUMUSKIN, MENANTICO & MUSKEE RIVERS WILD AND SCENIC RIVERS STUDY

**CUMBERLAND COUNTY, NEW JERSEY
NATIONAL PARK SERVICE**





Map 2. Pinelands Ecological Critical Areas

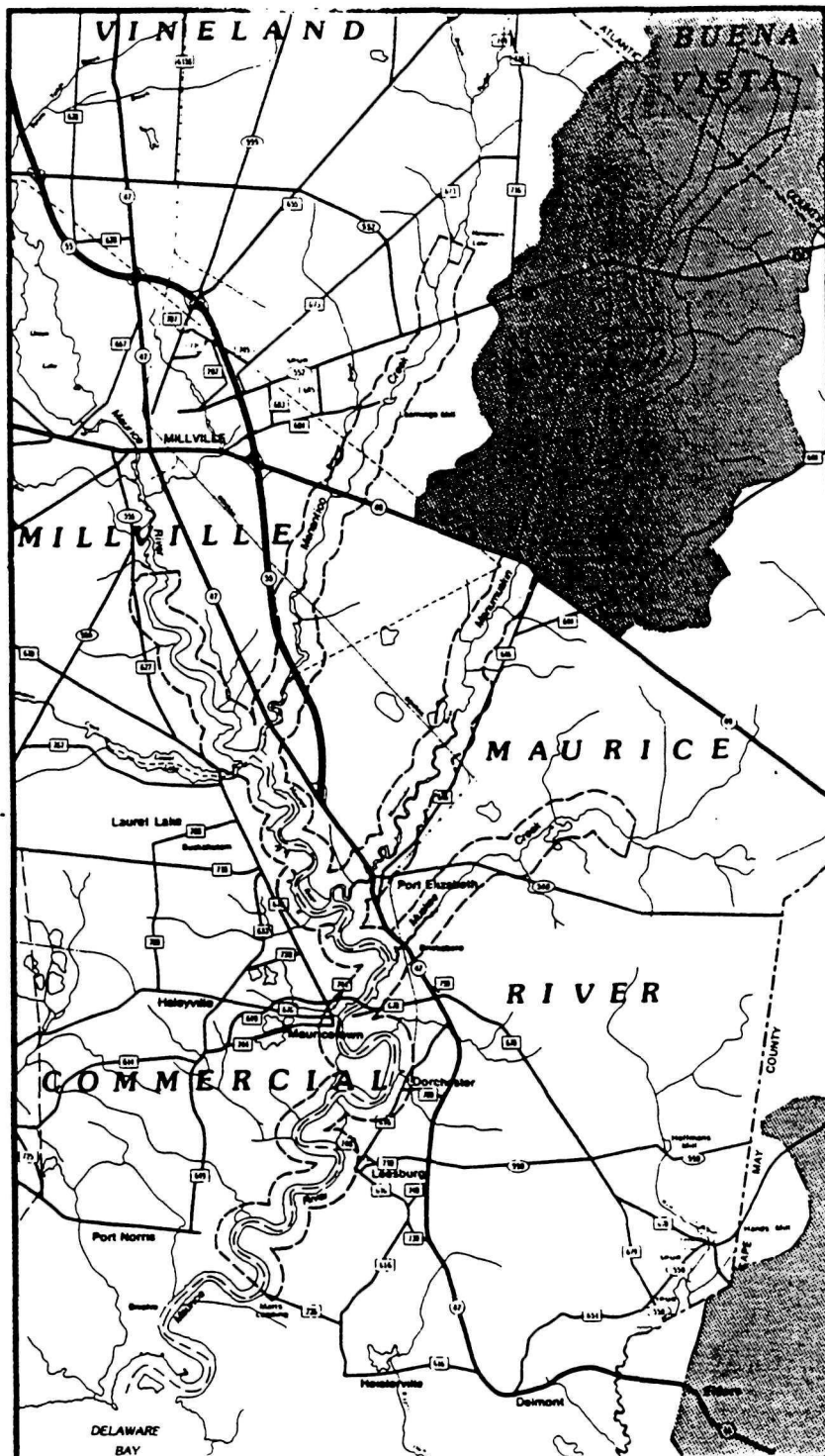


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Map 3. Characteristic Pinelands Aquatic Communities



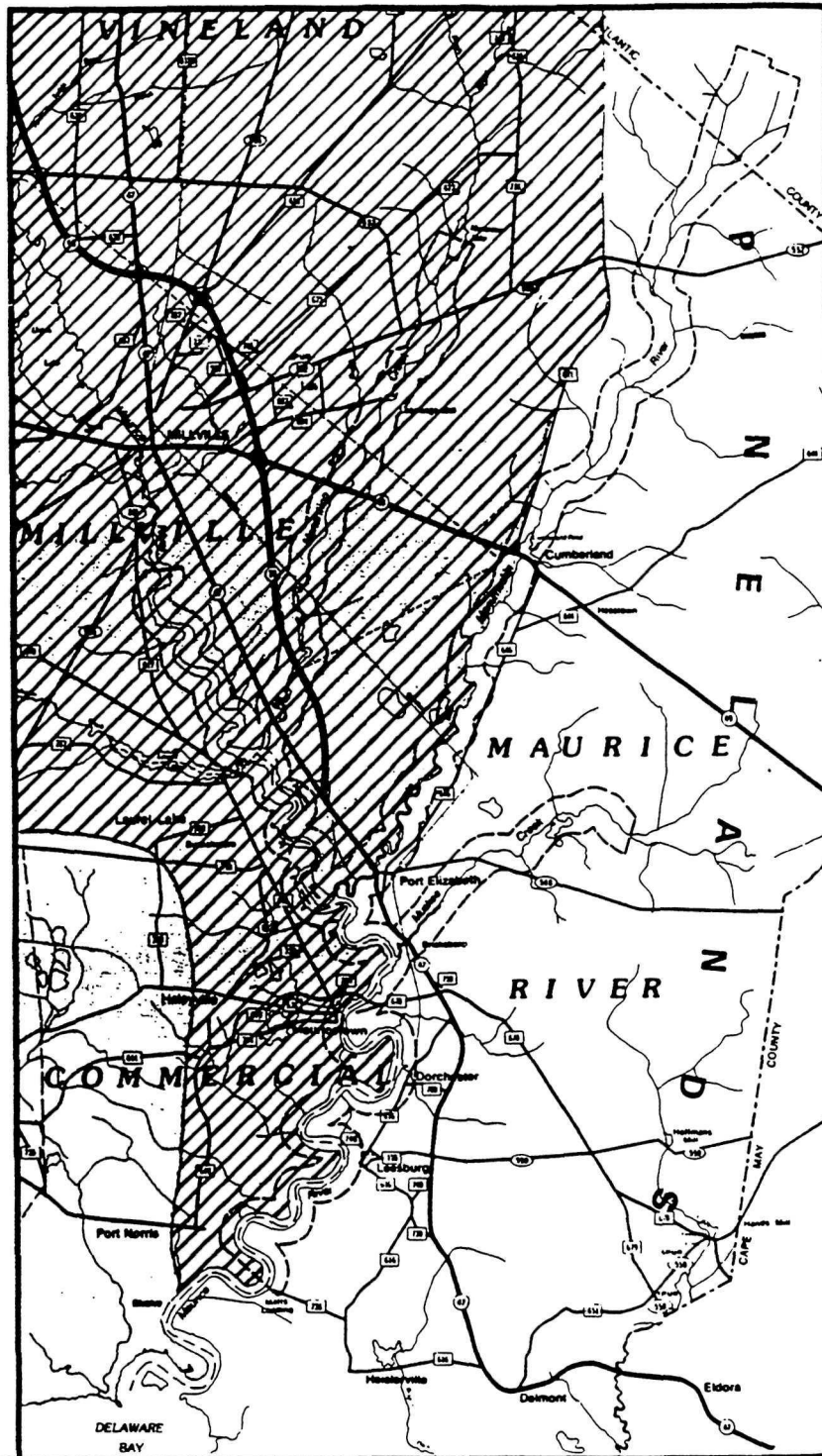
Areas that support aquatic communities characteristic of the Pinelands

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



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Map 4. Pinelands Adjacent Areas of Importance

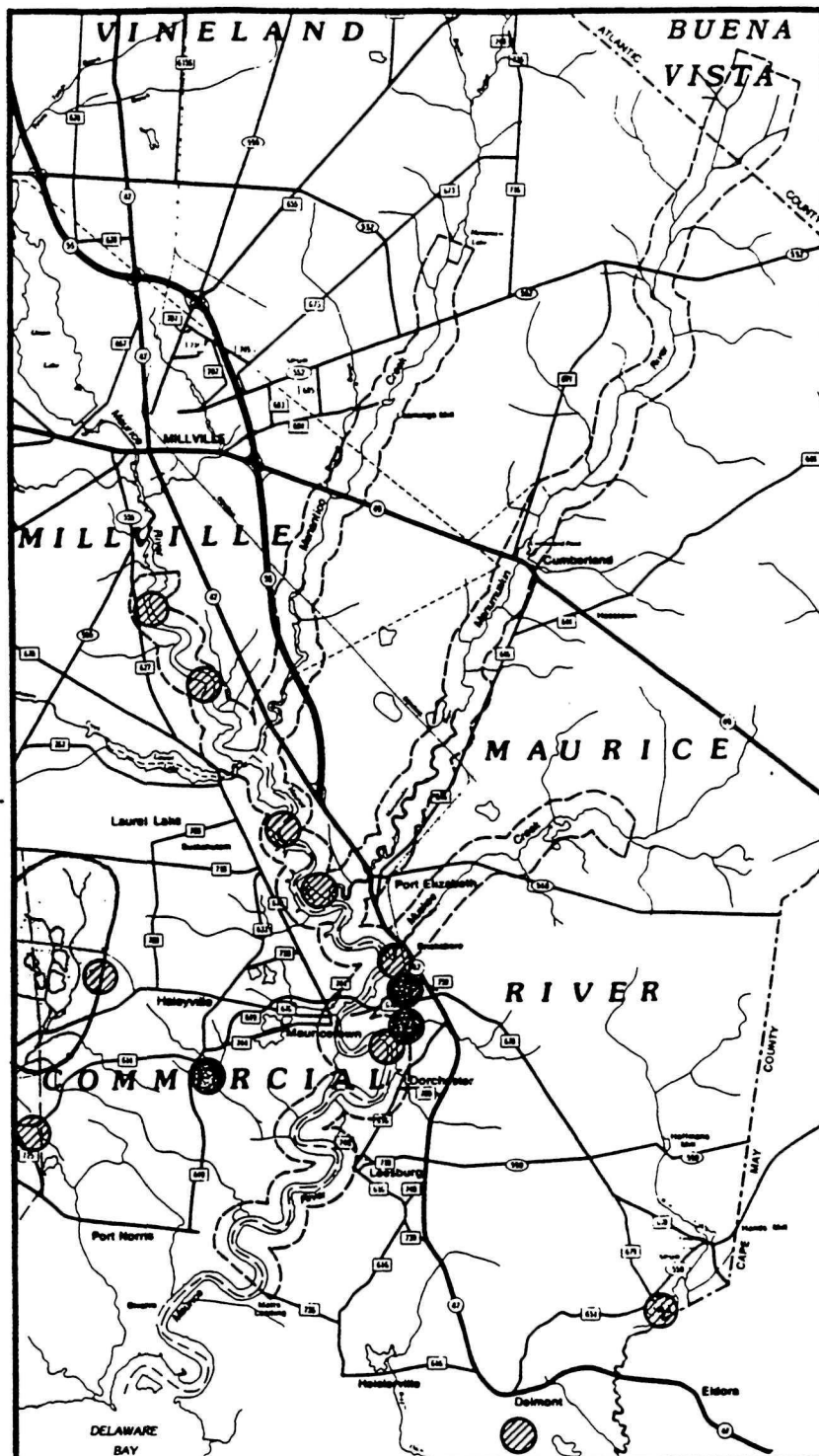
-  Cohansey Sand outcrop
-  Maurice and Manumuskina Rivers watershed

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


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Map 5. Bald eagle usage in the Maurice River area

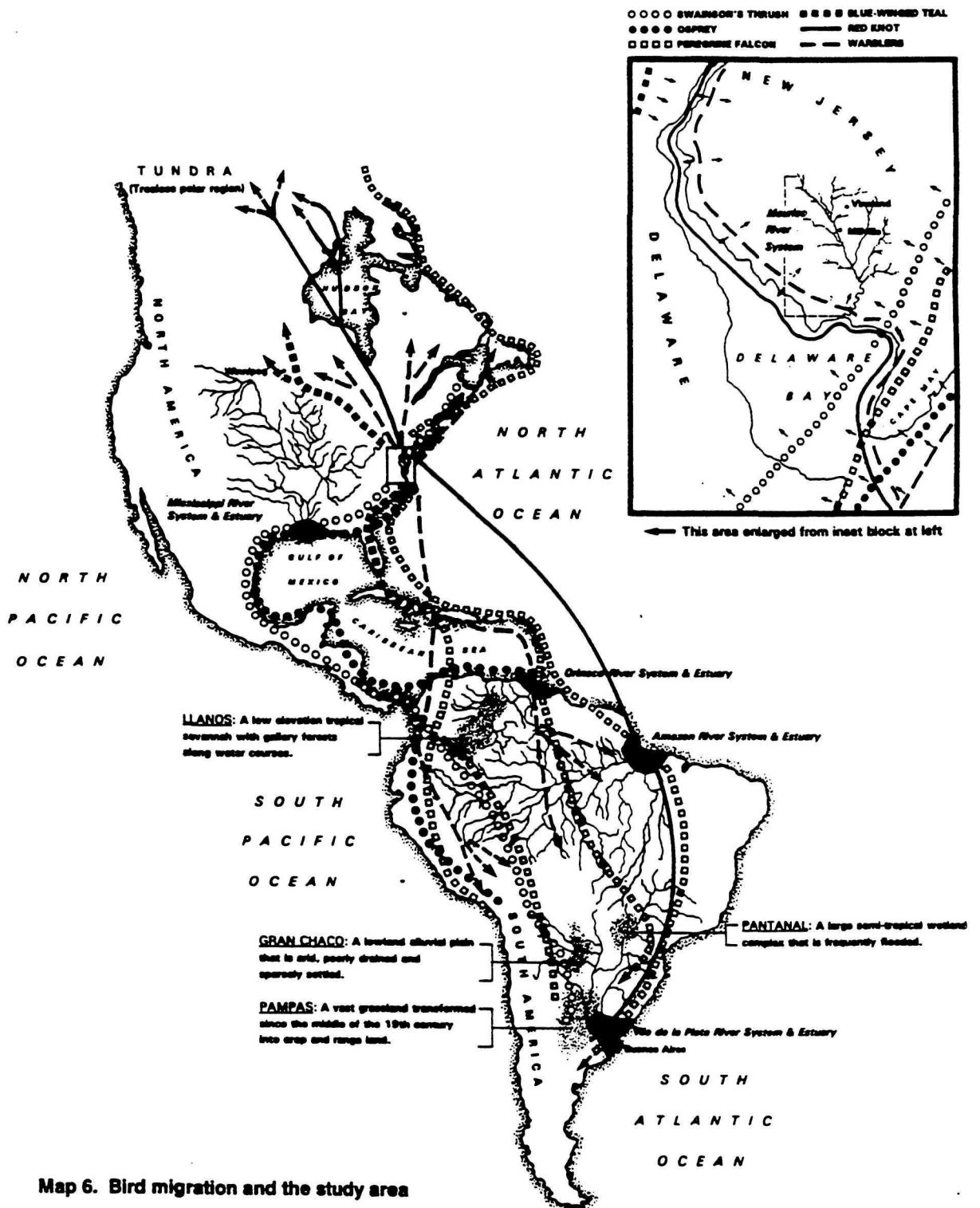
-  Feeding/perching/roosting sites
-  Historical nesting sites
-  Active breeding area

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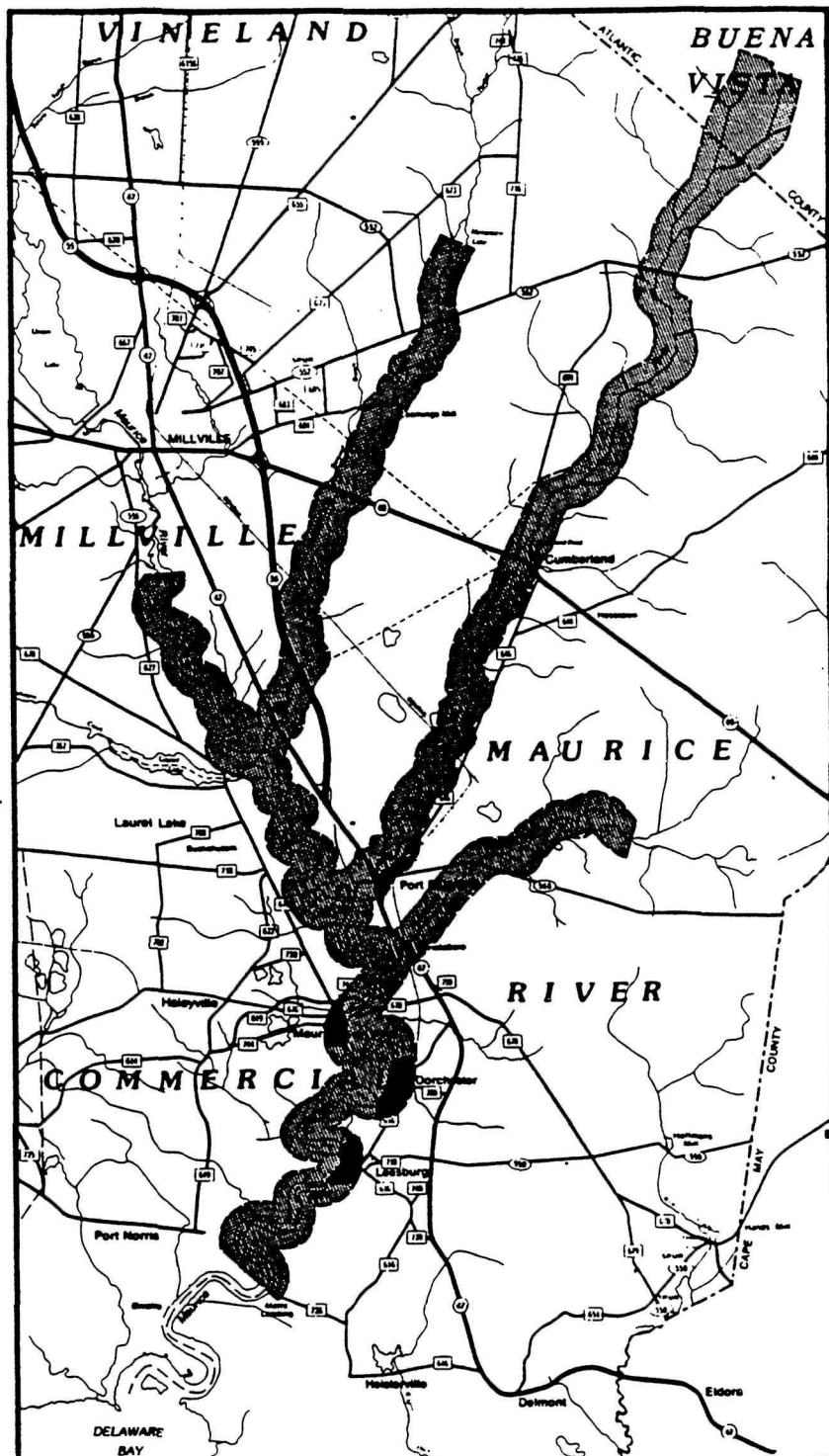




Map 6. Bird migration and the study area

The Maurice River study area is a critical convergence zone for many bird species migrating along the Atlantic Flyway. Although birds also migrate along other routes, this map shows how the study area is a link in an ancient migratory chain that affects the biodiversity of North and South America alike. During their migration, about 80 percent of the global population of Red Knots may be present in the estuary at one time, making the entire species vulnerable to a single catastrophic event. This map is based on information which is courtesy of the National Geographic Society.

DIAGRAMS NOT TO SCALE



**Map 7. Proposed conservation and development districts
of the River Conservation Zone**

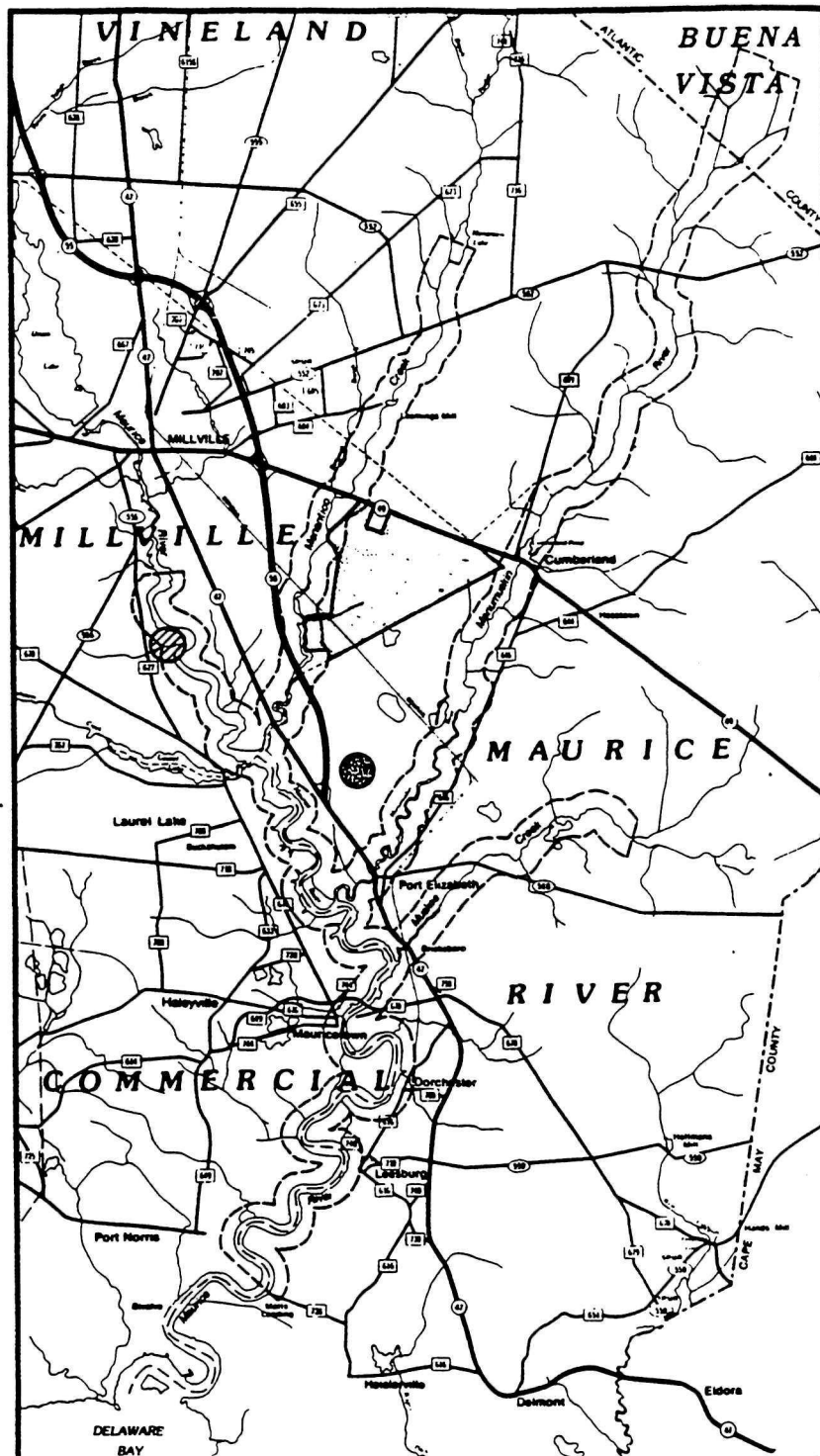
-  Protection District
-  Development District

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WILD AND SCENIC RIVERS STUDY**






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Map 8. Locations of proposed industrial facilities

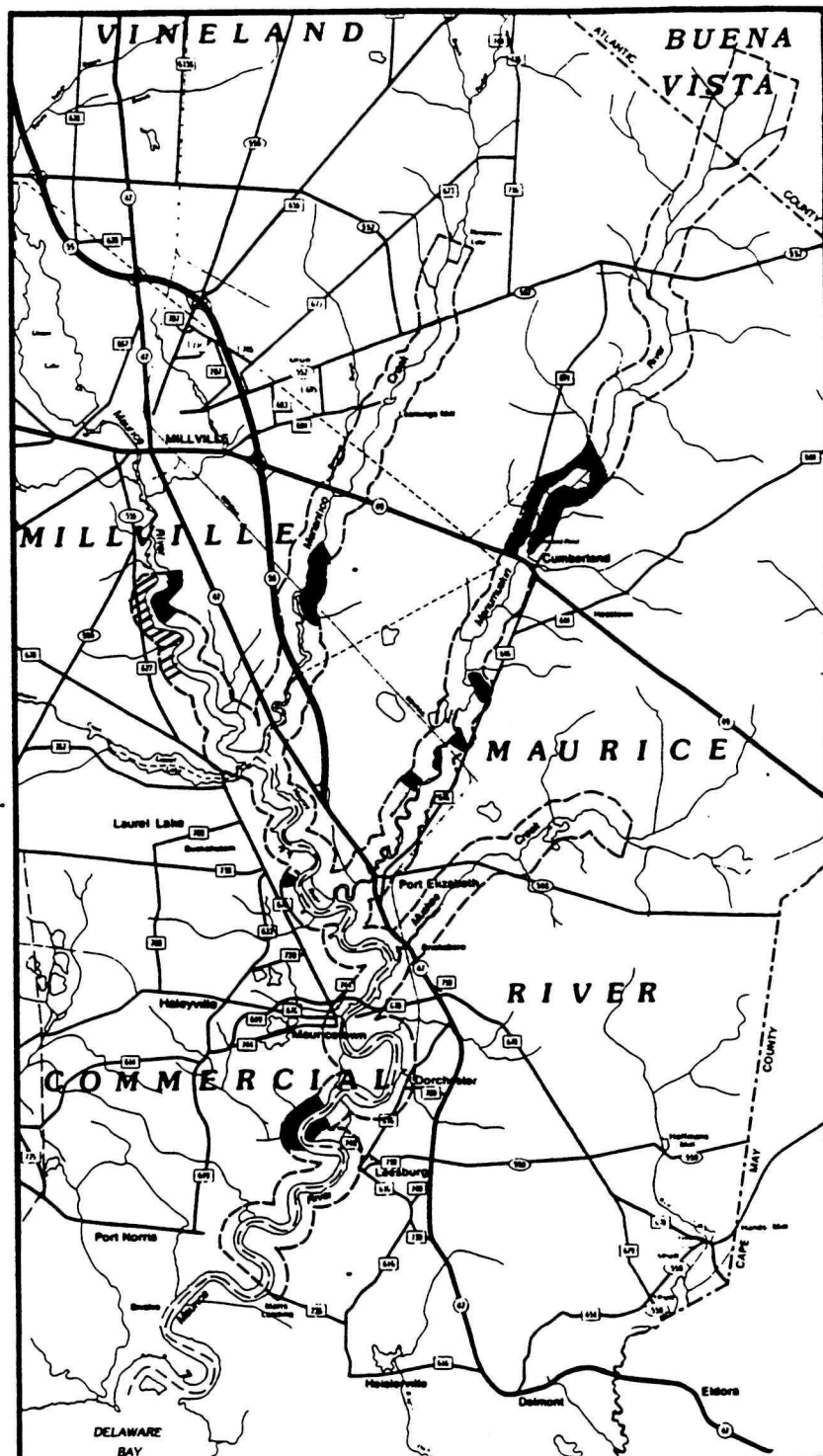
-  Genstar proposed barge loading facility
-  Proposed hazardous waste entombment site
-  Atlantic Electric Cumberland site

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WILD AND SCENIC RIVERS STUDY**

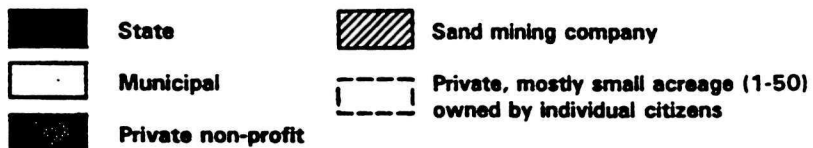


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Map 9. General land ownership patterns of the study area

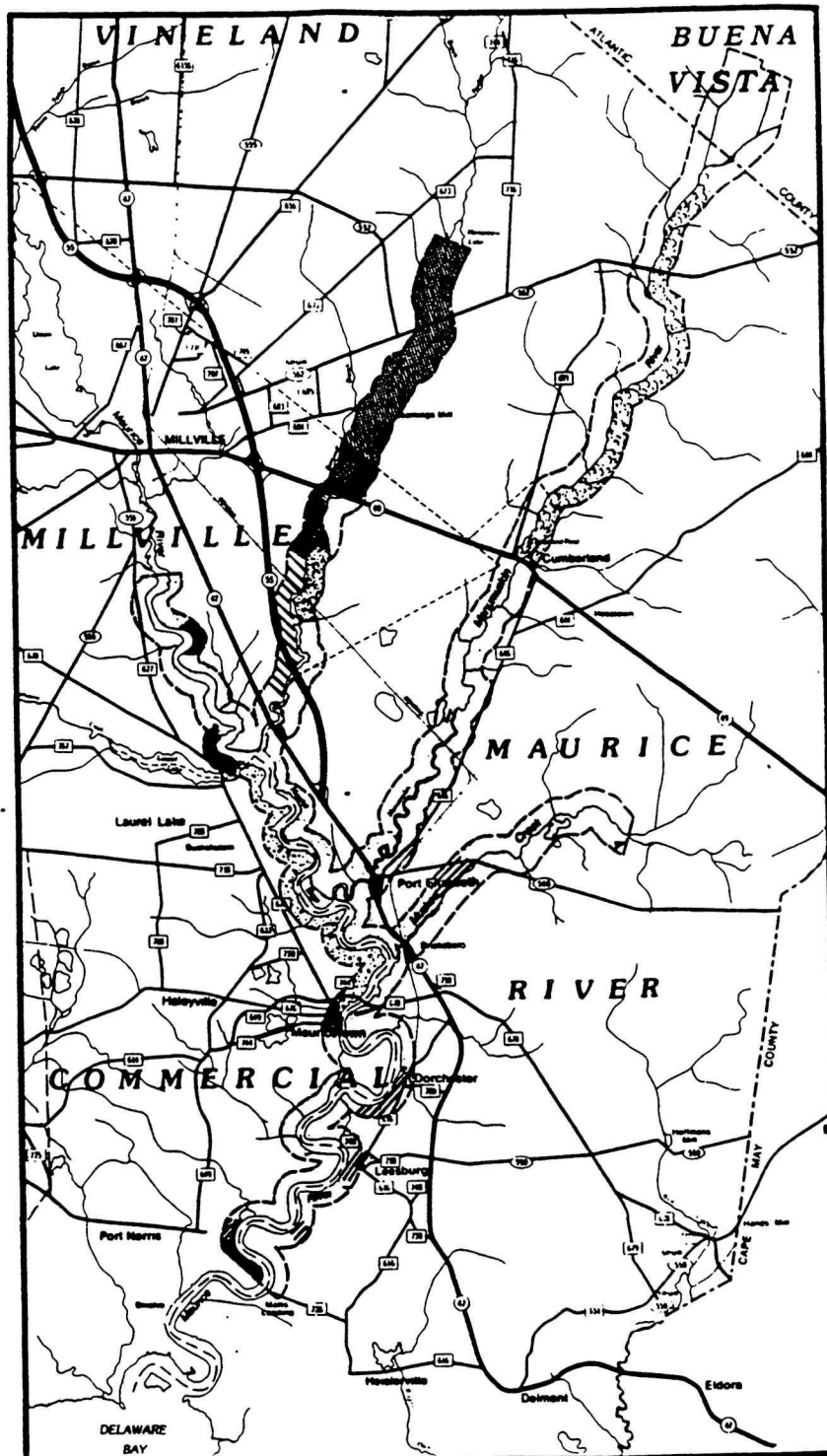


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WILD AND SCENIC RIVERS STUDY**

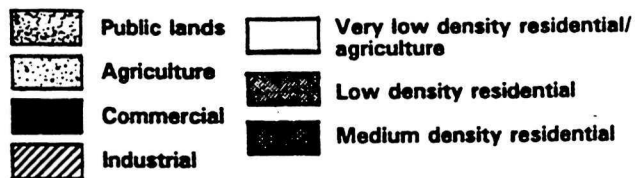


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NATIONAL PARK SERVICE**





Map 10. Local zoning at the time of the study

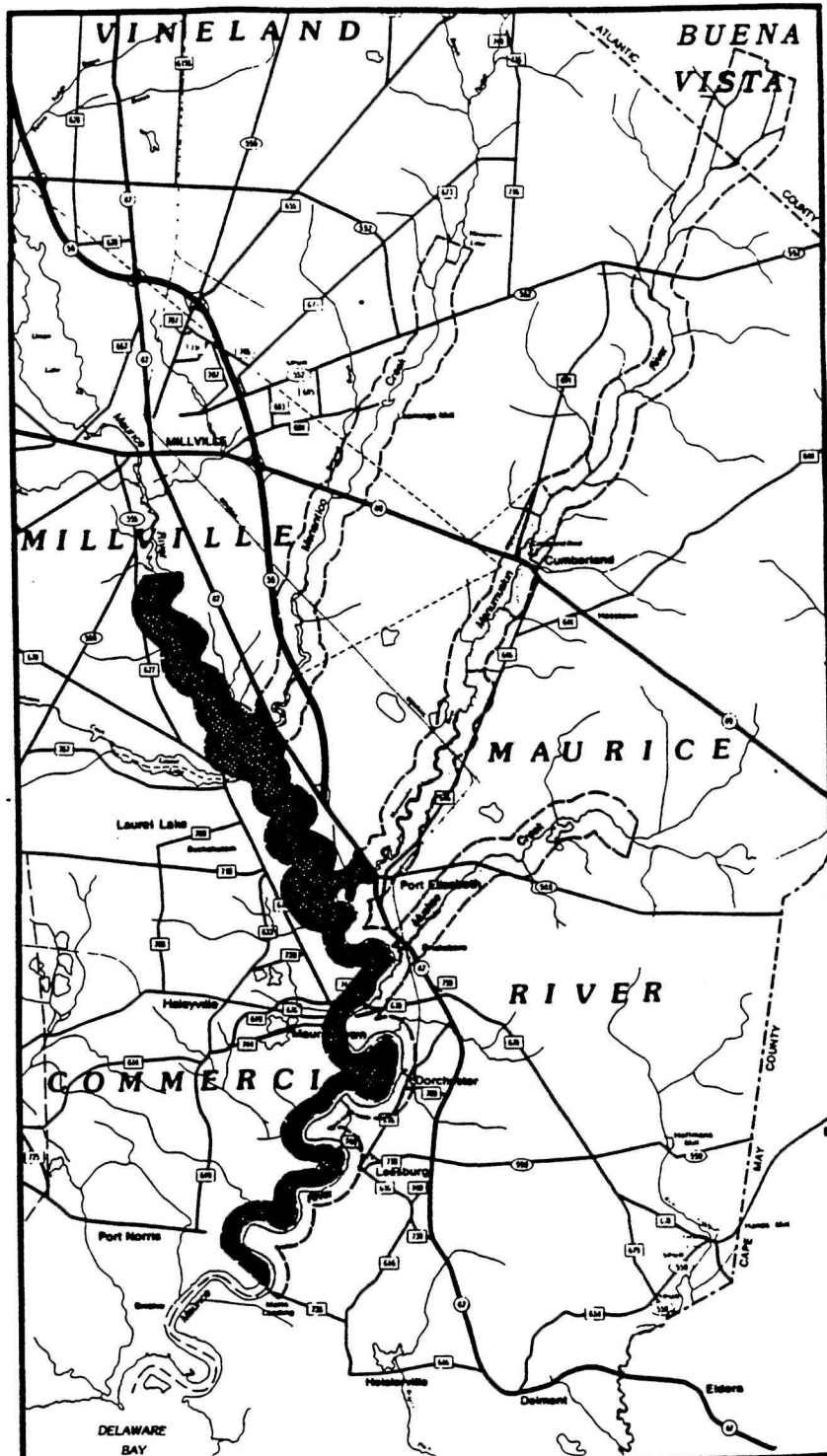


MAURICE, MANUMUSKIN, MENANTICO & MUSKEE RIVERS WILD AND SCENIC RIVERS STUDY



CUMBERLAND COUNTY, NEW JERSEY
NATIONAL PARK SERVICE





Map 11. Areas of jurisdiction of: a) the New Jersey Pinelands Protection Act; and b) the New Jersey Coastal Areas Facility Review Act (CAFRA)



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CUMBERLAND COUNTY, NEW JERSEY
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