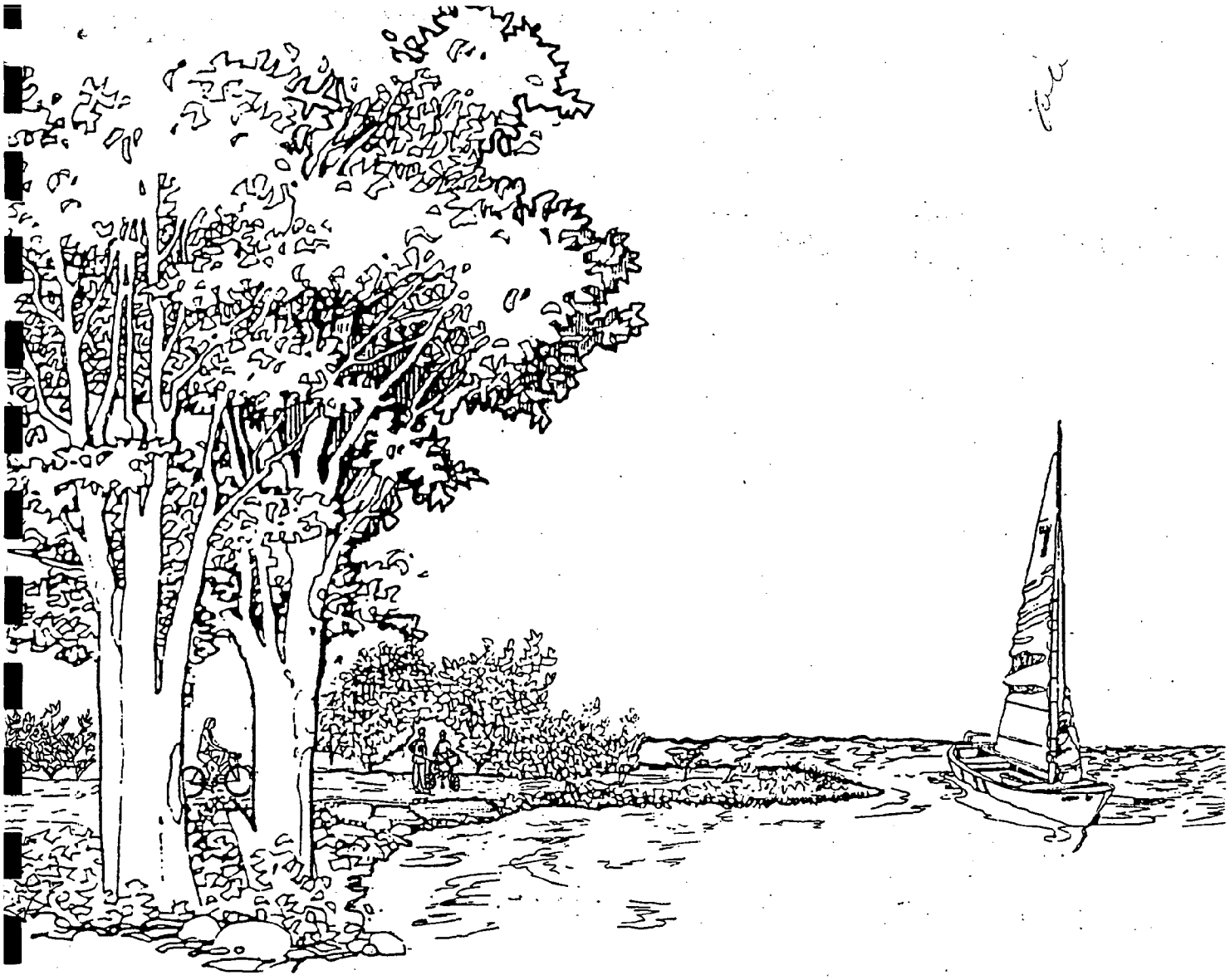

TOWN OF

INDIAN HEAD

NATURE PARK

TOWN OF INDIAN HEAD NATURE PARK PROJECT PLAN

Prepared for:
Town of Indian Head
Jeffrey E. Repp, Town Manager

Prepared by:
Redman/Johnston Associates, Ltd.
Easton, Maryland 21601

Acknowledgements

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Summary Recommendations

Develop Design Concept

Analyze features

- Who will be the user?
- What can be accomplished?
- What is the context?
- What are physical constraints?
- What are natural or physical opportunities?

Develop a Plan

- Build as three phases according to patterns of ownership and development of shoreline.
- Maintain "active" facilities - boat ramp, fishing pier, bank fishing opportunities at Mattingly Park and Mattawoman Woods buffer.
- Provide channeled access to shoreline via deck and stairs to control bank and shoreline erosion.
- Provide "passive" opportunities - nature trail and benches - at eastern end.
- Provide access to shoreline via boardwalk to protect important critical habitats. Observation platform over marsh provides opportunity for education and research.
- Link park area to town walkways while maintaining loci of activity at existing parks, Mattingly Park and Woodland Hills.

Develop a Strategy

- Use existing development regulations to acquire open space
- Develop specifications and bids as needed
- Develop funding sources
- Acquire necessary permits
- Obtain public approvals
- Construct facilities
- Provide long-term management for continued park enjoyment and safety.

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Background

one

At its outlet to the Potomac River, Mattawoman Creek drains approximately 71 square miles located primarily in Charles and Prince George's County[1]. Its associated wetlands and floodplain have been designated as an area of Critical State Concern in part because of their importance in the Potomac Basin as a prime spawning area for many species of fish. Mattawoman Creek and its wetlands also provide extensive habitat for wildlife and waterfowl.

This valuable natural asset poses a challenge to the Town of Indian Head. It is a unique opportunity to provide needed public access to the creek and provide waterside recreation facilities. In its Comprehensive Plan, the Town states that it shall be the Town's objective to insure that there will be increased and/or improved access to the Potomac River shoreline and to Mattawoman Creek. The Town's Critical Area Program identified the Mattawoman Creek shoreline as a strong candidate for establishing a natural park[2].

The Town already owns two parcels on the Mattawoman Creek shoreline which have been designated as park and open space. The Town desires to link these parcels together with a natural walkway system that would enhance town residents' recreational opportunities, while maintaining or improving the natural attributes of this area.

The plan which follows presents a unifying concept for this park. It is based on a phased approach which addresses development of facilities or needed improvements first in the existing Town-owned parcels and later in areas which are regulated by the Town's Critical Area Plan. This summary of the plan is divided into three primary sections. The Background includes a description of the site - its users and its features, both administrative and natural. The following section, Recommendations, summarizes the features of the plan and its phasing. In Strategies, the final section, various suggestions for permitting, construction and other important steps, are offered.

1. Charles County Department of Planning and Growth Management, Department of Planning, Environmental Division. 1990. *Stream Valley Management and Protection Program, Final Report, for Charles County, MD.* LaPlata, MD. unpublished manuscript.

2. Natural parks are areas of natural habitat that provide opportunities for those recreational activities that are compatible with the maintenance of natural conditions. The natural park concept was developed to create a public awareness of the amenities and fragile ecology of the Chesapeake Bay. One of the County's most unique natural areas with a strong potential to be developed as a natural park exists adjacent to the Town. This area along Mattawoman Creek is designated as a Natural Heritage Area as well as an Upland Natural Area.

The Park Area

The Mattawoman Creek shoreline in the Town of Indian Head extends from the U. S. Naval Ordnance Station on the west to extensive natural tidal wetlands on the east. Mattingly Park at the base of Mattingly Avenue currently contains a small parking area, a fishing pier, picnic tables, a child play area, public restrooms, a gazebo and a large open lawn. To the east of Mattingly Park is the Town-owned Critical Area Buffer zone of Mattawoman Woods, a Planned Unit Development comprising townhouses immediately to the north. Farther east are privately-owned lands which are undeveloped. These extend to undeveloped land owned by the Town south of Woodland Village. Woodland Village Park, to the north of this and also owned by the Town, has a tot lot, a basketball court, a baseball diamond and areas for parking and picnicking. Areas outside the Town or outside the Town's Critical Area were not included in this plan.

Map 1

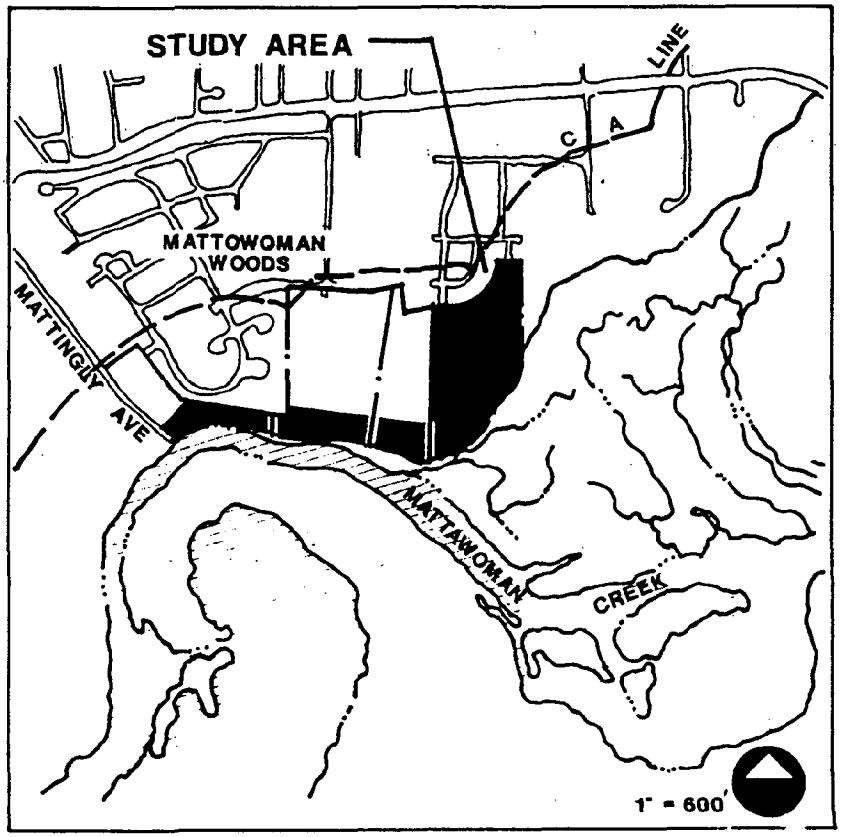


Figure 1

Users

While there is no specific profile of park users for this study, some basic assumptions may be made. Shoreline areas generally provide both active and passive forms of water-oriented recreation. Active recreation includes swimming, boating and other specific water activities. These often require very specific developed access points, such as boat ramps, swimming beaches, or access points which are at least close to parking facilities. Passive recreation may include shore fishing, nature observation and picnicking. Many of these passive activities are often enhanced by the presence of the shoreline views or microclimate. Such users often require very generalized access; pedestrians may need more often to be channeled into certain access points in order to alleviate traffic and stress in more sensitive areas. Additionally, many "passive" users do not travel far to reach the shoreline, as many of these activities may also be enjoyed in other settings. Users of boat ramps and swimming beaches typically travel farther to find these limited facilities.

At Mattingly Park, several types of users were typically present at three visits during this study. These were all "passive", with the principal activities being shore fishing, either from the existing pier or from the shoreline; picnicking, notably at lunchtime during the week serving Naval Ordnance Station employees; and, a combination of general pedestrian activities such as walking and sunbathing. The adjacent private boat ramp provides boat access and parking. There are no other active access points at this location, and the Town does not plan on adding any at this time. This suggests that park users are and will continue to be local residents and employees traveling from within the town's precincts or the Ordnance Station[3].

Similarly at Woodland Village Park, the users present during our visits were pedestrians who came to play basketball or play in the tot lot. Since it is unlikely that specific water access points are appropriate in this area, park users will most likely to continue to be local pedestrians who may search for pleasant walking experiences.

3. According to the Water-Dependent Facilities Program in the Indian Head Critical Areas Plan, while the Town continue to seek opportunities for improving public access to both the Potomac River and Mattawoman Creek, it is the intent of the Town that any public landings established in Town would be limited access in function and not a tourist attraction for out of county and out of state users.

Features

Zoning and Land Use

Within the Critical Area, lands bordering the Mattawoman Creek in the Town of Indian Head comprise mainly low density residential (R-1), a large Planned Unit Development (PUD) encompassing existing townhouse development bordering the Town-owned Buffer, and existing park area zoned as open space (OS). Medium density (R-2) residential areas abut the study area. Most of this area has at present been developed in town-scale single family homes.

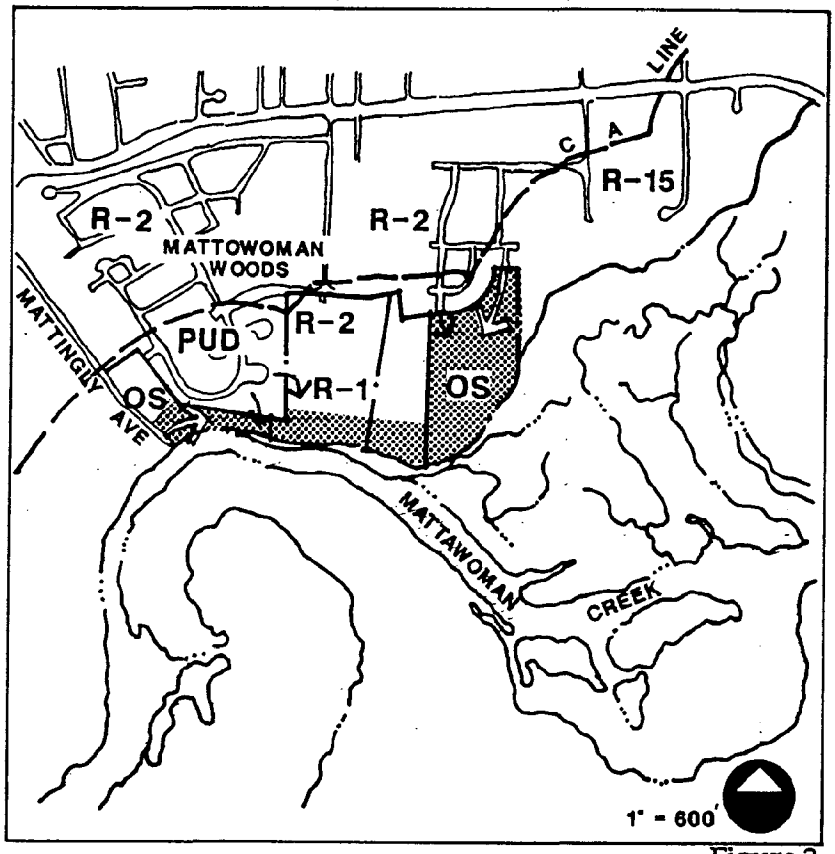


Figure 2

The Town of Indian Head, in adopting and implementing its Critical Area Plan[4] requires that any development in the Critical Area Overlay Zone follow certain procedures and guidelines. These include establishing a shoreline Buffer zone[5]. In general, no new development activities are permitted in the Buffer, including structures, roads and parking.

Mattingly Park contains the only area of Buffer in this area which has been significantly disturbed. The Buffer linking

Map 2

4. The passage of Maryland's Critical Area Law which required the Town of Indian Head to adopt and implement a Critical Area Management Program to protect the Chesapeake Bay, has changed shoreline patterns of development. The Critical Area was defined as "a strip of land along the tidal shoreline extending 1,000 feet landward from the water's edge, or from the landward boundary of any adjacent tidal wetlands". Three goals were listed:
   - Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or conveyances that have runoff from surrounding lands;
   - Conserve fish, wildlife, and plant habitat, and;
   - Establish land use policies for development in the Chesapeake Bay Critical Area which accommodate growth and also address the fact that, even if pollution is controlled, the number, movement and activities of persons in that area can create adverse environmental impacts.

Town of Indian Head Chesapeake Bay Critical Areas Plan, adopted January 1989.

the two existing parks is relatively undisturbed and contains two major nontidal water bodies, important resources which maintain the hydrologic and habitat value of adjacent tidal wetlands in Mattawoman Creek.

Water-dependent facilities[6] are an exception to development in the Buffer. The Town's Critical Area Plan analyzed suitable locations for water-dependent facilities and found that the shoreline along Mattawoman Creek may be suitable although site specific restrictions may apply. The unincorporated area to the east, comprising extensive tidal wetlands, is unsuitable.

The Town of Indian Head Zoning Ordinance mandates the dedication or reservation of recreation areas in the form of neighborhood parks (Article XIII, Section 1300). The area to be set aside varies, depending on the scale of the development, the number of bedrooms in the proposed dwelling units and the payment of impact fees or other combination. The purpose of these neighborhood parks is to provide adequate recreational facilities to serve the residents of the immediately surrounding neighborhood.

In addition, common open spaces designed for the use and enjoyment of all residents of a development, may not only serve recreational purposes, but also preserve significant site features and preserve open space. Common open space which contains natural features worthy of protection may be left unimproved.

Roads and Other Entrances

Mattingly Avenue with parking at Mattingly Park on the west, and Woodland Village, with parking at Woodland Village Park on the east are the current entrance points to the area. In addition, pedestrians may enter the shoreline area at the east end of the parking area of the townhouses at Mattawoman Woods (Mattawoman Court). Between this point and Mattingly Park, there is an established trail used for bank fishing as well as walking. There is also an established trail through the woodlands in the parcel east of this and west of Harrisons's Cut which may be entered at the cul-de-sac of Susan Drive. To the west, pedestrians who enter Kenrick Court from Thompson Lane may breach the stormwater management pond area to arrive at the north end of the parcel adjacent to Woodland Village park which

5. A primary Buffer has been established within 100 feet landward of the Mean High Water line of tidal water, tributary streams and tidal wetlands. In adjacent, sensitive areas, such as steep slopes, hydric soils or highly erodible soils, the Buffer will be expanded to protect streams, wetlands and other aquatic environments from all man-made disturbances.....The Buffer shall be maintained in natural vegetation, but vegetation may be planted where necessary for the protection, stabilization or enhancement of the shoreline.

Town of Indian Head Chesapeake Bay Critical Areas Plan, adopted January 1989.

6. Water-dependent facilities are "those structures or works associated with industrial, maritime, recreational, educational, or fisheries activities that require location at or near the shoreline within the Buffer". These may include but not be limited to: marinas, public beaches and other public water-oriented recreation or education areas, community piers and non-commercial boat storage and docks.

Town of Indian Head Chesapeake Bay Critical Areas Plan, adopted January 1989.

is owned by the Town. The condition of this area, as discussed in Recommendations, is however not suitable at present for pedestrian use.

Natural Features

Wetlands and Waterways

The park area from Mattingly Park east to Town-owned land south of Woodland Village contains a variety of upland and wetland habitats. The shoreline is cut by three streams, one of which is locally known as Harrisons's Cut. This is mapped as a tributary stream[7] and requires a minimum 100 foot Buffer in the Critical Area. The outlet of Harrisons's Cut is a small tidal marsh inlet mapped as seasonally tidal, Palustrine, Emergent[8]. Upstream is a mapped, temporarily flooded, Palustrine, forested wetland at the head of which is the Town's sewage treatment plant. The wooded slopes adjacent to this wetland complex are steep and moderately eroded. This area is currently undeveloped and in private ownership.

Barely 200 feet west of Harrisons's Cut is a small intermittent, unmapped stream which during seasonally dry periods may be crossed on foot.

East of Harrisons's Cut, located on the Town-owned undeveloped parcel south of Woodland Village Park, is an unmapped, temporarily flooded, Palustrine, forested wetland stream which has been delineated and surveyed for this plan. While this too may be crossed on foot during drier seasons, soils in this area are saturated and the area is subject to frequent flooding.

Much of the shoreline east of Harrisons's Cut contains tidal marsh; this marsh widens as the creek channel extends southeast and the fastland curves to the north.

Soils

The shoreline area from Mattingly Park east to Harrisons's Cut was mapped by the Charles County Soil Survey[9] as

7. by definition of the Town of Indian Head Critical Area Plan

8. U.S. Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory maps (1982).

9. U. S. Department of Agriculture Soil Conservation Service. 1974. *Soil Survey of Charles County, Maryland.* Washington, D.C.

Aura gravelly sandy loam on 10 to 15 percent slopes. This soil map unit has moderate limitations for recreational facilities such as paths, trails and picnic areas, mainly due to coarse gravel on the soil surface.

To the east lies Harrisons's Cut, with a tidal marsh inlet at the outflow of the creek. Tidal marsh soils are unsuitable for development.

East of Harrisons's Cut is an area of Galestown loamy sand which also has moderate limitations to recreational facilities due to its sandy surface.

The undeveloped land owned by the Town south of Woodland Village has two types of soils: Mattapex, which has a moderately high seasonal water table and slowly permeable soils, and a nontidal wetland/stream with Bibb soils, which are considered hydric and unsuitable for development under the Town's Critical Area Program. Beyond this stream outlet is an extensive tidal marsh. The Mattapex soils are also slightly to moderately limiting for recreational uses.

Slopes and Shore Erosion

The shoreline Buffer between Mattingly Park and Harrisons's Cut contains steep slopes which exceed 15 percent in specific areas. The shoreline in this section is eroded and susceptible to further degradation due to pedestrian use and bank fishing. A narrow natural beach is evident at low water in some areas below steep bluffs. Erosive forces along the Mattingly Park shoreline have been somewhat curtailed by gabions, although there is a section near the fishing pier which is subject to overwash flooding.

East of Harrison's Cut, the south facing shoreline is less steep with slopes generally up to 5 percent.

Protecting Habitats

The Indian Head Critical Areas Plan, and the Maryland Critical Area Criteria mandate that Habitat Protection Areas

be established in order to protect and conserve fish, plant and wildlife habitats and protect the quality of water resources.

The establishment of Habitat Protection Areas is not intended to restrict or affect, beyond existing local, State or federal laws and regulations or private restrictions of private land, activities such as non-commercial, passive recreation (for example, hiking and nature photography), educational pursuits, scientific observation, hunting, trapping or fishing. (COMAR 14.15.10.01.N).

The explicit goal of establishing such areas is to minimize adverse impacts to natural habitats of the shoreline and adjacent lands.

Recommendations for Critical Area Habitats

Submerged Aquatic Vegetation (SAV):

Submerged aquatic vegetation or rooted aquatic vegetation is an important food source for aquatic animals and waterfowl. These plants are seed-bearing species which are rooted on the bottom, and whose leaves are usually at or below the water surface. They are found in waters which are shallow, generally less than 6 feet deep, enough to allow sufficient light for growth, and because of this habitat, are susceptible to disturbance by dredging or sedimentation.

Stands of wild celery (*Valisneria americana*) were located in Mattawoman Creek and surveyed in the fall of 1986 by the U. S. Geological Survey as part of a Potomac River sampling program (Orth et al 1986).

Recommendation:

SAV should be surveyed to examine potential impacts from fishing piers or observation platforms in shallow waters

Large Forested Areas (which are habitat for Forest Interior Dwelling Birds (FIDBs) and other wildlife)

Riparian Forests are relatively mature forests that occur near streams, wetlands, floodplains and shorelines, such as those along Mattawoman Creek east of Mattingly Park, including Harrisons's Cut and the nontidal wetland identified in the town-owned parcel. Other than providing valuable transitional habitat for many plants and animals, these forests have been identified by the Indian Head Critical Area Plan as important for protecting forest interior dwelling bird species (FIDBs) from human disturbances.

Recommendations:

Minimize disturbances during the breeding season, which occurs between May and August.

Avoid forest fragmentation and isolation in design. Allow corridors at least 300 feet wide to remain in mature forest with closed canopy, or afforest for this purpose.

Retain the typical layering patterns of a mature forest: this typically consists of a canopy, a subcanopy of smaller trees and one or two shrub layers, composed of shrub and young tree saplings.

Retain standing dead trees and fallen trees as they are important food sources and shelter for many protected bird species as well as other animals important in the forest food chain.

Design for park uses which are most compatible with these habitats.

Anadromous Fish Spawning Streams

These streams are important habitats of fish which live most of their life cycle in the Bay but migrate to freshwater to spawn. Many of these species, such as shad, river herring, white and yellow perch and striped bass, have commercial or recreational value. Mattawoman Creek is mapped by the Indian Head Critical Area Plan as such a spawning stream.

Values of Wetlands

Wetlands are valuable for the many physical, hydrological and biological functions which they provide:

Physical

- Wetland vegetation and shallow waters absorb coastal wave energy and reduce shore erosion.
- Wetlands slow water velocities and reduce sediment loads.
- Wetland plants and bottom sediments are sinks or transformers of excess nutrients, such as nitrates or phosphates. Some wetland plants have been used for tertiary treatment of wastewater.
- Wetlands may trap heavy metals, herbicides and pesticides.
- Wetlands plants reoxygenate water, lowering biological oxygen demand.

Hydrological

- Wetlands act as floodways when associated with rivers and adjacent floodplains, which convey water downstream.
- Wetlands store water during floods and release volumes slowly, reducing drastic flood surges.
- Wetlands, while most often water discharge areas, also may act as water recharge areas.

Recommendations:

Avoid disturbance of the buffer or in streams during the spawning period of March 1 to June 15.

Retain forest canopy over streams to provide cooling effects of shade.

Avoid dams or other interferences with upstream movement by fish.

Nontidal Wetlands

Three areas of nontidal wetlands were identified during this survey by existing mapped sources and by field survey. The National Wetlands Inventory, using black and white aerial photography dating from 1977, identified Harrisons's Cut as Palustrine, emergent, seasonally tidal, in its lower portions and Palustrine, forested, broad-leaved deciduous, temporarily flooded in its upper reaches. This is the outfall area for the Town's sewage treatment plant.

In addition, a mapped hydric soil area was identified from the Charles County Soil Survey. This area also contains an intermittent stream which outfalls to tidal marsh and the Natural Area identified by the Department of Natural Resources environmental review. This wetland, which was field delineated and surveyed, is identified as Palustrine, forested, broad-leaved deciduous, seasonally saturated, where it crosses the Town property.

Lastly, there is a small intermittent stream near the eastern border of Mattawoman Woods. At its confluence with the tidal marsh of Mattawoman Creek, it is Palustrine, forested, broad-leaved deciduous, temporarily flooded.

Recommendations:

Since these wetlands are under different ownership, several different modes of protection and management should be considered.

For wetlands occurring in the Town's park and open space lands and under fee simple Town management: These

natural areas should be viewed as opportunities for passive recreation and education as well as protecting water quality and valued habitat in the Critical Area. A simple pedestrian crossing such as a boardwalk/footpath would channel disturbance activities to suitable areas and provide access to upland areas beyond. In addition, by crossing this wetland in its middle reaches on the Town's property, disturbance of the sensitive natural area of the lower eastern marsh would be avoided, while providing public access to the shoreline of Mattawoman Creek.

For wetlands occurring outside the Town's current park and open space but within the Town's shoreline on the Mattawoman Creek: The Town of Indian Head Critical Area Program requires that a Buffer be established within 100 feet landward of Mean High Water of tidal waters, tributary streams and tidal wetlands. This is an area which is managed to protect shorelines, wetlands and aquatic and terrestrial environments from man-made disturbances. This Buffer will be expanded to include sensitive areas such as steep slopes, hydric soils and erodible soils to protect streams, wetlands and other aquatic environments.

For any development proposal, the Buffer should be expanded to include the tidal and nontidal wetlands associated with Harrisons's Cut, as well as the mapped tributary stream and steep slopes.

Threatened and Endangered Species Habitat

The tidal marsh east of Harrisons's Cut is adjacent to and includes a portion of a State Listed Species Site for the State Threatened American Lotus (*Nelumbo lutea*) which is an emergent floating leaved water plant, according to the Maryland Natural Heritage Program (Appendix 1).

Recommendation: Minimize disturbances to the fullest extent possible on slopes adjoining this tidal marsh and within the minimum 100 foot Buffer.

Waterfowl Staging and Concentration Areas (Appendix 2)

The tidal marshes to the east may be wintering areas and breeding areas for dabbling ducks such as black duck and mallard.

Biological

- Wetland plants and invertebrates serve as the basis of a highly productive food chain.
- Wetlands are nursery and spawning areas for many species of finfish and shellfish. From 60 to 90 percent of commercially caught fish depend on coastal wetlands for food or spawning.
- Wetlands are also an importnat habitat for many waterfowl and wildlife species, serving as protective areas for feeding, resting, and breeding.
- Wetlands are habitat for many rare and endangered species. Almost 35 percent of protected animal species are found in wetlands, although wetlands cover only about 5 percent of the nation's land area.

Cultural

- Wetlands often contain important historical and archeological sites since they were early sources of food.
- Wetlands serve important recreational and commercial values in hunting, trapping and fishing.
- Wetlands which are forested may be managed for valuable timber production.
- Wetlands are open space amenities, providing borrowed landscape for bird and wildlife observation.

adapted from: *Protecting America's Wetlands: An Action Agenda. Final Report*, National Wetlands Policy Forum. 1988. The Conservation Foundation, Washington, D. C.

Recommendation:

Construct water-dependent facilities, such as boat ramps and fishing piers on the western portion of the area.

Recommendations

two

Summary of Important Features: Constraints and Opportunities

Figure 3

Mattingly Park

The existing fishing pier, the existing privately owned and operated boat ramp and patterns of existing use suggest that fishing is an important activity at this end of the park area and access should be improved for this purpose. Long-term management of the open space lawn will be necessary to maintain the visual quality of this park while sustaining heavy pedestrian traffic. Access to the trail to the east is not well defined. The bank at the east side of the fishing pier is subject to heavy pedestrian traffic.

Mattawoman Woods Buffer

There is an existing beach used for fishing beyond a bamboo clump in the Mattawoman Woods Buffer. Beyond this to the east are additional locations which are used for bank fishing, but continued use and traffic will exacerbate shore erosion and bank degradation, possibly resulting in fallen trees. The existing trail, is suitable for use in this area if portions of it can be upgraded where the bank slopes steeply. Measures to protect tree roots from soil erosion due to pedestrian traffic should also be taken.

Privately Owned lands

There is an existing beach and eroding spit used for fishing and beaching boats close to the western property edge. This bank is an excellent location for a sundeck with controlled access to the beach below for fishing, sunning and other "passive" activities. No tree removal should be required for an approximately 20 foot x 20 foot structure.

The area of Harrison's Cut, with its sloped banks and wetland/upland habitat diversity offers interior views and an excellent opportunity for nature study and walking. There are existing trails on the west parcel which link to residential areas of the Town. The forest on the west parcel is generally mature oak-hickory with an understory of mountain laurel. Two ways of crossing the wetland area are possible: 1) across tidal wetlands, approximately 250 to 300 feet to allow maximum viewing possibility of Mattawoman Creek and tidal wetlands; and 2) upstream between sloped banks approximately 50 to 100 feet in forested nontidal wetland. Both crossings require a structure such as a boardwalk to protect underlying vegetation and substrate. These should be oriented to minimize slope degradation and tree removal. The steep slopes adjacent to the stream and floodplain contain large diameter trees, one of which, a beech, is locally known and is a natural locus of the existing trails.

East of Harrison's Cut, there is a young successional forest dominated by tulip poplar, loblolly and Virginia pines and sweetgum. Some areas of the understory are infested with Japanese honeysuckle vines. Soils are in general less well-drained in the eastern half of the park area, and the topography is flat to gently sloping. There is an existing fishing pier at the shoreline in the eastern privately-owned parcel. Shrub-scrub tidal wetlands hug the shoreline, limiting views to the creek, except where there is a short slope.

Town-owned parcel south of Woodland Village

This parcel contains an excellent vantage point for the vast tidal wetlands to the east and south. This is located approximately 100 feet east of the property line and has been located with topography for this study. The shoreline offers the best opportunity for views and walking southwest of the wetland area.

Much of this parcel is nontidal wetland and bottomland. A stream with its floodplain wetland splits the parcel into two halves, the smaller of which is accessible to existing park facilities at Woodland Village.

There are two potential crossings of the wetland, both of which require structures to protect underlying vegetation and substrate. The south crossing is approximately 100 feet long between the delineated wetland/upland boundaries. This offers the best opportunity for observation of habitat diversity. There is a clump of tulip poplars on the eastern bank which is a good rest/seat location. The wetland may also be crossed upstream of this crossing point to a limit of 200 feet farther, where it is about 75 feet wide. Beyond this, the habitat diversity and visual value diminish greatly, mainly due to Japanese honeysuckle when observed in early spring. Also upstream of this point, the wetland has been utilized for stormwater release and may be subjected to high flooding.

The lower slopes east of the wetland are dominated by young tulip poplar, with upper slopes dominated by Virginia pine. There are at least two areas identified during our visits which are unsuitable for pedestrian use because of long-term dumping. These areas may be a safety hazard. Two potential trail routes from Woodland Village Park to these wetland crossings and the potential observation point were identified, flagged and surveyed during this study.

Phasing of Park Development

Figure 4

The existing pattern of ownership and management of the shoreline strongly suggests phasing of park development. A total plan might be accomplished in stages with the availability of funding and with changes in land ownership or development.

Phase I Mattingly Park and Mattawoman Woods

This area was chosen as Phase I because of the current need to correct bank degradation and enhance fishing access in this area already dedicated to the Town.

Three alternatives focused on four specific areas for improvements were discussed for this plan. These four areas are:

Figure 5

A. The existing fishing beach/bank which we had identified earlier as an ideal spot for an on-shore deck because of the bank contours, the natural opening in the woods, its location at the end farthest from the existing pier, and existing use patterns. Unfortunately, the major drawback is that, according to the site plan of Mattawoman Woods, this area appears to be on the Hungerford property. We continue to recommend this location if the Town can negotiate it. This has the potential to be the largest and most flexible type of deck or pier structure, either on land or water, which would serve handicapped people.

B. The possibility of a second alternative deck location is limited due to steep banks along the shoreline and the need for handicapped access. A possible location of a second alternative is just to the east of the bamboo stand, where a small cleared area indicates that the area is being used by fishermen. Although the access area is small, a pier could be built from this point extending parallel to the bank under shade trees. This location poses potential permit hurdles because of nearshore shallow water habitat disturbance, and will certainly require an Army Corps of Engineers permit.

C. Another alternative pier location is farther east along the shoreline. This requires however a grade change with steps and would probably not be handicapped accessible. We recommend that steps be installed to the beach to help control access which may be aggravating bank erosion. Some shore stabilization may be necessary as well.

D. The open space of Mattingly Park near the existing fishing pier may benefit from some landscape improvements in order to ease wear and tear on grass cover, lower maintenance costs, add some bank shade and conceptually tie the nature trail into the park. Co-ordinated signs for the park and nature trail would be another option here.

The optimum approach for Phase I construction would be:

1. Upgrade and stabilize the existing trail route, avoiding to the extent possible surface roots of large trees, especially the large sweetgum and large beech. This will require minimal grading and either installation of side curbs to hold mulch or cutting on the uphill side. There is about 40 feet of the trail which may require a higher, about 18 to 24 inch, retaining wall. We recommend a wooden bulkhead structure tied into steps at C.

Figure 6

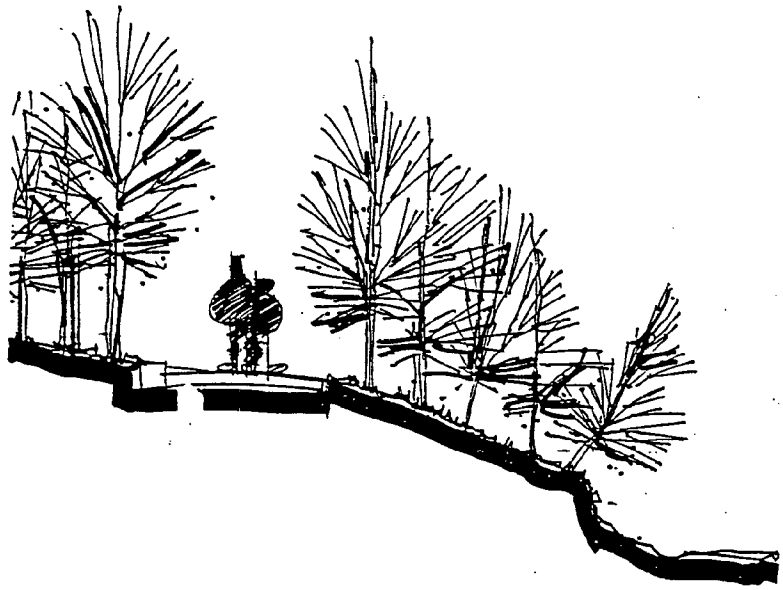


Figure 6

2. Control access to the shoreline by keeping existing patterns but providing hard surfaces such as steps to beach to prevent further bank degradation at B and C. In addition, a fishing pier/landing could be constructed at location B where the heaviest use now occurs and where it would be shaded by existing trees. Control erosion if necessary with gabions or wooden bulkhead. Investigate tree removal if leaning oak tree endangers shoreline trail.

3. Add signs at Mattingly Park as needed.

4. Landscape improvements to Mattingly Park to tie into nature walk, such as visual opening, selected shrub plantings. Other landscaping as needed in part to address long-term maintenance.

Phase II Woodland Village Nature Park Expansion

Development in this area should focus on "passive" activities that not only utilize but enhance the natural setting and habitats. Two major structures and trail improvements are suggested for this phase on Town-owned land.

A. The best opportunity for an observation locus for the shoreline and Mattawoman Creek is located at the southwestern corner of this site. A boardwalk built into the tidal marsh could serve important education and research objectives fostered by the Town's Critical Areas Plan and by the Chesapeake Bay Critical Areas Act. Such a structure will require review by commenting and permitting agencies as summarized in the next chapter.

B. A trail leading to this boardwalk as the terminus for Phase II construction could be established along suggested routes to minimize traffic in more sensitive areas such as shoreline wetlands and the slope on the west side. Trail improvements would be minimal, although direction should be well-established by marking trees or low level signage, and tree roots protected as needed by regular mulching.

C. A boardwalk crossing should be constructed over the wetland to protect water quality and habitat if a trail is to be used. This boardwalk should be constructed at the southern location to utilize the natural rest area under a clump of trees and to view maximum diversity. Pedestrian traffic on upland trails should be strongly channeled to such a structure in order to alleviate widespread disturbance of the wetland.

Figure 7

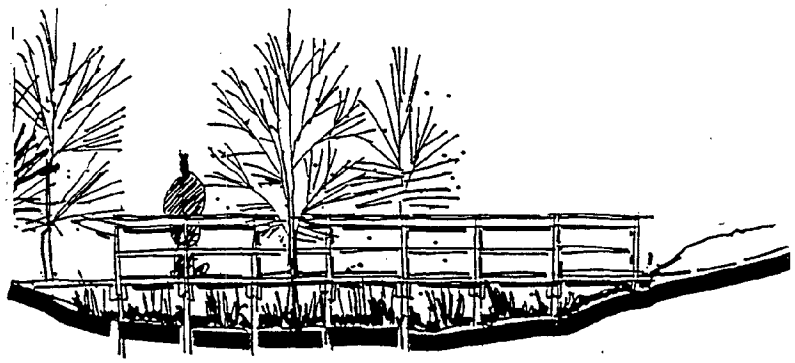


Figure 7

D. Clean up trash, particularly where it poses a safety hazard to adjoining development or threatens water quality downstream.

E. Investigate control of Japanese honeysuckle vines and replanting measures where needed.

Phase III

This would be better divided into two sub-phases as opportunities develop on the two privately owned parcels. Development of both of these parcels will be regulated by the Town's Critical Areas Plan and will include such features as expanding the minimum Buffer around Harrison's Cut, thus providing the Town with an opportunity for dedicated parkland.

A Natural Park should be a place with significant, well managed natural features that provide an unforgettable experience. Recommended management approaches which outline ways of creating opportunities for educational visitor activities, without destroying fragile components are:

- Define visitation capacity limits for each park; develop measures so that the capacity limit is not exceeded. Measures that can be used so that capacity limits are not exceeded include:

  user fees;

  limits on the number, size, or visibility of access routes into the park;

  limiting the size of parking areas;

  and control of publicity

All of these measures could be used in conjunction with a monitoring of park conditions so that park-specific visitor limits can be established by practical experience.

- Limits on attendance and/or activities such as hiking, camping and boating when resources or wildlife are susceptible to public disturbance (nest seasons) or close park entirely during the breeding season (closing entirely needs enforcement)
- Limits on park use during times when ground cover is sensitive, i.e., times after a heavy rain, flood or at beginning of spring when vegetation is just recovering from winter dormancy.
- Limit structures that may be built within a natural park to lessen the impact to sensitive resources. Structure could be limited to: trails, observation blinds, catwalks, rain shelters, rest stops, instructional pavilions, maintenance offices and maintenance equipment storage sheds. These should be sited to minimize habitat disturbance, preferably off-site.

Town of Indian Head Critical Areas Plan, adopted January 1989

A. West Parcel (Hungerford parcel 162)

This parcel may be linked with the Mattawoman Woods Buffer at location A in Phase I above, with possible construction of a deck or fishing pier. Existing trails in the woodland may be utilized for pedestrian access from neighboring residential areas, especially the end of Mattawoman Court and Susan Drive. The slope above Harrison's Cut offers numerous locations for rest and contemplation, by providing benches or even towers. Such a tower could be built at the west end of a future boardwalk across the tidal marsh.

Figure 8

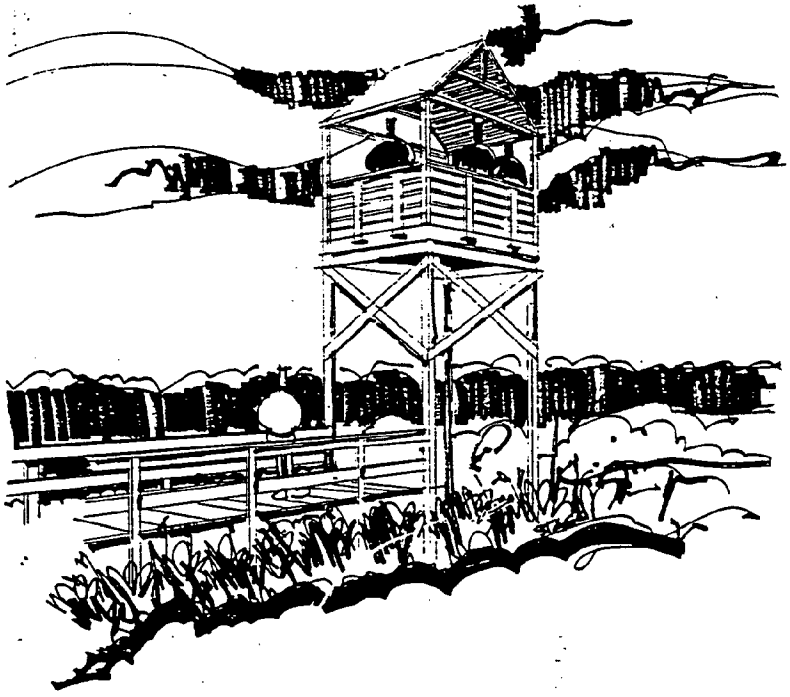


Figure 8

B. East Parcel (Fannie E. Brown parcel 182)

The shoreline of this parcel is the most isolated of all because it is located between two wetlands which require structural crossing improvements. The location of the existing fishing pier, although closer to sensitive tidal wetlands, is an alternative spot to location A, Phase I for additional Town fishing piers or boat landings. There is a

cleared, unimproved road through the forest to this pier which is a possible access that would minimize clearing and disturbance in the Buffer.

Access for People with Disabilities

There are many barriers to participation in recreational programs and facilities faced by disabled people. While physical barriers come most often to mind, there are social or attitude barriers which can be alleviated by educating park staff about the special needs and abilities of disabled people and making adjustments when necessary. Because this is a plan for physical park improvements, only physical barriers will be discussed here in more detail.

For localities and agencies which receive federal funding, federal legislation mandates access to recreational facilities and programs. The Architectural Barriers Act, passed in 1968, fostered the eventual development of the Uniform Federal Accessibility Standards (UFAS), adopted in 1984. These are the guidelines for construction and renovation with which federal agencies or agencies which receive federal funds should comply. Adhering to these standards helps most people with physical disabilities negotiate what might formerly have been barriers to participation, but these standards still do not guarantee access. The providers of recreation programs and facilities should be aware of some shortcomings:

- UFAS standards outline the minimum specifications. When warranted, exceeding these may improve access, such as lowering the grade of slope on a ramp.

- These standards apply to federal funding of projects. Projects with other funding should maintain these standards.

- UFAS standards do not necessarily apply to many commonly offered recreational facilities such as trails and playgrounds.

Furthermore, Section 504 of the Rehabilitation Act of 1973, amended 1978, states:

> No otherwise qualified handicapped individual in the United States...shall solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance.

Physical Limitations

For people who have difficulty walking, these might include steps or steep slopes, uneven surfaces, raised or uneven expansion joints, slippery surfaces, walks with debris and areas that collect standing water, sand or ice. Not only for wheelchairs but for some walkers, curbs can be a barrier.

Visual Limitations

To people who are disabled visually, some environmental elements of concern may be obstacles in path of movement, going up and down steps, reading signs or printed materials and obtaining or determining directions from visual cues.

Specific Recommendations for Disabled Access to Nature Park Facilities

- Assure that bank fishing activities may be accessible by providing at least one constructed pier accessed by ramps (where existing bank slopes allow construction) and by meeting or exceeding minimum UFAS standards and specifications for building ramps and walkways. This may apply as well to nature observation and boardwalk facilities close to Mattingly Park and Woodland Village Park where automobile parking can be utilized.

- Signs should use where possible graphic and/or tactile symbols to facilitate use of the park by visually impaired, or those with learning disabilities.

- Provide long-term maintenance which assures that safety hazards and obstacles will be removed as necessary.

Implementation

three

In this section is a discussion of elements in the process of expanding these recommendations into specific plans and installing them in the ground. It includes some items which will help to facilitate this process.

Acquiring Open Space

Through its Zoning Ordinance and its Critical Areas Plan and Ordinance, the Town of Indian Head already has some strong tools for acquiring additional dedicated open space along the Mattawoman Creek shoreline. This will be important to the eventual linkage of the two Town parks at either end. As already noted, the Critical Area Buffer should be expanded to include sensitive areas such as the tributary stream of Harrison's Cut. Development which is not water-dependent is prohibited in the Buffer. Site plan approvals of proposed development in private lands on the shoreline should require dedication of the Buffer as Town park, or at least public access rights to the shoreline for pedestrians.

Developing Recreation Facilities

Many Town residents already enjoy access to the shoreline from Mattingly Park east through the Mattawoman Woods Buffer, and from Woodland Village south. However, to protect sensitive habitats, this access should be channeled through appropriate constructed facilities such as trail improvements, bulkhead, boardwalks and stairs, and fishing piers. Not only will this retard processes which may result in degradation of habitats and water quality, but it will also enhance Town residents' enjoyment of this natural asset. Access may be improved for those currently unable

for physical reasons to enjoy the parks. Specific educational objectives fostered by the Town's Critical Areas Plan and the Chesapeake Bay Critical Area Commission may also be served, thus informing all area residents of the importance of protecting this resource.

To develop such facilities, specifications and bid documents should be prepared. This can be done in conjunction with acquiring funding, or after funding has been secured. A cost estimate with design drawings may often be sufficient to secure funding to produce more detailed drawings and specifications.

Selected suggested plans and cost estimates for certain constructed facilities were included in this study. A later, additional, product of this study was specifications for Phase I improvements, which are included in Appendix 3. This also contains recommendations for clearing in the Buffer from The Maryland Department of Natural Resources.

COST ESTIMATES

SELECT PHASE 1

SITE IMPROVEMENTS

Figure 9A

FISHING DECK/OVERLOOK; WEST END OF TRAIL

Site Mobilization/ Prepare work staging area		$ 500.00
Stakeout of Deck in Field		750.00
Deck Construction 600 s.f.		9,000.00
Access steps/grade stabilization		1,500.00
Site Clean-up		750.00
	Subtotal	$12,500.00
10% Contingency		1,250.00
	Total	$13,750.00

WETLAND BOARDWALK CROSSING; EAST END OF TRAIL

SiteMobili-zation/Prepare work staging area		$ 1,500.00
Stakeout of Boardwalk in Field		2,500.00
Clearing/Site Preparation		1,000.00
Deck Construction 130'± length		
Auger/jet posts in place 36 posts @ $75.00 ea.	$2700.00	
Deck Construction $15 s.f./$90 L.f.	$11700.00	
Hand rail $10 L.f.	$2600.00	
Anchor at ends	$1000.00	18,000.00
Site Repair		1,200.00
	Subtotal	$24,200.00
10% Contingency		2,420.00
	TOTAL	$26,620.00

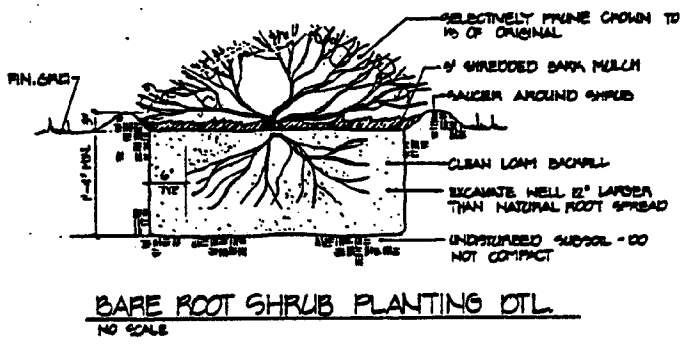
Figure 9B

Table 1

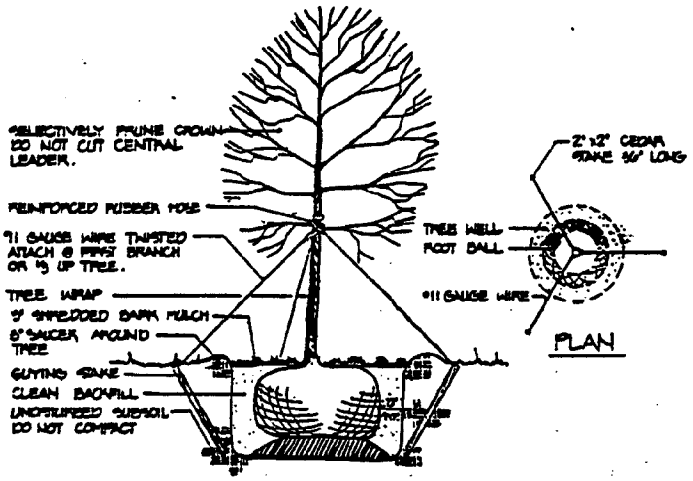
Figure 10

Suggested Plants for a Nature Park

This plan included recommendations as well for additional landscaping and plantings for Mattingly Park and the shoreline buffer. A list of recommended species of trees, small trees and shrubs has been included with general specifications for planting and staking. The tolerance of these plants to flooding, salt and drought has also been included; choosing appropriate plants for conditions at the park will ensure long-term survivability and continued park enjoyment by residents. These choices are also important to a long-term management program.



BARE ROOT SHRUB PLANTING DTL.
NO SCALE



TREE STAKING DETAIL
NO SCALE

Figure 10

Funding Options

The tools of public finance are designed to tap the principal source of revenue-personal wealth. The tools must be matched to the programs they finance in equitable, creative and efficient ways. Once the tools have been chosen and approved, a mechanism must be established to manage the flow of funds, and an institution for financial management should be created.

Suggested Plants for Nature Park Landscaping

Table 1

Botanical Name	Common Name	Soil Drainage	Shade Tolerant	Flood Tolerant	Salt Tolerant	Drought Resistant
Trees						
Acer rubrum	red maple	very poor to well-drained	yes	yes	sensitve	moderate
Fraxinus pennsylvanica	green ash	moderately poor to well-drained	no	yes	moderate	yes
Liquidambar stryraciflua	sweetgum	poor to well-drained	no	yes	moderate	
Liriodendron tulipifera	tulip poplar, yellow poplar	moderately well to well-drained	moderate	no	no	
Pinus taeda	loblolly pine	moderately poor to well-drained	no	no	no	yes
Quercus palustris	pin oak	poor to well-drained	no	yes	yes	yes
Quercus phellos	willow oak	poor to well-drained	yes	yes	yes	yes
Small Trees						
Cornus florida	flowering dogwood	moderately well to well-drained	yes	no	moderate	
Ilex opaca	American holly	poorly drained to well-drained	yes	no	no	yes
Magnolia virginiana	sweetbay magnolia	very poor to moderately poorly drained	yes	yes	yes	no
Malus spp.	crabapple	moderately well to well-drained	no	moderate	moderate	yes
Pinus virginiana	Virginia pine	moderately well to excessively drained	no	no	yes	yes

Suggested Plants (Continued)

Botanical Name	Common Name	Soil Drainage	Shade Tollerant	Flood Tollerant	Salt Tolerant	Drought Resistant
Shrubs						
Cornus stolonifera	red osier dogwood	very poor to well-drained	no	yes	no	yes
Hamamelis virginiana	witchhazel	moderately poor to well-drained	yes	no	no	no
Kalmia latifolia	mountain laurel	moderately well to well-drained	yes	yes	moderate	moderate
Lindera benzoin	spicebush	moderately poor to moderately well-drained	yes	yes	yes	no
Myrica cerifera	wax myrtle	poor to excessively drained	no	yes	yes	yes
Myrica pensylvanica	Northern bayberry	very poor to excessively drained	no	yes	yes	yes
Vaccinium spp.	highbush blueberry	very poor to well-drained	yes	yes	yes	moderate
Viburnum dentatum	arrowwood	moderately poor to well-drained	yes	yes	yes	yes

adapted from: Hightshoe, Gary L. 1988. *Native Trees, Shrubs and Vines for Urban and Rural America*: A Planting Design Manual for Environmental Designers. Van Nostrand Reinhold, New York, NY.

Accessing Funds

There are many ways to secure funds. These may be those programs stated below, or may be through taxes, user fees, other intergovernmental grants, and debt. A good rule of thumb is that property and sales taxes finance activities that benefit entire communities, while user fees raise funds from select groups of beneficiaries. Debt financing will raise large amounts of capital which may be repaid through taxes or user fees during a project's useful life. More innovative capital programs attract private participation to joint ventures. Many secondary benefits from public financing, such as stimulating local economy and employment, attracting investment and people may result.

Managing Funds

Starting and finishing a development project depends on the availability of funds at the right time. Many public access facilities may require operational budgets, as well as start-up capital. Provision must be made to accumulate and disburse funds.

To ensure program continuity, some jurisdictions have sought permanent financial management mechanisms outside annual budgeting. These may include enterprise funds, dedicated trust funds, bond banks, or revolving loan funds. Enterprise funds and dedicated trust funds earmark and control taxes or fees to finance a single self-supporting activity. Revolving loan funds, once capitalized, can lend money for local projects at below-market rates. As initial loans are repaid, the fund is replenished for new loans. Capitalization is sometimes found in private sources.

Some funding sources and management mechanisms worth exploring are:

- Property Tax Surcharge

  A surcharge is an additional, often temporary, levy to an established rate, which may help to raise funds for specific projects. These would be essentially one-time only projects which would not require regular replacement, although a surcharge may include measures

for operation and maintenance. Property taxes may be an equitable source of funding for shoreline stabilization and protection, where it is assessed against beach front owners.

- Real Estate Transfer Tax

  Such a sales tax, assessed on beachfront property may help to provide a low cost funding program, such as revolving loan program, for shoreline stabilization and improvement of public access facilities.

- User Fees

  An annual permit or parking sticker for water access facilities would be the most practical application of this alternative. The Town will need to monitor and enforce this program, and the costs of this enforcement should be built into the fee. Properly assessed, these fees could ensure a long-term source of funds to finance operations such as trash removal, strengthen the ability to issue low cost bonds, and contribute to retained capital for later investment in repairs.

State and Federal Funds

- Waterway Improvement Program

  The Waterway Grants and Project Planning division is responsible for recreational access to the Chesapeake Bay and its tributaries with emphasis on projects and activities related to the general boating public. Activities include liaison with federal, state and local agencies in promoting, designing, constructing and financing marine facilities.

- Recreational Boating Program

  Administered by the Boating Administration, this program reviews permits and provides technical support to develop facilities such as ramps, piers,

and marinas which are beneficial to the general boating public.

- Program Open Space

  These funds, administered by the Department of Natural Resources are provided by Maryland's real estate transfer tax and the Land and Water Conservation Fund at the federal level. Fifty percent is allocated to local jurisdictions for acquiring open space on a 100% reimbursable basis. This reimbursable also includes planning tasks. Development and construction are reimbursed on a 75%basis. Application may be made directly to Program Open Space. Jurisdictions may stockpile or encumber monies toward specifically planned projects in order to accumulate sufficient funds to acquire or develop open space acreage. This mechanism is essential to small jurisdictions which receive small amounts of funding and have small local budgets.

Sources of additional information are listed at the end of this chapter.

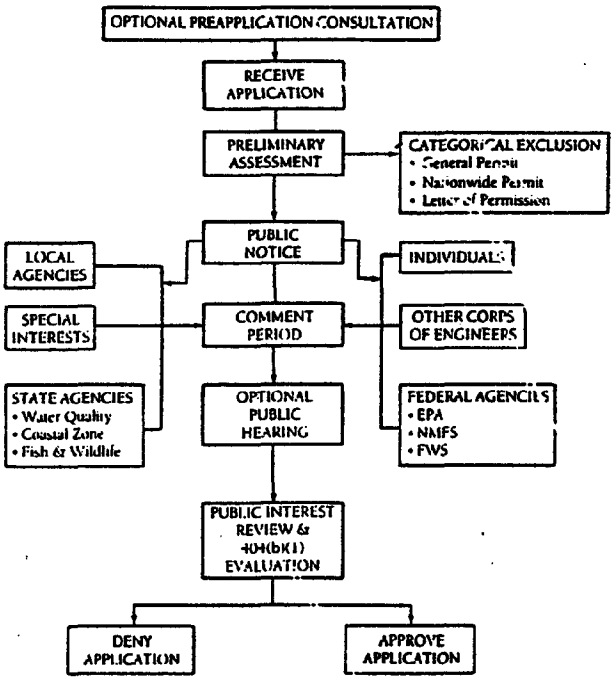
Permits

Proposed construction of recreational facilities may require an assortment of federal, state or local permits. These are summarized in tabular form according to proposed use. Sources of additional information are also listed at the end of this chapter.

Table 2

Figure 11

THE U.S. ARMY CORPS OF ENGINEERS' PERMITTING PROCESS



Source: Adapted from U.S. Army Corps of Engineers.

Figure 11

Postscript

Construction and Management

Many local governments' design and funding efforts focus on initial construction but do not include provision for maintenance and upgrades of facilities as needed. The proposed Nature Park and Trail should remain a "a place with significant, well managed natural features that provide an unforgettable experience." Recommendations for management were outlined earlier in this plan. An adequate maintenance plan should be submitted with any funding applications, and should determine maintenance responsibility and project a five year budget.

In addition, periodic review of master plans to determine if they still conform with existing patterns of use and features, and updating these plans as necessary will ensure that Town parks will continue to serve Town residents.

Table 2

Water Access and Park Permits

		Boat Ramps	Car Top Put-In (pedestrian access)	Beach	Fishing Piers
Federal					
Section 404, Clean Water Act (33 U. S. C. 1344)[a]	Discharge of dredged or fill material into "waters of the U. S."	■	□	▨	▨
Section 10, Rivers and Harbors Act of 1899 (33 U. S. C. 403)[a] U. S. Army Corps of Engineers	Obstruction or alteration of navigable waters of the U. S. In addition, the State of Maryland is required to issue a Water Quality Certification for any federally permitted activity which may result in a discharge of dredged or fill material to State waters or wetlands				
State					
Section 401, Clean Water Act Maryland Department of the Environment Water Management Administration	Water Quality Certification (as above) certifies that activity does not cause violation of Maryland state water quality standards.	b			
Section 307, Coastal Zone Management Act Department of Natural Resources Water Resources Administration	Applicants for federally permitted projects are required to certify that the project is consistent with the Coastal Zone Management Program, with which the State concurs or disagrees.	b			
Wetlands Law (Title 9 Natural Resources Article, Annotated Code of Maryland) Department of Natural Resources Water Resources Administration	Alteration of tidal wetlands or discharge of stormwater. Either a Wetlands License issued by the Board of Public Works and/or a Wetlands Permit granted by the Department of Natural Resources.	■	▨	▨	▨

■ Usually applies ▨ may apply □ is not required

Water Access and Park Permits (Continued)

		Boat Ramps	Car Top Put-In (pedestrian access)	Beach	Fishing Piers
Section 8-803, Natural Resources Article, Annotated Code of Maryland Department of Natural Resources Water Resources Administration	Construction in any 100 year floodplain which alters the course, current, or cross-section of a stream of body of water within the State.	■	▒	▒	▒
Nontidal Wetlands Protection Act (Section 8-1201-8-1211, Natural Resources Article, Annotated Code of Maryland) Department of Natural Resources Water Resources Administration	Grading, filling, excavating, destroying or removing vegetation, altering the water level, or placing structures in a nontidal wetland or within its 25 foot buffer, or 100 foot expanded buffer.	■	▒	□	▒
Town of Indian Head					
Stormwater Management	Review of disturbances greater than 5,000 square feet for compliance with State of Maryland regulations.	▒	□	▒	□
Sediment and Erosion Control and Grading Permits	Issued by the Town of Indian Head with review by Soil Conservation Service for disturbances greater than 5,000 square feet both inside and out of Critical Area.	▒	□	▒	▒
Building Permits	Site plan and construction plan review and enforcement by Town Manager's Office.	■	▒	■	▒
Critical Areas Plan and Critical Area Ordinance	Regulates development within 1,000 feet from tidal waters and tidal wetlands as defined by the Plan and Natural Resources Article Section 8-1801 through 8-1816, and requires implementation of Critical Area Criteria which protect water quality and plant, wildlife and fish habitats. The Chesapeake Bay Critical Area Commission may comment on development proposals, and is a referral agency with other State agencies as listed in the Town of Indian Head Plan.	■	■	■	■

[a] Information and joint applications may be obtained from: Maryland Dept. of Natural Resources, Water Resources Administration, Wetland & Waterways Program, 580 Taylor Ave., D-4, Annapolis, MD 21401

[b] As above for Section 404 permits

Additional Sources of Information

Protected Habitats

Forestry & Woodland Protection
Bay Watershed Forester
Forest, Park and Wildlife Service
Department of Natural Resources
P. O. Box 2746
LaPlata, MD 20646
301-934-2543

Environmental Review
Donald E. MacLauchlan, Assistant Secretary
Department of Natural Resources
Tawes State Office Building
Annapolis, MD 21401
301-974-5551

Wildlife Protection
Department of Natural Resources
P. O. Box 68
Wye Mills, MD 21679
301-827-8612

Sediment and Erosion Control
Allen "Pete" Cruickshank
U. S. Department of Agriculture Soil Conservation Service
Charles County Soil Conservation District
LaPlata, MD

Critical Areas
Chesapeake Bay Critical Areas Commission
Ren Serey, Chief
Project Evaluation
West Garrett Place, Suite 320
275 West Street
Annapolis, MD 21401
301-974-2418

Recreation Planning
Charles County Planning/Technical Assistance
George Maurer
Charles County
LaPlata, MD
Charles County Recreation
Tom Rowland
301-932-3440

Waterway Improvement Program
Boating Administration
Maryland Department of Natural Resources
Preston Hartge
Tawes State Office Building, E-4
Annapolis, MD 21401
301-841-5607

Program Open Space
Maryland Department of Natural Resources
Annapolis, MD 21401
301-974-7231

Wetlands and Waterways

Federal Permits
U.S. Army Corps of Engineers
Baltimore District
P.O. Box 1715
Baltimore, MD 21203-1715
Attention: CENAB-OP-R
301-962-3670

State Licenses & Permits
Department of Natural Resources
Water Resources Administration
Tidal Wetlands Division
Tawes State Office Building
Taylor Avenue
Annapolis, Maryland 21401
301-974-3871

Department of Natural Resources
Water Resources Administration
Waterway Permits Division
Tawes State Office Building
Taylor Avenue
Annapolis, Maryland 21401
301-974-2265

Department of Natural Resources
Water Resources Administration
Nontidal Wetlands Division
Tawes State Office Building
Taylor Avenue
Annapolis, Maryland 21401
301-974-3841

Coastal Zone Consistency Statement
Department of Natural Resources
Water Resources Administration
Wetlands and Waterways Program
Tawes State Office Building
Taylor Avenue
Annapolis, Maryland 21401
301-974-2156

Water Quality Certification
Department of the Environment
Water Management Administration
Division of Standards and Certification
2500 Broening Highway
Baltimore, Maryland 21224
301-631-3609

Appendix 1

Project Environmental Review (ER #90.01.009)
Sketch of Listed Species Site

Source: *Maryland Department of Natural Resources*
Forest, Park and Wildlife Service

Maryland Department Of Natural Resources

Forest, Park and Wildlife Service
Tawes State Office Building
Annapolis, Maryland 21401

January 30, 1991

Ms. Ginger Page Howell
REDMAN/JOHNSTON ASSOCIATES, LTD.
1132 Canvasback Drive
Suite C
Easton, MD 21601

Re: Indian Head Town Park Concept

Dear Ms. Howell:

This is in response to your request for information regarding the above referenced project. There are no known Federal or State threatened or endangered plant or wildlife species present at this project site.

The portion of the site east of Harrison Cut is adjacent to, or includes, a section of a Listed Species Site (Map enclosed) for the State Threatened America Lotus (Nelumbo lutea). This Habitat Protection Area includes tidal wetlands plus the minimum 100-foot Critical Area Buffer. In accordance with the Critical Area Criteria, no new development activities including the clearing of existing vegetation is allowed in the Buffer in Habitat Protect Areas. Therefore, development activities associated with the nature park should not disturb the minimum 100-foot Buffer in the Listed Species Site. Please bear in mind that, pursuant to the Criteria, the 100-foot limit of the Buffer must be expanded to include contiguous sensitive areas such as steep slopes, non-tidal wetlands and highly erodible soils.

Should you have any further concerns about this information, please contact Wayne Tyndall of the Natural Heritage Program, Tawes State Office Building, B-2, Annapolis, Maryland 21401, (301) 974-2870.

The project area is located within the Chesapeake Bay Critical Area and, therefore, certain other protected wildlife habitats must be addressed by the proposed project development plan.

Corridors of existing woodland vegetation must be maintained, to the extent practical, when development activities or the cutting or clearing of trees occurs in forested areas to provide effective connections between wildlife habitat area.

For additional information please do not hesitate to contact Bill Gates at (301) 827-8612.

we offer the following comments relative to forestry interests.

- A 100 foot naturally vegetated Forest Buffer shall be maintained and delineated from the Mean High Water Line of tidal waters, tributary streams, and tidal wetlands.

- A 50 foot naturally vegetated Forest Buffer should be delineated and maintained adjacent to all nontidal wetlands on the site.

- The 1000 foot Critical Area Line is not correctly shown on the site plan.

- Existing vegetation on the site has not been correctly identified and mapped.

- Development activities have not been designed to minimize destruction of forest and woodland vegetation.

- New development is prohibited from locating in the Buffer except water-dependent facilities.

- Impervious areas shall be limited to 15% of the site. It appears you have not met this requirement.

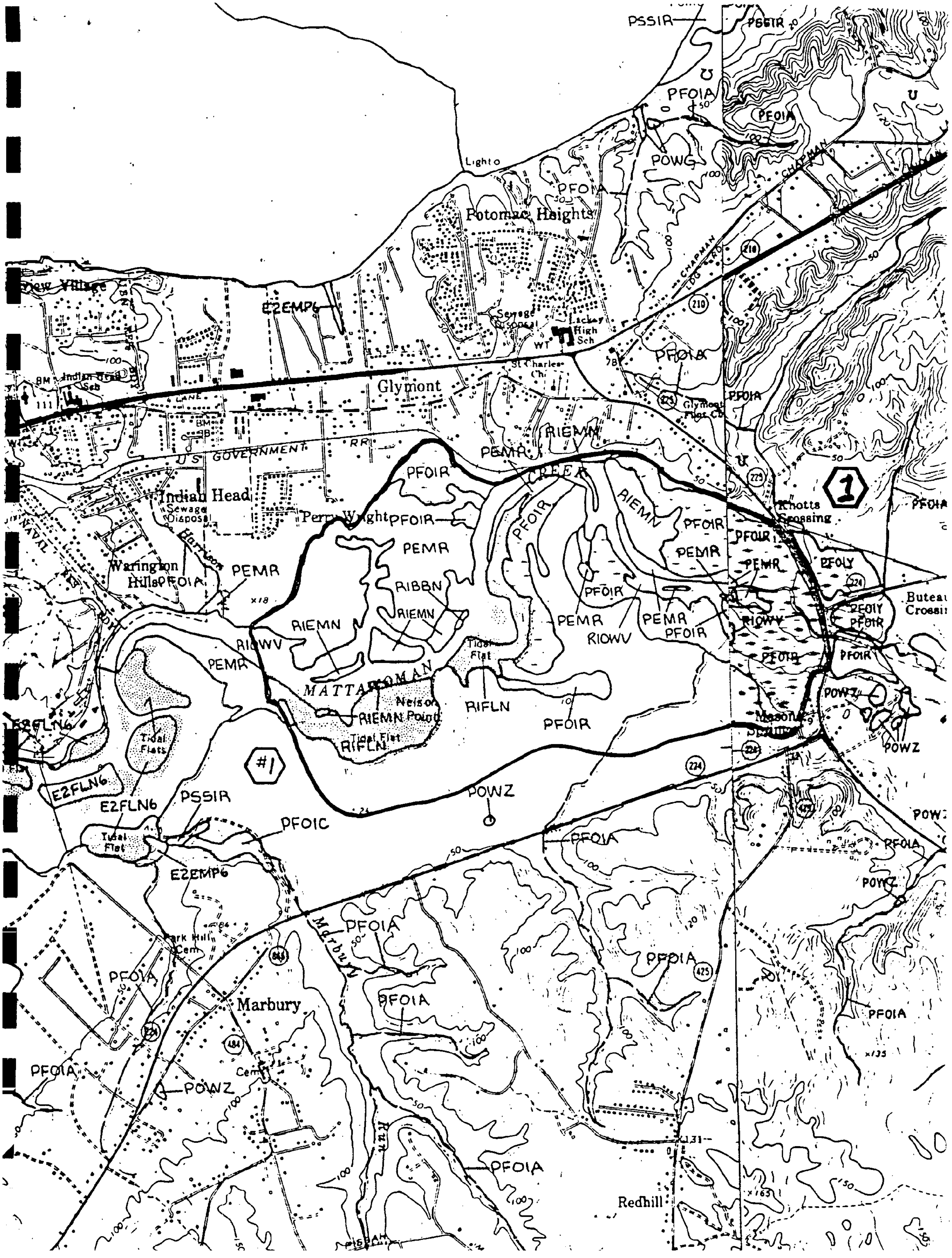
- Tree planting assistance is available to create forest buffer along water ways and to establish forests in open areas. Disturbance is prohibited in the 100 foot buffer unless the activity is water dependent. Interpreting programs should be established concerning water quality, tree planting, forest management and natural areas.

If additional information is required please contact David Gailey at (301) 934-2543.

Sincerely,

James Burtis/RHH

James Burtis, Jr.
Director, Planning and Program Development
JB:dec
cc: Bill Gates
Lynn Davidson
David Gailey
Jeff Horan
Jackie Magness
ER# 90.01.009


PSSIR
PFOIA
POWG
Potomac Heights
New Village
E2EMP6
Sewage Disposal
Lackey High Sch
Glymont
St Charles Ch
Glymont Fire Co
U S GOVERNMENT RR
RIEMN
PEMR
PFOIR
CREEK
Indian Head
Sewage Disposal
Perry Wright
Warington Hills
Harrison
RIBBN
RIOWV
Tidal Flat
MATTAWOMAN
Nelson Point
RIFLN
Tidal Flats
#1
E2FLN6
POWZ
PFOIC
E2EMP6
Knotts Crossing
PFOIY
Mason Springs
Marbury
Park Hill Cem
Redhill
CHAPMAN
1

Appendix 2

Wildlife Habitat Protection Guidelines

Source: *Maryland Department of Natural Resources*
Forest, Park and Wildlife Service
Wye Mills, MD

William Donald Schaefer
Governor

Maryland Department of Natural Resources
Forest, Park and Wildlife Service
P.O. Box 68
Wye Mills, Maryland 21679
301-827-8612

Torrey C. Brown, M.D.
Secretary

Donald E. MacLauchlan
Assistant Secretary

February 11, 1991

Ms. Ginger Howell
Redman/Johnston Associates, LTD.
1132 Canvasback Drive, Suite C
Easton, MD 21601

Dear Ms. Howell:

Enclosed is information regarding specific wildlife Habitat Protection Areas on the site of the proposed park in Indian Head, Charles County, Maryland.

Technically, this site is potential Forest Interior Dwelling Bird (FID) habitat according to the Cheasapeake Bay Critical Area Criteria because 300 feet of riparian forest is present (COMAR 14.15.09.04). This is probably the reason this site is mapped as potential habitat by the "Town of Indian Head Critical Area Plan." However, we feel the forest at this site is too small and isolated to require FID habitat protection measures. Nevertheless, we recommend that forest clearing be minimized during development of the park. This will help maintain habitat for other wildlife which utilize forested areas as well as remove nutrients from runoff which may be entering the creek from this and surrounding properties. This will also help maintain the wildlife corridor function of this forested area.

Dabbling ducks, including Black Ducks and Mallards, are using this site (see enclosed table). However, the aerial survey data indicate these species are not present in sufficient numbers for designation of this locality as a Waterfowl Staging and Concentration Area. One reason for this may be that waterfowl numbers were not always reported for specific sites, but by survey area, during past surveys. The marshes on the eastern portion of this and adjacent properties likely serve as a wintering site and, to some extent, a breeding area for dabbling ducks. Therefore, we recommend that any water-dependent facilities to be located in the park be situated away from these marshes (i.e. Construct these facilities on the western portion of the property.).

WATERFOWL OBSERVED IN THE VICINITY OF THE PROPOSED INDIAN HEAD TOWN PARK

Listed below are waterfowl observed in the vicinity of the proposed town park at Indian Head, Maryland. The data were collected during aerial surveys performed twice a year in approximately mid-November and mid-January. Data is not included for those surveys in which only totals are reported for survey area 1, which includes the Mattawoman Creek area.

Date	Location	Waterfowl
Feb. 90	Nelson Pt.	24 black ducks, 18 mallards
Dec. 89	Across Creek from Rum Pt.	300 scaup, 100 mallards, 50 canvasbacks
	Mattingly Park area	200 mallards, 125 black ducks, 50 unidentified dabbling ducks
	0.5 mi E of Rum Pt.	75 scaup
	S portion of mouth of Mattawoman Ck.	50 C. geese, 6 mallards
	Deep Pt.	200 scaup
Nov. 89	Just W of Rum Pt.	50 C. geese
	Just SW of Deep Pt.	395 scaup, 317 mallards, 175 canvasbacks, 6 buffleheads, 3 t. swans
Jan. 82	Mattawoman Ck.	200 mallards, 111 black ducks
Nov. 81	Deep Pt. and mouth of Mattawoman Ck.	150 canvasbacks
Jan. 79	Mattawoman Ck.	128 mergansers, 9 black ducks, 3 buffleheads
Jan. 78	Mattawoman Ck.	50 mergansers
Nov. 77	Mattawoman Ck.	14 swans

Feel free to contact me if you require additional information. My card is included for your perusal.

Sincerely yours,

William R. Gates

William R. Gates
Bay Wildlife Biologist

cc: Dr. S. Taylor

Appendix 3

Specifications and Construction Drawings for Phase I Improvements

Source: *Redman/Johnston Associates, Ltd.*
Easton, MD 21601

Guidelines for Phase I Trail Improvements

Source: *Maryland Department of Natural Resources*
Forest, Park and Wildlife Service
Brandywine, MD

DEPARTMENT OF NATURAL RESOURCES
Maryland Forest, Park & Wildlife Service
ROUTE 4, BOX 106A
BRANDYWINE, MARYLAND 20613
(301) 888-1638

DONALD E. MacLAUCHLAN
DIRECTOR

GENE PIOTROWSKI
REGIONAL FORESTER

March 4, 1991

Ms. Howell
Redman - Johnston Ass., LTD
1132 Canvasback Drive, Suite C
Easton, MD 21601

Subject: Indian Head Nature Trail

Dear Ms. Howell:

It was a pleasure meeting with you last Friday to discuss the proposed nature trail system to be installed at the Indian Head Town Park adjacent to the Mattawoman Creek. Plans to upgrade the existing compacted bare soil trail used by the public is an excellent method of controlling and decreasing the amount of overland runoff entering Mattawoman Creek.

As we discussed in the field the use of mulch or wood chips would be a substantial improvement over the existing conditions of the trail. A wood barrier such as landscape ties installed on the down hill side of the grade adjacent to Mattawoman Creek will be necessary to eliminate the washing away of wood chips following heavy periods of rainfall.

Cutting into the bank of the existing trail's contour in order to reduce the slope will reduce runoff and provide easier access for the public. However, as I mentioned in the field extreme caution should be taken to eliminate damage to tree roots during this operation. Lowering the grade 6 - 8 inches will remove a major portion of the top soil and major feeder roots of a tree. A loss of 1/3 to 1/2 of these surface roots will kill the tree. Naturally to preserve a tree and avoid root damage when cutting a grade, curve or zig-zag around the tree roots as much as possible. Roots should be cut cleanly . Deep grades will require a retaining wall . The wall should be porous to allow for aeration. Top pruning will aid in retaining tree vigor when roots are cut.

Several trees along Mattawoman Creek are leaning over the stream bank and pose a threat of falling which in turn will create accelerated erosion. As mentioned in the field I will prepare a

Buffer Management Plan and selectively designate trees for removal. All tree cutting in the 100 foot buffer must be approved by the Maryland Forest, Park and Wildlife Service.

All trees to be removed for trail construction must be replaced one for one as stipulated in the Chesapeake Bay Critical Area Law. A limit of disturbance should be delineated prior to trail construction, accompanied with the number of trees to be removed. Minimum disturbance is mandatory. Mitigation planting could be done as part of the stabilization project if acceptable by the Town of Indian Head. If necessary open areas on other Town properties will suffice.

The trees listed below are suited for planting along the Mattawoman Creek, due to their resistance to salt water intrusion.

Tree of Heaven	Scotch Pine
Norway Maple	White Oak
Common Honey Locust	Black Jack Oak
American Holly	Black Locust
Southern Magnolia	Chinese Elm
Black Tupelo	Colorado Spruce
Austrian Pine	Japanese Black Pine

The shrubs listed below are also suited for planting on the site.

Red Chokeberry	Inkberry
Saltbush	Junipers
Japanese barberry	Honeysuckles
Bittersweets	Bayberry
Red Osier Dogwood	Highbush Blueberry

If you have any questions please contact me at 301-934-2543.

Sincerely,

David W. Gailey
Bay Watershed Forester