

GENERAL
MANAGEMENT PLAN/
CONCEPTUAL
DEVELOPMENT PLAN
AND
PROJECT IMPLEMENTATION
PLAN

EAKIN/ EAKIN (MANTUA)/ ACCOTINK
STREAM VALLEY PARK



PREPARED BY
FAIRFAX COUNTY PARK AUTHORITY
PLANNING TEAM

APPROVED JUNE 1995

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Prepared for
FAIRFAX COUNTY PARK AUTHORITY

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**GENERAL MANAGEMENT PLAN FOR
EAKIN COMMUNITY/EAKIN(MANTUA)/ACCOTINK STREAM VALLEY**

DRAFT

I. INTRODUCTION

A. Purpose and Description of the Plan

The purpose of this General Management Plan (GMP) is to serve as a guide for all future planning and programming. This document should be referred to before future planning and design projects are started.

This GMP describes the existing natural and cultural resources of the stream valley system, as well as other existing conditions. Management zones have been established, with accompanying lists of potential uses for each zone. The uses are described in general terms, so that as visitor needs change, the uses provided can change also.

General Management Plans are meant to be flexible, to change with the changing needs of park visitors. Every GMP should be updated periodically to reflect changes that have occurred both on and off site.

B. Park Description

The park area described in this general management plan consists of three parks, two supervisory districts, and over 300 acres of contiguous park land. Accotink Creek is integral to the entire plan area, connecting Eakin Community Park, Eakin (Mantua) Park, and Accotink Stream Valley Park. Beginning at the intersection of the Fairfax City line and Accotink Creek near Pickett Road, the plan area follows the creek downstream, encompassing three active recreation areas, numerous managed conservation areas, and prehistoric and historic sites, to its terminus at the junction of Route 236 and Accotink Creek. The main portion of the study area is located in Providence supervisory district with the western portion in Mason supervisory district. The plan area is one of the non-staffed parks maintained by the Park Authority's Area 2 maintenance crew.

The plan area can be divided into two use areas: managed conservation areas and active recreation areas. Eakin Community Park and Eakin (Mantua) Park are classified as community parks and contain all of the active recreation facilities: scheduled baseball and softball fields, garden plots, tot lots, playgrounds, open play areas, picnic areas, volleyball courts, and tennis courts. Accotink Stream Valley Park is classified as a stream valley park, containing most of the trails. Furthermore, extensive managed conservation

areas and numerous conservation education programs are conducted within the stream valley. This section of Accotink Creek is only a small part of the entire Accotink Stream Valley owned by the Park Authority. It is, however, an integral part for managed conservation, being the closest starting point to the headwaters. It encompasses floodplain, wetland, meadow, and upland forest habitats; it also serves as a wildlife corridor in an urban setting providing environmental and genetic links for flora and fauna. Rare species such as otter and the red-headed woodpecker have been documented in the park. Prehistoric and archaeological sites are also present.

C. **Administrative History**

The purpose of this section is to provide a history of management decisions concerning the acquisition of park land, the construction of active play areas, and a basic identification of funding.

Land Acquisition - Acquisition of the land included in the plan area has been an ongoing process since the early 1950s. The acceptance of proffers has been the primary vehicle for acquisition. In some cases, the land was purchased outright. Major portions of the GMP area were acquired by the Park Authority from 1951-1962. These areas consisted of Eakin Community Park, Mantua Park, and portions of Accotink Stream Valley adjacent to housing development projects at that time. From 1965 to 1967, the stream valley on both sides of Woodburn Road was acquired. In 1975, the easternmost portions of the plan area bordering I-495 were acquired, and in 1982, final portions in the western section of the plan area, were acquired. Future acquisitions of large parcels will be unlikely since most of the adjacent land is developed.

Facility Development - The 1977 Bond Referendum appropriated funds for the development of the two active recreation parks, Mantua Park and Eakin Community Park, and a continuous trail from Route 50 to Lake Accotink. In 1979, the section of the trail south of Route 236 through Wakefield Park to Lake Accotink was constructed. Construction of the 3.5 mile section of trail between Route 236 and Route 50, the Eakin Park/Accotink S.V. GMP plan area, was to be coordinated with construction of a 66 inch sanitary sewer line. For a number of reasons, including a lack of funding, time constraints, and the difficulty in obtaining easements on private property for the trail, only the section of trail from Route 50 to King Arthur Road was completed. In 1986, bond monies were allocated for the renovation and upgrade of the existing stone dust trail to an asphalt surface and that construction occurred. The proposed Fairfax City Connector Trail and the portion of the trail from King Arthur Road to Route 236 are still unconstructed.

Programming Functions - In June of 1993, the Conservation Division of the Park Authority launched its "Stream Valley Stewards, A Watershed Initiative" program. The stream valley initiative is a merging of Park Authority staff and citizens working together to deal with a major resource protection issue and integrate resource protection messages into division programs and media. Stewardship and education will focus on improving water quality, wildlife habitat, genetic corridor functions, improved erosion and sediment control, better protection of groundwater, and visual improvement of stream valley environments.

The existing facilities are coordinated through various avenues. Ballfields located at Eakin and Mantua Park are scheduled through the County's Recreation Department. At Eakin Community Park, garden plots can be rented through the Green Spring Horticultural Center. Additional programs are advertised in the Park Authority's *Parktakes*; most are administered by the staff at Hidden Oaks Nature Center in Annandale.

Eakin Park Trust Agreement - The Eakin Trust was established through two agreements between the Park Authority, L.R. Eakin, Sr., and Eakin Properties, Inc. In 1966 Mr. Eakin deposited \$50,000 in a trust with Eakin Properties for improvement and development of Accotink Stream Valley Park, primarily Eakin Park, running on either side of Prosperity Boulevard. In 1971 an additional \$100,000 was put in trust for the same purpose. The trust states the Park Authority will supply financial reports giving evidence of the expenditures according to terms of the trust. In turn, Eakin Properties, Inc. will match funds or labor charges used to develop or improve the park. If the money has not been spent, at any point beyond five years after the trust agreement was signed, Eakin Properties, Inc. has the ability to transfer the funds from the trust to any charitable or governmental organization in the County of Fairfax in its sole discretion.

D. **Cultural History**

Prehistory - Accotink is an Algonquin name, reminding us of the first inhabitants of Northern Virginia. It is also the name of the creek that courses through Eakin Park, Mantua Park and Accotink Stream Valley. The people that Captain John Smith encountered while exploring the Potomac River in 1608, were the Potomac Creek peoples; the Piscataways, Doeges and Anacostans. As was the custom with the English, the naming of a stream often corresponded to the name of the largest Indian village located along its shores. The village of Accotink has never been found.

Within the plan area of Accotink Stream Valley, there is evidence of much earlier Indian groups, culturally unrelated to those Captain Smith and other early European explorers found. Native American occupation and land use began about 9,000 to 10,000 years ago. Essentially, these people were nomadic, moving across the area in response to movements of wild game herds and seasonal changes in the environment. Remains of their material culture is present in the form of stone tools dating from 10,000 years ago to 7,000 years ago. As the environment changed and large game herds were depleted, Native Americans adapted as well. They became more sedentary, residing at camps for longer time periods. Consequently, a larger portion of their food consisted of plants and their efforts to procure those plants became more systematic and intensive, leading to early forms of agriculture.

In addition to plant foods and wild game, prehistoric people also quarried raw materials for the manufacture of tools. Within the management area, there are two sources of lithic raw materials, rock outcrops and river cobbles. Both raw material sources were used to provide Native Americans a vast range of materials from which to fashion stone tools.

By the time of European contact most Native Americans had moved closer to the major rivers forming sedentary villages.

History - The New World was discovered by Christopher Columbus in 1492. The first permanent English settlement was Jamestown in 1607. In 1649, King Charles II granted a proprietary to seven Englishmen, which consisted of all of Virginia between the Rappahannock and Potomac Rivers. By 1719, Thomas, sixth Lord of Fairfax, controlled all of the shares of the proprietary. By 1745, the entire Eakin Park/Accotink S.V. GMP area had been granted to various land owners as part of the Northern Neck Grants. William Fitzhugh owned the southern half of the plan area as part of the well known Fitzhugh grant of 21,996 acres. Henry Fitzhugh owned 746 acres centered approximately where Prosperity Avenue crosses Accotink Creek. To the east of Henry Fitzhugh, Simon Summers owned 354 acres. To the west, upstream, Simon Summers and John Gladden each owned 300 acres.

Originally, this land probably supported tobacco farming. However, tobacco farming quickly exhausted the soil, and with falling prices for tobacco most farms turned to alternative crops, such as wheat, corn and rye. Still, farming practices of the late 18th and early 19th century in Fairfax County were poorly applied, and combined with an economic recession and failing crops, a generation of farmers migrated west in search of better land conditions. The price of land in Northern Virginia declined accordingly, attracting northern farmers in search of large cheap tracts of land without the environmentally constraining terrain found in much of New England. With them came new

ideas for revitalizing the depleted land. Later, in the 19th century, many of these farmers turned to dairy farming, being attracted by lucrative markets in Washington and Alexandria.

In response to a shift from tobacco farming to the production of grain products there was a corresponding increase in milling in Fairfax County. The milling industry had been growing steadily with increases in population, diversified farming practices, and overseas trade. Milling reflects the heavy industry of the 18th and 19th centuries in Fairfax County. Driven by the water of Accotink Creek, raw materials were turned into semi-finished products, ready for transportation to coastal markets by road. Accotink Creek provided a perennial water source with a good water flow and was situated between two major transportation corridors providing access to the ports of Alexandria and Occoquan. Remnants of three water-powered mills have been found in the park. The first was operated by Daniel McCarty Chichester who applied for a mill seat in 1801. In 1820, he produced 4,500 bushels of flour. He died that same year and by 1839, the mill was no longer operational. The second mill ruin was depicted on a 1862 Civil War map as an "old mill." It was located on the western boundary of the park on Accotink Creek, and is known today as Fairfax Circle Mill. A third mill was located on the eastern boundary of the park. Only traces of the millrace remain. In addition, maps dating from 1894 depict a steam saw mill, owned by M.M. Wakefield, located on a tributary of Accotink Creek, within the plan area.

In 1850, the Manassas Gap Railroad Company started construction of a spur that was to connect the Virginia piedmont directly with the port in Alexandria, bypassing the Manassas and Leesburg junctions. By 1851, the alignment of the railroad had been determined and portions of the railroad bed and culverts completed. Unfortunately, the railroad was never finished due to the crushing economic effects of the Civil War.

Although major battles were not fought here area during the Civil War, the inhabitants still felt the effects. Located outside the ring of protective forts surrounding Washington D.C., this portion of Accotink Stream Valley was situated between two major transportation corridors to Centreville and parts west; Little River Turnpike (Rt. 236) and the Falls Church and Fairfax Courthouse Road (Rt. 29). During the first and second battles of Manassas large armies moved past this area along the Little River Turnpike (Rt. 236) and Warrenton Turnpike (Rt. 50) to get to the front lines of the war. It is probable that local farmsteads were used by northern troops, requisitioning fodder and water for animals, and food, housing, and water for soldiers. Later in the war, cavalry units from both sides probably crossed the area.

After the turmoil of the Civil War, life returned to farming. At least two farmsteads located on park lands remained viable working farms into the early 20th century. However, the era of farming drew to a close in 1939, with the sale of land to Eakin Properties Inc., a housing developer. Since that time, a slow but steady suburbanization has occurred.

II. ***PARK PURPOSE AND SIGNIFICANCE***

A. **Park Purpose: What is the purpose of the park?**

Park purpose statements are intended to provide an umbrella for planning and decision making. If a proposed use conflicts with any one of the purposes listed, it will be considered an incompatible use. By establishing park purposes, future plans can remain flexible, as other circumstances such as legislative requirements and visitor preferences change.

The purpose of the combined parks, Eakin Community, Eakin (Mantua) and Accotink Stream Valley is to:

- ▶ Preserve, protect and restore natural resources
- ▶ Preserve, protect and restore cultural resources
- ▶ Provide visitors with passive recreation and resource interpretation opportunities
- ▶ Provide a variety of active recreation opportunities for county citizens

B. **Significance Statement: Why is this park important?**

The Eakin Community, Eakin (Mantua), and Accotink Stream Valley Parks provide the surrounding community with active and passive recreation opportunities at ballfields, garden plots, tot lots, playgrounds, open play areas, volleyball courts, tennis courts, picnic areas, and along the numerous trails.

The plan area is unique because of its significant size and integration of the environment with the surrounding suburban development. The parks offer excellent opportunities for enjoying wildlife, with over 300 acres of natural habitat including the Accotink Creek and its tributaries, wetlands, coniferous and deciduous forest, meadows, and a pond. Wildlife species include the White-footed Mouse, Star-nosed Mole (ranked as a species of special concern in Virginia), over 150 identified species of birds, including Red-headed Woodpecker (rare in Fairfax County), Red-shouldered and Sharp-shinned Hawks, and Great Horned Owl. The site also provides educational opportunities for hundreds of students, adult and family visitors participating in field interpretive programs based out of Hidden Oaks Nature Center.

Eakin Community/ Eakin (Mantua) and Accotink Stream Valley Parks are significant because:

- ▶ they are an integral part of the environmental and genetic corridor from Little River Turnpike to Fairfax City and are one section of over 700 acres of Accotink Stream Valley parkland that is managed by the Fairfax County Park Authority
- ▶ they contain Native American Indian sites and Historic sites
- ▶ they provide a variety of scheduled and unscheduled active recreation opportunities.
- ▶ they provide continuous trails for exercise, wildlife watching, and other leisure activities
- ▶ they provide over 300 acres of aquatic and terrestrial habitat for wildlife in an urban setting
- ▶ they provide opportunities to experience Fairfax County's natural heritage first-hand through interpretive programs and personal discovery
- ▶ their floodplain and wetlands provide some stormwater and sediment control functions in a highly developed watershed

III. ***EXISTING CONDITIONS***

A. **Developed Features**

Access - There are numerous existing points of pedestrian access from the surrounding neighborhoods into the stream valley park land. Formal access points include, but are not limited to:

- ▶ a trail from the parking lot in Thaiss Park south of the intersection of Route 50 and Picket Road - only extends to the turn in the creek at this time
- ▶ a trail from the Route 50 access road opposite Nutley Street
- ▶ access to the main stream valley trail at crossings of Barkley Drive, Prosperity Avenue, Woodburn Road, and King Arthur Road

Existing vehicular access into the parking lot at Eakin Mantua Park is from Glenbrook Road at the intersection of Hamilton Drive and Barkley Drive. An existing entrance at Prosperity Avenue enters the parking lot at Eakin Community Park, and an additional entrance enters a second parking lot from Tobin Road on the east side.

Utilities and Easements - Numerous easements are located within the plan area including sanitary sewer easements, water lines and easements; storm sewer, storm drainage, and storm water detention easements; Virginia Power easements; C&P telephone easements; and gas lines easements. The sanitary sewer easements have the most negative impact within the plan area. These easements are shown on a series of plans in the project files.

Facilities - Within this stream valley park system is an extensive hike/bike trail; portions of the trail are asphalt, some are gravel, and a portion is only well-worn dirt. Additional development existing in the two community parks includes a Little League field, multi-use court, two tennis courts, picnic area, a playground/tot lot, and parking at Eakin (Mantua), and two softball fields, two tennis courts, three sand volleyball courts, picnic area, a playground/tot lot, parking, and garden plots at Eakin Community Park.

B. Natural Resources

Although showing signs of impact overall from stormwater flow dynamics and human use, the parks represent a highly rich and diverse natural resource.

Wetlands abound in the parks, with eight types delineated. These include unvegetated open waterways, hillside springs, hardwood swamps, alluvial floodplain depressions, isolated depressions, cattail marsh, a eutrophic pond, and disturbed areas.

ERIC (Ecological Resource Inventory Committee) surveys were conducted, identifying eight distinct vegetative cover types in the management plan area. Data collection revealed that roughly 18% of the area is comprised of Floodplain Forest; 39% is Forested Wetland; 38% is represented in Upland Hardwood Forest; and approximately 1% or less, respectively, is taken up by Upland Softwood Forest, Wetland Shrub Swamp, Inland Wet Meadows and Marshes, Old Field, and Old Field with Hardwood Cover. See Wildlife Observations and Plant List in Appendix of this report.

Wetlands - Six Predominant Wetland Types

Unvegetated Open Waterways - The site's main physiographic features include Accotink Creek and Bear Branch Creek. These are essentially highly eroded waterways, devoid of vegetation, although introduced species such as Asiatic Tearthumb (Mile-a-minute Weed) and Lily-turf have been identified along gravel point bars at meander bends in the creek and along roadsides, respectively. Smaller eroded and open channels are prevalent elsewhere on the property and are primarily unvegetated due to their conveyance of significant flood flows. Substrate generally is composed of mixed unconsolidated sand, gravel, and cobbles.

Hillside Springs (USFWS Designation - Palustrine Forested/PF01C/Seasonally Flooded) and Hardwood Swamps (Palustrine Forested) - The majority of the wetland systems are fed by springs and stormwater discharge derived from adjacent residential and highway developments. Hillside springs are contiguous with hardwood swamp wetlands in the park. Dominant species in these wetlands include Lizard's Tail, Cinnamon Fern, Spicebush, Skunk Cabbage, Bugleweed, Jewelweed, Lady Fern, and Crested Fern. Soils are primarily composed of Wehadkee Silt Loam.

Alluvial Floodplain Depressions (USFWS Designation - Palustrine Forested/PF01A/Temporarily Flooded) - A large portion of the parks is composed of alluvial floodplain depressions, a forested habitat that is the first to flood when the Accotink overflows during flood events. Hydraulic spreading of flood waters is further facilitated by smaller channels networked throughout the floodplain. The species composition of these depressional areas include Green Ash, Box Elder, Sweetgum, Red Maple, Poison Ivy, Southern Arrowwood, and Redtop. Evidence of flood events are present throughout the area in the form of drift lines, sediment/debris deposits, water-stained leaves, and drainage patterns. The soils primarily consist of Chewacla Silt Loam, a hydric and somewhat poorly drained soil, with inclusions of hydric Wehadkee and Meadowville series.

Isolated Depressions (USFWS Designation - Palustrine Forested/PF01B/Saturated) - Isolated depressions are characterized by both their depressed topography and their soil type (Worsham Silt Loam). They do not necessarily vary in vegetation composition from the adjacent alluvial floodplain depression wetland type.

Cattail Marsh (USFWS Designation - Palustrine

Emergent/PEM1/Persistent) - A linear cattail marsh has developed to the north side and parallel to the paved access road into Eakin Community Park. A diverse plant community was noted with a species composition of: Cattail, Jewelweed, Arrow-leaved tearthumb, River Birch, Rice Cutgrass, Cardinal Flower, Small Spike False Nettle, Common Boneset, Swamp Aster, Calico Aster, Brookside Alder, Curly Dock, Silky Dogwood, Black Willow, Redtop Panicgrass, Green Ash, Beaked Groovebur, and Ditch Stonecrop. Soils are composed of Wehadkee Silt Loam.

Eutrophic Pond (USFWS Designation - Palustrine Aquatic Bed/PAB4/Floating Leaved)

- A remnant pond is located to the east of the cattail marsh, just south of the paved access road, also in Eakin Community Park. It is fed by a single spring originating from the adjacent hillside with a single discharge point terminating at the Accotink. The pond is in the later stages of succession due to prolonged sedimentation. It exhibits an encroaching vegetative mat, limited and shallow water, and a thick deposit of organic matter and silt. Vegetation is dominated by Sweet Flag, Jewelweed, Arrow-leaf Tearthumb, and Cutgrass.

Wetlands - Wildlife Associated with Wetland Types - Wetlands support a wide variety of wildlife in the Accotink Stream Valley. Sunfish, Minnows, Crayfish, Freshwater Eels and a variety of invertebrates live in the creeks. Painted and Snapping Turtles have been observed sunning themselves in the pond. Green Frogs and Crayfish frequent Alluvial Floodplain Depressions in the Accotink Stream Valley and some species of Caddisflies live in and live only in Hillside Spring wetland habitat. A diverse association of mammals and birds are supported equally by all wetland types.

Wetlands - Ecologically Sensitive & Significant Types of Note - Wetlands are significant overall in their function of managing stormwater flows and improving water quality by absorbing excess nutrients in stormwater as well as slowing its velocity.

Hillside Springs are especially significant in supporting a unique association of plants and animals, some of which only occur in this particular wetland type. Further direct observations need to be made of this singular habitat in the study area.

Alluvial Floodplain and Isolated Depressions provide essential pockets of temporary or permanent standing water in which the observed Green Frogs, Spring Peepers, N. Cricket Frogs, Fowler's and American Toads, and Redback Salamanders breed and lay their eggs in the Accotink Stream Valley.

The Cattail Marsh and Pond perform the function of providing additional associations of plants and animals, unique to these respective wetland types.

Vegetation & Wildlife - Vegetative Cover Types
(Vegetative Cover Type Maps, pages 17, 18, and 19)

Floodplain Forest - The Floodplain Forest is a counterpart of the Upland Hardwood Forest, occurring in the floodplains of streams and rivers. The plant community is highly diverse and grouped into recognizable strata: herbaceous layer, shrub layer, understory, and canopy. The herbaceous layer is usually very diverse and often extremely dense, in response to the rich soil.

SIGNIFICANCE OF COVER TYPE - Floodplain Forest functions similarly to Forested Wetland habitat and shares many of the same flora and fauna species. The two cover types together represent the majority (about 57%) of the land in the study area. Twenty species of trees, 63 species of herbaceous plants, and 35 species of animals were found in this habitat during ERIC surveys. Although some invasives, such as Japanese Honeysuckle and Multiflora Rose are represented in every cover type in the parks, the Floodplain Forest also supports Cutleaf Toothwort, Trout Lily, Wile Rye, Sedges, Elderberry, Fringed Loosestrife, and Jack-in-the-Pulpit.

ASSOCIATED WILDLIFE - Some of the 35 species of wildlife noted in the Floodplain Forest include Deer, Pileated Woodpecker, Downy Woodpecker, Red-eyed Vireo, Crayfish, Raccoon, Beaver, Sharp-shinned Hawk, N. Cricket Frog, and Five-lined Skink.

Forested Wetland - Forested Wetlands are characterized by tree-sized woody vegetation arising from soil that is permanently or non-permanently covered by water or is saturated throughout the year. In Fairfax County, Forested Wetlands that exhibit permanent or long-term flooding are temporary. No local tree species can tolerate this amount and duration of water and will eventually die, resulting in a Wetland Shrub Swamp, Inland Wet Meadow and Marsh, or in cases of extreme flooding, open water. Those in which the soil is flooded infrequently or not at all, but remains permanently saturated are the successional equivalent of a terrestrial hardwood forest, with a modest degree of stratification and an understory of hydrophytic or more mesic plants, depending on the degree of flooding.

SIGNIFICANCE OF COVER TYPE - Approximately 39% of land in the parks is represented by this cover type. While it functions similarly to the floodplain habitat and shares many of the same flora and fauna species, it may support more hydrophytic plants, depending on the degree of flooding and saturation. Thirty species of trees and 107 species of plants were noted in these sites, including Black Gum, Sycamore, Box Elder, Red Maple, Black Willow, Virginia Creeper, Highbush Blueberry, Cleavers, Enchanter's Nightshade, Calico Aster, Black Haw, Spotted Touch-me-not, and Sensitive Fern.

ASSOCIATED WILDLIFE - Much of the same wildlife is found in this cover type and Floodplain Forest, as well. In addition to species noted above, Great Blue Heron, White-breasted Nuthatch, Belted Kingfisher, Northern Spring Peeper, Red-backed Salamander, and Mallards were also noted.

Upland Hardwood Forest - The temperate deciduous forest biome is characterized by this highly diverse plant community, grouped into recognizable strata: herbaceous layer, shrub layer, understory and canopy. The herbaceous layer blooms in the spring, before the emergent canopy blocks most sunlight from reaching the forest floor. Shrubs are spaced widely, most vines take the form of lianas and both understory and canopy trees self-prune many of their lower branches. All of this contributes to an open appearance near the ground. The canopy trees are of a random (uneven) age and saplings of these species appear in all other layers of the forest as the climax vegetation regenerates itself.

SIGNIFICANCE OF THE COVER TYPE - This is generally the climax stage of succession in this region. About 38% of the land in the study area is represented in this cover type. The highly diverse plant community supports a highly diverse fauna. Thirty-nine species of trees, 109 species of plants, and 52 species of animals were found to be represented in this cover type in the parks. These included White Oak, Beech, N. Red Oak, Yellow Poplar, Mockernut Hickory, Mountain Laurel, Wild Hydrangea, Maple-leaved Viburnum, Rhododendron, Wood Anemone, May Apple, Bracken Fern, Bloodroot, Christmas Fern, and Indian Cucumber Root.

ECOLOGICAL SENSITIVITY OF COVER TYPE - Some species of wildlife native to Upland Hardwood Forest are particularly sensitive to habitat fragmentation, diminishing parcel size, and adjacent land use. In the Eakin Community Park, Eakin (Mantua) Park, and Accotink Stream Valley Park, species of note that exhibit this sensitivity are Pileated Woodpecker, Scarlet Tanager, Red-eyed Vireo, Wood Thrush, and White-breasted Nuthatch.

ASSOCIATED WILDLIFE - A rich complement of wildlife species characterize the Upland Hardwood Forest, ranging from arthropods to reptiles, amphibians, birds, and mammals. Species found in the parks include White-breasted Nuthatch, Pileated and Downy Woodpeckers, N. Flicker, Gray Catbird, Yellow-bellied Sapsucker, Gray Squirrel, Meadow Vole, Black Rat Snake, Rabbit, American and Fowler's Toads, and Deer. Spring and fall migrations are particularly intense in mature forests. Birders can sight many different species of warblers that pass through this area in these seasons. Sharp-shinned Hawks, which were observed at the site, also feed on smaller birds and mammals.

Upland Softwood Forest - Before abandoned lands succeed into climax hardwoods, they are usually forested with evergreens, or softwoods. In this habitat in the parks, Virginia Pine is typically the first tree to invade open fields because of their tolerance of temperature and moisture extremes and their ability to thrive on poor soil. Gradually, however, they buffer the microclimate and enrich the soil sufficiently to provide suitable conditions for hardwoods. Eventually, the dense shade formed by the canopy evergreens begins to inhibit the germination of pine seeds and the stage is set for transition to climax hardwoods. Softwood forests generally lack the well-developed strata of hardwood forests. However, as canopy trees mature, die out, and do not regenerate, dense tangles of herbaceous vegetation and woody vines will emerge in the created openings.

SIGNIFICANCE OF THE COVER TYPE - This cover type is significant in its role in preparing the land and its microclimate for natural succession to the climax successional stage for our region, a mature hardwood forest. Twelve species of trees & 24 species of herbaceous plants were found in this habitat, which represents about 1% of cover type in the parks. The Virginia Pines are mature and on the decline, with young hardwoods moving in including Sweet Gum, Black Cherry, Pin Oak, Musclewood, Red Maple, and Beech. Associated plants included Trumpet Vine, Sassafras, Flowering Dogwood, Silky Dogwood, and Spotted Wintergreen.

ASSOCIATED WILDLIFE - Although only four plots were surveyed, noting little wildlife at the time of the survey, animals likely to occur here are Tiger, Black, and Spicebush Swallowtails, Cecropia, Promethia, Imperial, Luna and Royal Walnut Moths, Bagworm caterpillars, Eastern Box Turtle, Eastern Garter Snake, Rough Green Snake, and Black Rat Snake. Birds include Blue Jay, Common Crow, Cardinal, Rufous-sided Towhee, Catbird, Robin, Black-capped Chickadee. Skunks and Red Foxes may also occur here.

Wetland Shrub Swamp - Wetland Shrub Swamps are labeled Palustrine Scrub-shrub Wetlands by the USFWS. Characterized by shrub-sized (<6 meters) woody vegetation, wetland shrub swamps are most commonly dominated by Alders and Black Willow when they occur along watercourses. In the park plots, Red Maple, Box Elder, Green Ash, and Sweet Gum are also represented. The herbaceous layer includes Lizard's Tail, Turtlehead, Soft Rushes, Cutgrasses, Woodreed Grass, and Crested Wood Fern.

SIGNIFICANCE OF COVER TYPE - Eight species of trees and thirty-two species of herbaceous plants were found in only three plots. This is a highly diverse cover type, supporting unique plant species. It will eventually be replaced by Wetland or Floodplain Forest on sites that are not flooded or flooded infrequently.

ASSOCIATED WILDLIFE - Only three plots were surveyed, representing about 1% of the cover in the parks. Evidence of Cardinal, Chickadee, Raccoon, and Carolina Wren were found during this limited survey.

Old Field - The physical environment in a field immediately following abandonment is harsh - temperature extremes are great and wind is unabated. The soil often lacks nutrients and doesn't hold water well. The grasses and forbs that colonize such sites cope with these conditions by dying completely during the winter after producing seeds (annuals), or dying back to a root stock (perennials). Vertical stratification does not occur, but horizontal distribution often shows clumping or other non-random patterns, usually due to proximity of seed sources.

SIGNIFICANCE OF COVER TYPE - Less than 2% of cover type in Fairfax County is represented in Old Field habitat.

Old Field with Hardwood Cover - As noted above in the description of the Upland Softwood Forest cover type, before abandoned lands succeed into climax hardwoods, they are usually forested with evergreens, or softwoods. Under some circumstances, the pioneer trees in an open field may be hardwoods. This may be the result of proximity to seed source, or the influence of the substrate.

SIGNIFICANCE OF COVER TYPE - This cover type is extremely rare in Fairfax County. County-wide, only .002 % of vegetative cover is represented in Old Field with Hardwood Cover.

Inland Wet Meadows and Marshes - Known as palustrine emergent wetlands under the USFWS system, inland wet meadows & marshes are transitional to shrub swamps in drier areas, and persistent on wetter sites. The dominant vegetation is herbaceous. Grasses, sedges, rushes and cattails are the most common plants, with smartweeds, arrowheads and many other species present.

SIGNIFICANCE OF COVER TYPE - This type is also rare in Fairfax County. Inland wet meadows and marshes represent 0.0006 % of vegetative cover types county-wide.

C. **Accotink Stream Valley Initiative**

Since 1992 Conservation Division staff have been managing a stream valley pilot project for the Accotink Stream Valley, which includes the study area. Ongoing components of this project include:

- ▶ Educational outreach programs to local schools, scouts, and community groups designed to inspire appreciation and stewardship of the Accotink watershed and creek

- ▶ Participation in the GMP/CDP process for the park
- ▶ Nest box management programs for bluebirds, wood ducks, et al, which include construction, monitoring, and interpretation of nest boxes along the trail/habitat areas
- ▶ Reforestation of selected areas, ie., paw-paw in the northern park section
- ▶ Meadow management to maintain variety of meadow flora and fauna
- ▶ Community action activities such as stream clean-ups and National Trail Day participation
- ▶ Macrobiotic and chemical water quality monitoring
- ▶ National resource inventories

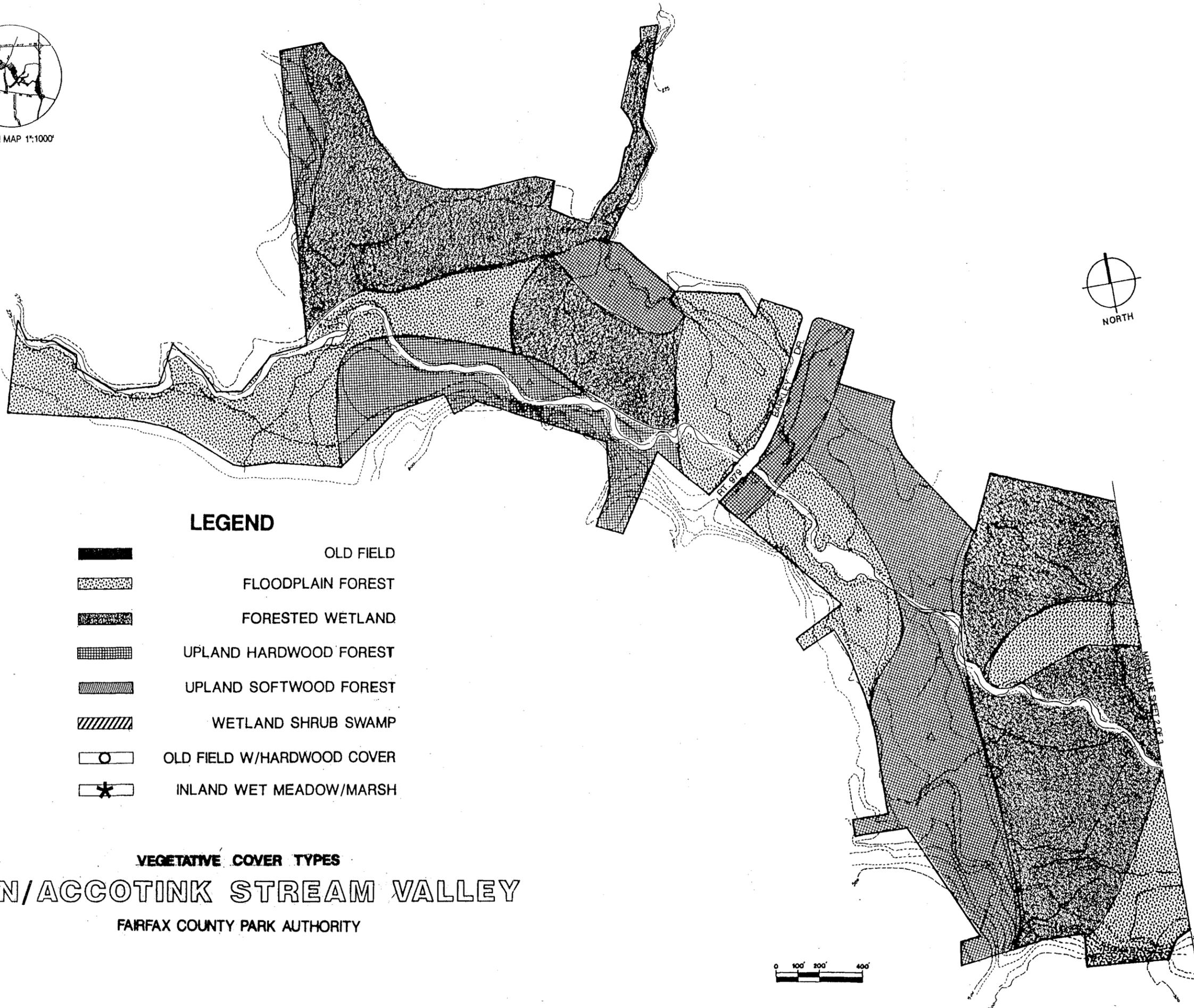
The overall project goal is to have the Stream Valley Initiative (SVI) entirely community and volunteer driven, with Conservation staff serving as interpretative and technical resources to support stewardship activities.

Letters of invitation were sent to homeowners groups surrounding the Stream Valley. Meetings will be scheduled to introduce the community to the program and invite groups to become stream valley stewards in their watersheds and in stream valley parkland.

Groups already active in the SVI include Scouts, local intermediate school biology classes, and volunteer trainers for monitoring techniques. Other community groups have participated in erosion control projects along Eakin's trails, and reforestation of parts of the watershed.



LOCATION MAP 1":1000'



LEGEND

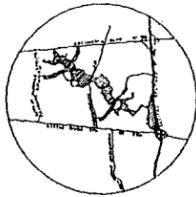
-  OLD FIELD
-  FLOODPLAIN FOREST
-  FORESTED WETLAND
-  UPLAND HARDWOOD FOREST
-  UPLAND SOFTWOOD FOREST
-  WETLAND SHRUB SWAMP
-  OLD FIELD W/HARDWOOD COVER
-  INLAND WET MEADOW/MARSH

VEGETATIVE COVER TYPES

EAKIN/ACCOTINK STREAM VALLEY

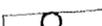
FARFAX COUNTY PARK AUTHORITY

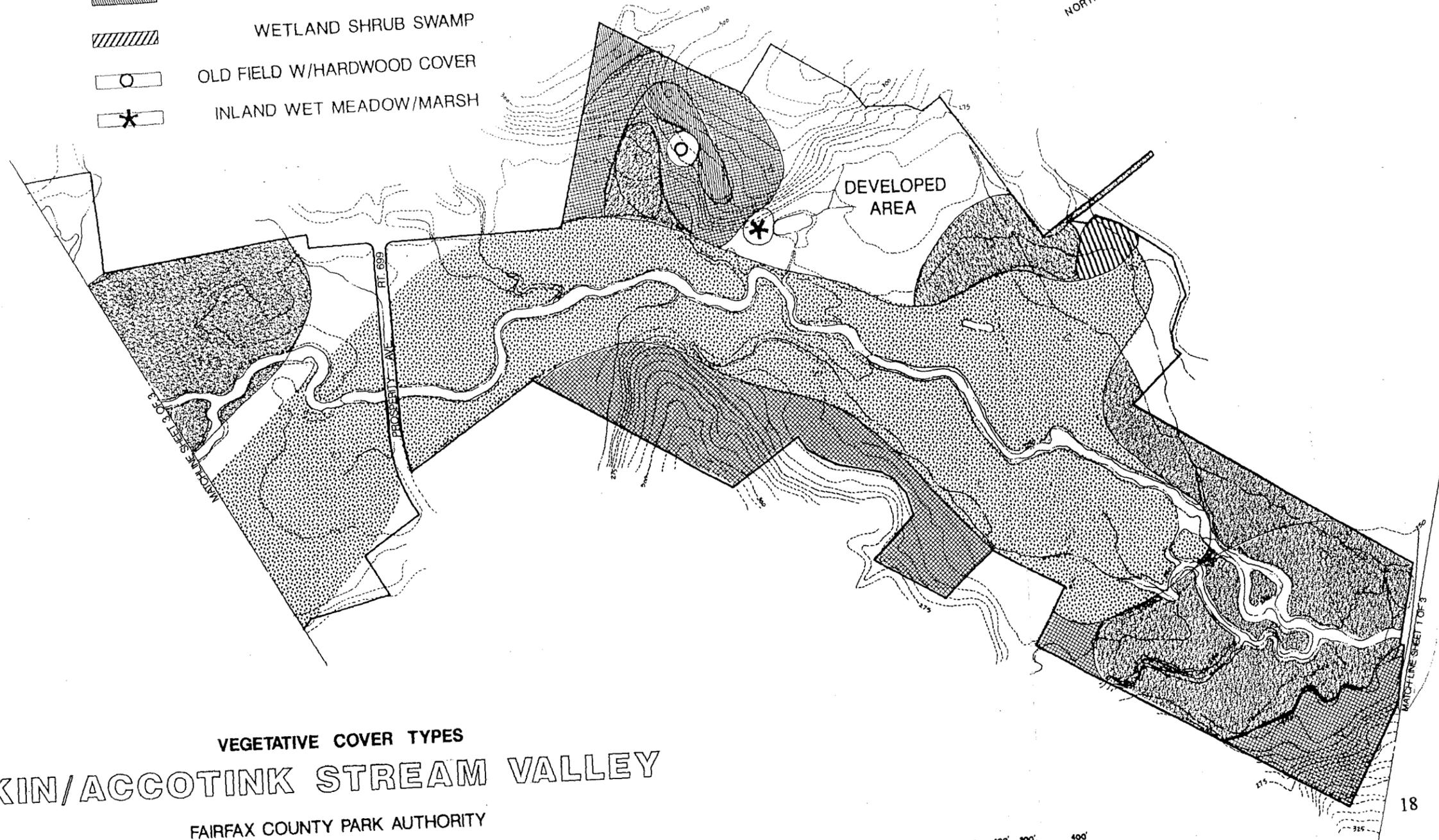




LOCATION MAP 1":1000'

LEGEND

-  OLD FIELD
-  FLOODPLAIN FOREST
-  FORESTED WETLAND
-  UPLAND HARDWOOD FOREST
-  UPLAND SOFTWOOD FOREST
-  WETLAND SHRUB SWAMP
-  OLD FIELD W/HARDWOOD COVER
-  INLAND WET MEADOW/MARSH



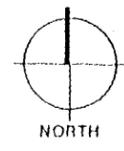
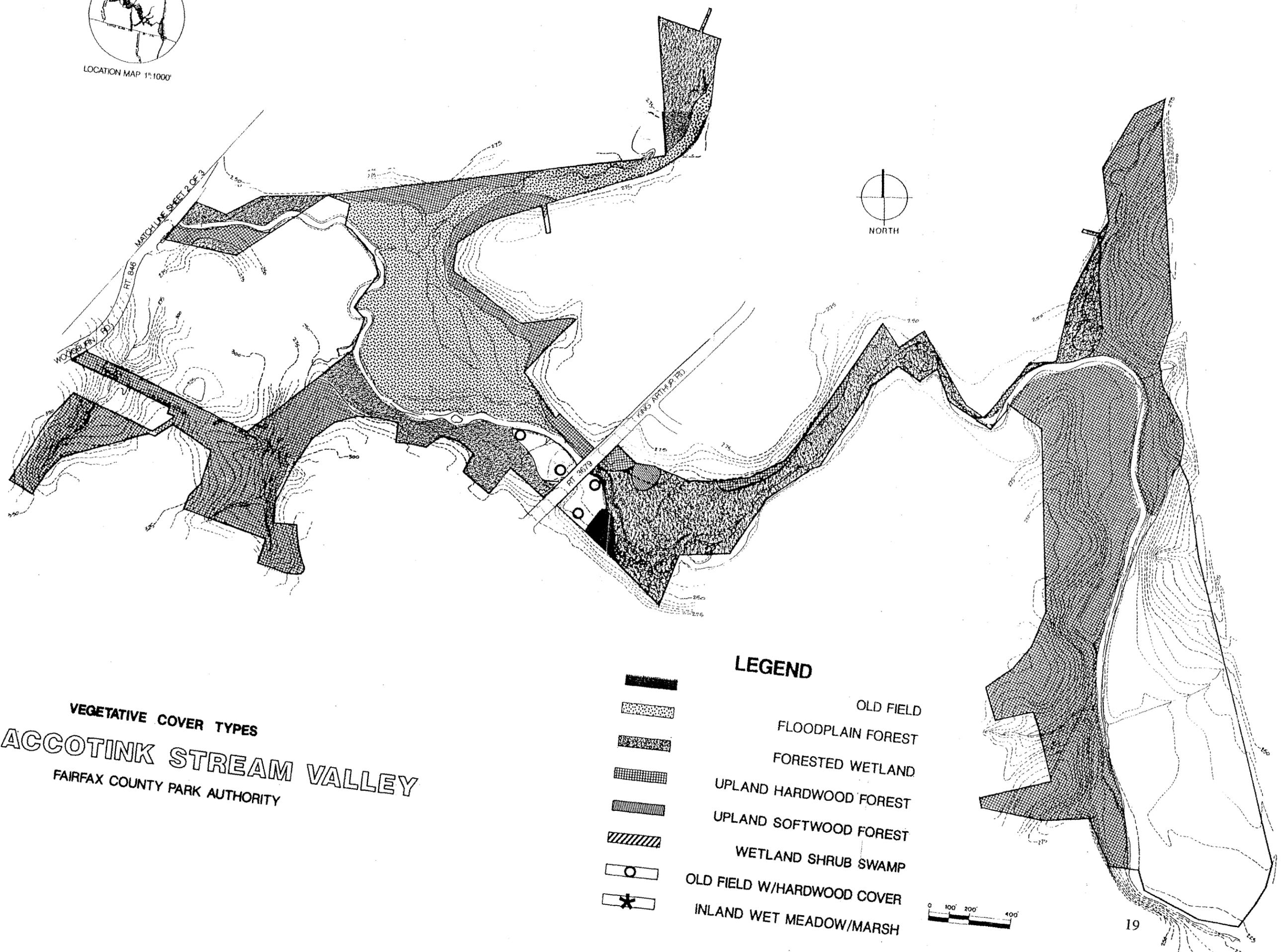
VEGETATIVE COVER TYPES

EAKIN/ACCOTINK STREAM VALLEY

FAIRFAX COUNTY PARK AUTHORITY



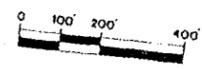
LOCATION MAP 1"=1000'



NORTH

VEGETATIVE COVER TYPES
EAKIN/ACCOTINK STREAM VALLEY
FAIRFAX COUNTY PARK AUTHORITY

- LEGEND**
-  OLD FIELD
 -  FLOODPLAIN FOREST
 -  FORESTED WETLAND
 -  UPLAND HARDWOOD FOREST
 -  UPLAND SOFTWOOD FOREST
 -  WETLAND SHRUB SWAMP
 -  OLD FIELD W/HARDWOOD COVER
 -  INLAND WET MEADOW/MARSH



D. Cultural Resources

Cultural Resources include any physical evidence of past human existence. Accotink Creek contains the following study units as defined by the Comprehensive Plan on Heritage Resources for Fairfax County: Paleo-Indian, Hunter-Gatherers, Early Diversified Agriculture, Agrarian Fairfax, Expansion and Growth (railroads, roads, industries), Suburbanization and Urban dominance and possibly others. The number of study units is significant for the park. These study units are used for research models and to note the type and number of cultural resources in Fairfax County. In addition, a number of archaeological sites exist just outside the perimeter of the park boundaries; this increases the probability of finding additional resources on park lands.

The following cultural resources have been identified within the park. This list is not intended to represent all of the cultural resources present, but represents those sites that have been identified. Contained within the park are the following resources.

44FX2090 Chichester's Mill Race and Mill

The site consists of a 3900 foot mill race. In addition, archaeological evidence of the 1820s mill site has been found. By historic map overlays the location of the mill dams have been located. Preservation of the site is recommended.

44FX37 Lee Thorpe Site

This prehistoric site is defined by hundreds of quartz flakes, one flint bifurcate projectile point, stemmed quartz and quartzite projectile points, scrapers, bifaces, and hammerstones. Preservation of the site is recommended.

44FX42 Prehistoric Site

This prehistoric site is defined by quartz, quartzite and rhyolite flakes. It also contains numerous tools, including bifaces, hammerstones, and projectile points. A portion of this site is located on Park Authority land; the remainder is privately owned. Preservation of the site is recommended.

44FX967 Fairfax Circle Mill Ruins

This site consists of a mill dam and portions of the race. The exact age of the mill is not known, maps indicate it may have been in operation earlier than 1862. Part of the site is located on Park Authority land. The remaining portion is located on Board of Supervisors land. Further testing is recommended to determine size and extent, and archival research is recommended to determine construction date and owner(s) of the mill.

44FX2087 Manassas Gap Railroad, Accotink S.V.

The site consists of 340 feet of railroad bed and two cut stone culverts constructed between 1850-1851 by the Manassas Gap Railroad Company. The rails were never placed and the railroad was never completed. Preservation of the railroad bed and culverts is recommended.

44FX2130 Little River Turnpike Mill Race

The site consists of 2000 feet of mill race. The exact location of the mill is not known and has likely been destroyed by road construction. Archival research is recommended to determine age and ownership of mill and mill race. Preservation of the site is recommended.

D. Description of Adjacent Uses and Zoning

The surrounding area is developed and zoned as low-density residential, mostly R-1, R-2, and R-3. It is described in the Fairfax County Comprehensive Plan as "largely ... stable residential neighborhoods." (See Zoning and Land Use Maps, pages 20 and 21.)

E. Site Issues and Constraints, Opportunities

Slopes - By far the largest portion of the GMP area is less than 15% slope. In fact, much of the land is flood plain and virtually flat. Limited areas of slopes greater than 15% exist, concentrated between King Arthur and I-495.

Soils - Nine different soils are found in this area of the Accotink Stream Valley. The area between Woodburn Road and the creek as it flows south along the Beltway has not been mapped by Fairfax County, but would be expected to have soils within the same soil groups as the mapped areas. Mixed Alluvial Land, Chewacla Silt Loam, and Wehadke Silt Loam are the three most common soils in the flood plain and stream bottom areas. These soils are subject to frequent flooding and may contain poorly drained sections, especially the Wehadke soils. Gravelly bars and sandy areas may also be found in the Mixed Alluvial Land. Both Wehadke and Mixed Alluvial Land are hydric soils and may contain jurisdictional wetlands.

For more information on the wetlands in this stream valley see the wetlands reports by Vanasse Hangen Brustlin, Inc. in project files.

Worsham Silt Loam, found in limited areas along the upper drainageways between Prosperity Avenue and Woodburn Road, is another hydric soil. It is subject to seepage waters from surrounding slopes, is poorly drained, and has poor productivity and workability.

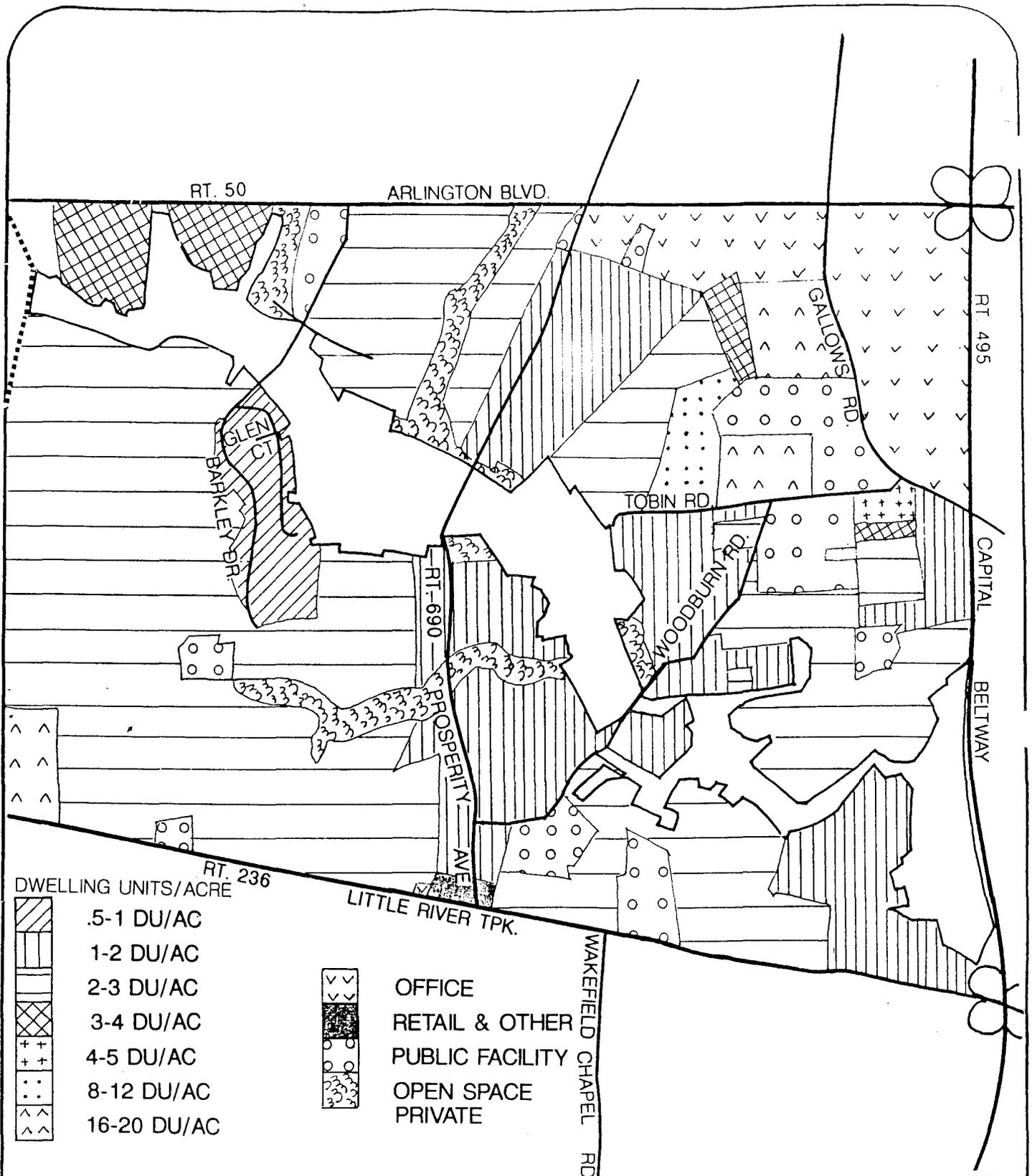
Four associated soils, Glenville, Meadowville, Manor, and Glenelg Silt Loams, comprise most of the remaining soil on the site. They vary in wetness from the excessively drained Manor to the well-drained Glenelg to the moderately well-drained Meadowville and the somewhat poorly drained Glenville with a high seasonal water table. All of these soils are in the upper drainageways, saddles, or upper slopes of the site.

One final soil, located north of the site west of Barkley and south of Route 50, and also found on the section between Accotink Creek and the Beltway, is Augusta Loam. It is a somewhat poorly drained soil occurring on low stream terraces. The workability and productivity are fair.

Adopted Countywide Trail Plan - The proposed countywide trail along Accotink Creek is a significant component of the General Management Plan for this stream valley park area. (See Countywide Trail Plan in this report, page 25.) Extending from the Fairfax City boundary to the Route 236/Capital Beltway interchange, this component of the trail is an essential link in a countywide alternative transportation plan. The existing trail is used by nature lovers for bird and wildflower viewing; by bikers, joggers, and walkers as an exercise path; by daily commuters as an alternative to vehicular transportation.

Fairfax County Comprehensive Plan - The land being evaluated in this study is in two planning sectors: the Mantua Community Planning Sector within Area II, Fairfax, and the Pine Ridge Community Planning Sector within Area I, Annandale. Both sectors are largely developed as stable single-family residential neighborhoods. Recommendations concerning future development in both sectors state that infill development in these neighborhoods should be compatible in "terms of use, type, and intensity" and "in accordance with the guidance provided by the Policy Plan in Land Use Objectives 8 and 14." These objectives refer to maintaining stability and harmonious development patterns within the community.

The Accotink Stream Valley is discussed in the park recommendation sections of both reports. The Mantua Community sector recommends "Protect archaeological resources in the headwaters of the EQC in the Pickett Road area through acquisition by FCPA." The report in the Pine Ridge section states "Ensure protection of EQC and public access to stream valley park through acquisition and/or donation of conservation/trail easements on privately owned land in accordance with FCPA stream valley policy. Complete development of countywide Stream Valley Trail to Wakefield Park."

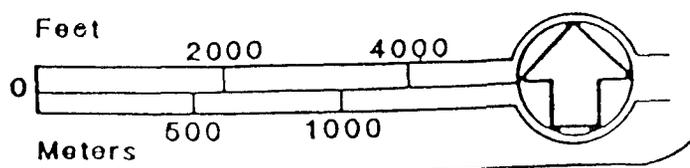


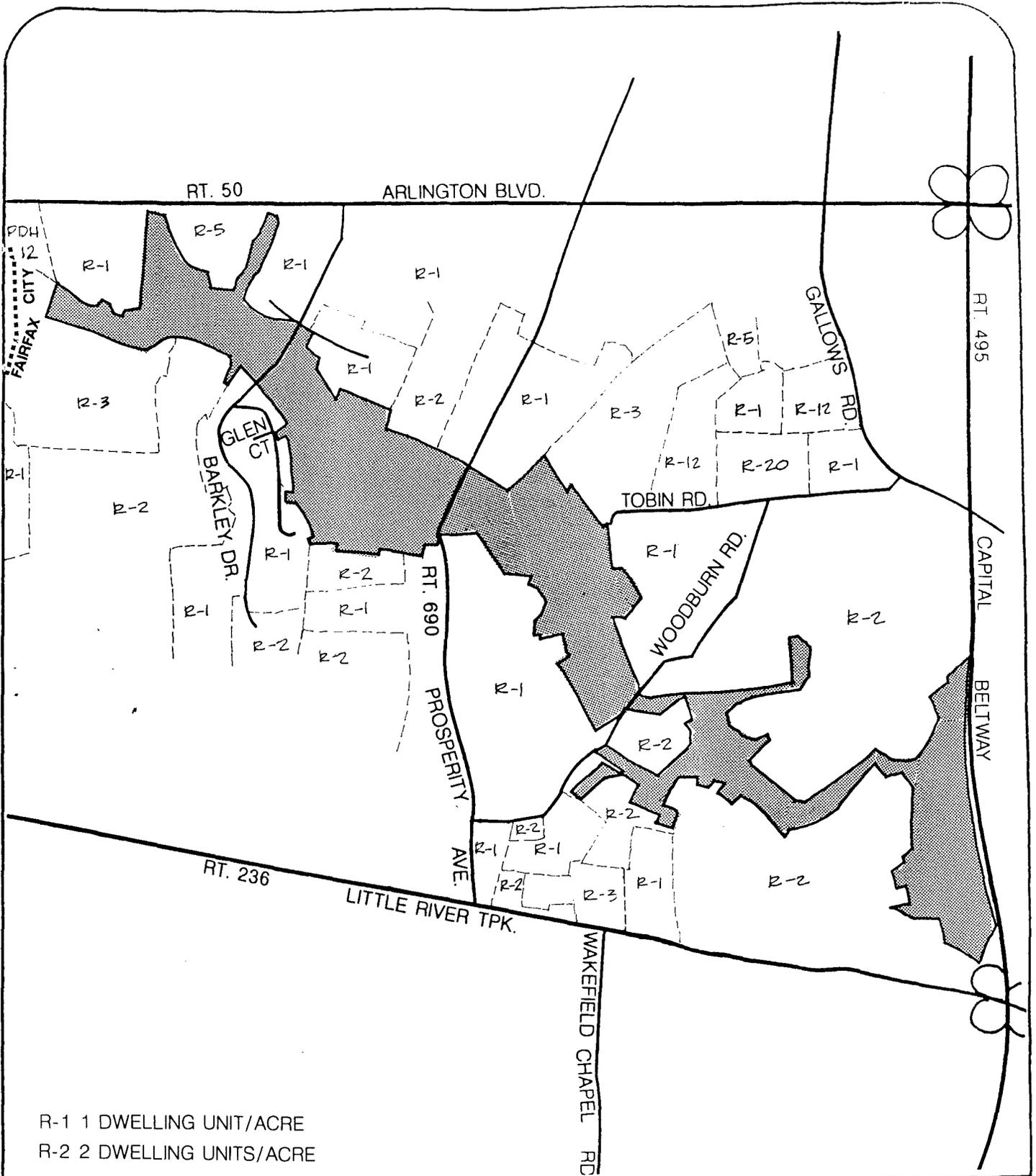
DWELLING UNITS/ACRE

	.5-1 DU/AC
	1-2 DU/AC
	2-3 DU/AC
	3-4 DU/AC
	4-5 DU/AC
	8-12 DU/AC
	16-20 DU/AC

	OFFICE
	RETAIL & OTHER
	PUBLIC FACILITY
	OPEN SPACE
	PRIVATE

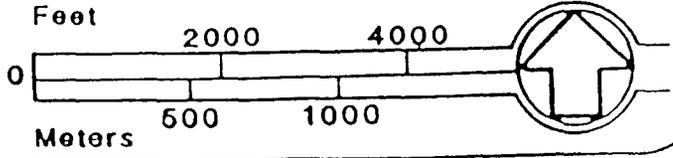
EAKIN/ACCOTINK S.V.
LAND USE

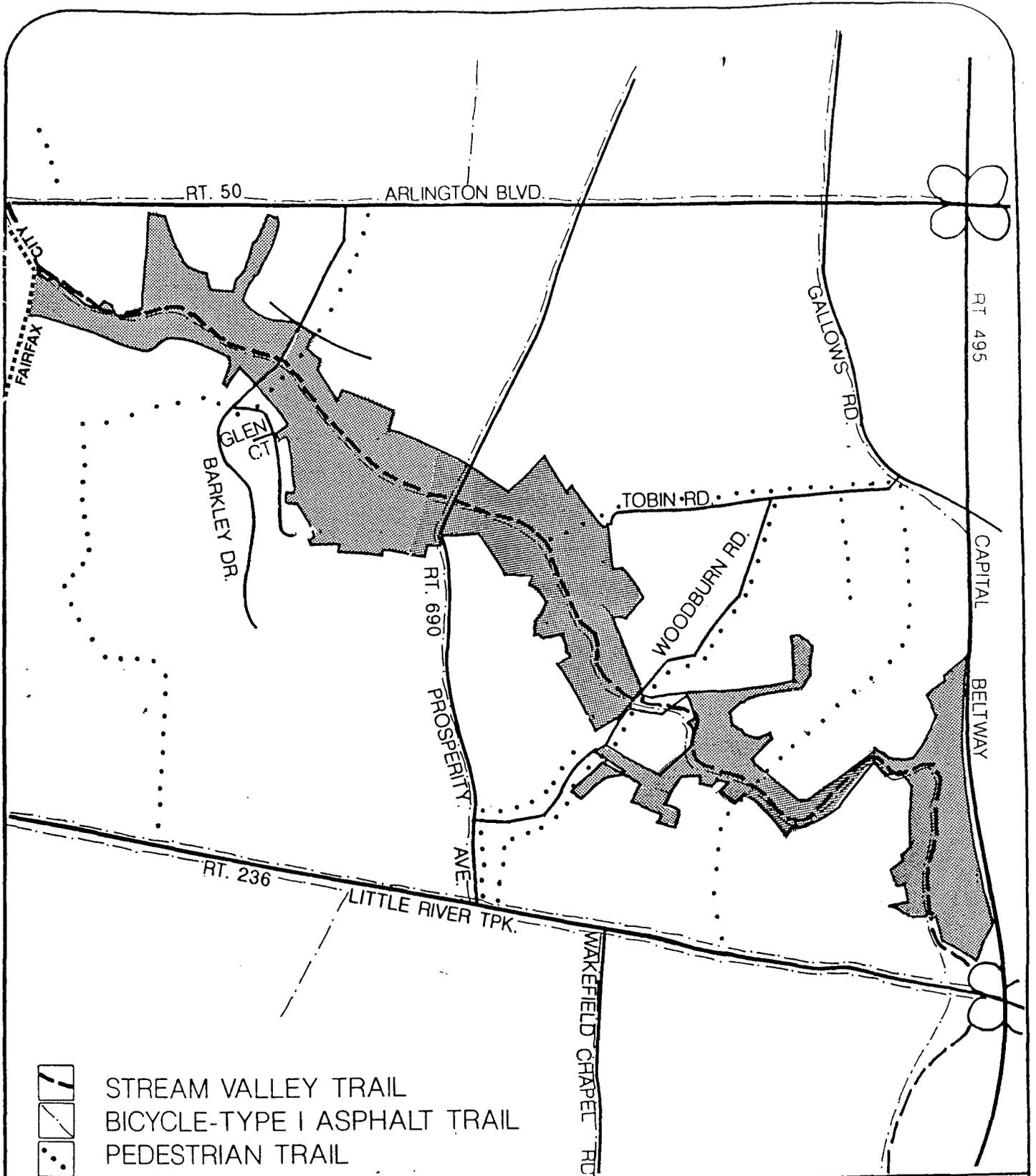




R-1 1 DWELLING UNIT/ACRE
 R-2 2 DWELLING UNITS/ACRE

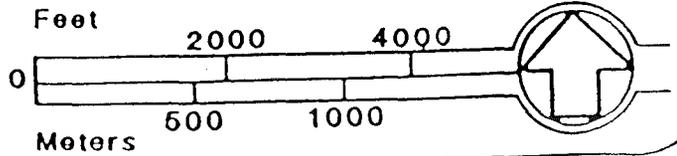
EAKIN/ACCOTINK S.V.
ZONING





-  STREAM VALLEY TRAIL
-  BICYCLE-TYPE I ASPHALT TRAIL
-  PEDESTRIAN TRAIL

EKIN/ACCOTINK S.V.
COUNTYWIDE TRAILS



The statement concerning Eakin (Mantua) recommends upgrading existing facilities. The recommendation on Eakin Community is to protect archaeological resources in any further development. The trail system is shown through the entire stream valley under planning consideration, and is classified as "an integral part of the overall County system."

Transportation - VDOT and County Transportation planning documents indicate that future road improvements are planned for almost all road systems that border the plan area and that bisect the park. According to the 2010 Statewide Highway Plan, Woodburn Road, Prosperity Avenue and Barkely Drive will double in traffic lanes. Route 50 will be widened to six lanes and I-495 will be 14 lanes. No current plans to expand Route 236 are known. Some of this construction will have serious negative impacts.

Demographics - The demographics and recreation participation profile for this stream valley park was computed using data from Claritas, Inc. and from the Park Authority's 1993 recreation demand survey. The data was compiled by Nick Duray of the Park Authority's Market Planning and Research section.

The area included in this demographics summary is bounded by the Beltway on the east, Fairfax City on the west, Arlington Blvd. on the north, and Little River Turnpike on the south. The population of the area is 15,168 with 5,860 households. There is a larger concentration of people age 45 and older than in the county as a whole. The percentage of the population aged 65 and older is 55% higher than it is countywide.

The area has slightly higher than average concentration of Asians and a lower than average percentage of Hispanics. Childless households are more common than in Fairfax County as a whole; about 69% of the households in the service area do not contain children. One and two-person households are more prevalent here than in the county as a whole.

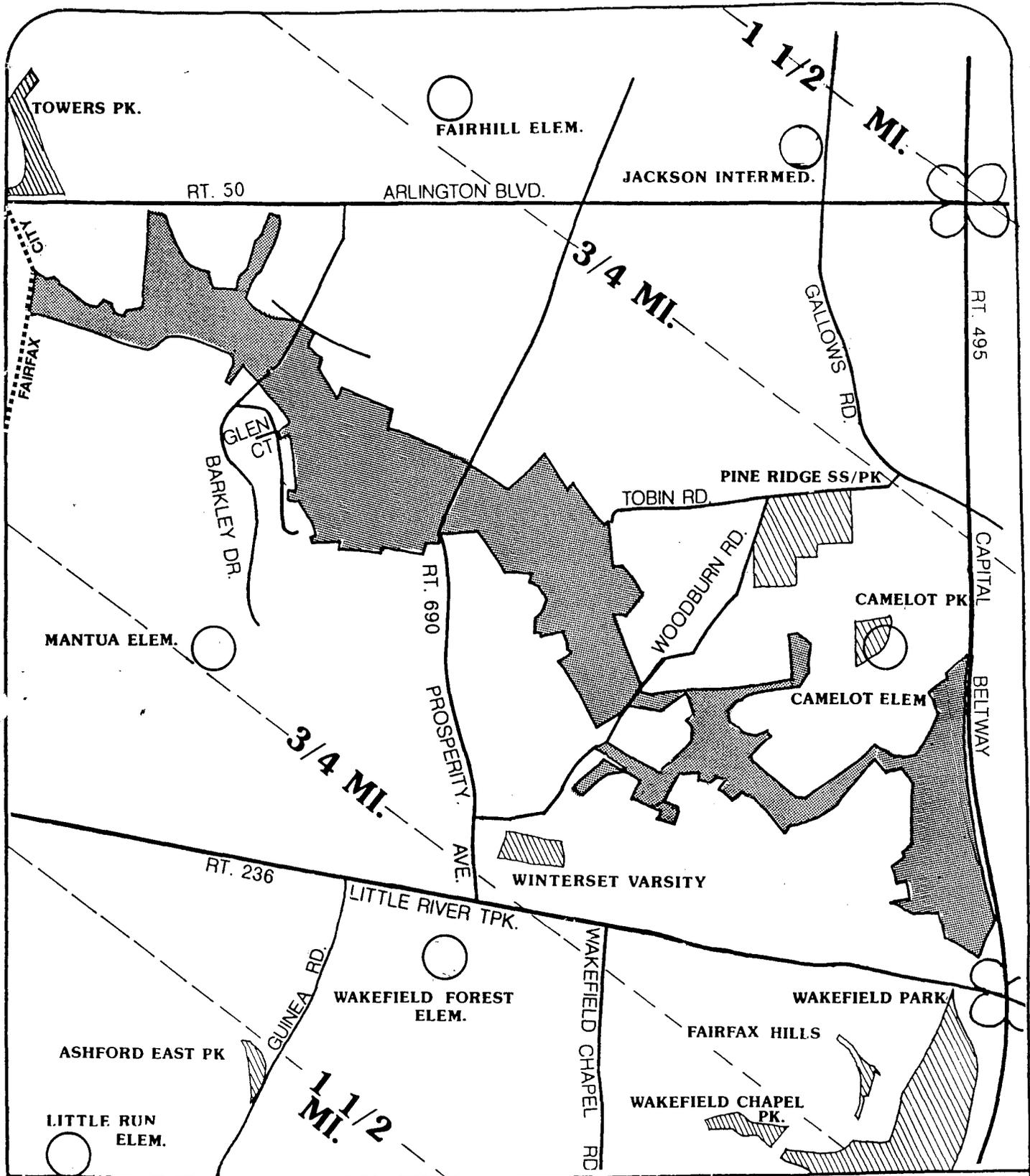
The income in the area has a greater proportion of middle income households and upper income households. (See the pie chart, page 26) The Executive Suites is typified by affluent and well-educated married couples with teen-age children. Many in the Winner's Circle are still childless, though some have pre-school children. Empty nesters (Pools and Patios) and young singles and couples (New Beginnings) are the remaining groups found in the area.

The chart on page 30 shows projections of recreation participation for the Accotink service area based on the Park Authority's 1993 recreation demand survey. Recreation activities projected to have above average rates of participation in this area include: golf, driving range, ice skating, visiting historic sites, tennis, outdoor concerts, hiking/walking, gardening, recreation swimming, bicycling, jogging/running, and basketball.

Needs Assessment - Since 1989 the Park Authority has been working with the Mantua Citizen's Association to determine needs in the community parks. A list was developed in 1989 to include desires of the community. Some of the projects have been accomplished already; others will be considered during this planning process, the CDP phase. Most are specific park improvements for the two community parks with an emphasis on Mantua.

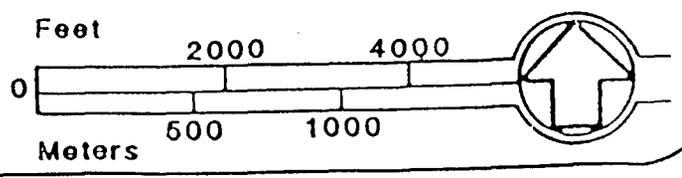
Additionally, the chart from page 30, showing the projected participation rates for various activities lists needs that may potentially be met in this stream valley park: tennis, hiking/walking, gardening, bicycling, jogging/running, and basketball.

During the first input phase for the Park Comprehensive Plan in fall of 1993, citizens included trails as one their highest priorities. The Fairfax County Comprehensive Plan includes the completion of the trail from Fairfax City to Wakefield Park as "an integral part of the overall County system."



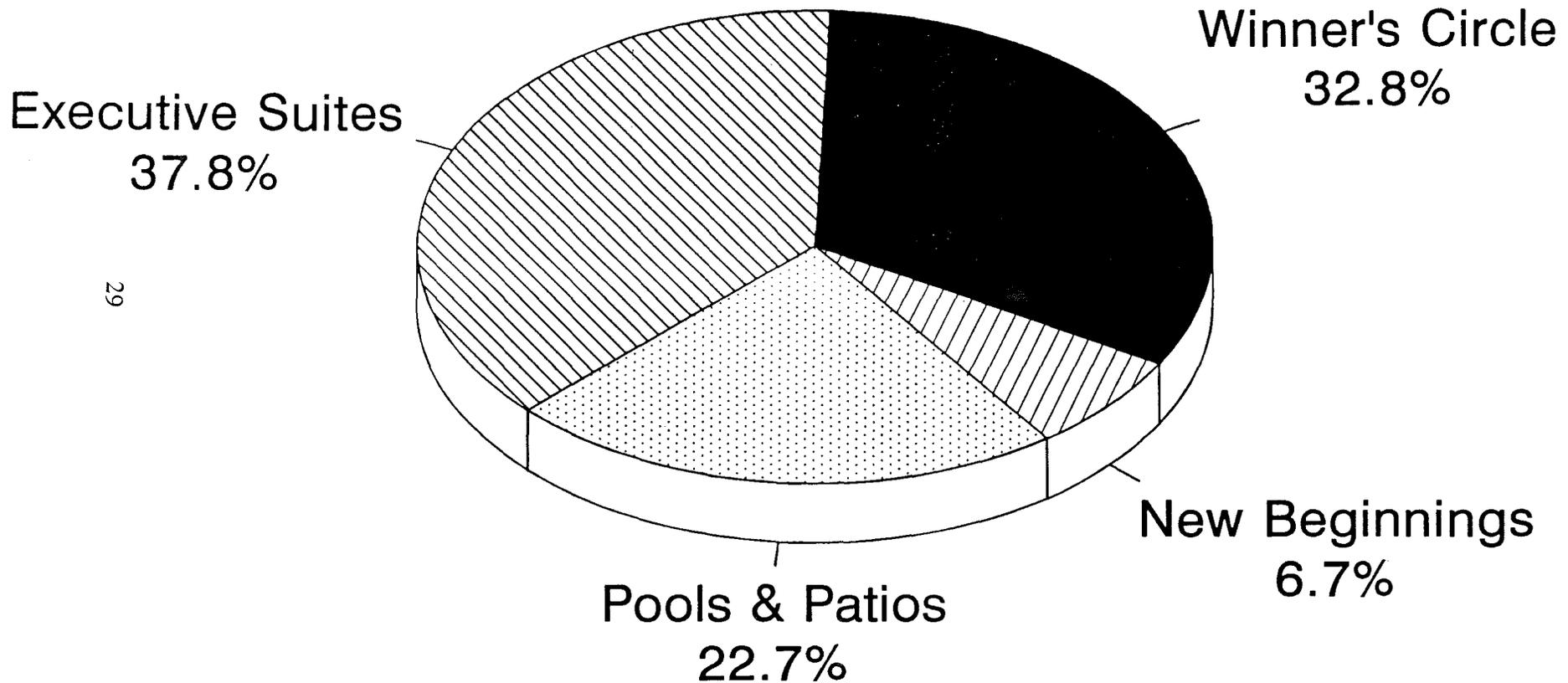
**EAKIN/ACCOTINK S.V.
PARKS & SCHOOLS**

-  SCHOOL
-  PARK
-  PLAN AREA



Cluster Composition

Accotink Stream Valley Service Area



29

Base: 5,860 Households

Source: Claritas, Inc., 1994.

**Projected Recreation Activity Participation,
Age 6 and Older
Accotink Stream Valley Service Area**

Activity	Index*	% Participation
Golf	113	20.1
Golf Driving Range	110	20.1
Ice Skating	109	19.8
Visiting Historic Sites	108	69.7
Tennis	108	29.9
Hiking/Walking	107	74.1
Gardening	107	50.6
Outdoor Concerts	107	46.5
Recreational Swimming	106	47.4
Bicycling	106	46.5
Jogging/Running	106	26.6
Basketball	106	25.4
Picnicking	104	67.6
Lap Swimming	104	43.8
Miniature Golf	103	26.8
Small Craft Boating	103	24.1
Visiting Parks To Enjoy The Outdoors	102	75.7
Volleyball	101	22.1
Nature Centers/Natural Areas	100	46.4
Soccer	99	14.0
Freshwater Fishing	97	16.8
Softball	97	14.4
Overnight Camping	91	15.8

*Index compares the rate of participation in the service area with the rate of participation countywide. Interpret values below 95 to mean below average rates of participation, compared to the county average. Indexes between 95 and 105 equal about average participation and over 105 equals above average rates of participation.

Sources: FCPA Recreation Demand Survey, 1993 and Claritas, Inc., 1994.

IV. **MANAGEMENT FRAMEWORK**

The management framework integrates research (including environmental assessments, wetland delineation, cultural resource surveys, etc.), site analysis, and other basic data presented in this document. Management zones have been defined to provide a framework for decision making. Existing uses, existing conditions, and recommendations from a wide range of professions were considered in the development of the management zones. The framework provides broad flexibility within a range of potential uses for each management zone. See plan on page 31.

The "Potential Uses" stated for each zone describe what uses are acceptable for each zone. If a use is not listed for a zone, by its omission it is considered an incompatible use for that zone. The potential uses are intentionally general to allow flexibility when making decisions.

A. **Natural Resource Protection Zone (NRPZ)**

In keeping with this purpose, human impact in this zone will be kept to a minimum. Management of the natural resources will be allowed, however, new structures or environmental degradation of this zone shall be prohibited. Some of the NRPZ may also contain cultural resources.

POTENTIAL USES

Trails
Passive Recreation
Resource Management
Interpretation, Research, and Education

B. **Cultural Resource Protection Zone (CRPZ)**

The Cultural Resource Protection Zone includes the entire park. Because cultural resources occur in every management zone, research should be conducted prior to any site design work at the park. A map of the Cultural Resource Protection Zone is available in the Cultural Resource Section.

The primary purpose of this zone is to protect the existing cultural resources and to develop those resources for interpretation where applicable. If a cultural resource site occurs within a zone that has a contrary primary purpose, mitigation of the Cultural Resource is required. This may include avoidance, preservation, data collection, etc. In accordance with the above statements, expansion of the garden plots on Eakin Community Park should be prohibited. A cultural resource is located in and around the garden plots and would be destroyed by further expansion.

The Cultural Resource Protection Zone represents a long and varied use of the land by prehistoric and historic people. The park has not been systematically surveyed and additional sites are likely to be found.

POTENTIAL USES

Trails
Passive Recreation
Interpretation, Research, and Education

C. **Entrance Zone (EZ)**

The existing entrances to the park area off Prosperity Avenue, Glen Court, and Tobin Road will continue as main vehicular entrances. The entrance zone includes the entrance, entrance road, and parking. The Entrance Zone (EZ) provides access for visitors into the site and allows them to view the natural environment as they enter.

POTENTIAL USES

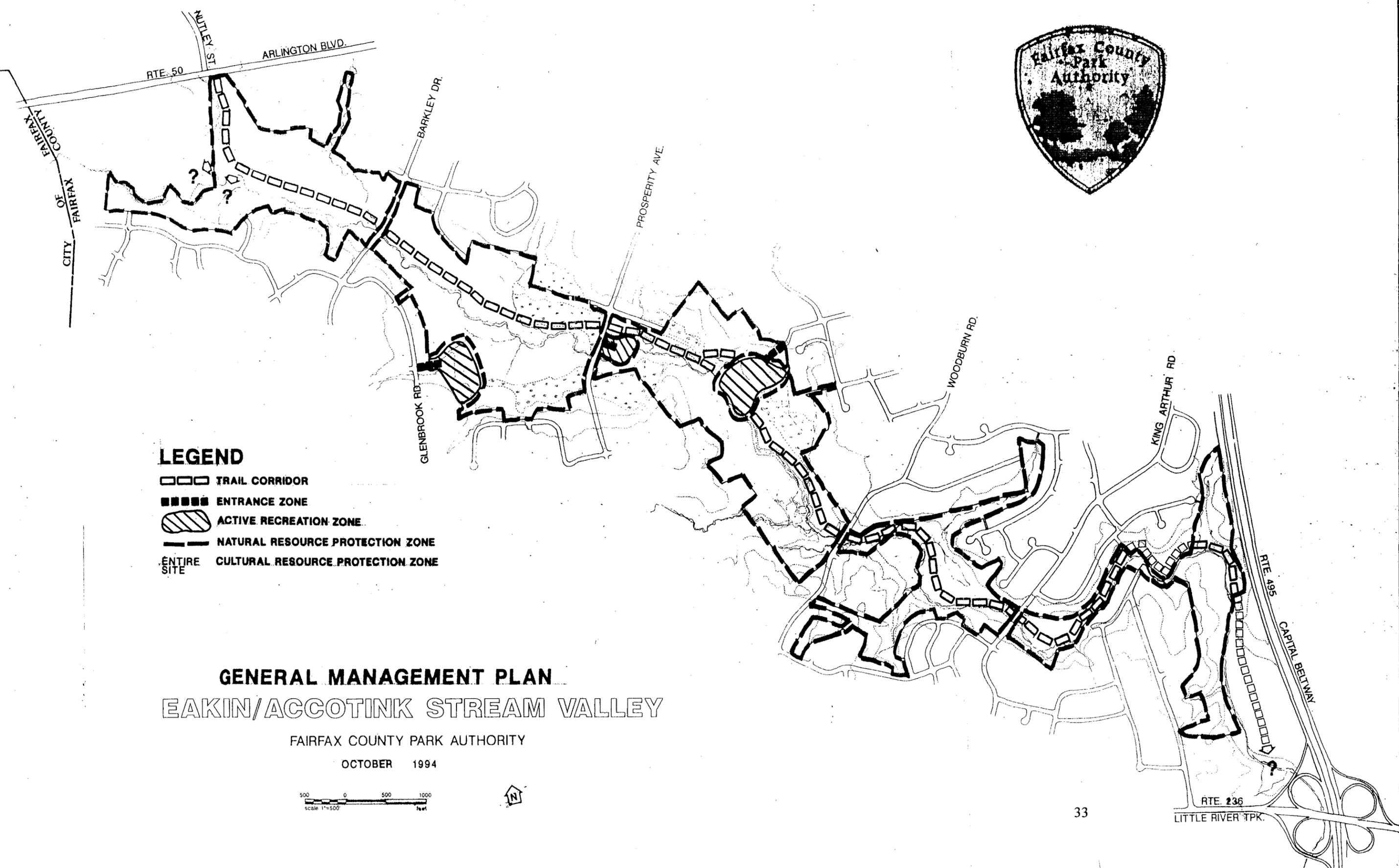
Parking
Trails
Roads and Road Improvements
Utilities, Storm Water Management
Required Site Development Facilities and Features,(such as screening and barriers)
Signage

D. **Recreation Zone**

The Recreation Zone includes the existing developed active areas of Eakin Community and Eakin (Mantua) Parks. The primary purpose of this zone is to provide visitors with active recreational experiences. All of the existing uses in the recreation zone are considered acceptable as potential uses.

POTENTIAL USES

Active Recreation
Passive Recreation
Utilities and Storm Water Management
Required Site Development Facilities and Features,(such as screening and barriers)
Parking



LEGEND

- □ □ TRAIL CORRIDOR
- ■ ■ ■ ENTRANCE ZONE
- ▨ ACTIVE RECREATION ZONE
- — — NATURAL RESOURCE PROTECTION ZONE
- — — ENTIRE CULTURAL RESOURCE PROTECTION ZONE SITE

**GENERAL MANAGEMENT PLAN
EAKIN/ACCOTINK STREAM VALLEY**

FAIRFAX COUNTY PARK AUTHORITY

OCTOBER 1994



V. **RECOMMENDATIONS FOR FUTURE PLANS AND PROJECTS** (See CDP)

Projects from the 1989 Mantua Citizens Association list for consideration:

- ▶ improve drainage in playground areas
- ▶ re-orient ballfield and backstop if possible
- ▶ add picnic pavilion with grills
- ▶ re-design or renovate tennis practice area
- ▶ add third tennis court at Mantua
- ▶ provide barrier behind basketball goal
- ▶ provide landscaping

Other projects suggested by the team:

- ▶ Perform a boundary survey of the entire plan area and mitigate encroachments and non documented easements
- ▶ Acquire parcel 48-4-((1))-3F for natural and cultural resource preservation. This includes the Brazier Archaeological Site 44FX33, a suspected paleo-indian site and identified Indian quartz quarry. In addition, it also contains the remains of the Fairfax Circle Mill Ruins 44FX967, part of which is located on Park Authority land.
- ▶ Acquire the undeveloped portion of Parcel 48-4-((1))-10. This includes the floodplain and the Stenhouse Site, 44FX32, a late archaic (4000-6000 years ago) prehistoric site.

Interpretive Plan

- ▶ Prepare and adopt an interpretive plan for the parks to further initiate, manage, and maintain all the interpretive functions within the park. These include the framework and interpretive messages for:
 - personal interpretation through guided tours or information centers
 - non-personal interpretation through signs, waysides or kiosks
 - publications
 - possible future visitor center or exhibits

Resource Management Plans

- ▶ Prepare and adopt a resource management plan to guide future activities conducted in the parks through the Resource Management Division. The activities are designed to preserve, protect, enhance, and restore wildlife habitat and archeological sites. Resource management plans are appropriate to frame resource management goals and objectives.

Possible Future Negative Impacts

The planning team has considered two areas for potential negative impacts to the park which designers and managers of the parkland may need to consider.

- ▶ VDOT has plans to widen numerous roads on the periphery of the plan area and three road that traverse the plan area. Regardless of the routing the increase in road width will result in further storm water runoff into Accotink Stream Valley. An increase in siltation, pollution, and environmental degradation will follow. Road construction could also have a negative impact on cultural resources. The team suggests attempts to mitigate existing stormwater and pollution problems and any future stormwater problems.

- ▶ Numerous easements are located within the plan area. The team recommends the Park Authority reject requests for new easements and the widening of existing easements. In addition, efforts should be made to remove and redirect existing easements off Park Authority lands.

APPENDIX

ECOLOGICAL RESOURCE INVENTORY
WILDLIFE OBSERVATIONS AT
EAKIN COMMUNITY/EAKIN (MANTUA)/ACCOTINK STREAM VALLEY

BIRDS:

Bluebird, Eastern	<i>Sialia sialis</i>
Bunting, Indigo	<i>Passerina cyanea</i>
Cardinal, Northern	<i>Cardinalis cardinalis</i>
Catbird, Gray	<i>Dumetella carolinensis</i>
Chickadee, Carolina	<i>Parus carolinensis</i>
Cowbird, Brown-headed	<i>Molothrus ater</i>
Crow, American	<i>Corvus brachyrhynchos</i>
Dickcissel	<i>Spiza americana</i>
Dove, Mourning	<i>Zenaida macroura</i>
Flicker, Yellow-shafted	<i>Colaptes auratus</i>
Goose, Canada	<i>Branta canadensis</i>
Grackle, Common	<i>Quiscalus quiscula</i>
Hawk, Red-tailed	<i>Buteo jamaicensis</i>
Hawk, Sharp-shinned	<i>Accipiter striatus</i>
Heron, Great Blue	<i>Ardea herodias</i>
Jay, Blue	<i>Cyanocitta cristata</i>
Kingbird, Eastern	<i>Tyrannus tyrannus</i>
Kingfisher, Belted	<i>Megasceryle alcyon</i>
Mallard	<i>Anas platyrhynchos</i>
Martin, Purple	<i>Progne subis</i>
Mockingbird, Northern	<i>Mimus polyglottos</i>
Nuthatch, White-breasted	<i>Sitta carolinensis</i>
Owl, Barred	<i>Strix varia</i>
Owl, Unknown	Unknown species
Ovenbird	<i>Seiurus aurocapillus</i>
Phoebe, Eastern	<i>Sayornis phoebe</i>
Robin, American	<i>Turdus migratorius</i>
Sapsucker, Yellow-bellied	<i>Sphyrapicus varius</i>
Sparrow, House	<i>Passer domesticus</i>
Sparrow, Swamp	<i>Melospiza georgiana</i>
Starling, European	<i>Sturnus vulgaris</i>
Tanager, Scarlet	<i>Piranga olivacea</i>
Titmouse, Tufted	<i>Parus bicolor</i>
Thrush, Wood	<i>Hylocichla mustelina</i>
Towhee, Rufous-sided	<i>Pipilo erythrophthalmus</i>
Turkey, Wild	<i>Meleagris gallopavo</i>
Vireo, Red-eyed	<i>Vireo olivaceus</i>
Whip-poor-will	<i>Caprimulgus vociferus</i>
Wren, Carolina	<i>Thryothorus ludovicianus</i>
Woodpecker, Downy	<i>Picoides pubescens</i>
Woodpecker, Pileated	<i>Dryocopus pileatus</i>

MAMMALS:

Beaver
Chipmunk, Eastern
Deer, White-tailed
Fox, Red
Mole, Eastern
Muskrat, Common
Opossum, Virginia
Rabbit, Cottontail
Raccoon
Skunk, Striped
Squirrel, E. Gray
Vole, Meadow

Castor canadensis
Tamias striatus
Odocoileus virginianus
Vulpes fulva
Scalopus aquaticus
Ondatra zibethica
Didelphis marsupialis
Sylvilagus floridanus
Procyon lotor
Mephitis mephitis
Sciurus carolinensis
Microtus pennsylvanicus

REPTILES & AMPHIBIANS:

Bullfrog
Frog, Green
Frog, Northern Cricket
Frog, Wood
Newt, Red-spotted
Racer, Northern Black
Salamander, Red-backed
Skink, Five-lined
Snake, Black Rat
Spring Peeper
Toad, American
Toad, Fowler's
Turtle, Common Snapping
Turtle, Eastern Box

Rana catesbeiana
Rana clamitans melanota
Acris crepitans crepitans
Rana sylvatica
Notophthalmus viridescens
Coluber constrictor constrictor
Plethodon cinereus cinereus
Eumeces fasciatus
Elaphe obsoleta obsoleta
Hyla crucifer
Bufo americanus
Bufo woodhousei fowleri
Chelydra serpentina
Terrapene carolina carolina

INSECTS:

Beetle, Strawberry Flea
Bumble Bee
Butterfly, Cabbage
Spider, Bowl & Doily

Altica ignita
Bombus sp.
Dieris rapae
Frontinella pyramitela

OTHER:

Crayfish, Unknown

Cambarus sp.

ECOLOGICAL RESOURCE INVENTORY
PLANT LIST FOR
EAKIN COMMUNITY/EAKIN (MANTUA)/ACCOTINK STREAM VALLEY

TREES:

Ash, Green (Red Ash)	Fraxinus pennsylvanica
Beech, American	Fagus grandifolia
Birch, River	Betula nigra
Box-elder	Acer negundo
Cedar, Red	Juniperus virginiana
Cherry, Black	Prunus serotina
Cottonwood, Eastern	Populus deltoides
Dogwood, Flowering	Cornus florida
Elm, American	Ulmus americana
Elm, Slippery (or Red)	Ulmus rubra
Fringetree	Chionanthus virginicus
Gum, Black	Nyssa sylvatica
Gum, Sweet	Liquidamber styraciflua
Hazelnut	Corylus americana
Hickory, Bitternut	Carya cordiformis
Hickory, Mockernut	Carya tomentosa
Holly, American	Ilex opaca
Holly, Deciduous	Ilex decidua
Ironwood	Carpinus caroliniana
Maple, Red	Acer rubrum
Maple, Silver	Acer saccharinum
Maple, Sugar	Acer saccharum
Mulberry, Red	Morus rubra
Oak, Black	Quercus velutina
Oak, Chestnut	Quercus prinus
Oak, Pin	Quercus palustris
Oak, Red	Quercus rubra
Oak, Shingle	Quercus imbricaria
Oak, Swamp White	Quercus bicolor
Oak, White	Quercus alba
Oak, Willow	Quercus phellos
Pine, Loblolly	Pinus taeda
Pine, Virginia (Scrub)	Pinus virginiana
Sassafras	Sassafras albidum
Sycamore	Platanus occidentalis
Tulip Poplar	Liriodendron tulipifera
Walnut, Black	Juglans nigra
Willow, Black	Salix nigra

FERNS AND FERN ALLIES:

Bracken Fern
Broad Beech Fern
Christmas Fern
Cinnamon Fern
Crested Wood Fern
Groundpine
Hay-scented Fern
Horsetail
Maidenhair Fern
New York Fern
Quillwort
Rattlesnake Fern
Running Cedar
Sensitive Fern
Lady Fern, Southern

Pteridium aquilinum
Thelypteris hexagonoptera
Polystichum acrostichum
Osmunda cinnamomea
Dryopteris cristata
Lycopodium obscurum
Dennstaedtia punctilobula
Equisetum arvense
Adiantum pedatum
Thelypteris noveboracensis
Isoetes engelmannii
Botrychium virginianum
Lycopodium digitatum
Onoclea sensibilis
Athyrium asplenoides

SHRUBS:

Arrowwood, Southern
Autumn-Olive
Azalea, Pink
Barberry, Japanese
Blackberry Bramble
Blackberry, Tall
Blueberry, Highbush
Blueberry, Low
Coralberry
Deerberry
Dogwood, Silky
Elderberry
Elm, Winged (Wahoo)
Fetterbush
Greenbriar, Common
Haw, Black
Haw, Possum-
Honeysuckle, Bush
Huckleberry, Black
Hydrangea, Wild
Laurel, Mountain
Privet
Raspberry, Black
Raspberry, Red
Rhododendron
Rose, Multiflora
Rose, Swamp
Russian Olive
Sawbrier
Serviceberry, Oblong
Spicebush
Strawberry Bush
Viburnum, Maple-leaved
Winterberry

Viburnum dentatum
Eleagnus umbellata
Rhododendron nudiflorum
Berberis thunbergii
Rubus pennsylvanicus
Rubus argutus
Vaccinium corymbosum
Vaccinium pallidum
Symphoricarpos orbiculatus
Vaccinium stamineum
Cornus amomum
Sambucus canadensis
Ulmus alata
Leucothoe racemosa
Smilax rotundifolia
Viburnum prunifolium
Viburnum nudum
Lonicera maackii
Gaylussacia baccata
Hydrangea arborescens
Kalmia latifolia
Ligustrum sinense
Rubus occidentalis
Rubus idaeus
Rhododendron sp.
Rosa multiflora
Rosa palustris
Elaeagnus angustifolia
Smilax glauca
Amelanchiar canadensis
Lindera benzoin
Euonymus americanus
Viburnum acerifolium
Ilex verticillata

VINES:

Bittersweet
Buckwheat, Climbing
Carrion Flower
Grape, Unknown
Grape, Fox
Grape, Pigeon
Groundnut
Honeysuckle, Japanese
Honeysuckle, Trumpet
Ivy, English
Ivy, Poison
Trumpet Vine
Virginia Creeper

Celastrus scandens
Polygonum scandans var. scandens
Smilax herbacea
Vitus sp.
Vitus lambrusca
Vitus cinerea
Apios americana
Lonicera japonica
Lonicera sempervirens
Hedera helix
Rhus radicans
Campsis radicans
Parthenocissus quinquefolia

GRASSES/SEDGES/RUSHES, ETC:

Broomsedge
Burreed
Cattail, Common
Cut-grass, Rice
Fescue, Red
Fescue, Tall
Grass, Deer-tongue
Grass, Orchard
Grass, White
Meadow Grass, Rough-stalked
Melic-grass
Panic-grass, Bushy
Panic-grass, Flat-stemmed
Purpletop
Reed-grass, Wood
Redtop
Rush, Path
Rush, Soft
Sedge, Fringed
Sedge, Sallow
Sedge, Square
Sedge, Stellate
Sedge, Woodland
Sweet Vernal-grass
Wild Rye, Nodding
Wild Rye, Virginia
Woodrush 1
Woodrush 2
Yellow-eye Grass, Carolina

Andropogon virginicus
Sparganium americanum
Typha latifolia
Leersia oryzoides
Festuca rubra
Festuca sp.
Dichanthelium clandestinum
Dactylis glomerata
Leersia virginica
Poa trivialis
Melica mutica
Dichanthelium dichotomum
Panicum anceps
Tridens flavus
Cinna arundinacea
Agrostis stolonifera
Juncus tenuis
Juncus effusus
Carex crinita
Carex lurida
Carex squarosa
Carex rosea
Carex blanda
Anthoxanthum odoratum
Elymus canadensis
Elymus virginicus
Luzula acuminata
Luzula echinata
Xyris caroliniana

FLOWERS:

Agrimony	<i>Agrimonia rostellata</i>
Anemone, Rue	<i>Thalictrum thalictroides</i>
Anemone, Wood	<i>Anemone quinquefolia</i>
Anise-root	<i>Osmorhiza longistylis</i>
Arrow-head, Broad-leaved	<i>Sagittaria latifolia</i>
Aster, Frost	<i>Aster pilosus</i>
Aster, Purplestem	<i>Aster puniceus</i>
Aster, Small White	<i>Aster vimineus</i>
Aster, Starved (Calico)	<i>Aster lateriflorus</i>
Aster, White Wood	<i>Aster divaricatus</i>
Aster, Unknown	<i>Aster sp.</i>
Bedstraw	<i>Galium aparine</i>
Bedstraw, Rough	<i>Galium asprellum</i>
Bedstraw, Hairy	<i>Galium pilosum</i>
Bedstraw, Sweet-scented	<i>Galium triflorum</i>
Beggar's Lice	<i>Bidens sp.</i>
Beggar's Ticks	<i>Bidens frondosa</i>
Bellwort, Sessile-leaved	<i>Uvularia sessilifolia</i>
Bittercress, Hairy	<i>Cardamine hirsuta</i>
Bittercress, Pennsylvania	<i>Cardamine pennsylvanica</i>
Bloodroot	<i>Sanguinaria canadensis</i>
Buckwheat	<i>Fagopyrum sagittatum</i>
Bush-clover	<i>Lespedeza cuneata</i>
Buttercup, Bulbous	<i>Ranunculus bulbosus</i>
Buttercup, Hispid	<i>Ranunculus hispidus</i>
Buttercup, Kidneyleaf	<i>Ranunculus abortivus</i>
Buttercup, Unknown	<i>Ranunculus sp.</i>
Cardinal Flower	<i>Lobelia cardinalis</i>
Cattail, Common	<i>Typha latifolia</i>
Chickweed, Common	<i>Stellaria media</i>
Chickweed, Mouse-eared	<i>Cerastium viscosum</i>
Cinquefoil, Old-field	<i>Potentilla simplex</i>
Cinquefoil, Rough-fruited	<i>Potentilla recta</i>
Clearweed	<i>Pilea pumila</i>
Clover, White	<i>Trifolium repens</i>
Cohosh, Black	<i>Cimicifuga racemosa</i>
Coneflower, Cutleaf	<i>Rudbeckia laciniata</i>
Corydalis	<i>Corydalis flavula</i>
Crown Vetch	<i>Coronilla varia</i>
Dandelion, Common	<i>Taraxacum officinale</i>
Dewberry, Creeping	<i>Rubus hispidus</i>
Dock, Curled	<i>Rumex crispus</i>
Elephant's-foot, Carolina	<i>Elephantopus caroliniana</i>
Evening Primrose, Common	<i>Oenothera biennis</i>
Five-fingers	<i>Potentilla canadensis</i>
Garlic, Field	<i>Allium vineale</i>
Ginger, Wild	<i>Asarum canadense</i>
Goldenrod, Early	<i>Solidago juncea</i>
Goldenrod, Flat-topped	<i>Solidago graminifolia</i>
Goldenrod, Rough-stemmed	<i>Solidago rugosa</i>
Goldenrod, Slender	<i>Solidago erecta</i>
Goldenrod, Tall	<i>Solidago altissima</i>

FLOWERS: (continued)

Goldenrod, Unknown
Hemlock, Water
Hercules Club
Honewort
Horse-nettle
Indian Cucumber-root
Indian Hemp
Indian Strawberry
Jack-in-the-pulpit
Jumpseed
Lady's Thumb
Lettuce, Wild
Licorice, Wild
Lily, Yellow Pond
Lizard's Tail
Loosestrife, Fringed
Loosestrife, Whorled
Marigold, Marsh
May Apple
Meadow Rue, Early
Mustard, Garlic
Nettle, False
Nightshade, Enchanter's
Onion, Wild
Partridge Berry
Partridge Pea
Periwinkle, Common
Pinkweed
Pondweed, Waterthread
Ragweed, Common
Ragwort, Golden
Rattlesnake Weed
Skullcap, Heart-leaved
Skullcap, Mad-dog
Skunk Cabbage
Smartweed (Water Pepper)
Snakeroot, Black
Soloman's Seal, False
Soloman's Seal
Speedwell, Ivy-leaved
Spotted Touch-me-not
Spotted Wintergreen
Spring Beauty
Strawberry
Tearthumb, Arrow-leaved
Tearthumb, Halberd-leaved
Tearthumb, Unknown
Thoroughwort, Round-leaved
Three-seeded Mercury, Slender
Tick Trefoil, Naked-flowered
Tickseed, Whorled
Toothwort, Cut-leaved
Solidago sp.
Cicuta maculata
Aralia spinosa
Cryptotaenia canadensis
Solanum carolinense
Medeola virginiana
Apocynum cannabinum
Duchesnea indica
Arisaema triphyllum
Tovara virginiana
Polygonum persicaria
Lactuca canadensis
Galium circaezans
Nuphar luteum
Saururus cernuus
Lysimachia ciliata
Lysimachia quadrifolia
Caltha palustris
Podophyllum peltatum
Thalictrum dioicum
Alliaria petiolata
Boehmeria cylindrica
Circaea lutetiana
Allium canadense
Mitchella repens
Cassia fasciculata
Vinca minor
Polygonum pennsylvanica
Potamogeton diversifolius
Ambrosia artemisiifolia
Senecio aureus
Hieracium venosum
Scutellaria ovata
Scutellaria lateriflora
Symplocarpus foetidus
Polygonum hydropiper
Sanicula canadensis
Smilacina racemosa
Polygonatum biflorum
Veronica hederaefolia
Impatiens capensis
Chimaphila maculata
Claytonia virginica
Fragaria virginiana
Polygonum sagittatum
Polygonum arifolium
Polygonum sp.
Eupatorium rotundifolium
Acalypha gracilens
Desmodium nudiflorum
Coreopsis verticillata
Dentaria laciniata

FLOWERS:(continued)

Trillium, Toadshade

Trout Lily

Turtle-head

Vetch, Common

Violet, Birdfoot

Violet, Blue Marsh

Violet, Common Blue

Water Horehound, Cut-leaved

Water-Plantain

White Avens

Wild Geranium

Wild Yam

Winter Cress, Early

Trillium sessile

Erythronium americanum

Chelone glabra

Vicia sativa

Viola pedata

Viola cucullata

Viola papilionacea

Lycopus americanus

Alisma subcordata

Geum canadensis

Geranium maculatum

Dioscorea villosa

Barbarea verna

**ADDITIONAL WILDLIFE OBSERVATIONS AT
EAKIN COMMUNITY/EAKIN (MANTUA)/ACCOTINK STREAM VALLEY**

BIRDS:

- | | |
|---------------------------------|----------------------------|
| * Chat, Yellow-breasted | Icteria virens |
| * Creeper, Brown | Certhia familiaris |
| * Duck, Wood | Aix sponsa |
| * Flycatcher, Acadian | Empidonax virescens |
| * Grosbeak, Rose-breasted | Pheucticus ludovicianus |
| * Hawk, Broad-winged | Buteo platypterus |
| * Hawk, Red-shouldered | Buteo lineatus |
| * Heron, Black-crowned Night | Nycticorax Nycticorax |
| * Heron, Green-backed | Butorides striatus |
| * Loon, Common | Gavia immer |
| * Nighthawk, Common | Chordeiles minor |
| * Oriole, Baltimore | Icterus galbula |
| * Oriole, Orchard | Icterus spurius |
| * Osprey | Pandion haliaetus |
| * Owl, Great-Horned | Bubo virginianus |
| * Owl, Screech | Otus asio |
| * Redstart, American | Setophaga ruticilla |
| * Thrasher, Brown | Toxostoma rufum |
| * Thrush, Gray-cheeked | Catharus minimus |
| * Thrush, Hermit | Catharus guttatus |
| * Thrush, Swainson's | Catharus ustulatus |
| * Vireo, Solitary | Vireo solitarius |
| * Vireo, White-eyed | Vireo griseus |
| * Vireo, Yellow-throated | Vireo flavifrons |
| * Warbler, Bay-breasted | Dendroica castanea |
| * Warbler, Black-and-white | Mniotilta varia |
| * Warbler, Blackburnian | Dendroica fusca |
| * Warbler, Black-throated Blue | Dendroica caerulescens |
| * Warbler, Black-throated Green | Dendroica virens |
| * Warbler, Blue-winged | Vermivora pinus |
| * Warbler, Canada | Wilsonia canadensis |
| * Warbler, Chestnut-sided | Dendroica pensylvanica |
| * Warbler, Golden-winged | Vermivora chrysoptera |
| * Warbler, Magnolia | Dendroica magnolia |
| * Warbler, Northern Parula | Parula americana |
| * Warbler, Palm | Dendroica palmarum |
| * Warbler, Pine | Dendroica pinus |
| * Warbler, Prothonotary | Protonotaria citrea |
| * Warbler, Wilson's | Wilsonia pusilla |
| * Warbler, Worm-eating | Helmitheros vermivorus |
| * Warbler, Yellow | Dendroica petechia |
| * Waterthrush, Louisiana | Seiurus motacilla |
| * Waterthrush, Northern | Seiurus noveboracensis |
| * Woodpecker, Hairy | Picoides villosus |
| * Woodpecker, Red-Headed | Melanerpes erythrocephalus |
| * Wren, House | Troglodytes aedon |
| * Wren, Winter | Troglodytes troglodytes |
| * Yellowthroat, Common | Geothlypis trichas |

* *Observations made by FCPA Naturalist Marty Smith*

MAMMALS:

* Mole, Eastern	Scalopus aquaticus
* Mole, Star-nosed	Condylura cristata
**Mouse, White-footed	Peromyscus leucopus
* Otter, River	Lutra canadensis
**Rat, Norway	Rattus norvegicus
**Shrew, Short-tailed	Blarina brevicauda

REPTILES & AMPHIBIANS:

* Salamander, Spotted	Ambystoma maculatum
* Snake, Rough Green	Opheodrys aestivus

* *Observations made by FCPA Naturalist Marty Smith*

***Observations made by U.S. Fish and Wildlife Service Mammologist Dr. Al Gardner*

**CONCEPTUAL DEVELOPMENT PLAN FOR
EAKIN COMMUNITY/EAKIN(MANTUA)/ACCOTINK STREAM VALLEY**

DRAFT

I. INTRODUCTION

The purpose of this Conceptual Development Plan (CDP) is to describe what facilities should be developed, how they fit into the established management framework, where they will be constructed, and how these facilities will be operated in conjunction with other portions of the park and existing uses.

II. DESIGN CONCERNS

A. Wetlands

A thorough wetlands delineation has been completed for most of this site. Wetlands so delineated should be avoided if at all possible. If avoidance is impossible, impact should be minimized or mitigated as required.

B. Accessibility and Safety of Facilities

Any development program should include upgrading existing facilities as much as possible to provide accessibility for all park visitors. Any required improvements to increase safety in the park should also be included. New facilities should meet both safety guidelines and accessibility requirements. A possible conflict between preservation of wetlands and habitat and provision of additional width on the trail for the safety of users will need to be resolved in the Project Implementation Plan and the final design.

C. Overall Preservation and Resource Protection Concerns

As concluded in the GMP, the study area holds highly rich and diverse cultural and natural resources. Care must be taken to preserve, or to enhance if possible, these characteristics during the design/development phase of the plan, and following any construction, during lifetime maintenance.

III. **DESCRIPTION OF CONCEPT PLAN ELEMENTS**

A. **Trail System**

Completion of the countywide trail from the Fairfax City line to the Route 236/Beltway interchange provides a link in the trail system. Connections to the Fairfax City trail along Pickett Road and the trail north toward Vienna and the Metro and W&OD trail should be investigated. The link south across 236 to Wakefield Park and the Wakefield/Accotink trail should also be explored. Additional land or easements or agreements with neighboring jurisdictions may be required for completion of this trail. Existing trail may need improvement in some sections, in others, it may be adequate.

Environmental sensitivity is of the utmost importance. Minimal grading and clearing is a goal, tree and wetland preservation a priority, and trail width, safety, and location a consideration.

B. **Trail and Interpretive Signage**

Directional signs should be provided at key trail intersections, including all street crossings and intersections with other trails. Interpretive signs should be developed in conjunction with interpretive programs and installed at significant points along the trail, giving cultural and natural history of the area, describing the importance of the site, identifying wildlife and plants of the area, etc.

C. **Improvements at Eakin (Mantua) Park**

Multi-Use Court - Renovate or rebuild to current standards for design, ADA, and safety.

Entrance Road - Replace the storm drainage pipe and related structures under the entrance road. Stabilize the stream banks at both ends. Repave entrance road and parking lot as necessary.

Accessible Routes - Renovate trail to provide accessible route from the parking lot to the apparatus area and to the multi-use court. Stripe parking lot to include an accessible space.

Apparatus Area - Renovate the apparatus area to current ADA and safety standards. Add shade trees at the perimeter.

Tennis Courts - Renovate with crack filler and add color coating finishes to the existing playing surface.

Trails - From parking lot to tennis court, renovate the existing trail and steps to current safety standards.

Picnic Shelter - In the area of the multi-use court and playground, install a small metal picnic shelter with two or three tables.

Water Fountain - Investigate the feasibility of providing a drinking fountain near the new picnic shelter and playground.

D. Improvements at Eakin Community Park

Pond Renovation - The pond at Eakin is a rich and varied resource, used not only for sustenance by flora and fauna; it is also used to teach and interpret aquatic life cycles to thousands of students in Fairfax County. However, siltation has degraded the aquatic life. Therefore, the pond should be drained or dredged and cleaned to restore that life quality.

Accessibility Issues - Provide curb cut from parking lot. Provide accessible route to both ballfield bleacher pads and tennis courts.

Parking Lots (Tobin Road and Prosperity Avenue) - Resurface as needed, restripe, provide drainage improvements, and include accessible space.

Tennis Court - Crack fill and color coat tennis court.

Ballfield #1 - Provide drainage improvements behind the backstop.

Trail Repairs - Main trail requires drainage improvements to prevent standing water on trail.

**PROJECT IMPLEMENTATION PLAN FOR
EAKIN COMMUNITY/EAKIN(MANTUA)/ACCOTINK STREAM VALLEY**

DRAFT

I. INTRODUCTION AND OVERVIEW

The purpose of this Project Implementation Plan (PIP) is to provide scope definitions, budgets, and approximate schedule for completion of the Eakin Community/Eakin(Mantua)/Accotink Conceptual Development Plan.

Implementation of the plan involves the design and construction of the facilities described below. Project Manager for the implementation will be a project manager from the Planning and Development Division with team support from the planning team noted in this document.

All facilities and amenities will be fully accessible to persons with disabilities where reasonably possible.

The Phase I project cost is estimated at \$459,600.

II. PROJECT SCOPE DEFINITIONS - PHASE I - NEW CONSTRUCTION AND RENOVATION

The following project scope definitions include elements of the Conceptual Development Plan selected by the team for funding under the 1988 Capital Improvement Bond and by a grant received in June 1995 as part of the Commonwealth of Virginia Transportation Enhancement Program.

A. Trail System - New Trail from Thaiss Park to Connect to Existing Trail and Stream Crossing on New Trail

This planned segment of the countywide trail from the Fairfax City line to the Route 236/Beltway interchange establishes a vital link in the trail system. It will provide a connection to the Fairfax City trail along Pickett Road, Northern Virginia Regional's Gateway Park, and the trail north toward Vienna Metro and the W&OD trail.

The trail section will depend upon the topo and a geotech study of the area of construction. It will have an asphalt surface with appropriate materials underlying the asphalt to allow water flow and related drainage structures. The length of this segment will be approximately 2400 liner feet, beginning at the FCPA/Thaiss Park line and continuing through FCPA land to Accotink Creek south of the existing trail.

To connect to the existing main trail, a stream crossing will be constructed. The stream crossing may be one of several types, depending on an engineering analysis of the stream flow at the point of crossing and other factors. A fairweather crossing, a bridge, or a box culvert type crossing are all under consideration. The trail will connect to the existing Fairfax City trail at the Thaiss Park property line. The trail tread will be 8' wide.

B. Trail and Interpretive Signage

Directional signs will be provided at key trail intersections, including all street crossings and intersections with other trails. Interpretive signs will be developed in conjunction with interpretive programs and installed at significant points along the trail, giving cultural and natural history of the area, describing the importance of the site, identifying wildlife and plants of the area, etc.

Twenty interpretive signs (9" x 12"), 19 describing natural history and one describing cultural history, will be constructed of aluminum and mounted on u-channel posts at locations within the project area to be determined by team members from the Resource Management Division. Additionally, 30 (18" x 24") aluminum directional/information signs and eight (18" x 24") entrance signs will be located by the team following the construction of the trail. Two permanent kiosks, describing the pond environment and the history of Chichester Mill, will be located at those sites. These signs will be larger and more complex and constructed of a material (Lexan) resistant to vandalism.

C. Improvements at Eakin (Mantua) Park

Multi-Use Court - Rebuild existing multi-use court to current standards for design, ADA, and safety. This work will include demolition and removal of existing asphalt curb and removal of existing backboards, posts, and footings. The asphalt area will be expanded to meet current safety and design standards; line painting and colorcoat will be applied and new goals will be installed. An accessible 6' wide concrete trail will be constructed to connect the parking lot and the new court. Disturbed areas will be seeded.

Entrance Road and Parking Lot - Replace the storm drainage pipe and related structures under the entrance road. Stabilize the stream banks at both ends. Repave entrance road and parking lot as necessary. This work will include demolition and removal of the existing storm pipe, curb inlets, curb, and surrounding asphalt pavement (approximately 133 SY). A new class III pipe and associated structures will be installed and the pavement will be repaired. In addition, the parking lot will be striped with an accessible space added.

Walkway and Steps to Tennis Courts - Renovate the existing trail and steps to current safety standards. This work will include demolition and removal of the existing asphalt trail and benches. A new 5' wide concrete trail and new steps with handrail will be constructed. In addition, a concrete bench pad with two new benches will be added outside the tennis fence, at the entrance gate.

Picnic Shelter - On the existing concrete slab near the multi-use court and playground, install a prefabricated 24' metal picnic shelter. One accessible picnic table and two standard tables will be placed and anchored in the shelter. One grill and one trash container will also be installed in the shelter area.

D. Improvements at Eakin Community Park

Pond Renovation - Eakin pond is a rich and varied resource, sustaining flora and fauna and used to teach and interpret aquatic life cycles to thousands of Fairfax County students. In recent years siltation has blocked the water course, effectively drying the pond in August and lowering it several feet below normal depth during the rest of the year. Erosion sediment has also compromised the pond's ecosystem, leaving it susceptible to complete freezing in winter and creating anaerobic conditions.

Extensive investigation has determined that the water course has cut a deeper channel around the eastern edge of the pond, which is now filled only during floods and by whatever sheet water can make its way through the water shed from the upper gravel lot. The channel is currently a thin trickle of water with enough flow to keep wetlands in the eastern half of the pond. The western half depth is less than one foot. The berms on several edges of the pond have collapsed.

The pond will be renovated by incorporating the following recommendations:

- ▶ Replace three 18" corrugated 8' pipes to better accommodate flow from ballfields and creek feeder from Tobin Road hillside.
- ▶ Clear trench from Tobin Road hillside and fill in channel cut by stream around eastern half of pond (45 cubic yards of fill dirt).
- ▶ Clear effluent to prevent flooding of asphalt path south of pond.
- ▶ Rebuild collapsed berm on southern section near effluent (approximately 20 cubic yards of fill dirt)

- ▶ Clear lily pads from western half of pond to enhance bio-diversity of pond life.
- ▶ Avoid dredging pond or clear cutting areas on berms or surrounding areas. Clear only enough brush areas to clear streambeds, trenches, and rebuild berms.

Parking Lot (Tobin Road) - The renovation to this parking lot and trail connection to tennis courts will include demolition and removal of a 30' section of curb, existing walk, and storm pipe. The curb inlets will be reset, curb and gutter replaced, pavement milled, and a curb ramp installed. The storm pipe will be replaced with 12 LF of 12" corrugated metal pipe, the parking lot will be resurfaced and striped, including an accessible space. A new 5' wide concrete walk will be constructed to the tennis courts and a bench pad with two benches installed outside the fenced in area. Disturbed areas will be seeded.

Trail Construction to Field #2 - Construct new accessible 6' wide asphalt trail between parking lot and field #2. This work will include excavation and grading, installation of drainage structures, and construction of the asphalt surface trail. Disturbed areas will be seeded.

Trail Repairs to Main Trail - Repairs to the main trail will include the demolition and removal of approximately 260 LF of asphalt trail and 12 LF of storm pipe on section of trail between Prosperity Avenue parking lot and pond. Regrade and construct new 8' wide asphalt trail with gravel shoulder, installing two 17" x 13" corrugated metal pipes (36 LF) to control storm drainage. Replace section of trail missing south of the ballfields between Prosperity and Woodburn Road. Disturbed areas are to be seeded.

III. **BUDGET**

The following cost estimates are based on the best available information at this time and are conceptual only. During the design phase, as more detailed information is available, adjustments to these figures will need to be made.

To calculate the numbers shown, contingencies, general contractor overhead and profit, design and engineering and review costs have been added to the estimated cost of time and materials. All figures have been rounded to the nearest \$100.

The costs have been calculated for each item separately so that the estimated cost of each item is presented.

SAMPLE CALCULATION

\$28,000 (time and materials)
+ \$ 2,800 (10% contingency)
= \$30,800
+ \$ 7,700 (25% general contractor overhead and profit)
= \$38,500
\$ 3,900 (10% design/engineering/review)
\$42,400 (TOTAL PROJECT COST)

PHASE I - NEW CONSTRUCTION AND RENOVATION

*NEW TRAIL FROM THAISS PARK
TO CONNECT TO EXISTING TRAIL* \$145,200

NEW STREAM CROSSING ON NEW TRAIL \$113,400

NEW TRAIL AND INTERPRETIVE SIGNAGE \$ 8,000

IMPROVEMENTS AT EAKIN (MANTUA) PARK (Glenbrook Road)

MULTI-USE COURT \$ 20,600

ENTRANCE ROAD AND
PARKING LOT \$ 59,000

WALKWAY AND STEPS
TO TENNIS COURTS \$ 14,000

NEW PICNIC SHELTER \$ 16,200

IMPROVEMENTS AT EAKIN COMMUNITY PARK (Tobin Road)

POND RENOVATION \$ 30,300

PARKING LOT \$ 37,100

NEW TRAIL CONSTRUCTION/REPAIRS
(parking lot to field #2) \$ 4,200

(repairs to main trail) \$ 11,600

TOTAL PHASE I **\$459,600**

PHASE II - NEW CONSTRUCTION AND RENOVATION
(subject to future funding)

NEW TRAIL SYSTEM (south of King Arthur Road)

TENNIS COURTS AT EAKIN (MANTUA)

TENNIS COURTS AT EAKIN (COMMUNITY)

WATER FOUNTAIN AT EAKIN (MANTUA)

REPLACEMENT OF GRAVEL PORTIONS OF TRAIL AND TRAIL REPAIRS
(north of King Arthur Road)

IV. *AVAILABLE FUNDING - PHASE I*

The estimate for Phase I of the Project Implementation Plan is \$459,600. Funds are currently available in the amount of \$300,000 in Project 475588, Community Park Development, subfund 451. These funds will be matched with funds from the Eakin Trust (approximately \$150,000 from each source). Funds are also available in the amount of \$47,465 in Project 004750, Park Proffers, subfund 950, Park Authority Capital Improvement Trust Fund. A grant in the amount of \$311,000, to be shared with Fairfax City, has been awarded the trail section of this project from the Commonwealth of Virginia Transportation Enhancement Program.

V. *SCHEDULE*

A start date has not been determined for this project. The following schedule describes approximate time frames for the various tasks involved in development of this project:

Design/Engineering

(includes gathering topo information, geotech studies as needed, design, cost estimates, bid documents, in-house review)

12 months

Jurisdictional Review

(review and permitting by necessary agencies)

6 months

Bid Process

(includes the actual bid, approvals from PAB and BOS, award of contract)

4 months

Construction

8 months

* An actual detailed schedule for this project will be developed as the design phase gets under way. Some dates may need to be adjusted due to operational concerns and staff workload.



FAIRFAX COUNTY PARK AUTHORITY
3701 Pender Drive, Fairfax, VA 22030

JUNE 1995

Memo to the Board
June 27, 1995

ACTION - 1.

GENERAL MANAGEMENT PLAN/CONCEPTUAL DEVELOPMENT PLAN AND PROJECT IMPLEMENTATION PLAN FOR EAKIN/EAKIN (MANTUA)/ACCOTINK STREAM VALLEY PARK (PROVIDENCE AND MASON DISTRICTS).

ISSUE:

Park Authority Board approval of the General Management Plan/Conceptual Development Plan and Project Implementation Plan for Eakin/Eakin (Mantua)/Accotink Stream Valley Park.

RECOMMENDATION:

I recommend the Park Authority Board approve the General Management Plan/Conceptual Development Plan and Project Implementation Plan for Eakin/Eakin (Mantua)/Accotink Stream Valley Park.

TIMING:

Routine.

BACKGROUND:

In 1989 and early 1990, meetings were held with Eakin community residents to discuss improvements they wanted in area parks, including Eakin Community and Eakin (Mantua). Based on those discussions, in September 1990, Bob Hull, then Providence District Representative on the Park Authority Board, moved to direct staff to establish a project to initiate improvements at Eakin Park. He also moved that the Park Authority seek partial reimbursement from an existing trust fund established by the L.R. Eakin Family for that purpose. Both motions were approved by the Board.

In Fall 1993 a team was established to develop a General Management Plan (GMP), Conceptual Development Plan (CDP), and Project Implementation Plan (PIP) for these parks, with a date for final approval set for June 1995.

A public hearing on the GMP/CDP was held on November 17, 1994. Comments at that hearing addressed several environmental issues, including stream control and water quality, the deer and fox population, and pond renovation at Eakin Community Park. The other main topic of discussion was construction of additional trail connections throughout the area. These issues have been considered during the planning process and solutions included in the Project Implementation Plan if at all possible.

Memo to the Board
June 27, 1995

In the Fall/Winter of 1994, application was made to the Commonwealth of Virginia Transportation Enhancement Program for a grant totalling of \$837,000. This grant was to support a trail link from Fairfax City through Fairfax County Park Authority land to the 236/Beltway interchange. The grant has tentatively been approved for a portion of this request, \$311,000, and will be divided between Fairfax City and Fairfax County Park Authority. The funds from this grant will be used to construct the portion of the trail from the Fairfax City/County Line at Thaiss Park across the Accotink Creek to connect with FCPA existing stream valley trail on the north side of the creek below the Route 50/Nutley Street Intersection.

The Planning Team has compiled information from the public hearing and other citizen comments, extensive site analysis, park needs, and information on available funding to create the proposed Project Implementation Plan. This plan will be used to guide the development team throughout the design and construction process.

FISCAL IMPACT:

The estimate for the Project Implementation Plan is \$459,600. Funds are currently available in the amount of \$300,000 in Project 475588, Community Park Development, Subfund 451, Park Authority Bond Construction. These funds will be reimbursed with up to 50% matching funds from the Eakin Trust. Funds are also available in the amount of \$47,467 in Project 004750, Park Proffers, Subfund 950, Park Authority Capital Improvement Trust Fund. A grant in the amount of \$311,000 to be shared with Fairfax City has been awarded to this project from the Commonwealth of Virginia Transportation Enhancement Program.

ENCLOSED DOCUMENTS:

Attachment 1 - General Management Plan/Conceptual Development Plan and Project Implementation Plan for Eakin/Eakin (Mantua)/Accotink Stream Valley

STAFF:

James A. Heberlein, Director
Lynn Tadlock, Acting Division Director, Planning and Development
Jenny C. Pate, Landscape Architect



Fairfax
County
Park
Authority

MEMORANDUM

TO: PARK AUTHORITY BOARD July 7, 1995

FROM: James A. Heberlein, Director JAH/jk
Fairfax County Park Authority

SUBJECT: Board Package: Tuesday, July 11, 1995

AGENDA ITEMS:

PRESENTATION - 1.

GOLF DEVELOPMENT UPDATE (COUNTYWIDE).
Bill Ference will provide the update.

ADMINISTRATIVE - 1.

ADOPTION OF MINUTES - JUNE 27, 1995 - (COUNTYWIDE).

ISSUE:
Park Authority Board approval of Minutes of the June 27, 1995 meeting.

RECOMMENDATION:
I recommend the Park Authority Board approve the Minutes of the June 27, 1995 meeting.

TIMING:
Routine.

FISCAL IMPACT:
None.

ENCLOSED DOCUMENTS:
Minutes, June 27, 1995 meeting

STAFF:
James A. Heberlein, Director
Nancy L. Brumit, Recording Secretary

Fairfax County Park Authority
Board Meeting
June 27, 1995

The Chairman convened the meeting at 7:30 p.m. at Park Authority Headquarters, 3701 Pender Drive, Fairfax, Virginia 22030.

Members Present

Harold L. Strickland, Chairman
Margaret D. Andino, Vice Chairman
Harold Y. Pyon, Secretary****
Michael E. Belefski, Treasurer***
Richard W. Bliss**
Linda K. Douglas*****
Gregory C. Evans*****
Joanne E. Malone
Gilbert S. McCutcheon
Cesar A. Orantes-Alfaro*
Richard T. Pro
Thomas B. White, Jr.

* Member Absent
** Arrived at 7:37 p.m.
*** Arrived at 7:40 p.m.
**** Arrived at 7:44 p.m.
***** Arrived at 8:00 p.m.
***** Left before 9:15 p.m.

Staff Present

James A. Heberlein, Director
Janet Tetley, Board Support
Nancy L. Brumit, Recording Secretary
James Peacock
Lee Stephenson
Lynn Tadlock
Tim White
Susan Allen
Charlie Bittenbring
Merni Fitzgerald
Dick Hecht
Chris Hoppe
Jay Jorgensen
Jenny Pate
Justin Patton
Ted Zavora

Mr. Strickland asked if there were any changes to the Agenda. Later in the meeting, Mr. Strickland requested that **COMMITTEE REPORTS AND SPECIAL ASSIGNMENTS** and **BOARD MATTERS** be moved to precede **EXECUTIVE SESSION**. There were no objections from the Park Authority Board.

Mr. Strickland called for the VOTE:

Mrs. Andino - AYE	Mr. McCutcheon - AYE
Mr. Belefski - ABSENT	Mr. Orantes-Alfaro - ABSENT
Mr. Bliss - AYE	Mr. Pro - AYE
Mrs. Douglas - AYE	Mr. Pyon - ABSENT
Mr. Evans - ABSENT	Mr. White - AYE
Ms. Malone - AYE	Mr. Strickland - AYE

The MOTION was APPROVED with Messrs. Belefski, Evans, Orantes-Alfaro, and Pyon being absent.

Mr. Pro stated that the Washington, Virginia, and Maryland Garden Railway Society, Inc. and the Virginia Railway Express did a tremendous job. The Washington, Virginia, and Maryland Garden Railway Society, Inc. and the Virginia Railway Express are going to build a storage shed with the Park Authority providing the building materials. Mr. Pro stated that the Washington, Virginia, and Maryland Garden Railway Society, Inc. and the Virginia Railway Express are outstanding and are doing a tremendous job. Mr. McCutcheon concurred with Mr. Pro, stating that the Washington, Virginia, and Maryland Garden Railway Society, Inc. and the Virginia Railway Express are outstanding.

ACTION ITEMS

A-1. General Management Plan/Conceptual Development Plan/Project Implementation Plan for Eakin/Eakin (Mantua)/Accotink Stream Valley

Ms. Malone MOVED the Park Authority Board approve the General Management Plan/Conceptual Development Plan and Project Implementation Plan for Eakin/Eakin (Mantua)/Accotink Stream Valley Park; SECONDED by Mr. White.

Please call in advance w/changes to Minutes 246-5610

After staff presentation, Mr. Strickland called for the VOTE:

Mrs. Andino - AYE	Mr. McCutcheon - AYE
Mr. Belefski - AYE	Mr. Orantes-Alfaro - ABSENT
Mr. Bliss - AYE	Mr. Pro - AYE
Mrs. Douglas - AYE	Mr. Pyon - AYE
Mr. Evans - ABSENT	Mr. White - AYE
Ms. Malone - AYE	Mr. Strickland - AYE

The MOTION was APPROVED with Messrs. Evans and Orantes-Alfaro being absent.

A-2. Project Scope - Structural and Mechanical Renovations/Phase II at Robert E. Lee and Mount Vernon RECenters

Mr. Pro MOVED the Park Authority Board approve the project scope for design and construction of the structural and mechanical renovations, phase II, at the Robert E. Lee and Mount Vernon RECenters; SECONDED by Mr. McCutcheon.

After staff presentation, Mr. Strickland called for the VOTE:

Mrs. Andino - AYE	Mr. McCutcheon - AYE
Mr. Belefski - AYE	Mr. Orantes-Alfaro - ABSENT
Mr. Bliss - AYE	Mr. Pro - AYE
Mrs. Douglas - AYE	Mr. Pyon - AYE
Mr. Evans - AYE	Mr. White - AYE
Ms. Malone - AYE	Mr. Strickland - AYE

The MOTION was APPROVED with Mr. Orantes-Alfaro being absent.