CHAPTER 14

Lower Schuylkill River Conservation Landscape

The Schuylkill River is the dominant and unifying feature of this landscape. Although the Lower Schuylkill River landscape is highly developed, signi cant riparian habitat remains along the river and some of its tributaries. The riparian corridor along the river is also the location of major transportation arteries, including railroads and the Schuylkill Expressway, which unfortunately cut off direct access to the river except for a few points such as Flat Rock Park in Lower Merion Township and Spring Mill Park in Whitemarsh Township.

Description

Location

The Lower Schuylkill River Conservation Landscape extends along the Schuylkill River from the valley of Gully Run to Spring Mill. It includes a total of 2,495 acres and covers parts of Lower Merion, Spring eld, and Whitemarsh Townships (Figure 14.1). The Schuylkill Trail traverses the river corridor on the east side from the Philadelphia line to Conshohocken. This landscape is not contiguous with any of the other areas described in this report.

Hydrology

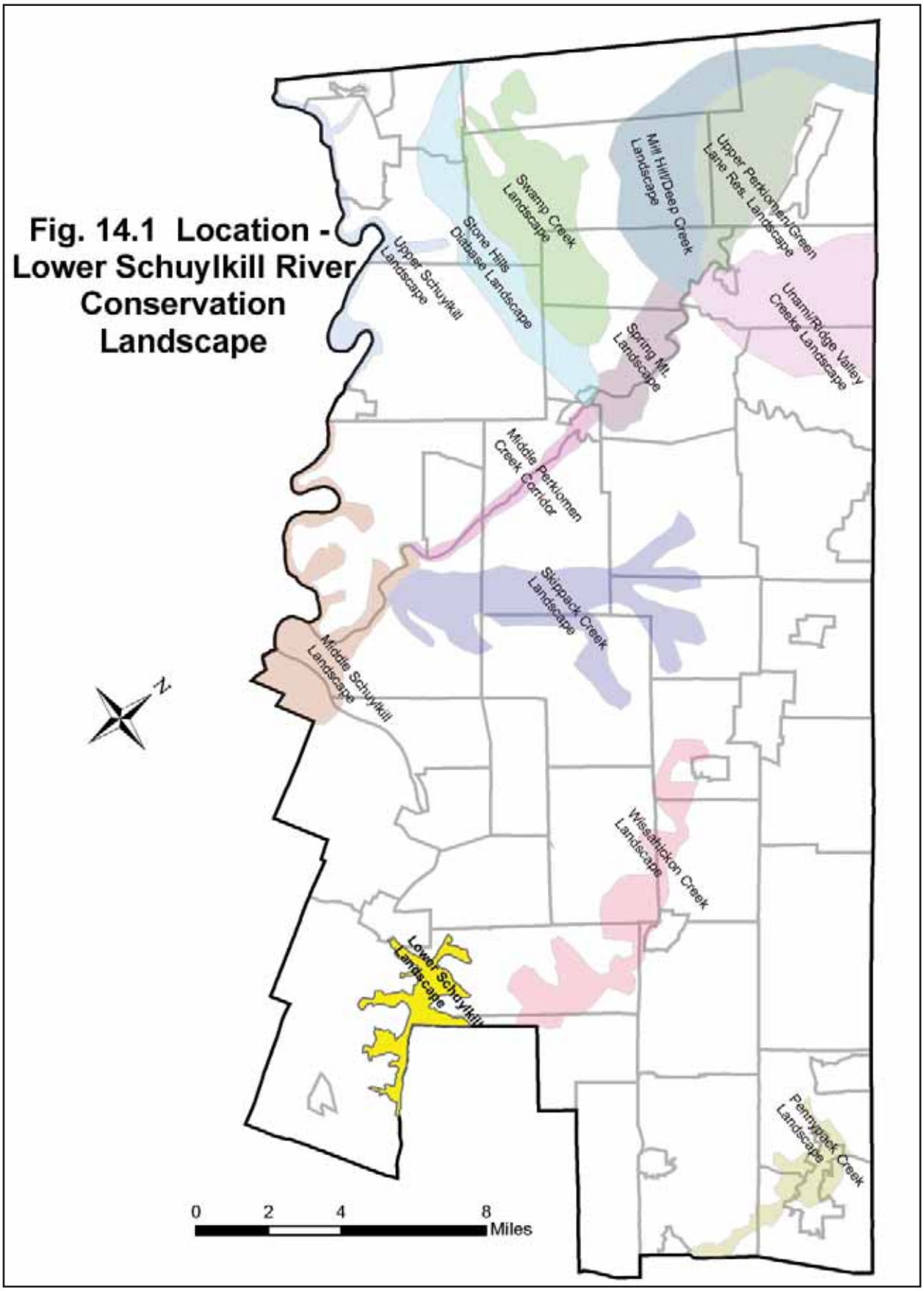
The Lower Schuylkill River Conservation Landscape lies completely within the Schuylkill River watershed. In addition to the Schuylkill itself, the landscape includes several tributary streams including Manor Creek, Spring Mill Creek, Saw Mill Run (Lower Merion Twp.), Mill Creek, Rock Run, Glanraffan Creek and Gully Run. Mill Creek is classi ed as TSF (trout-stocked shery). The Schuylkill and remaining tributaries are classi ed as WWF, MF (warm water shery, migratory shes). A sh ladder was recently completed at the Flat Rock Dam to allow shad to migrate upstream to spawn.

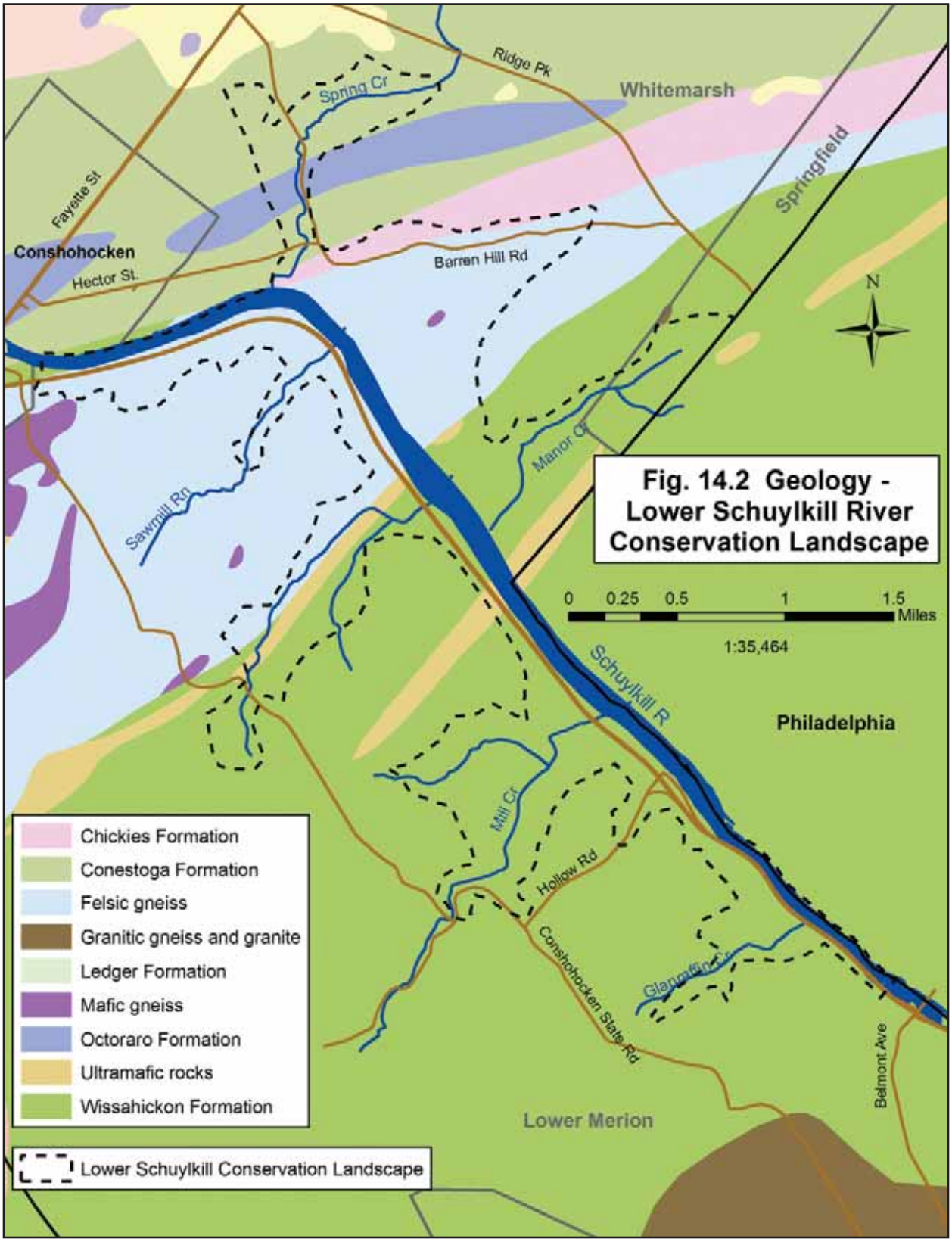


Fish ladder at Flat Rock Dam

Geology

The Schuylkill River and its tributaries have carved a valley through bands of felsic and Wissahickon schist of the Piedmont Uplands. A narrow dike of serpentinite crosses the river at the Philadelphia/Montgomery County line at Miquon (Figure 14.2). This was the site of Prince's Soapstone Quarry that operated in the mid to late 1800s. Native Americans may have been the rst to obtain the soft soapstone rock at the site according to Edgar Wherry. The remains of the quarry are still visible along the bicycle trail. Wherry also reported the presence of several rare ferns at the site; unfortunately they have long since disappeared.


Fig. 14.1 Location - Lower Schuylkill River Conservation Landscape
Upper Schuylkill Landscape
Stone Hills Diabase Landscape
Swamp Creek Landscape
Mill Hill/Deep Creek Landscape
Upper Perkiomen/Green Lane Res. Landscape
Spring Mt. Landscape
Unami/Ridge Valley Creeks Landscape
Middle Perkiomen Creek Corridor
Skippack Creek Landscape
Middle Schuylkill Landscape
Wissahickon Creek Landscape
Lower Schuylkill Landscape
Pennypack Creek Landscape
N
0 2 4 8
Miles


Ridge Pk
Spring Cr
Whitemarsh
Springfield
Fayette St
Conshohocken
Hector St
Barren Hill Rd
N
Manor Cr
Sawmill Rd
Fig. 14.2 Geology - Lower Schuylkill River Conservation Landscape
0 0.25 0.5 1 1.5 Miles
1:35,464
Schuylkill R
Philadelphia
Mill Cr
Hollow Rd
Conshohocken State Rd
Glennifer Cr
Belmont Ave
Lower Merion
Chickies Formation
Conestoga Formation
Felsic gneiss
Granitic gneiss and granite
Ledger Formation
Mafic gneiss
Octoraro Formation
Ultramafic rocks
Wissahickon Formation
Lower Schuylkill Conservation Landscape

Forest Cover

The Lower Schuylkill Conservation Landscape includes 1,554 acres of forest, 62 percent of the land area; 717 acres qualify as interior forest (Figure 14.3). Riparian forests border the Schuylkill River.

Critical Features

Two PNHP-listed plants are known to be present in the Spring Mill area: umbrella sedge (Cyperus lancastriensis) and forked rush. Umbrella sedge was listed at the nearby "Miquon River Road Site" in the 1995 Natural Areas Inventory.

Reptiles and Amphibians – A survey of reptiles and amphibians of the Lower Schuylkill River Landscape by Marlin Corn revealed ve species including the state endangered redbelly turtle (Table 14.1). All are native to Pennsylvania with the exception of the red-eared slider, an introduced species.



Northern two-lined salamander, photo by Marlin Corn

Table 14.1 — Reptiles and Amphibians of the Lower Schuylkill River Conservation Landscape
(Source: Surveys by Marlin Corn 2006-2007)

Salamanders
Northern two-lined salamander
Frogs and Toads
Green frog
Pickerel frog
American toad
Turtles
Red-eared slider
Redbelly turtle
Eastern painted turtle
Snakes
Northern ringneck snake
Common garter snake

Birds – Combined data for two adjacent Breeding Bird Atlas blocks in the Lower Schuylkill Conservation Area document the presence of 51 species of birds con rmed to be breeding. Nineteen additional species were probably breeding in the area and 12 more are listed as possible local breeders (Table 14.2).

Table 14.2 — Birds of the Lower Schuylkill River Conservation Landscape
(Source: 2004-2008 data from the Breeding Bird Atlas blocks 82D16 and 82D14)

Confirmed	House Wren	Common Yellowthroat
Acadian Flycatcher*	Mallard	Eastern Wood Peewee
American Crow	Mourning Dove	Field Sparrow
American Goldfinch	Northern Cardinal	Great Crested Flycatcher
American Redstart	Northern Mockingbird	Great Horned Owl
American Robin	Northern Parula	Indigo Bunting
Baltimore Oriole	Northern Rough-winged Swallow	Mourning Dove
Barn Swallow	Orchard Oriole	Northern Flicker
Blue Jay	Red-bellied Woodpecker	Ovenbird
Blue-gray Gnatcatcher	Red-eyed Vireo	Red-winged Blackbird
Brown-headed Cowbird	Red-tailed Hawk	Rock Pigeon
Canada Goose	Red-winged Blackbird	Scarlet Tanager
Carolina Chickadee	Ruby-throated Hummingbird	Wood Thrush
Carolina Wren	Song Sparrow	Yellow Warbler
Cedar Waxwing	Tree Swallow	Yellow-billed Cuckoo
Chimney Swift	Tufted Titmouse	
Chipping Sparrow	Veery	Possible
Common Grackle	Warbling Vireo	American Goldfinch
Downy Woodpecker	White-breasted Nuthatch	Black Vulture
Eastern Bluebird	White-eyed Vireo	Cooper's Hawk
Eastern Kingbird	Wild Turkey	Great Blue Heron
Eastern Phoebe	Willow Flycatcher	Green Heron
Eastern Screech-owl	Wood Duck	Hairy Woodpecker
Eastern Towhee	Wood Thrush	Kentucky Warbler
European Starling		Pileated Woodpecker
Fish Crow	Probable	Ring-neck Pheasant
Hooded warbler	Acadian Flycatcher	Rose-breasted Grosbeak
House Finch	American Kestrel	Turkey Vulture
Gray Catbird	Blue-winged Warbler	Yellow-throated Vireo
House Sparrow	Brown Thrasher	

Threats to Natural Areas

The twin threats of overabundant deer and invasive non-native species have devastated remnant tracts of forest in this landscape. Deer have a distinct preference for native plants and have stripped herbaceous and shrub layers creating browse lines and barren forest oors. The diversity of native plants and animals has decreased, forest regeneration has been halted, and ecological function is threatened. Invasive species, which are less attractive to deer, have spread to ll the gaps. In most urban and suburban



Over browsed forest in Lower Merion Township

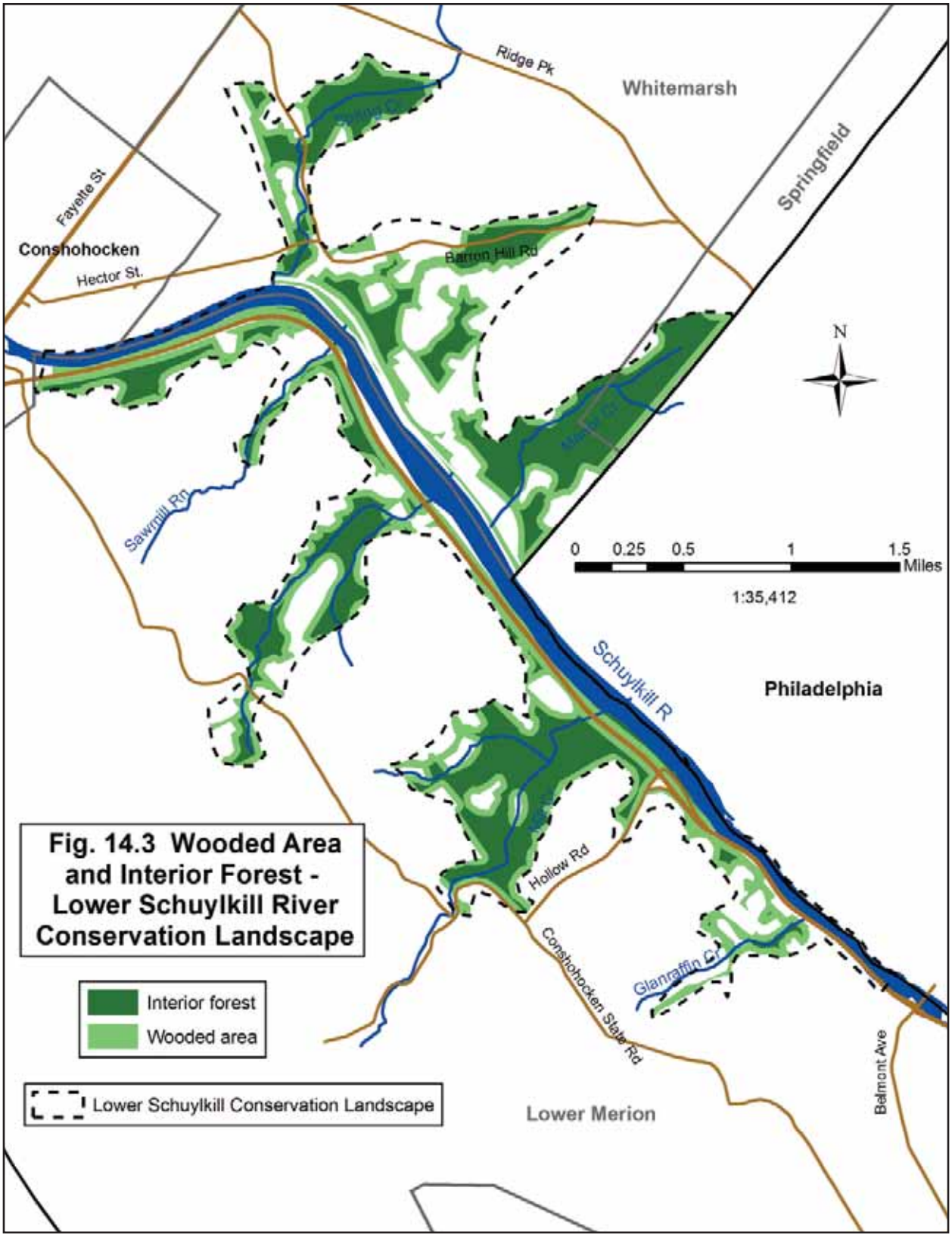


Fig. 14.3 Wooded Area and Interior Forest - Lower Schuylkill River Conservation Landscape

situations, traditional hunting is not feasible and the Pennsylvania Game Commission has until recently been reluctant to allow other alternatives such as the use of baiting and sharpshooters. Effective management of open space must address the problem of too many deer.

Past Uses

See the introduction to this overall report for more of the history of the Schuylkill River as a transportation and early industrial corridor. In addition, some discussion of the history of individual sites is also included under the sections on Mill Creek and Spring Mill Park.

Preservation Status and Other Designations

The entire conservation area is included in the Schuylkill River National and State Heritage Area, which is managed by Schuylkill River Greenway Association. The mission of the Heritage Area is to revitalize and restore the region through natural and cultural resource preservation, education, recreation, community revitalization, and heritage tourism. The Schuylkill is also designated as a Pennsylvania Scenic River. While Scenic river designation does not include speci c protections, the Pennsylvania Scenic Rivers Act (P.L. 1277, Act No. 283 as amended by act. 110, May 7, 1982)states:

> *"Many of the rivers of Pennsylvania, or sections thereof and related adjacent land areas, possess outstanding aesthetic and recreational values and potential bene t to the citizens of Pennsylvania. It shall be the policy of the Commonwealth to protect these values and to practice sound conservation policies and practices within this Scenic River system."*

Preserved open space is shown in Figure 14.4. Lower Merion Township owns 343.1 acres of parkland, open space, and resource protection land within the landscape. The larger sites are described below. Most of the protected land lies in the valleys of Mill Creek and Rock Run.

The Mill Creek Historic District in Gladwyne, containing 525 acres and 150 historic structures, is on the National Register of Historic Places. The valley of Mill Creek was an early industrial center; water-powered saw, grist, paper, and textile mills lined its banks. Today mills, mill ruins, and mill-workers houses can still be found. Remnants of the early agricultural community around the mills are also preserved in the form of farmhouses, barns, and springhouses.

The Bridlewild Trails Association maintains a network of hiking and equestrian trails in Lower Merion Township that links many of the parks and open space sites. The trails, which are open only to Association members, are partly on private property; however, recently several proposals have been developed to expand the trail network and make it public.

A 2004 feasibility study for Lower Merion recommended an expanded system of public bicycle and pedestrian trails. One segment of the plan envisions a 10.52-mile Schuylkill West Trail, which would link with the existing Schuylkill River Trail on the east side of the river. The proposed route would connect West Laurel Hill and Westminster Cemeteries to Flat Rock Park, the Mill Creek and Rock Creek corridors, Riverbend Environmental Center, and Woodmont. The 2005 Lower Merion Township Open Space Plan contains a similar recommendation described as an "Emerald Necklace" of open spaces along the west side of the Schuylkill River from Philadelphia to West Conshohocken linked by a multipurpose trail.

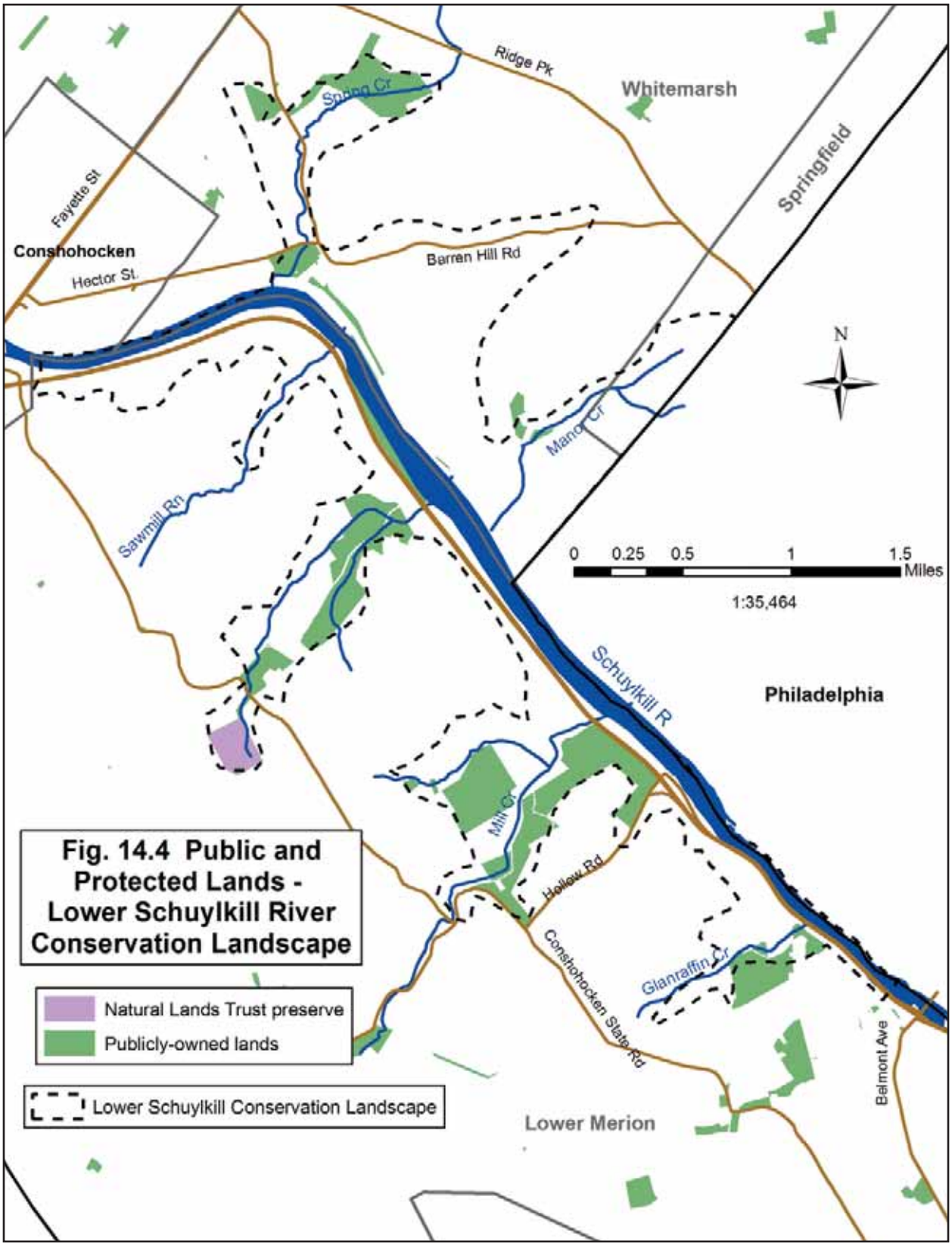


Fig. 14.4 Public and Protected Lands - Lower Schuylkill River Conservation Landscape

On the east side of the river, Spring Mill Park is a county-owned property along the Schuylkill at the mouth of Spring Mill Creek. Whitemarsh Township owns a 54-acre tract in the headwaters of Spring Mill Creek known as Kline Park; much of it is a former silt basin that is now covered with highly disturbed successional forest.

Core Areas (East side of Schuylkill River)

Manor Creek Valley

The valley of Manor Creek is a green corridor extending from uplands near Ridge Pike to the Schuylkill River.

The 102.1-acre Shelly Ridge Girl Scout Reservation is the largest parcel of open space on the east side of the river in this landscape. Located in Spring eld Township with an additional 11 acres extending over the border into Philadelphia County, this mostly forested tract includes the headwaters of Manor Creek, a tributary of the Schuylkill River. The property, which is owned by the Girl Scouts of Southeastern Pennsylvania, is the site of their headquarters and one of their summer day camps.

The geology of the Shelly Ridge property is primarily Wissahickon schist. However, a small area of granitic gneiss along the western boundary was the site of an early quarry, evidenced by the remaining residue.

The Shelly Ridge forests include several mature stands of **red oak – mixed hardwood forest** (Fike 1999). Red oak, black oak, and American beech are the dominant canopy species. However, severe browsing by deer has eliminated the understory and shrub layers, except for a few well-chewed beech shoots. Herbaceous plant diversity is also drastically reduced; a few plants of white baneberry, jack-in-the-pulpit, and common blue and yellow violets are all that remain.



Manor Creek stained red by leachate from the Miquon landfill which was closed in the 1960s

Successional forests of ash and tuliptree occupy much of the Shelly Ridge property. Non-native invasive trees and shrubs, such as Norway maple, Japanese angelica-tree, corktree, multi ora rose, Amur honeysuckle, Japanese honeysuckle, winged euonymus, jetbead, wineberry, and obtuse-leaved privet, are abundant. Spicebush is the only native shrub in these forests. The ground layer is similarly dominated by non-native invasive species, including Japanese stiltgrass, lesser celandine, and garlic mustard.

Low areas along Manor Creek and several small tributary streams contain seepage wetlands dominated by skunk-cabbage with New York fern, silvery glade fern, lady fern, sensitive fern, Christmas fern, jewelweed, and spring-beauty. Bird diversity at the site is high according to Ruth Pfeffer, local bird trip leader.

Other protected properties in the Manor Creek valley include a 24.76-acre easement held by Montgomery County Land Trust and several small township-owned tracts.

In addition, Whitemarsh Township owns a 25.1-acre parcel of open space that contains the former Miquon land ll, which was closed in the 1960s. Leachate from the land ll enters Manor Creek just above the upper bridge over the creek. The orange deposits containing oxidized iron and manganese are visible in the creek bed below that point.



Ruins of an old mill and millpond on Manor Creek at Hagy's Mill Road

A walk along forested slopes above Manor Creek revealed that deer overabundance in the valley has eliminated the shrub and understory layers of the forest and severely depleted the ground layer vegetation. Only widely scattered, very suppressed fragments of maple-leaf viburnum, a few small, non- owering plants of false Solomon's-seal and Indian cucumber root, and a few small patches of New York fern were present.

Spring Mill Park

This Montgomery County Park located in Whitemarsh Township consists of 38 acres of oodplain along the east side of the Schuylkill River. It provides an access point for the Schuylkill River Trail, which passes through the park. Except for the trail, the park is undeveloped.

The village of Spring Mill has a long history as an industrial center; it was also the site of a ferry. Two iron furnaces were built in 1844 and 1853 to process iron ore mined nearby. The furnaces were later demolished to make room for expansion of the railroad. Clay pits were also operated near the village. In addition Spring Mill contained a gristmill powered by a spring-fed creek, no doubt the inspiration for the name of the village.

The park includes the lower stretches of Spring Mill Creek and a second unnamed creek both of which ow across a broad area of oodplain to enter the Schuylkill River at the bend at Spring Mill. Suppression of woody vegetation in a powerline right-of-way that also crosses this low at area creates a marsh that provides habitat for 2 state-listed wetland plants (forked rush and umbrella sedge). However, common reed and purple loosestrife are present and threaten to crowd out many of the native plants.

Most of the park is dominated by **silver maple oodplain forest** or **sycamore - box-elder oodplain forest** with black walnut, American elm, and white ash also common. Non-native trees include white mulberry, tree-of-heaven, and mimosa. Although there are some native species present, the shrub and herbaceous layers are dominated by non-natives, such as porcelain-berry, Japanese hops, Oriental bittersweet, Amur honeysuckle, Japanese knotweed, stinging nettle, common mugwort, Indian strawberry, and mile-a-minute.

Despite its weedy condition, Spring Mill Park provides an attractive backdrop for the Schuylkill

River Trail and habitat for 2 rare plants (umbrella sedge and forked rush) and numerous bird species. Trees overhanging the river are potential habitat for riparian specialists such as Northern Parula, Yellow-throated Warbler, and Warbling Vireo.

Kline Park

Whitemarsh Township's Kline Park preserves 54 acres in the headwaters of Spring Mill Creek in what was an old silt basin. Non-native, invasive species are abundant.

Core Areas (West Side of the Schuylkill River)

Rolling Hill and Mill Creek Valley Parks

A signi cant portion of the valley of Mill Creek is contained in Rolling Hill and Mill Creek Valley Parks, both owned by Lower Merion Township. **Rolling Hill Park** was purchased in part with county Open Space Funds; this 103-acre tract includes the headquarters of the Lower Merion Conservancy. **Mill Creek Valley Park**, occupies an 88.6-acre parcel in the lower portion of the creek valley. The combined park area includes upland elds, successional areas, forested slopes, and historical buildings and ruins. Like other areas of remnant forest in an urban/suburban matrix, invasive species are prevalent and deer overabundance is a major ecological threat.

Flat Rock Park

Flat Rock Park, located on the riverbank above the Flat Rock Dam, provides river access for shermen and boaters and a picnic grove. The 24.3-acre park contains remnants of **silver maple – box-elder oodplain forest**. The recently completed sh ladder is an additional attraction with major environmental education potential.

Rock Creek Valley

The Rock Creek Valley contains several public and private open space tracts. **Saunders Woods**, a 25-acre preserve located in the headwaters, is owned by the Natural Lands Trust. Containing open meadows and a steep, forested stream valley, it is open to the public for walking, bird watching, photography and nature study. It is linked to **Henry Lane Park**, a 22-acre township-owned site, via a portion of the Bridlewood Trail, which follows Rock Creek. **The Henry Foundation for Botanical Research** occupies 50 acres along Rock Creek adjacent to Henry Lane Park. The property contains plantings of native North American plants collected by Mary Gibson Henry during her botanical travels. The property remains in the family and is operated as an arboretum. Further downstream is the 87-acre **Keneally Nature Park** owned by Lower Merion Township. It contains hiking and equestrian trails.



Rock Creek at Henry Lane Park

Simpson Island, located in the Schuylkill River at the mouth of Rock Run is a 2-acre wildlife preserve owned by the Lower Merion Township

Glanraffan Creek Valley

Lower Merion Township's Pencoyd Park contains 57.8 acres of undeveloped open space along a small tributary of the Schuylkill River. Glanraffan Creek is polluted by leachate from a closed municipal land ll that operated at the site from 1918 until 1969. The land ll was built on a spring that discharges to the creek. From 1937 to 1969, an incinerator was operated at the site to reduce the volume of waste, but the ash, which contained heavy metals and other pollutants, continued to be land lled according to the Environmental Protection Agency les.

Gully Run Valley

Gully Run enters the Schuylkill River just north of Westminster Cemetery. The township-owned 7.2-acre Gully Run Park is located adjacent to the Merion Memorial Park Cemetery where Conshohocken State Road crosses the creek.



Female Orchard Oriole, photo by Howard Eskin

Riverbend Nature Center

The Riverbend Nature Center is located at the bend in the Schuylkill River opposite Montgomery County's Spring Mill Park. Primarily an environmental education facility, Riverbend occupies approximately 30 acres of land; the Schuylkill Expressway and railroad lie between the nature center and the river, making access to the river dif cult. The site includes a hilltop meadow and steep forested slopes above the Schuylkill Expressway. Sawmill Run ows through the property. Like similar fragmented forest remnants in the urban/suburban landscape, Riverbend's forests are in decline. The lack of regeneration due to over browsing by deer and the proliferation of invasive species are the major problems facing the site, according to a recent master plan prepared by Rolf Sauer and Partners, Ltd.

Idlewild Farm

Idlewild farm is a 21-acre preserve located in Lower Merion Township and owned by the Natural Lands Trust. A wild ower meadow has been established on former farm elds providing habitat for numerous butter ies. The trust is working to control serious infestations of several invasive plants on the site.





Monarch butterfly on purple coneflower in the wildflower meadow at Idlewild Farm

Additional Sites Requiring Protection

Woodmont Palace Mission

The headquarters of Father Divine's Palace Mission Movement has been located on Spring Mill Road in Gladwyne in Lower Merion Township since 1952. Located on 67 acres overlooking the Schuylkill River, the property includes a manor house dating from 1892, gardens, a pond, and woodlands. It is designated as a National Historic Landmark.

Recommendations

Land Protection and Connectivity

- Implement the Lower Merion Township Schuylkill West Trail proposal.
- Focus land protection efforts on additional lands in the Mill Creek and Rock Run areas in Lower Merion Township.
- Protect the headwaters springs that are the source of Spring Mill Creek and the unnamed stream that enters the Schuylkill River just downstream of Spring Mill Creek.
- A long-range goal should be permanent protection for Woodmont.

Land Management

- Reduce deer density throughout.
- Continue invasive species management at Idlewild Farm and Saunders Woods.
- Institute invasive species management and forest restoration programs at selected additional sites.

Education and Interpretation

- Interpret the industrial history of Spring Mill for users of the Schuylkill River Trail.
- Open the sh ladder at Flat Rock Dam to public visitation and develop an interpretive program at the site focused on river ecology and shad.

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