

**OPEN SPACE AND ENVIRONMENTAL RESOURCE
PROTECTION PLAN
2004 UPDATE**

UPPER MERION TOWNSHIP
MONTGOMERY COUNTY, PA

FINAL

October 4, 2005

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For:
Upper Merion Township Open Space Committee

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Note: Items identified (A) are related to required plan elements as outlined in the Montgomery County Green Fields/Green Towns Program Recommendations, p 62.

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INTRODUCTION

Upper Merion Township, Montgomery County is an important hub in the southeast Pennsylvania region. Like many communities where location, work and living conditions are desirable, development is strong and open space is threatened. The Township has been guided by two planning documents during the past decade that have helped planners and leaders in the community make wise decisions to expand and protect the open space system. These include the 1994 Parks and Recreation Master Plan and an Open Space and Environmental Resource Protection Plan Addendum. This 2004 update will bring the former planning guides back into focus with renewed emphasis on open space opportunities and current trends of the Township.

This community is fortunate to have such a rich collection of historic and natural resources. Open space is both active and passive, natural and managed landscape. The Township is located in an important regional context and the presence of quality open space serves both the community and the region well.

The Open Space Committee has carefully reviewed the areas and influences of open space and seriously considered the needs, opportunities and goals of this update. The open space has been visited in the field, studied on maps and deliberated in open, public discussion. The input of community leaders and interested citizens has been sought along with advise of other municipalities and county planners.

A process has been used whereby widespread notices have been distributed and posted in public places to notify residents and stakeholders of the study and meeting times. The public has been invited to all meetings and opportunity for input has been given when interested parties have attended. The committee members toured various sites several times, hiked along the river and studied properties on maps and aerial photographs. The committee also invited other communities to attend and interact with regards to the impact of Upper Merion open space on their individual communities. Guest speakers have attended to inform the committee of open space preservation techniques and concerns. Various forums provided by Montgomery County have been attended as well. These include the introduction of the Draft 2004 Plan titled Open Space, Natural Features, and Cultural Resource Plan and a forum for river communities to interact and incorporate ideas and partnerships from joint discussions.

Genuine thanks are expressed to the participants and contributors.

2004 Upper Merion Township Open Space Committee

COMMUNITY BACKGROUND

REGIONAL SETTING

Upper Merion Township is comprised of 10,777 acres located in the southern end of Montgomery County. To the north and east is the Schuylkill River, West Conshohocken Borough and Bridgeport Borough. On the west is Radnor Township, Delaware County and Tredyffrin Township, Chester County. Lower Merion Township is located to the south. Across the Schuylkill River to the north several more communities including Lower Providence Township, West Norriton Township, Norristown Borough and Plymouth Township.

This Township is very well connected to major transportation systems. Center city Philadelphia is some 15 miles away and easily accessed by rail via the Norristown High Speed Rail Line or the R5 and R6 SEPTA Commuter Rail Lines. Several SEPTA bus routes also serve Upper Merion Township. A network of major highways intersects within or nearby the Township as well. The Pennsylvania Turnpike includes a prominent east-west interchange within the Township. Route 76, Schuylkill Expressway originates in King of Prussia and provides connection to Philadelphia. Route 422 and U.S. Route 202 complete the major transportation arteries north to Pottstown and Berks County and east-west to Bucks and Chester Counties. Recent improvements to the Route 202 corridor connections have further enhanced this transportation network. More road improvements are scheduled in the future such as the Route 23 re-location along the northern side of the Township becomes reality.

The pivotal location of this Township and its transportation connections has resulted in rapid growth for several decades. Growth continues today even though the Township is largely developed. The development includes some of the region's largest retail centers, the largest mall in the eastern United States, significant employment centers, hotels and convention facilities, high rise residential units and all types of housing units. Continued growth in these areas is possible, although current residential zoning districts may be nearing the peak conditions. Re-development and infill development and also the possibility of zoning changes may still generate new housing and population.

The need for open space continues to be an important emphasis. The Township has been progressive in the past with acquisition and development of lands for parks and open space preservation. The Township is currently constructing its largest area of developed park at Heuser Park in the north, located on land reclaimed from a former coal settlement basin. The site was filled with material from the construction of roads in the area, which allowed the formerly mined area to be viable for parkland. Township lands are also complemented by the vast land area of Valley Forge National Historic Park located in the west of the Township. The national park plans a major facility expansion in the future that may draw many additional visitors to the region. Pennsylvania DCNR anticipates a program of promotional "road trips" throughout the state, one of which may promote tourists to travel the "Road to Revolution" leading to this park.

Several trails within the Township have been and continue to be planned and constructed to bring access and recreation to the Township. The Schuylkill River trail runs along the north side of the Schuylkill River while the Chester Valley Trail runs east-west through the heart of the Township. As the pressures of growth and transportation continue, it also validates the need for additional open space to be identified, preserved and made available to the residents of Upper Merion Township and the region.

Natural resources in the Township include the Schuylkill River along the length of the Township's northern boundary and tributary fingers of riparian drainage areas with associated flood plain and wooded areas. Other areas of woodlands and steep slopes are found primarily to the south. Some areas are developed with residential communities, however other areas are preserved such as the McKaig Nature Education Center. The area's underlying geology is noteworthy because it contains extensive areas of Karst and Carbonate formations which are prone to sinkholes. Many of these areas are developed and continued development may be hampered by the difficulties of managing sinkholes.

EXISTING LAND USE PATTERNS

Upper Merion Township contains significant diversity of land use types. Developed land comprises some 73.8% of the land within the Township. This includes the following categories and percentage: 29.6% residential / 14.4% industrial / 14.1% roads and utility right of ways / 5.6% office / 4.7% retail commercial, malls and shopping / 4.6% institutional / 0.8% hotels and convention land. The later category, while smaller is well known in the region because the taller buildings are common landmarks in the landscape of the Township. The King of Prussia shopping mall with seven anchor stores is another well-known landmark.

The remaining 26.2% land area is undeveloped land that includes a portion of the Schuylkill River itself, parks, open space, golf courses and vacant or undeveloped private land. The Valley Forge National Historic Park is the largest single feature representing 1300 acres of land, over 12% of the entire Township. This feature is a unique aspect of open space that few communities have available to supplement their local open space systems. There are no state or county parks in this Township, although there is very good access to Montgomery and Chester County trail systems.

Certain categories of land classified as developed may also contain certain open space qualities. For example, the P.E.C.O. right of way runs through the Township east and west. The right of way is developed as a utility, however portions of the right of way serve the Chester Valley Trail and offer the appearance of green space within the Township. The green space is marred, however with the visual detraction of the power lines. Similarly, cemeteries and schools are included in developed land areas yet they offer many qualities of open space by their open views, landscaped settings, trees, athletic fields and playgrounds.

The above conditions effectively expand the perception of open space even if the areas are only partially protected. However, increased population has placed pressure on the Upper Merion Area School District to expand its own facilities. In doing so, some of the land formerly open has been further developed such as Candlebrook and Roberts Elementary Schools. The community has continued to benefit from the available open space at these schools and the facilities have been upgraded with new play equipment and fields that are still available for the Township to use. The Upper Merion Middle School is currently undergoing an expansion project that will reduce the number of athletic fields available to the Township. A strong partnership does continue between the Township and School District for access and use of recreation facilities.

DEMOGRAPHIC INFORMATION

The population of Upper Merion Township increased again during the 1990's after a small decrease during the previous decade of the 80's. Population increase during the 1990's was 4.3% from 25, 722 in 1990 to 26, 863 in 2000. The Delaware Valley Regional Planning Commission projects a trend of stable to slight decline in population through the present decade to 2010 and beyond to 2020. Given the popularity of high-rise residential units in the Township and the potential for development of the Glasgow property on North Henderson Road, the projected flat line in population may not hold true. If the 4.3% growth rate during the 1990's is maintained, over 28,000 population may live in the Township by 2010. Additional growth projections are discussed later in the assessment of open space needs in order to project needs for open space to 2025.

HOUSING INFORMATION

Housing in Upper Merion Township is comprised of a wide variety of density and unit types. 12,125 residential units were in the Township by 2000. Growth in housing is anticipated by DVRPC to add 630 additional units by 2010 and continued increase of 469 additional units between 2010 and 2020. Several anticipated developments may cause these projections to be exceeded.

The distribution of unit types and amounts includes the following:

<u>Type</u>	<u>Number</u>	<u>% of Total units</u>
Single Family Detached homes	6,510	53.7%
Multi-family units – apartments & duplexes	4,006	33.0%
Attached SF homes – townhouses & twins	1,569	13.1%
Mobile Homes	17	0.1%

In 2000, additional population of 201 persons lived in housing such as nursing homes that are not identified in the above housing types.

EMPLOYMENT INFORMATION

Employment is strong in the Township. By comparison to surrounding municipalities, Upper Merion is a leader in jobs, even where other municipalities have greater population and more housing. Jobs increased by 8.4% with 3922 new jobs from 1990 to 2000. Continued growth is projected in the job rate from 50,350 in 2000 to 53,100 in 2010. The highest employment by industry was administrative and support positions with retail trade also a very strong sector of employment.

Major employers in the Township continue to be attracted to the area. Many offices and businesses rely upon the local transportation system. It provides access to other regions and availability of shoppers and transport of goods and services generated in the Township. It is interesting to note that PADOT itself occupies a major office building in the Township located in the heart of the transportation system that it plans and regulates.

SUMMARY OF DEVELOPMENT POLICIES

Open space is driven by policies that are currently in place in Upper Merion Township. The guiding principles that provide quantity and structure to the open space system in the Township have been in place and gradual updates and changes are made to enhance the policies in greater support of open space. The following documents, planning guides and ordinances have contributed:

Parks and Recreation Master Plan

This Master Plan, prepared in 1994 has been a planning guide for active and passive recreation facilities in the Township. The guide has been an instrumental tool in tracking and identifying needed improvements to park facilities, promotion of partnership with the local School District for leased recreation space and provision for maintenance of parks.

Open Space and Environmental Resource Protection Plan

An addendum to the 1994 Parks and Recreation Master Plan provided for an increase in focus and targeting of land for preservation and acquisition for the future open space benefit of residents. Numerous sites were identified to be of value and successful acquisitions have been made. This 2004 report will update the material to current conditions, trends and priorities of land.

Comprehensive Plan

The Township Comprehensive Plan has provided structure for the integration of open space into the big picture of planning issues for the Township. Elements of the 2004 Draft of Land Use Plan have been incorporated into this current open space report. The 2004 Comprehensive Plan has not been adopted at time of this writing.

Zoning Ordinance

Open space preservation is supported in the current Zoning Ordinance. Provisions are included for flood plain conservation and steep slope resource protections. Restrictions of development in these areas are required to maintain the flood plains and steep slopes. Riparian corridors are not addressed per se, except that the flood plain controls do also restrict riparian corridor areas throughout most drainage ways. A draft of riparian corridor ordinance was included in the Open Space and Environmental Resource Protection Plan but was not adopted by the Township. Riparian corridors in the Township remain under protected as identified in the Open Space Plan.

Woodlands, scenic and cultural resources are not specifically managed under the Zoning Ordinance, although some areas of the ordinance such as, signage and lighting regulations do provide a measure of scenic contribution. Woodlands are provided some protection under the Subdivision and Land Development Ordinance.

Open space is specifically provided for in the zoning ordinance by open space resulting from specified maximum impervious surface and building coverage ratios. The most significant area of support for open space is found in an ordinance section that requires all residential and non-residential developments to provide 20 percent area for recreation space. This requirement is being used effectively to obtain land for open space or fee in lieu if acceptable to the Board of Supervisors. The fee in lieu contributions can be directed toward acquisition of open space in areas needing protected status.

Subdivision and Land Development Ordinance

This ordinance provides for some control of woodland areas by recommendation to preserve trees and application of penalties for replacement when trees are removed. The woodland removals are not prohibited if replacements are provided except that vegetation is not to be removed in riparian corridors. The Township planners encourage developers to preserve wooded areas through comment and review of plans submitted.

Landscape requirements in this ordinance provide some contribution to the scenic quality of the Township within the built environment. General beautification by requirements of landscaping with street trees and screening of parking lots is provided. Other adverse visual conditions are required to be buffered or screened with appropriate planting.

AUDIT FACTORS:

Many conditions within Upper Merion Township have been impacted by changes in the community, yet previous planning efforts have guided the Township toward an impressive legacy of preserving open space in the midst of a region that is experiencing intense development pressures. The Open Space Committee has considered the changes and continued growth of the community but has also been impressed with the very significant success the Township has had in aggressively acquiring the properties targeted in the 1994 update of the ***Open Space and Environmental Resource Protection Plan***.

The Community has continued to grow in the areas projected by the previous Open Space Plan. The land use patterns of the Township remain similar as the 1994 study projected with the retail commercial development soaring. Population has increased several hundred more than what was projected in 1994. Housing has been a booming area in the Township with increases of more than a thousand units above what was previously projected. Jobs have remained steady as projected.

In spite of the development pressures this Township has experienced there has been significant success in the area of open space preservation. The land identified in the former Open Space Plan was largely acquired by the Township over this previous 10 year period. Clearly, the citizens and the elected officials have wanted to acquire additional open space over the past many years. As the Township land has been pressured for development, so the Township has found significant acreage of open space by using their ordinances and planning decisions to leverage open space and by reclaiming areas that past generations left unused. The reclamation of former silt basins along the river is the largest single contributor to this success in open space acres. Additional acres of quality open space have been obtained by careful planning and these have been part of the overall success in implementing the former open space plan. A listing of these acquisitions is included under the chapter on Existing Conditions and Resources.

GOALS & OBJECTIVES

The goals and objectives identified below provide the broad basis for decision making related to open space in the Township. These goals identify principle planning ideas that set the stage for identifying open space issues and seeking solutions to guide the planning of open space. The goals help to recognize potentials, to be vigilant for opportunities and to avoid problems associated with open space and natural resources. Later in this report, the goals and objectives here become the standard for evaluating potential parcels and resources to be protected as open space.

1. Make the Schuylkill River frontage of the Township available for use and a vibrant part of the Township’s Open Space System.

- *Develop access connection points to get to the river front. Consider access for pedestrians, safety and maintenance personnel.*
- *Focus on development opportunities that provide a view of the river in a public sense and engage persons to interact with the river along it’s length wherever safe and practical.*
- *Develop a continuous trail system along the river and interconnect with adjacent communities to allow for a regional river experience.*
- *Seek acquisition or protected status of additional land along the river to maintain a greenway for access and riparian corridor.*
- *Focus on tributary drainage connection points to the river.*
- *Clean up and improve the visual quality of conditions along the river zone.*

2. Broaden the Township wide network of connections for access to open space and use of open space for alternative transportation and recreation.

- *Use designated trails, in particular County trail systems to provide linkage points to other communities and nearby open space by completing the connections.*
- *Look for creative solutions to transportation challenges along the missing link areas and include planning at early stages of new transportation projects.*
- *Incorporate linkage requirements in the planning process to require that development applications contribute to linkage completion.*
- *Provide for diversity of transportation types and achieve design standards for accessibility in accordance with existing and changing guidelines under the Americans with Disabilities Act.*

3. Capture important natural resource areas of the Township within open space areas so the resources can be protected.

- *Continue to preserve resources such as wetlands, steep slopes, mature vegetation and riparian corridors through the enforcement of existing ordinances in the planning process.*
- *Evaluate the on-going effectiveness of ordinances. Adopt revisions and supplements to ordinances to preserve and protect vegetation, stream corridors and sensitive steep slopes.*
- *Encourage open space contributions containing unprotected resources. Seek to transfer ownership to the Township or public trust.*
- *Target land with resources for acquisition by the Township to achieve protection of land, together with additional intrinsic purposes of open space.*

4. Develop the potential for open space areas to include areas for public use and enjoyment.

- *Seek to include land suitable for development of access connections, as a minimum. Balance useable land with resource protection when evaluating additional open space opportunities.*
- *Consider the location and positioning of open space relative to other areas of existing or potential open space. Seek to balance open space throughout the community to increase the network and linkages formed by open space.*
- *Continue to partner with school district and other public and private institutions to maximize lands available for public use.*
- *Seek to obtain or protect existing private recreation land when sale or development threatens its loss.*
- *Evaluate changing needs of the community and demands for open space to support population, current recreation programs and potential new activities to support diversity of recreation opportunity.*

5. Consider the visual quality of open space and developed areas to be of high value to the community.

- *Mandate preservation of high value visual resources, vegetation and natural areas within developments.*
- *Encourage development areas to provide attractive landscaping, lighting and signage elements. Enforce existing ordinances requirements in this regard and consider creative alternatives through the planning process.*
- *Capitalize on the visual quality of the river and make clean-up improvements to provide a desirable experience of passing along the riverfront.*
- *Maintain public open space in well kept appearance. Provide for landscape care, trash collection and routine maintenance of developed recreation areas while maintaining naturalism within the broader context.*

EXISTING CONDITIONS & RESOURCES

PERMANENTLY PROTECTED LANDS

A park system of Township owned land and leased land throughout the Township is one of the primary forms of protected land. Approximately 478 acres of park land exists in Upper Merion's ten planning districts illustrated on the Township map of park lands. See Map #2 and related maps in the appendix. Additionally, the Township leases recreation area from Upper Merion Area School District that is not included above. The inventory of parks identified in the 1994 Parks and Recreation Master Plan included the school sites. This inventory has been enhanced with a number of acquisitions of parcels identified in the previous Open Space and Environmental Resource Protection Plan as priority parcels for acquisition and various additional lands. These include the following:

Swedeland Basin Park – 26 acres
Bob Case Park - 26.5 acres
Norview Farm Park – 9.75 acres
Whitegate Park – 5 acres
The Donohue Property near McKaig Nature Center – 2 acres
Drummond Corporation Fields (parking lot) adjacent to Swedeland Park – 4 acres
Sumner Dam Park – 9 acres
Heuser Park – 111 acres
Vahora parcel - 3 acres added to the east end of Bob Case Park
Genuardi property – 3.5 acres ~
Approximately 3 acres along Abrams Run (behind Sweetbriar Shopping Center)
Mullen Property on Allendale Rd. adjacent to Walker Park – 6 acres
Sunnyhill Farm Park – 12 acres ~
Field adjacent to Volpi Commons – 4 acres
Tulip Lane / Gambone – 2 acres ~
PECO Riverfront – 4 acres
(acres identified ~ are approximate)

Collectively, the updated areas of all these lands in protected status and under Township control are 478 acres of open space. Additionally, Upper Merion Area School District properties add 116 acres of which substantial portions contribute to open space including active recreation facilities. These lands combined provide 594 acres of protected land. The Township also enjoys approximately 1300 acres of federally protected land within the Valley Forge National Historic Park.

TEMPORARILY PROTECTED LANDS

Temporarily protected lands are classified as existing private recreation lands, golf courses, Act 319 and Act 515 preferential assessment lands and other spacious land uses such as cemeteries, hospitals and large institutional land holdings.

Such parcels may have characteristics that support the goals of this open space plan. These may include environmental sensitivity, proximity to other protected open space, scenic and functional values, location where open space is needed and sparse. These qualities may be worthy of seeking to protect these lands permanently.

Upper Merion has over 387 acres of temporarily protected land owned by private recreation institutions. This does not include the cemeteries which also may be seen as temporarily protected. Additionally, some 92 acres of land are included in the Act 319 program that requires the land remain undeveloped for a period of time. Tax incentives maintain these parcels in temporary protection status.

Significant land holdings of previously Pennsylvania owned “silt basins” have been acquired by the Township and are being effectively used for recreation development and open space. Another silt basin exists on a 70 acre tract of land owned by Conrail along the Schuylkill River near the mouth of Crow Creek. The former silt basin berm and coal sediment from river dredging is still evident. The area is supporting an emergent woodland interspersed with meadow. The area may be considered temporarily protected in the sense that the railroad tracks and the Schuylkill River isolate it from other development. The land is owned by the Railroad, apparently acquired from the Pennsylvania Bureau of Abandoned Mine Reclamation. It is not known what intentions the railroad may have for the land. If any possibility of acquisition or lease from the railroad exists, the County or Township should pursue this for potential of County or Township recreation and open space along the river.

The area of un-used land between the railroad tracks and the riverfront also contains other features such as monitoring wells and facilities that are monitored by the Environmental Protection Agency (E.P.A.). This vision of open space may consider this strip of land all along the river as temporarily protected because of it’s isolation, floodplain status and E.P.A. monitoring.

SCHUYLKILL RIVER OPPORTUNITIES

The corridor along the Schuylkill River in Upper Merion is rich in its intrinsic value for open space preservation. The Township operates a facility for a boat landing at the eastern end of the Township’s riverfront. Scenic views of bridges and a dam at this location introduce a riverfront experience for those who are familiar with the location. Much more potential exists along the river to experience scenic views, majestic Sycamore and White Oak trees, historic features along the riverfront and the serenity of lapping water along the shore. It is likely that few residents of Upper Merion Township have actually experienced the high quality of open space that exists in this area. Access to and along the river should be an open space priority. The qualities worthy of this pursuit include the following features, which have been observed in the field:

- Visual connection to Barbados Island in the river (appendix photo)
- Woodland areas supported by layered vegetation

- Massive Sycamore groves and Oak trees (appendix photo)
- Historical stone walls of the former Knickerbocker Ice Company (appendix photo and Map)
- Evidence of a former tow path along the river (appendix 1912 Maps)
- Boating activity in the river (appendix photo)
- Fishing opportunities
- Wetlands along the river bank and tributary stream intersections
- Flood plain
- Coal silt basin meadow and emergent woodland
- Remnants of old locks in the river (appendix 1912 Maps)
- Former trail remnants and bridges
- Port Indian
- Port Kennedy
- Connection to Valley Forge National Historic Park
- An old concrete building along the river bank

The water front is a unique resource in the Township. It offers opportunities to preserve some important heritage. The river zone is a valuable environmental area where flood waters travel, erosion and silt is controlled from entering the river, natural and mature vegetation and woodland exist. This river zone, in its present state, provides an important component for preserving a greenway along the river connecting communities throughout Montgomery, Chester, Berks and Philadelphia Counties. Opportunities for an enhanced river experience are many and the entire zone should be seen as one of the Township's foremost and important resources.

Many challenges present themselves when considering the use of the river area for access and recreation trail development. However, the value of a trail continuously along the river could offer many benefits to this community and the surrounding communities. The challenges include the ownership and isolation of the area with railroad tracks running along the southern edge of the river zone. In places the land between tracks and riverbank narrows down to nothing but a sloped embankment directly into the river. While these challenges are significant, access points and linkages also seem promising in areas which may allow some future trail alignment to be possible.

The vision of a trail continuously along the river could offer great opportunity for access and use of open space. There is benefit and opportunity for a trail and associated land acquisitions to preserve the intrinsic riverfront qualities listed above. The trail could also provide a great opportunity for community gathering and enjoyment, interpretive educational walks, family walks and picnics, safe bicycle riding for recreation and transportation and linkage to other parts of the Township open space network. The trail could be an excellent extension of the Schuylkill River Trail and Chester Valley Trail systems, offering connection to Valley Forge National Historic Park, alternative routes for hikers. The trail could also serve as incentive and destination to complete other linkages within the Township network through areas such as Heuser Park, Bob Case Park and the Crow Creek riparian corridor. Many interesting experiences along the route of such a trail could be gained by its users and woodland, wetlands, environmental, cultural

and historic features could be preserved along the length of the riverfront. Photo images 1 and 2 at the back of this book provide views which capture the qualities of river experience discussed above. Also included in the appendix at the back of this book are maps illustrating some of the historic features.

PUBLIC OPEN SPACE INVENTORY:

The audit of open space includes substantial lands acquired as a result of the 1994 Open Space Plan. Lands acquired are indicated in *bold italics*. Also the sites with riverfront conditions are indicated **riverfront**.

INVENTORY OF TOWNSHIP OWNED AND LEASED RECREATION AND OPEN SPACE FACILITIES BY PLANNING AREA (Schools listed separately)

<u>Planning Area</u>	<u>Recreational Facility Open Space</u>
1. Gypsy Hills (Approx. 22 Acres)	<p>*Executive Estates Park- 9.13 acres, basketball court, lighted tennis court, play apparatus, shelter, picnic area, stream and monument. Longview Road. Neighborhood Park.</p> <p>*Gypsy Road Nature Area (Natural Lands Trust) – 9.99 acres leased to the Township in natural state, adjacent to Executive Estates. Gypsy Road. Community Park.</p> <p>*William Wall Memorial Park – 0.75 acres, owned by West End Civic Association and Township, maintained by Township, basketball court, play apparatus, picnic area, benches, grill, community building. Supplee Lane. Mini-Park.</p> <p>*Township Property – 2.16 acres in natural state, adjacent to Natural Lands Trust Gypsy Road Nature Area. Lantern Lane. Undesignated.</p>
2. Croton Woods (Approx. 127 Acres)	<p>*Bob White Park – 21.22 acres, softball field, basketball court, two lighted tennis courts, shelter, picnic area, play apparatus, stream and pond for fishing and ice skating. Falcon Road. Community Park.</p>

*McKaig Nature Education Center/Marcia Woods Park – 86.77 acres of natural area, woodlands, stream and trails. Owned and leased. Croton Road. Community Park.

* ***Donohue Property – 2 acres adjacent to McKaig Nature Center.***

*Mt. Pleasant Park – 1.23 acres, undeveloped. Mt. Pleasant Avenue. Mini-Park.

*Brower Road Nature Area (Natural Lands Trust) – 10.12 acres leased to the Township in natural state, adjacent to McKaig Nature Education Center. Brower Road. Community Park.

*Township Property – 0.91 acres in natural state along stream. Kerrwood Drive. Undesignated.

*Whitegate Park – 5 acres dedicated to a new neighborhood park in the Whitegate Subdivision. Development of park amenities anticipated in 2005.

3. King of Prussia/
Valley Forge
(Approx. 6 acres)

*Betzwood Park – 1.00 acre, natural area. Betzwood Bridge. Mini-Park.

* Upper Merion Community Center- 4.80 acres, Irwin Estate historic three-story building, arboretum, cabin, natural area. Moore Road. Community Park.

4. Abrams
(Approx. 204 Acres)

****Heuser Park – 111.33 acres, part of Impounding Basin No. 23***, purchased from the State, three softball fields, Beidler Road. Community Park.

*Sweetbriar Park - 28.18 acres, baseball field, basketball court, two playgrounds, shelter, picnic area, stream and natural area. Hansen Road/Beidler Road. Neighborhood Park. *(Partially located in Belmont section)*

*Volpi Common – 3.48 acres, natural area. Keebler Road. (with additional acreage acquired from Tulip Lane from Gambone Development Co.) Neighborhood Park.

*Walker Park – 25.03 acres, four baseball fields, one lighted football field, community building, lighted basketball court, play apparatus, drinking fountain, maintenance building, monument, stream and open space. Old Fort Road. Community Park. (*Partially located in Merion section.*)

***Mullen Property – 6 acres adjacent to Walker Park.**

***Bob Case Park – 30 acres, formerly impounding basin #24** currently planned for two soccer fields. Includes the Vahora parcel, 3 acres added to the east end of Bob Case Park.

*Riverfront Park – 4 riverfront acres acquired from PECO.

5. Belmont
(Approx 11 Acres)

*Schuylkill River Boat House – 1.63 acres, river access. Access is 2nd Street in Bridgeport, plus an ***easement from the Trinsey Property to access the park.*** Community Park. This park includes **riverfront.**

*Sweetbriar Park – *Previously counted in Abrams District, partially located in this District.*

***Norview Farm Park – 9.75 acres on N. Henderson Road containing a farmhouse, farm buildings and a farmer’s theme playground.**

6. Merion

*Leo M. Ross Park – 1.74 acres, leased,

- (Approx. 36 Acres)
- sandlot ball-field, basketball court, play apparatus, shelter and picnic area. Ross Road. Neighborhood Park.
- *Tabak Park – 0.53 acres, basketball court and play apparatus. East Valley Forge Road. Mini-Park.
- *Township Building – 17.92 acres, ice skating, fishing and outdoor amphitheater. Valley Forge Road. Community Park.
- *Walker Park – *(previously counted in Abrams District, partially located in this District)*
- * Genuardi property, 3.5 ~ acres near N. Henderson Road and Beidler Rd.**
- *Sunny Hill Farm Park – 12 ~ acres of undeveloped open space, sloping land opposite the Township Building and Park.**
7. Kingwood/Henderson
(2.61 Acres)
- *Kingwood Road Park – 2.61 acres, leased from Philadelphia Electric, softball field, two basketball courts, shelter, picnic area, flagpole, bicycle rack, and play apparatus. Kingwood and Long Roads. Neighborhood Park.
8. South Gulph/Hughes Park
(3.9 Acres)
- *Merrill C. Young Park – 2.70 acres, softball field, basketball court, play apparatus, shelter and picnic area. White Avenue. Neighborhood Park.
- *Valley Forge Acres Park – 1.2 acres, sandlot ball field, basketball court, play apparatus, shelter and picnic area. Lori Lane. Mini-Park. Additionally, a ¼ acre lot was acquired adjacent to this park.
9. Swedesburg/King Manor
(10.74 Acres)
- *King Manor Park – 10.0 acres, leased from King Manor Philadelphia Electric, ball

field, play apparatus, basketball court, shelter, and picnic area. Coates Lane. Neighborhood Park.

*Swedesburg Park – 0.74 acres, leased from Turnpike Commission, basketball court, play apparatus, shelter and picnic area. Center and Church Roads. Mini-Park.

10. Gulph Mills/ Swedeland
(Approx. 55 Acres)

*Swedeland Park – 4.93 acres, softball field, two basketball courts, shelter, picnic area, grill, bathrooms, play apparatus, benches and monument. Community Park.

****Drummond Corp. Field - Additional 4 acres*** was acquired adjacent to Swedeland Park (parking area).

*Sumner Dam Park, 9 acres of woodland and former dam pool in a riparian area.

*Kunda Park, 11 acres, partially in West Conshohocken. This site includes **riverfront** area accessed from West Conshohocken.

*Swedeland Basin Park, 26 acres acquired from the state includes **riverfront** area between Bridgeport and West Conshohocken.

INVENTORY OF SCHOOL DISTRICT OWNED RECREATIONAL FACILITIES BY PLANNING AREA

Planning Area

Recreational Facility

2. Croton Woods
(10 Acres)

*Robert’s Elementary School. 9.89 acres, sandlot ball field, soccer field, two basketball courts, play apparatus and all-purpose room. Neighborhood Park.

4. Abrams
(20 Acres)

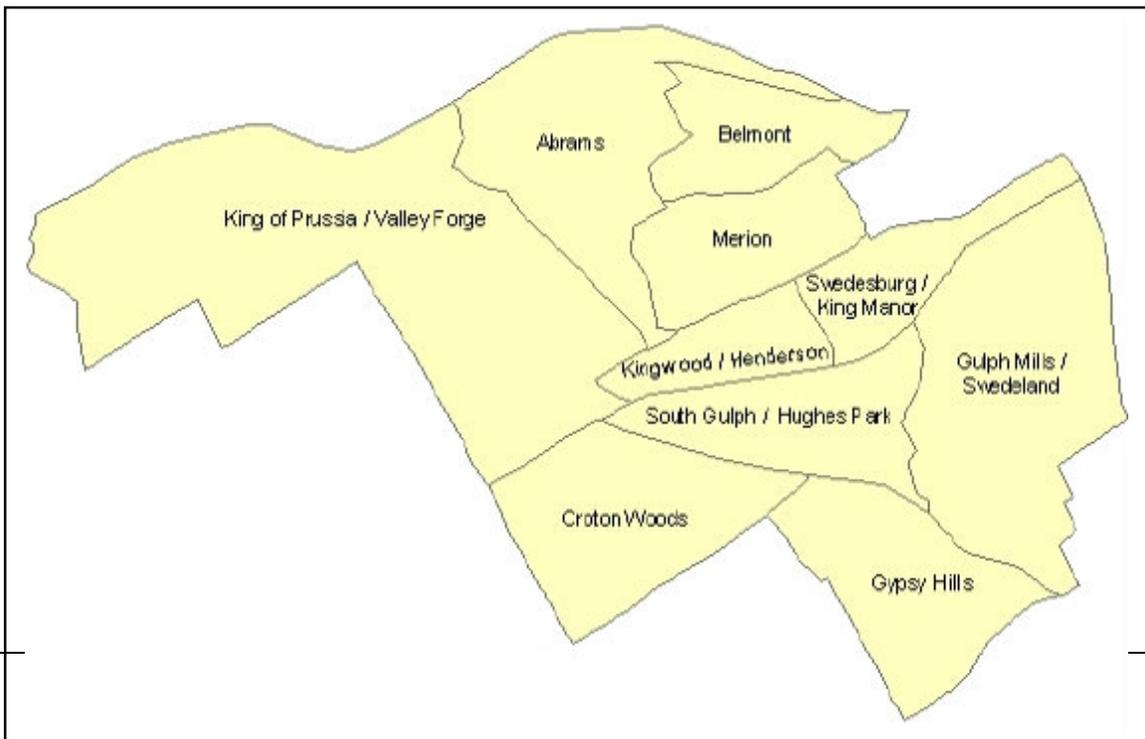
*Caley Road School –20.0 acres, three baseball fields, three basketball courts, play apparatus and all-purpose room. Neighborhood Park.

- | | | |
|----|---------------------------------------|---|
| 5. | Belmont
(9 Acres) | *Belmont Elementary School – 8.62 acres,
two softball fields and play apparatus.
Neighborhood Park. |
| 6. | Merion
(51 Acres) | *Candlebrook Elementary School – 8.31
acres, two basketball courts, sandlot ball
field, play apparatus and all-purpose room.
Neighborhood Park.

*Upper Merion Middle School – 18.0 acres,
athletic fields (soccer, field hockey,
lacrosse), two gymnasiums, swimming pool,
two baseball fields, five tennis courts and
fitness trail. Community Park.

*Upper Merion Senior High School – 25.0
acres, two baseball fields, basketball courts,
three tennis courts, two gymnasiums,
swimming pool, football field and running
track. Community Park. |
| 8. | South Gulph/Hughes Park
(26 Acres) | *Gulph Road Elementary School – 25.89
acres, two tennis courts, two soccer fields,
gymnasium. Community Park. |

Planning Districts Map: (Taken from Upper Merion Township - www.umtownship.org Community Profile)



RESOURCE CONSIDERATIONS:

Existing parks and open space land and protected land areas are backbone resources for this community in preserving and protecting the quality of life for residents of the Township and nearby communities. Other cultural and natural resource considerations are also important to consider in maintaining and expanding the open space network. Resources are vulnerable and worthy of protecting to maintain their important functions and preserve a quality of life experience for all users.

The Audit of former 1994 Open Space Plan confirms that the resources of importance then also remain important to the Township today. The acquisition and development of land such as Heuser Park near the river has kindled a new interest in the river which this update will emphasize. Also recognized by the audit process was the importance of stream corridors as open space elements having important natural resources that need more protection and may be great opportunities for developing an open space network that is well linked to other open space areas.

Historic and Cultural Resources:

Montgomery County and Upper Merion Township are rich in historical resources. Remnants of history from the revolutionary war period are plentiful. The Valley Forge National Historic Park preserves the site of General Washington's Valley Forge encampment and the bitter conditions faced by his troops during the harsh winter of 1777-1778.

Many other resources of historical and cultural significance remain in the area. Some properties have been placed on the national or state registers. Some are privately held and others are protected in the public domain or preserved as museums. These resources form many of the visual and character qualities enjoyed by those who live in and visit this community. The preservation of these resources is important for their historic and educational value, their interest and visual qualities and their ability to provide a binding thread of meaning to a diverse community.

New resources of interest have been re-discovered while focusing on the river area during this open space plan preparation. 1912 maps of railroad areas, together with on site discovery of cultural remnants have shown that the old industrial rail strip along the river was an important part in the fabric of this community. Thirty feet tall portions of stone walls, several feet thick, can be found in the heavy vegetation where the Knickerbocker Ice Company once stood. Evidence of an old tow path along the river is another historical feature of interest. The remnant of locks in the river and features of ferry crossing stations stand as reminders of an age long past where the river and rail system along it were important to the daily lives of residents. Many of these interesting features have potential to some day become part of an interpretive trail system along the river.

A table from the 1994 Open Space and Environmental Protection Plan is updated below:

TABLE: HISTORIC AND CULTURAL RESOURCES	
RESOURCE	LOCATION
NATIONAL REGISTER: HISTORIC LANDMARKS	
Washington’s Headquarters (Isaac Pott’s House)	Valley Forge & N. Gulph Roads
NATIONAL REGISTER: INDIVIDUAL PROPERTIES	
Kennedy Mansion	1050 Valley Forge Road
King of Prussia Inn	Moved to Crockett Road from Route 202 & Route 363
Poplar Lane (Ballingomingo)	Boxwood Court
Bridge over Gulph Creek	South Gulph Road
PROPERTIES DETERMINED ELIGIBLE BY PA BUREAU FOR HISTORIC PRES.	
Christ Church (Old Swede’s)	740 River Road
John Hughes House	800 S. Gulph Road
Kennedy Mansion	1050 Valley Forge Road
Moore-Irwin House (Muhlenberg Quarters)	700 Moore Road
Hanging Rock	Route 320, Gulph Mills
SITES OF LOCAL CULTURAL SIGNIFICANCE	
Millworkers’ Homes	Below Washington’s Headquarters
Commissary Building	Route 23
Washington Mem. Chapel, Museum, Bell Tower	Valley Forge Road
Huntington’s Quarters	Quarry Road near Route 23
Varnum’s Quarters	Route 23
Inner Line Earthworks	Throughout Valley Forge Park
Letitia Penn Schoolhouse	Gulph & Baptist Roads
Knox Covered Bridge	Yellow Springs Road at Valley Road
National Memorial Arch	Gulph Road at Outer Line Drive
Old Mill Building	County Line Road
Morgan’s Quarters	Richards Road at Route 363
Catfish Dam Lock House	on the Schuylkill, off Mansell Rd.
Peacock Gardens	Routes 76-202-252
L.W. Morrison House	King of Prussia Road
Harry J. & Beatrice Schuler	Croton Road
Webber House	Warner Road
Old Roberts School	Croton Road
Exley Log Cabin	Radnor Road, Wayne
Plumb Nilly	Brower & Fletcher Roads
Jonathon Roberts House	S. Gulph Road, King of Prussia

Dominick D. & Francis M. Pasquale	Shoemaker Road, King of Prussia
Private residence	Shoemaker & Old Gulph Roads
Bird in Hand Store	Gulph Mills
Finel Residence	Swedeland Road
Picket Post	Old Gulph Road, Gulph Mills
Gulph Christian Church	Gulph Mills & Matsonford Roads
Old Gulph School House	Matsonford Road
Supplee Home	Swedeland Road
Coates Dwelling	Coates&Church Streets, King Manor
Holstein Family Home	Henderson Road
Benjamin Eastburn House	Valley Forge Road & Tabak Avenue
Limekilns	Saulin Blvd. at Rte 202
Private Residence	Henderson & Valley Forge Roads
Samuel Phillips House	Henderson Road
Farmhouse	Beidler Road

Natural Features:

Geology

The underlying geology in Upper Merion Township includes some areas which are recognized as carbonate bedrock formations. Some of these areas have been described as highly folded, steeply dipping, solution affected or pinnacled carbonate formations. The areas of this type of geology are found throughout a widespread area running east to west in the middle portion of the Township. These areas may be of particular concern for subsidence and sinkhole conditions. Carbonate and Dolomite formations tend to dissolve under certain conditions leaving void space and resulting in subsidence or sinkhole areas, which can be hazardous conditions for structure foundations and paved areas. The hazard for foundations and structures may be eliminated or minimized if the proper precautions are taken during construction.

Because of the geology in this area, quarry operations have been used in Upper Merion Township since 1708. The material is hard and useful for building materials. Limestone was quarried and marble was also extracted from the area prior to 1782. Other types of stone and rock and sand extraction for building materials and clay for making of firebrick have been going on in the Township. Certain rock formations known as the Ledger, Elbrook and Conestoga formations have been especially productive for these extraction practices.

Steep Slopes

Steep slope areas in Upper Merion Township are protected under the Zoning Ordinance to prohibit or restrict development within areas of slope 15% to 25% and over 25% slope conditions.

Steep slope protection is closely associated with the resource of topsoil. Development in areas of steep slope is harmful in the sense that topsoil resources are more likely to slip and weather, causing erosion of the surface and potentially eroding further into the subsoil. The standards for protection of steep slope require efforts in planning and during construction to enforce the protection requirements. One of the best protection methods for such areas is to maintain the steep slopes within protected open space areas.

Some of the most prominent steep slope areas are located in the southwest sector of the Township. Some of the existing steep areas are protected within public areas. The McKaig Nature Center is one such area that protects a significant quantity of steep slope. Other steep slopes have been developed such as west of McKaig Nature Center and west of Roberts Elementary School.

Erosion problems have been experienced in the Township. The Sumner Dam area is an example of significant silt building up within the riparian corridor. The problems associated with silt in a riparian area may not be completely attributed to steep slope disturbance. Even natural forces on undisturbed steep slopes can cause migration of soil particles, which end up in streams. However, the importance of protecting the vulnerable soil particles on the steeper slopes should be augmented by open space practices and planning. Zoning Ordinance protection of these areas should be enforced in the review process and the implementation phase of projects. Additional restrictions might also be considered.

Streams, Flood Plain and Riparian Areas

The Schuylkill River area is the largest water resource in the Township, flowing in an easterly direction along the northern boundary of the Township. The riverbank along the Schuylkill conveys floodwaters to the Delaware River Basin. Its value and function beyond the conveyance of normal flow and floodwaters is discussed in a previous section. The environmental function of this watercourse, together with the intrinsic values of scenic quality and wetland and wooded conditions as well as the historic and cultural value of this zone combine to make this area an important emphasis for future open space preservation efforts.

Other stream corridors feeding the Schuylkill River are of similar value for the same reasons stated above. Each of the five goals for open space preservation stated previously are enhanced by preserving the stream corridors and their associated wetlands, steep slopes, scenic and forested conditions.

The tributary stream areas convey storm water runoff from the more intensively developed central areas of the Township to the Schuylkill River which is the major conveyance channel departing the Township. Pollution of public waters has been under increasing scrutiny and concern in our national emphasis of the environment from the 1980's to this date. Protection of these tributary conduits is an important factor in maintaining water quality, not only for this community but within the entire watershed.

The riparian corridors and associated wetlands and vegetation provide filtering of suspended hydrocarbons, oils and sediments. These ribbons of green space should be utilized in the open space plan, not only to protect the resources within them but also to link other open space areas into the larger system of open space. The linkage can provide for trail connection in some locations while serving as visual buffers and wildlife habitat in other locations. Linkage opportunities running in a north-south direction are particularly important since the Chester Valley Trail and the Schuylkill River run primarily east-west in direction. The tributaries on the eastern side of the Township also run east-west and these provide linkage opportunities for access and open space ribbon to the Schuylkill River area

The riparian corridors of note regarding the tributaries within the Township include the following named and unnamed tributaries (listed from west to east):

- **Valley Creek** runs through the Valley Forge National Historic Park where steep slopes and riparian areas are well protected within the park.
- **Trout Creek** connects areas near the west end of Beidler Road, including Heuser Park, north to the Schuylkill River. A tributary of this creek may also be known as **Mashelmac Creek**.
- **Crow Creek** (also called Abrams Creek) connects areas from the south central part of the Township, south of Crow Road, north through the heart of the Township to the Schuylkill River. This stream is the longest riparian corridor in the Township and contains several forks on the south end. An important aspect of this creek from a linkage standpoint is that it helps to bind the north, central and south portions of the Township. Linkage barriers exist by way of major existing infrastructure, highways and railroads. Some large culverts exist to maintain the flow of this sizeable drainage area.
- Unnamed tributaries exist east of the mouth of Crow Creek.
- An Unnamed tributary runs within the Township, south of Bridgeport Borough, running east in the vicinity of the Swedeland impounding basin to the Schuylkill River.
- **Matsunk Creek** originates near the west side of the private recreation Gulph Mills Golf Club property. This riparian corridor links to Kunda Park just north of West Conshohocken Borough. Flow is toward the east connecting to a south flowing segment of the Schuylkill River.
- **Gulph Creek** also flows east toward West Conshohocken Borough. The drainage area within this riparian corridor begins at the west end of Gypsy Lane. Along the route toward West Conshohocken Borough, this creek links several parks and open space parcels. One property owned by the Natural Lands Trust borders the

western edge of Executive Estates Park. Further down stream is the Sumner Dam property that is owned by the Township.

Woodland and Vegetation

Woodland areas are found throughout the Township. Mature woods are particularly notable in the southern portion of the Township. The McKaig Nature Education Center is an example of large contiguous woodland consisting of approximately 90 acres. Other lands adjacent to the nature center also add contiguous woodland canopy to the area including lands of the Natural Lands Trust and some areas of residential development where lots are large enough and housing was developed to preserve the existing wooded character.

Montgomery County has identified the McKaig Woods as a site of local significance. It is a unique example of woodland within a densely populated area. The woods are noted for the diverse flora for this area of the County and the woods contains beech, black oak and chestnut oak. The County recommendation for control of non-native weeds such as multiflora rose should be noted and may also be prudent warning for other wooded areas in the Township.

Other areas of significant woodland in the Township include woods on the Valley Forge National Historic Park lands and along the Schuylkill River corridor and former coal sediment basins. The trees in these areas have reached significant heights. Old Sycamores and Oaks along the Schuylkill River floodplain reach heights of 100' or more.

The wooded areas of the Township also follow the stream corridors to a great extent, making these areas even more significant for open space preservation. The wooded conditions provide some protection of the stream corridors and surrounding steep slopes to assist in holding soil in place and reducing the runoff intensity adjacent to the stream bank areas where erosion is a concern. Layered vegetation including sub-canopy trees and underbrush is characteristic of most wooded areas.

Protection of woodlands by ordinance in the Township is primarily by way of the Subdivision and Land Development Ordinance. Developers are discouraged from removing trees, although it is not prohibited and not a requirement of zoning regulations. Where trees are removed, tree replacements are required.

Scenic Resources

Areas of significant scenic quality may be enjoyed within diverse areas of the Township. The Schuylkill River corridor has been previously described and this offers one of the most significant scenic qualities. However, there are many other areas within the Township, which offer high value scenic experiences. The wooded areas described above and along the forested stream areas, the historic homesteads and the historic Valley Forge Park contribute significantly to the scenic qualities.

While there are areas of intensive development within the built environment of the Township, there are also areas that stand out visually and experiences of scenic appreciation can be encountered throughout the Township. There is potential for enjoyment of scenery along walking trails, nature areas, along high topography areas, low-lying river zone and along scenic roadways. The visual experience is diverse, capturing glimpses of history, shady woodland scenes, distant vistas, and serene water environments.

The experience also offers an educational snapshot of the history of this Township. The Valley Forge National Historic Park is a treasure for the Township and adjacent communities. The rolling former farmlands, split rail fences and historic monuments provide a glimpse of “the way it was”. This should be a strong reminder of the value of other scenic qualities and what they may contribute to the future of this community.

Visual resources have been established a goal of this study. The natural and historic environment is the primary concern for preservation of the visual context. However, landscaping and community beautification programs should be considered of high value to support the overall visual resource quality. Natural areas cannot be fully appreciated and enjoyed as qualities of importance to the fabric of a community if they are juxtaposed against poor visual conditions in the built environment. For this reason the considerations of this Open Space update should factor in the concept of landscaping requirements within the Township and routine maintenance of public spaces and other requirements to set a high standard for protection of natural and historic scenic values.

Specific scenic considerations of the Township include the following features that deserve protection and this open space plan should especially reinforce these opportunities:

- Views toward Barbadoes Island in the Schuylkill River are significant. The site is not in Upper Merion Township but the views of the historic island from Upper Merion should be preserved. The Township hopes to see cooperation of other municipalities, Montgomery County and the Commonwealth to protect this resource.
- Views all along the riverfront offer outstanding scenic quality. More access for residents to experience these views is needed and protection of the visual qualities, the historic elements and mature shade trees is extremely important.
- The hills at Valley Forge National Historic Park are already well protected under the federal status of the land. The area is the largest single land area of scenic quality in the Township.
- Highest elevation points offer the best long distance views. The area near the Lockheed Martin facility offers some of the best views in this regard and preservation and access to the view points beyond is important.

LINKAGE BARRIERS AND OPPORTUNITIES:

The presence of open space areas, natural resources and scenic and historic areas must be accessible and interconnected for effective use and enjoyment of these areas by the residents. After conducting the audit of the 1994 Open Space Plan, it became a strong goal of this study to promote the concept of linkages to bind the community together in a way that open space areas will have maximum benefit for the maximum number of residents. The former open space plan also recognized this potential. However, it became more evident by studying the maps and recent land acquisitions that the potential of interconnected open space networks is a near reality. The network must expand and the barriers preventing such expansion must be overcome through creative engineering and planning.

Barriers

Significant barriers to linkage of open space areas exist in this Township. Major infrastructure runs east and west through the heart of Upper Merion Township. Major road and transportation systems such as the Pennsylvania Turnpike, U.S. Route 202, and Conrail railroad tracks are difficult obstacles that make physical access and linkage of north and south areas difficult. These physical barriers are replicated along the river zone by the multiple Conrail railroad tracks and major collector roads throughout the Township also present similar difficulties. Few crossing points are available to bind the north and south areas together.

The river zone that has so much potential for open space use and enjoyment is difficult to access. Private lands owned by the railroad restrict the approach to this area and access is limited to approach from the west because of limited space and steep slopes along the river banks.

Another barrier, though less difficult, may be the PECO right of way, also running east-west through the Township from Bridgeport to Chester County. This barrier, however, has been turned effectively into an opportunity for placement of the Chester Valley Trail along much of its length. If a similar partnership with the railroad could be gained, some significant barriers could be overcome to take advantage of the Schuylkill River zone.

Opportunities

In spite of the barriers and because of the barriers, opportunities should be identified to make linkages so that connectivity within the open space system can be as complete as possible. Another factor to realize in the planning of open space at the local level is the ability to make connections to larger networks of open space beyond the boundaries of this community.

County Trail System

The development of the Chester Valley Trail through the Township is beginning to take shape and provide for new linkage opportunities. Since the trail is an extension of a county wide system, it is an outstanding link to other communities and open space areas. The trail links west to Chester County, leading toward Exton and Downingtown. Toward the East, the trail is one connecting link to Upper Merion Township's Boat House facility on the Schuylkill River near Bridgeport. It continues into Norristown making an important regional connection with the Schuylkill River Trail. This connection allows access to the complete network of trails in Montgomery County. These include the continuation of the Schuylkill River Trail east to Philadelphia, west to Berks County, the Perkiomen Trail toward the west, Liberty Bell Trail going north into Bucks County and the Cross County Trail toward the northeast.

It should be noted that the Schuylkill River itself is identified as a "water trail" for boaters and kayaks. The Schuylkill River Greenway Association makes this designation.

Bicycle and Pedestrian Network Plan

Upper Merion Township has produced a Draft Plan of a Bicycle and Pedestrian Network throughout the Township. (Map is included in the Appendix.) The street network with neighborhood connector streets have been identified for pedestrian friendly routes to travel through neighborhoods to access open space and other areas. The bicycle and pedestrian networks have been studied in view of barriers, opportunities and destinations. Potential connections to complete broken links have been identified. These have been integrated with the intermodal network for connections to trails, transit systems, off road and multi-purpose trails, bridges and waterways. See Map 5 for key linkage elements of this system related to open space and adjacent community connections.

Riparian Corridors

The riparian corridors have been described in the above material on the natural resources of the Township. It is important to reiterate the value of these natural zones for linkage of open space. The linkage may be an active one with trail connection along the upper banks of the creek. The Crow Creek Trail, especially provides this active connection through the riparian corridor. Riparian areas without trails also form passive linkages. The connection of open spaces with the associated hydrology, soils, vegetation and topographic features provide habitat for birds and animals and a natural network through which diversity of wildlife can travel, locate food sources, live and reproduce.

Map # 4 illustrates the riparian corridors in the Township with associated status of protection for these open space linkage elements. Some riparian areas fall within protected open space that already exists. These are indicated in green color on the map. Some riparian areas shown in yellow color on the map are relatively preserved but not held in a protected ownership status. As such, these riparian areas may be threatened. Other sections, shown red on the map, are significantly encroached by previous

development. The encroachment may be road systems, driveways or back yard areas of residences with sheds, swimming pools, garages and such uses that are close to stream banks and do not appear to provide a typical riparian system. Along the route of this drainage flow and riparian areas, fingers of potential open space connect to the major resource of the Schuylkill River. These opportunities for linkage are directionally oriented to cross many of the major elements of infrastructure that become barriers or challenges for continued connection. The map illustrates the opportunity for linkage that these elements offer, also identifying the points of conflict with major infrastructure. Pedestrian access to overcome the element of infrastructure should be considered of prime importance at many of these conflict points.

Adjacent municipalities

Linkage opportunities for open space connection to adjacent municipalities may also be active and passive. Trail and bikeway connections are existing and possible future scenarios. Map # 5 identifies important points of connection via the county trail system, county designated scenic routes, and possible bike or pedestrian links identified by the Bicycle and Pedestrian Network Plan.

Map # 3 also illustrates natural resource conditions of Upper Merion Township. These features may co-exist with the adjacent municipalities. The overlap of natural resources, exchange of scenic views and shared river frontage are passive aspects of open space linking with adjacent municipalities to form a regional system. Additional discussion follows under the Regional Context chapter of this report.

OPEN SPACE NEEDS

Growth Evaluation & Build-Out Scenario (G)

Upper Merion Township current land use pattern and existing zoning “build-out” scenarios do not offer large areas of land that could yet be developed for residential uses. The Township has smaller lot size zoning in areas north of the Schuylkill Expressway where grades there are suitable for smaller lots. Few areas remain for single family development. However, some re-development could occur and there are several parcels near the river that are not developed and zoning supports higher density mid-rise possibilities there. These higher density areas seem difficult to develop due to access, however there may be approximately 250 to 350 units produced here. These estimates assume 10 acres of potential development areas as such. Assuming 15 % building coverage and perhaps 8 stories of residential mid-rise units of up to 1200 s.f. each and 80% floor area efficiency, the upper limit of **350 units** might be reached. The ultimate yield would depend on variables such as the size of units, height of the buildings, required parking and stormwater areas.

A Build-Out Scenario Map is included on following pages whereby potential development areas are indicated on top of the Township Zoning base map. The above areas of high density are identified as “A” & “B” on this map.

There are some additional areas where lot sizes are currently larger than the minimum allowed by zoning. Generally these areas are not extensive and multiple properties would have to be acquired by a developer in order to re-develop at maximum allowed density. The environmental features of the land likely prevent the full build-out. One of these areas is zoned R-2 in the north along the east end of Ross Road and Valley Forge Road. This area is identified as area “C” on the build-out map. Minimum lot sizes of 10,000 s.f. allowed in this zoning district are currently developed in deeper lots of approximately 20,000 s.f. size. Approximately forty existing deep lots in this area might be re-developed in some manner to increase approximately **25 additional units**.

Possibly **10 or 15 additional** small areas of re-development lots in the north could be found for single units that are not identified on the build-out map. Area “D” on the map is in the north central area, zoned R-3. These lots are primarily developed as single family lots, however two family and multi-family options exist in this zoning district. If re-development possibilities are considered here, there may be a **net increase of 110** smaller dwelling lots that could replace a portion of the singles. We assume here up to 60 existing lots could theoretically be consolidated by a developer and developed at some higher density. We have used 35 acres, 80% efficiency development and 6 dwelling units per acre to arrive at this estimated net increase.

In southern areas of the Township zoning supports larger lot sizes and environmental resource restrictions are very difficult for builders to maximize the allowable densities. Steep slope ordinances and woodland preservation requirements are build-out restrictive. Few larger parcels remain with any possibility to subdivide. Throughout the southern half of the Township it appears that only 40 to 50 lots may be gained by further subdivision or development. An area identified “E” on the build-out map, zoned “HR” may support a mid-rise use, however it appears rather difficult to develop as such. Perhaps **20 additional units** could be achieved in area “E” though it seems doubtful.

Area “F” is zoned “R1A” which allows 1 acre lots. Since many of these lots are oversized lots with 2 to 3 acres, some re-development is theoretically possible but again, probably impractical due to the natural feature constraints. We will allow for **up to 20 additional units** as such. Perhaps **10 additional units** could be found in the south areas that are not identified on the build-out map.

The build-out scenario discussed above results in a theoretical increase of 550 units. Allowing for an additional 20% increase that is not identified above to account for possible clustering and other multifamily development options the total build-out scenario for the Township appears to be **660 additional units** under the current zoning.

Alternative scenarios for possible development do also exist however outside of the restrictions of current zoning. A comparison of current land use and projected land use identified in the current Draft of the Upper Merion Township Land Use Plan reveals that potential for residential growth could be centered in several categories of development:

High Density Residential

Potential for additional infill and areas re-classified from Multi-Family Residential to High-Density Residential may result in additional population growth. The areas of vacant land already mentioned above along the river front may be developed in higher density high rise and mid-rise housing types. Transfer of Development Rights is presented in the Land Use Plan draft as a form of density management to direct growth. This may be considered by the Township in the future, helping to preserve some land for open space but also increasing the growth potential of other sites within receiving areas.

Village Residential Areas

It appears that additional, currently undeveloped or industrial and other mixed uses, may be planned for future areas of Village Residential that may include twins, townhouses and garden apartments. Growth in this regard is particularly possible in the area bounded by the Pennsylvania Turnpike and Bridgeport Borough and east of North Henderson Road and South Henderson Road, north to Ross Road. An 87 acre parcel could be developed in the Ross Road area resulting in over 400 units according to some preliminary development plans.

Vacant Land and further Subdivision/Land Development

Several vacant land parcels remain potential development areas. Along the Schuylkill River three parcels in particular may be developed including some mid-rise housing types and single family detached development. The use of TDR's may be a factor in these parcels as they may be designated as receiving areas to increase density. These three parcels comprise 60 acres which may yield an estimate of 400 or more residential units. If TDR's are not allowed by the Township, or not utilized by developers, growth may still be expected to a smaller degree.

Areas to the south of the township contain some private land holdings of somewhat larger parcels than minimum lot size for the zoning districts. These conditions always have potential for some additional development by subdivision or land development. However, the use of TDR's and designation of these areas as "sending" areas could help to prevent any significant growth in these areas. The presence of woodlands and steep slopes in this zone of the Township also make these parcels more difficult to develop. Currently, there is less public open space in this area of the Township than any other. The larger lots therefore, are important to maintain a feeling of open space where actual protected open space is in short supply. The TDR concept would be particularly beneficial in this location to send development rights to other areas more suitable for development.

Non-Residential Growth

Areas along the major transportation corridors in the Township continue to demonstrate potential for significant growth in the development of office, hotel and retail uses. The current success of business development, proximity to major transportation and suitable infrastructure remain attractive development incentives. The intensity of development in this regard should not negate the consideration of open space within this area.

The growth zone for non-residential closely follows the areas that are also linkage barriers for north-south open space connections. Open space for workers to enjoy and providing for linkages to bind the communities together should remain important planning objectives within intensive non-residential development areas.

Re-development opportunities

The central zone of the Township, running east and west along the major transportation corridors of Route 202, the Pa. Turnpike, South Gulph Road and the Schuylkill Expressway and also east of North Gulph Road is an area where infill development may continue to occur. The concept of sending areas and receiving areas associated with possible transfer of development rights (TDR's) is again a consideration. If adopted, this planning tool could generate more re-development type projects, however the tool may also be useful in directing the growth where best conditions exist. From an open space standpoint, directed growth should have a positive effect.

Needs Assessment and Resource Opportunities (H)

Since the Delaware Valley Regional Planning Commission does not project population growth over the next 20 years, it might be concluded that additional open space to serve population is not required. However, housing projections for Upper Merion Township presented in an earlier section of this update indicated 1099 potential new housing units by the year 2020. Expanding this projection to the year 2025 yields 1375 units. Then applying 2.2 persons per household, the population increase may be as high as 3025 persons by 2025.

An alternative calculation is based on the following. If the population trend of 4.3% during the last ten year census period should be applied through 2010, a population of 28,018 may be present. This represents an increase of 1155 in ten years. Assuming growth rate will decline as suitable property becomes less available, a reasonable assumption may be only half this growth rate, or approximately 2% during the following decade to 2020 and only slight growth, approximately 0.5% to 2025. Application of this logic yields a projection of approximately 1860 population increase by 2025.

The average of two above methods for projecting 2025 growth is 2443 more persons living in the Township at that time. Open space available to Township residents includes the 1300 acre Valley Forge National Historic Park, however for this exercise, the vast park land will be discounted. 520 acres of other recreation and open space land was available at the time of the previous study. This included leased school district land and municipal open space. With acquisitions made since then, nearly 600 acres of similar protected open space has been identified.

NRPA and Open Space Ratios

The above open space is currently available on a Township wide basis at the rate of 22.3 acres per 1000 population. This exceeds the recommended NRPA standard of 10.5 acres per 1000 population. However, the above results in a need for 54 acres of additional open space by 2025 to maintain the current ratio of open space to population that exists for the average population scenario above.

Some previous deficits in open space have been alleviated by land acquisitions. The Norview Farm addition of 9.75 acres improved the deficit in the Belmont section. Other acquisitions of Swedeland Basin Park, Drummond parking lot and the Sumner Tract have addressed former open space deficits in the Gulph Mills / Swedeland district. The ratio is now 30.89 acres/1000 population in this district so it may now be classified in the surplus category relative to the NRPA Standard. Open space “surplus” also continues to exist in Croton Woods, Abrams and Merion districts. Surplus must not be considered unnecessary. The surplus conditions must be recognized as important parts of the open space system that provide larger areas of open space for community parks, open space system connections and relief of commercial and industrial development intensities.

Remaining deficit districts include the following planning areas:

- King of Prussia / Valley Forge (6 acres/2,617 population = 2.29 acres/1000)
- Kingwood / Henderson (2.61 acres/2,013 population = 1.29 acres/1000)
- Swedesburg / King Manor (10.74 acres/1780 population = 6.03 acres/1000)
- South Gulph / Hughes Park (3.9 acres/3220 population = 1.21 acres/1000)
- Belmont (11 acres/2,791 population = 3.94 acres/1000)

Natural Resource Opportunities

If protected status is effectively given to areas of natural resources, the use and enjoyment of these areas as passive open space is gained. The protected status may be prescribed by ordinance or sheltered by a conservation easement or even acquisition. Stream valleys, woodlands and steep slopes or underlying geology areas may present opportunities for further protection and thus the expansion of protected open space. Priority should be considered in the following areas in the order presented:

- Stream valleys or riparian corridors offer the greatest opportunities to also protect woodland vegetation along the riparian corridor and achieve many of the goals of this report. The stream valleys have been identified as opportunities for open space linkage connections, trail access possibilities and ultimately they flow to the Schuylkill River which is the highest priority established in this Master Plan.
- Woodlands have been removed to accommodate the pressure of growth on the Township. Developers are willing to pay the penalty of tree replacements for woodland removal. Stronger controls to preserve mature growth would benefit the Township with continued preservation of its character. Considering the old national and regional historical and cultural context of this Township, it is particularly important to effectively preserve mature vegetation that has been around for hundreds of years. The benefits on an ecological platform speak for itself. Woodlands provide habitat for birds and animals, shade to moderate temperature and evapo-transpiration to clean the air. Erosion and runoff is greatly reduced in areas sheltered by mature canopy of trees. Tall buildings such as high rise apartments and hotels are scale reduced by the presence of mature trees which may reach 80' to 100' height. All of these factors also support the goals of open space protection presented in this Master Plan.
- Steep slope areas and sinkhole prone areas need protection to prevent problems associated with erosion and sinkhole enlargement. Such areas may also contain woodlands and the run-off to stream corridors may be further protected if these areas are protected.

Refer to Map #3 in the back of this book for Natural Resource areas of the Township.

Notes:

OPTIONAL PLAN ELEMENTS

Beyond the basic requirements of this Master Plan Study, optional elements suggested by Montgomery County have been considered. These optional elements have been chosen by the Open Space Committee for their specific application to the larger goals and objectives of this Open Space and Natural Resources Master Plan update.

Municipal Trail Pathway Development

Upper Merion has been engaged in a Bicycle and Pedestrian Network Plan drafted January 2002 by Campbell Thomas and Associates. Dialogue with bicycle and hiking interest groups has been considered. The plan identifies existing sidewalk and path systems and provides recommendations for missing links in access connections. This plan also seeks potential routes for bicycles to make connections and allow this alternative transportation method to be used more freely and safely in the Township. Existing trails and potential access ways for hikers along the river have been identified and potential off road paths are indicated which significantly correspond to the open space linkage discussion in this study.

The Township has begun to take action on many of the elements in the Campbell Thomas bicycle and pedestrian study and the plan has been presented to the public at a Board of Supervisors meeting. Although the study was conducted separately by the Township, it should be considered as a parallel document to this open space plan to effectively promote and implement detailed connections that benefit access and enjoyment of open space. The short term goals of the Campbell Thomas study are to implement the plan in segments as quickly as possible and long term the plan is to be implemented in its entirety. One segment to connect a trail between Garrison Way and Lantern Lane is in the planning stage with implementation scheduled in 2005.

The Township is also actively pursuing applications with the Delaware Valley Regional Planning Commission for federal funds for safe routes to school and hometown streets. The plan will also seek state funding under the new Growing Greener II program. The plan has included discussions with adjacent municipalities and Montgomery County Planning Commission to connect trails, interconnect communities and make more access connections to the Chester Valley Trail in Upper Merion Township. The Township is also pursuing design and construction of a pedestrian/bicycle bridge over Route 202 as part of the Chester Valley trail at Saulen Boulevard, providing safe crossing of a dangerous 4-lane highway. When completed, this access opportunity will be a great example of breaking down the barriers to linkage identified in this open space study.

Specific goals for trail and pathway development correspond directly to the first two goals and objectives of this open space study:

- 1. Make the Schuylkill River frontage of the Township available for use and a vibrant part of the Township's Open Space System.**

- *Develop access connection points to get to the river front. Consider access for pedestrians, safety and maintenance personnel.*
 - *Focus on development opportunities that provide a view of the river in a public sense and engage persons to interact with the river along its length wherever safe and practical.*
 - *Develop a continuous trail system along the river and interconnect with adjacent communities to allow for a regional river experience.*
- 2. Broaden the Township wide network of connections for access to open space and use of open space for alternative transportation and recreation.**
- *Use designated trails, in particular County trail systems to provide linkage points to other communities and nearby open space by completing the connections.*
 - *Look for creative solutions to transportation challenges along the missing link areas and include planning at early stages of new transportation projects.*
 - *Incorporate linkage requirements in the planning process to require that development applications contribute to linkage completion.*
 - *Provide for diversity of transportation types and achieve design standards for accessibility in accordance with existing and changing guidelines under the Americans with Disabilities Act.*

Additional goals for this optional plan element may include the following:

1. **Carefully use riparian corridors to provide routing of potential trail linkages taking advantage of these open space systems while protecting the sensitive resources within them.**
2. **Consider the network of trails and paths relative to destinations and linkages but also the scenic value and recreational value of experiencing open space via the trail and path system.**

Schuylkill River Greenway

In accordance with the Schuylkill River Greenway Stewardship Study and the Greenway Report, Spring 2003, Upper Merion Township will do its part in building a greenway community.

The mission statement of the Schuylkill River Valley National Heritage Area states:

"Conserve, interpret and develop the historical, cultural, natural and recreational resources related to the industrial and cultural heritage of the Schuylkill River Valley of Southeastern Pennsylvania."

“Our designation as a National Heritage Area – one of only 23 in the U.S. – is more than a tribute to the natural, historical and cultural wealth of the Schuylkill River Valley corridor; it is an important step in preserving the area for future generations”.

With these statements in mind, Upper Merion Township’s Schuylkill River zone is ideally suited to embrace the objectives of the River as a greenway and as a heritage area. Opportunities and observations along the river are also discussed in the Existing Conditions and Resources Chapter. Throughout this report, the river is a primary component that has been considered and integrated into the goals and recommendations for future open space.

Greenway Goals

The goals of creating a greenway should be in accordance with Upper Merion Township’s overall goals for open space. In addition the Montgomery County Open Space Plan goals for a river greenway should be considered as well as the Schuylkill River Greenway Association and other stakeholders. Ultimately the greenway goal is to provide a green thread of open space following the river zone that binds communities together and broadens the potential for river connection and enjoyment.

Access

Existing access to the river is difficult as discussed regarding linkages and barriers to open space. The railroad cuts off access for much of the riverfront. The best access currently available is by way of the Township’s Boat House facility near Bridgeport. Future focus for access may include connections by way of the Crow Creek corridor and potentially from Betzwood Bridge area. Kunda Park near West Conshohocken also provides an important access function for the river greenway, though it is not easily found. The Township owns five parcels of land along the riverfront and several large parcels such as Heuser Park and Bob Case Park are not far from the river. These properties already provide a strong backbone for the hopes of a continuous river greenway.

Potential Greenway Projects

The Schuylkill River corridor has been discussed in detail in the Existing Conditions and Resources Chapter. The descriptions of natural resource conditions, cultural and historical remnants, old tow path and ruins, old river locks, boat launch points etc. provide many opportunities for exciting projects to enhance the greenway and support the goals of open space. See Photo images 1 and 2 at the back of this book for additional perspective on these areas. Development of trails, access points, interpretive signage, boating improvements, fishing opportunity areas and many such projects could be considered to enhance the experience and enjoyment of these areas.

Large areas of the river zone are under utilized and not easily accessed by Upper Merion residents at this time. Many opportunities exist to make this zone a vibrant part of the

open space system for both the Township and the region. It should not be overlooked that the large 1300 acre national lands of Valley Forge National Historic Park is a major destination along this entire Schuylkill River Greenway. The possibilities of open space interconnections along the river greenway to this major destination are significant in priorities that are given in this Master Plan Update to river open space.

RECOMMENDATIONS

With the goals and objectives previously identified in mind, these recommendations are intended to offer the best opportunities for successfully achieving additional open space protection and/or acquisition. Other policies discussed later in this report may also be important to the total success of protecting resources and providing for open space.

Consideration for gaining open space has been evaluated based upon a given site's value with regard to several key aspects of analysis:

- Location of the parcel relative to serving the needs
- Distribution of open space within the Township and relative to deficit areas
- Balance and diversity of open space types, active and passive, resource or cultural protection
- How the parcel meets the needs for open space and goals of this Master Plan
- Contribution to an overall network of open space
- Linkages with the municipality and surrounding communities
- Ability to acquire or protect the parcel
- Vulnerability of the parcel to other use which may cause loss of open space

The Open Space Committee deliberated these factors and rated the sites as indicated below using a letter designation: "A" – Highest Rating / "B" – High Rating / "C" – Good Rating. Consistent with the primary goal established, the sites that support riverfront open space received the "A" rating.

Recommended Properties List:

The following properties should be considered for acquisition or protected land status using funding sources available. Non-acquisition forms of protection should also be sought where funding may not be available. Sites are also numerically identified on Map #6 or detailed riverfront Map #7.

1. Kline Property

Approximately 7 acre private owned land located at the northeast corner of Brower Road and Fletcher Road. The land was previously identified for open space preservation. The site is a high a quality parcel, open with mature trees and old stone buildings and possible connection to McKaig Nature Center at the rear of the parcel. (*"C" Rating*)

2. Wayne Swim and Tennis Club

Existing indoor and outdoor tennis facilities and swimming pool with mature trees and outdoor soccer fields located adjacent to the Chester Valley Trail on the west side of the Township. (*"C" Rating*)

3. Gulph Mills Golf Course

Located along one of the stream corridors of the Township and in a location where deficit of other protected open space is identified. The area should be preserved in open space. (*"C" Rating*)

4. Glasgow Quarry Site

Site of possible development adjacent to Leo M. Ross Park. The site is near North Henderson Road and along the south side of Ross Road. Areas of woodland resources and areas adjacent to Ross Park should be included in open space requirements for any development project on the parcel. (“B” Rating)

5. Riverfront Properties/Railroad Holdings and Silt Basin

Areas along the north side of the Conrail railroad tracks are open but apparently owned by the railroad. The area is important for open space, containing mature trees, river flood plain, historic resources and the potential of a river trail. One area is an old coal sediment basin, now supporting a natural meadow and emergent woodland. This location is central to the riverfront and size and proportions of space are suitable for quality open space to support river related goals of this study. The location also is strategically located at the end of an important missing link of open space along the Crow Creek riparian corridor. Acquisition or covenant for open space upon this area would allow for a substantial riverfront connection. The area is near another linear strip of land identified on the Township map of parks as Schuylkill River Park.

All of the land along the river in this area from the existing Boat House property near Bridgeport to the Crow Creek silt basin is target real estate for permanent river front protection. Additional areas west of the silt basin would protect riverfront flood plain, mature vegetation and could accommodate a future river trail to the Betzwood Bridge area. However, this land along the west end becomes very narrow and confined between the railroad tracks and the river with very steep embankments. It will remain a significant challenge to utilize this area for active trails or paths because of these constraints.

River front land along the area between Bridgeport Borough and West Conshohocken Borough is also considered important for linkages and ability to make a continuous riverfront trail. Concerns for environmental hazards do exist related to the highly industrial nature of this section of river. The interest in the Township to acquire land may be limited. However, easements to allow access and linkage of areas such as Kunda Park and the Swedeland Basin and trail connections are very important.

Refer to Map #7 at the back of this book for riverfront properties identification. Summary of these sites grouped by ownership is as follows:

5(A), 5(D), 5(E), 5(J) Railroad properties along river front without R.R. tracks

These parcels are listed from west to east. Parcel “D” is particularly noteworthy being the former silt basin with 70 acres of high quality open space. Access is difficult for these parcels, however, their value with respect to the goals of this report are very high. (“A” Rating)

5(B) Riverfront Property (ambiguous ownership appears to be railroad owned)

This parcel is a narrow strip of very steep land between the river and the tracks along east of Betzwood Bridge. Tax maps are unclear as to the status of this

parcel. Use of the land would be difficult, however it does contain important vegetation and it would preserve some visual buffer directly along the river. (“A” Rating)

5(C) Riverfront Property owned by R.P. Hughes Land Development, Inc.

This property is a small narrow strip between the river and the railroad near the vicinity of Mashelmac Creek and an old remnant of former lock (gate no. 53) in the river. (“A” Rating)

5(F) Riverfront Property southwest of Trinsey tract – G.E.I. Corporation

This land is a narrow sliver of irregular land, not actually fronting on river but located near the Trinsey Property. (“A” Rating)

5(G), 5(H) Riverfront Property near Boat House - (Mermelstein - a.k.a.

“Trinsey”) This property is the land area surrounding the Boat House Facility and located beneath the bridge area of the Route 202 crossing of the river. (“A” Rating)

5(I), 5(K), 5(M) Riverfront Properties – Bearoff Cinder Company (East of Bridgeport) Several parcels each side of the Pennsylvania Turnpike just south of Bridgeport. Parcel (I) and (K) are interrupted by parcel (J) owned by the railroad. These parcels may offer potential for river access or connection to Bridgeport and trail continuation along the river. The sites may not be suitable for outright acquisition, however negotiation for rights of trail connection is important. (“A” Rating)

5(N). Riverfront Property - Browning Ferris, Inc. This parcel is intensively developed and a history of industrial use may make it undesirable for open space. However, the location just north of other Township land along the river is a key consideration for gaining rights to continue trail access and allow for a west side (south side) trail. (“A” Rating)

6. Gold’s Gym

Located along Valley Forge Road, this parcel is currently a private recreation gym with an old swimming pool in disrepair located on the property. It also contains wooded areas and steep slopes along the Crow Creek. This private parcel is an important missing link in the open space network which could provide the best opportunity for north-south linkage in the Township. Open space to complete this linkage is highly important and the steep slopes and woodlands in the riparian corridor could benefit from permanent open space protection of this parcel or portions which may accomplish the stated goals of this study. (“B” Rating)

7. Landfill site on E. Valley Forge Rd.

This site is located north of Valley Forge Road near the river. The current use is utility power lines and landfill. Future access connection to the Schuylkill River may be a possibility if this land becomes protected open space. (“C” Rating)

8. South Tyler Road

The south end of Tyler Road dead ends into this parcel which is also abutting the PECO power line easement to the south of the parcel. Nearby is the Chester Valley Trail. This open space could preserve an area of trees and provide open space for the nearby residential community which has no other direct access to open space. The east side of the parcel is scheduled for convenience store development along North Henderson Road. (“C” Rating)

9. S. Gulph Rd / I-76 Woods

An area of open space woodland provides existing buffer to visually seclude portions of the Schuylkill Expressway from other areas of the Township. It may also be useful in completing internal pedestrian or bicycle routes. The area is opposite the Septa rail station at Gulph Mills. The area is scheduled for development and the open space features may be lost. (“C” Rating)

10. Supplee Lane & Lincoln Drive

The West End Civic Association provides oversight for a small neighborhood playground that could potentially be enlarged by the acquisition of a small adjacent parcel with house. If the house were removed, the parcel could provide added space where open space is in short supply. (“C” Rating)

11. Glaxo Smith Kline Property

This site was previously identified in the 1994 Open Space Plan. It was previously identified that approximately 15 acres of forest, steep slope and stream corridor private open space on this site may be considered valuable for environmental resource conservation and buffering of other properties. This site should remain listed for its potential to contribute to the open space system and opportunities for preservation of some open land should be considered. (“B” Rating)

12. S.E. Corner Beidler & Caley Roads

A sizeable property at this intersection is strategically located between other open space areas at Caley Road Elementary School and Bob White Park. The location supports linkage opportunities and various open space functions. (“C” Rating)

Recommendations for use of Ordinance generated open space:

Upper Merion Township’s current ordinance requires 20% dedication of development areas for recreation space. Similar land for open space is achieved under the current ordinance by cluster provisions for residential developments. The land available for open space and recreation uses generated by these ordinance requirements should be carefully and consistently applied. These should be used to obtain parks and passive open space areas. When developments are located in areas where important resource lands are present or linkage opportunities exist, these developments should be required to protect the resource or linkage element with the 20% required land or open space from cluster design options.

Specific locations for providing this resource or linkage protection should include the following:

Valley Forge Golf Course

This could provide an important linkage between the Chester Valley Trail and Valley Forge National Historic Park and the south side Schuylkill River Trail.

Gold’s Gym

This site offers an important linkage completion for the Crow Creek Trail in addition to riparian corridor and tree protection opportunities.

Glasgow Tract

Located advantageously for expansion of Ross Park and an opportunity for linkage of parts of the Township with the Chester Valley Trail. Tree preservation is an additional resource benefit to be considered.

Philadelphia Gear

Provides opportunity for visual relief in the midst of a commercially developed area.

King of Prussia Office Park Intersection/Redevelopment

Preservation of Maschelmack Creek

Trinsey Tracts (Boat House area)

This site offers opportunity for expanding the Boat House park facility, providing for river trail connections, river views and riparian protection.

Drummond Tract

Additional opportunities exist for active recreation and riparian protection.

Redevelopment of Lockheed Martin tract

This site could maintain public access to views north across the river.

CE Refractories Site (Mancill Mill Road)

The site may be a linkage opportunity to trails accessing open space near the river and the south side Schuylkill River Trail.

PECO Electric Corridors throughout the Township

Many opportunities for possible linkage connections may be found in these areas.

Sites recommended for Historical/Cultural Protection:

The following sites have been identified for their historical and cultural value to the community while their status may be threatened. These sites may be subject to

development or improvements and open space would suffer from the loss of these features. The sites are recommended for consideration under a Historical and Cultural Resources Protection Ordinance. Refer to the yellow dots on Map #6 at the back of this book for location of these sites keyed to the letter designation as follows:

A. *Morrison House*

Located along King of Prussia Road, an old stone house and garage are significant to the area culture and history. The historical context could be threatened if not preserved by some form of protection.

B. *King of Prussia Inn*

This resource has been moved from its original location in the Township. Additional development pressure on this facility may threaten the cultural value connected with it. All future development associated with it should be accomplished within the guidelines of protecting these resources.

C. *Muhlenberg Quarters*

An existing historical structure located along Moore Road adjacent to wooded nature areas, stands vacant and in poor condition. An adaptive re-use plan for this facility is needed to bring this facility into alignment with the goals and objectives of this Open Space Plan. The Open Space Committee while preparing this plan discussed various alternatives. It is noted that repair and intensive use of an upgraded facility here may carry with it the need for parking and other improvements which may be in conflict with the larger goals of open space and nature preservation at this important open space area of the Township. Yet a plan is required to prevent further degradation of the facility.

A recommendation was made for Upper Merion Township to appoint a study committee of interested groups to propose a plan with the goals and objectives of open space in mind. The cultural resource is valuable and significant study of this resource has been engaged in the past. Other findings and recommendations of previous studies are available for a committee to review.

Resource Protection Recommendations:

Stream Corridors

The Schuylkill River is an important open space element in this Township. The tributary streams feeding into the river are also important elements of the open space system. The stream valleys include areas of flood plain, steep slopes and vegetation that collectively contribute significant value to open space and to the larger network of open space in the Township.

Certain riparian corridor protections can be found in the ordinances of Upper Merion Township, however they are largely associated with ordinance sections which target other features. A specific Riparian Corridor Ordinance was

recommended in the previous Open Space 1994 Open Space and Resource Protection Plan Update, however it was not adopted by the Township.

It is recommended that riparian corridors be recognized as important elements of open space and additional protected status should be given to the entire zone of the stream area with its banks, vegetation, flood plains and soil conditions. There is still opportunity for these features to also provide linkage of open space into a meaningful system. Map # 4 at the back of this book has been previously discussed in this regard.

Woodlands

Removal of trees to accommodate development is a practice developers in Upper Merion must consider carefully. Upper Merion Township ordinances do discourage unnecessary removal of trees. Still, some developers willing to pay the penalty of tree replacement costs may be able to remove even mature vegetation and replace trees removed with tree for tree replacements. Ordinance requirements are strictly enforced in this respect.

The township has evaluated the effectiveness of ordinance enforcement in the past when some additional controls were required in regards to tree removals but they were sometimes burdensome to enforce. The value of existing vegetation could still be supported with strong ordinance restrictions to ensure the preservation of mature or rare trees. Consideration could be given to designation of very large trees over 36” dbh as “Heritage Trees”. Such trees are highly valuable to the community. They substantiate the heritage and historical perspective of the architecture and known history of the region. The massive canopy and structural mass of the large branching is also an element of scenic beauty, a resource for shade and temperature moderation and habitat for wildlife food and shelter.

Woodland protection provisions in the ordinances are enforced. They could be further enhanced to include limitations on woodland removals by percentage or tree replacements comparable to caliper inches when mature trees are removed. An ordinance upgrade to protect larger trees or large wooded areas by replacing lost trees at higher rates than the existing ordinance might be considered. Replacement of such trees with larger initial size replacement trees might also be considered.

Scenic Areas

Added protection of open space areas may be accomplished by designation of scenic areas to be protected. Scenic value is somewhat subjective and difficult to establish guidelines that are enforceable by ordinance. However, the important physical features of riverfront, stream corridors, woodlands and interesting topography are identifiable and worthy of consideration for their scenic value.

The Township should consider designation of such features and protections to preserve these values for the future.

For example, the Schuylkill River frontage of the Township would be far less valuable and impressive if the railroad stripped the area between existing tracks and river, removing its mature wooded character and converting to a raw industrial yard along the river. This would not likely be done and flood plain protections in the ordinances would be violated if it were. However, the mental image of a barren river edge causes concern and realization that stronger woodland and scenic protection may be beneficial to have in place.

It is noteworthy that Montgomery County has designated several roads in the Township as scenic. Two classifications of scenic roads exist in the Township. They include “aesthetically unique scenic roads”, located in the Valley Forge National Historic Park, and also a “daily use scenic road”, Montgomery Avenue in the southeast of the Township. Montgomery Avenue connects to other roads of the same classification in Lower Merion Township. This classification is indicative of the wooded canopy and interesting topography in this area of the Township. Scenic qualities such as these will remain, only so long as the resources that create scenery are protected.

Scenic criteria for establishment of scenic programs may be considered from sources such as Scenic America (a national interest group), PADOT, and Chester County Scenic Roads Handbook, as suggested by Montgomery County.

Historic and Cultural Resources

The rich history and culture of the area is not well protected from a development standpoint. Much of the region contains remnants and artifacts and important buildings, walls, trees and site features which record the conditions when our nation was established during the independence era. The railroad has also meant much to the development of this Township. Yet there are no established guidelines for protection of important artifacts and sites. Voluntary and political influences may be brought to bear on developers to preserve important features. However, the demands of future growth may endanger some of these features if they are not protected. The Township should consider adopting an ordinance for the protection and preservation of significant historical and cultural resources in the Township.

Other Recommendations:

Upper Merion Township Open Space Referendum

To aid in the implementation possibilities of this Open Space Plan, the Open Space Committee held a discussion on the advantages of a possible Township referendum for

Open Space to be placed on a future ballot. Just as the residents of Montgomery County supported the concept on a county wide basis, there is opportunity for additional funding of open space through the local real estate tax base. This is a matter for the voters to decide; however the recommendation is made to place this matter on the ballot for November 2005 local election.

Trail Connections

Generally, the goal of expanding the network of interconnectivity with trails is strongly recommended. The potential for linkages has been discussed throughout this report. Opportunities to make these connections should be accomplished by a variety of methods including acquisition of land when necessary but also using the avenue of open space land requirement and leverage upon developers in the planning process.

It is one of the primary goals of this study to bring about a West Side Schuylkill River Trail (also referred to as South Side Schuylkill River Trail). The completion of the Crow Creek Trail is also seen as a key element of the open space system in the Township. A trail connection into West Conshohocken has been explored and further study of this connection is warranted.

SUPPLEMENTAL CONSIDERATIONS

This discussion is included to remind planners and all who follow after this planning document that the most successful open space areas require more than land that is simply set aside to keep open and provide green space. Open space can become a burden to the municipality if it is not cared for and if abuse is not guarded against.

Maintenance

Land that is not maintained can become an eyesore to the community, a public health hazard and a general nuisance to the public. Naturalism and maintained conditions are somewhat in opposition with each other and it is recognized that much of open space planning is about preserving areas of nature, woodlands and other natural features. Extensive maintenance within open space may reduce the value of naturalism. However, open space must be kept on a schedule of routine maintenance to be on guard against many issues which can detract from open space.

Maintenance is one element that may be used to respond to the fifth goal in this open space plan: **Consider the visual quality of open space and developed areas to be of high value to the community.** The objectives associated with this goal also apply to the supplemental considerations presented here.

- *Mandate preservation of high value visual resources, vegetation and natural areas within developments.*
- *Encourage development areas to provide attractive landscaping, lighting and signage elements. Enforce existing ordinance requirements in this regard and consider creative alternatives through the planning process.*
- *Capitalize on the visual quality of the river and make clean-up improvements to provide a desirable experience of passing along the riverfront.*
- *Maintain public open space in well-kept appearance. Provide for landscape care, trash collection and routine maintenance of developed recreation areas while maintaining naturalism within the broader context.*

Vegetation

While natural plantings within open space are desirable, invasive plants can become a problem in any open space. In the context of a municipality like Upper Merion, many plants exist in the man made landscape which are not native. The seed crop associated with these can introduce invasive species into natural woodland. Weeds can always be a problem in natural areas also, particularly at the fringes of developed areas, along trails or where soil disturbance has occurred. The Township should perform periodic inspections and address invasive species and weeds. Montgomery County's Open Space and Natural Features and Cultural Resources Plan notes that invasive species should be controlled in McKaig Nature Education Center.

Extensive trimming or pruning of trees should not be necessary. However, certain conditions must be reviewed periodically and addressed as needed. Removal of branches from wires or utilities or sight distance areas and head clearance zones may be needed from time to time.

Fall clean-ups including leaf removal may be needed in some areas along developed open space and particularly along fence lines.

Grass

Where lawns are planted within open space areas, in parks, along trails and adjacent to development features, the grass must be kept maintained to keep an orderly appearance in the open space. The Township must consider the annual maintenance program required in this respect to keep open space looking attractive. Maintenance of lawns includes mowing, occasional fertilizing, lime and re-seeding.

Trash

It is important to keep developed areas clean and free from trash debris. The Township should provide trash receptacles at appropriate locations within open space. Also, a program for collection of trash within parks, open space and along trails is needed. Community pride in keeping these open spaces clean and neat is an important aspect of well-maintained open space. The Township must set the first example in keeping the appearance well kept in this regard.

Facilities

Keeping any facilities that are part of open space in good condition is equally important. Whether it is playgrounds in a park or picnic tables and interpretive signs along a trail, broken and unusable items send a poor message to the community. Annual operating budgets should allow for sufficient maintenance to make routine inspections and general repairs. Larger repairs may need to be slated for capital improvements work.

Safety and Security

Additional concerns must be considered in the area of open space regarding safety and security. Open space areas can become a lightning rod of community criticism if there is perception that the area is not safe. These concerns may range from the possibility of crime locations within the open space area to dangerous naturally occurring or built conditions that may injure users of the open space. Trails, for example, are not always well received by adjacent residential landowners. There may be concerns about passers by seeing into their yards, reducing their sense of security. Other examples may include the safety of steep slopes or embankments or the surfacing conditions surrounding playgrounds in a park or adequate lighting for trails to be safe at night.

Addressing the concerns that may come up in regard to the safety and security factors may not be easily accomplished. However, it is beneficial to have an awareness of the potential concerns and an action plan to prioritize the safety issues and address them.

The Township has been concerned about similar factors associated with the Sumner Dam site within the existing open space system. Studies have been performed to evaluate options for removing an old dam or modifying the dam to increase the safety in the area and to return the area to a natural state.

The Township has also been careful to consider safety in the development of Heuser Park, the largest Township park, now under construction. Lighting was provided for path walkway areas, for example to maintain a safe environment at dusk or evening for joggers or other users of the park.

Nuisance Factors

A nuisance may be anything that annoys the users of open space, managers of open space or the adjacent land owners and Township residents surrounding the open space. It would be impossible to identify all the forms of potential nuisance. However the following list of items should be considered when decisions about open space are made:

Cleanliness/Visual Quality

The issues associated with maintenance above are important to present open space in a positive manner to the community. Clean, well-groomed conditions or natural areas that appear natural without objectionable weeds and invasive plants are generally not a nuisance. Tall grass areas and full trash cans, on the other hand, may attract rodents and the visual quality of open space is spoiled by these conditions.

Noise and Light trespass

For some existing residents living adjacent to open space areas, the effect of noise and lighting associated with active recreation or passive lighting on trails may not be embraced favorably. The Township should consider appropriate buffering and carefully designed lighting to mitigate adverse effects for residents when open space is developed in these ways. When lighting is used, the standards of the Township Zoning and SLDO Ordinances should be followed. Unique conditions may require special treatments with house side shields or other techniques to protect light trespass. Athletic field lighting is one such area where light pole locations, shields and aiming angles must be given careful consideration. Landscape materials, mounding or solid fencing elements may help buffer noise from activity areas.

Physical Trespass

When open space is utilized for passive or active recreation, adjacent residents sometimes object to the physical and visual relationship of properties. When access is not provided or boundaries are not well defined, public shortcuts develop across private land. Open space arrangements and connections should strive to avoid these possibilities. The use of fencing and landscaping is not always possible or appropriate to define open space but these may be considered along with signs or other pedestrian control techniques.

Vandalism

Arrangements of open space and developed areas within open space is often important to provide suitable police protection and a general sense of public visibility to avoid problems such as vandalism of property. Vandalism is an unfortunate behavioral problem of society that may occur in any community. Maintaining open space in good condition and providing a community sense of pride in the open space areas is important to manage and deter the problems of vandalism.

REGIONAL CONTEXT

Adjacent Municipality Considerations

The value of open space extends beyond the boundaries of a local area where the open space may exist. Upper Merion Township is located regionally at the intersection of three counties and surrounded by nine municipalities on both sides of the Schuylkill River. The fabric of these communities should include interactive possibilities with the open space and resources of Upper Merion. The presence of County trails through these communities provides interconnection. The heritage of the region overlaps municipal boundaries. The river running through the communities provides a binding ribbon of green space with great potential to bring communities together and a scenic and recreation resource shared by many of them.

Upper Merion Township has supported and cooperated with other planning efforts of the Schuylkill River communities by participating in dialogue, workshops, leading discussions and offering participation through the open space committee meetings. As a partner with other municipalities Upper Merion scheduled one of its meetings to invite neighboring municipalities and understand their particular interests in working together to accomplish objectives. Members of the open space committee also participated in meetings and forums offered by Montgomery County to bring communities together. The interconnection with Lower Merion Township with pedestrian and bicycle connection studies by Campbell Thomas Associates also engaged the two municipalities and has included the communities of West Conshohocken Borough and Bridgeport in this discussion. Upper Merion promoted a widespread network of email communications shared among some of the other municipal leaders to inform and encourage dialogue and joint participation. The open space committee also conducted field investigations, tours and hikes to explore the possibilities of access, trails and joint municipality projects that served to bring these communities together in their joint efforts to emphasize the river connections.

Montgomery County Communities

- *Lower Providence Township* – The common denominator is the Schuylkill River between these two Townships. Valley Forge National Historic Park is opposite Lower Providence Township on the Upper Merion side. The Schuylkill River Trail runs through the Lower Providence side of the river and makes connection to the Perkiomen Trail. Improved trail access to Upper Merion will be available at the new Betzwood Bridge nearby in West Norriton when a proposed pedestrian and bicycle access lane is completed.
- *West Norriton Township* – Again the river is a shared open space element between the municipalities. The high rise Valley Forge Towers overlook West Norriton Township and new riverfront condominium units currently under construction. Portions of the Upper Merion side are undeveloped railroad owned

open space from Betzwood Bridge to Barbados Island. The Schuylkill River Trail follows the West Norriton side. A 12' wide pedestrian/bicycle access will be made via the new Betzwood Bridge project. Opportunities for access to Schuylkill River Trail may engage both municipalities to articulate a vision for joint project possibilities. Barbados Island itself is also a feature of West Norriton Township and the presence of this structure is a significant factor for much of the river experience in Upper Merion.

- *Norristown Borough* – Barbados Island in the Schuylkill River and various bridges and utilities and railroads run between these two municipalities. Norristown hosts the intersection of regional trails, the Chester Valley Trail and the Schuylkill River Trail. The County also indicates that the future Stony Creek Trail will run north from Norristown near this intersection with the other two trails. In this sense, the bridges and trail connections are important inter-relationships for open space.
- *Bridgeport Borough* – Bridgeport actually serves as the crossing point for the Chester Valley Trail. Other open space relationships include Bob Holland Park in Upper Merion located at the base of utility right of ways and steep slope open space in Bridgeport. Future opportunities for trail connection may exist although the challenge of steep slopes is significant.
- *Plymouth Township* – The Schuylkill River Trail also follows the Plymouth side of the river. The trail makes connection with the Cross County Trail at Conshohocken, just south of Plymouth. Natural areas of the Swedeland Basin Park are opposite on the Upper Merion side as well as railroad lines running between Bridgeport and West Conshohocken. Matsunk Creek in Upper Merion also intersects the river along this sector. An existing railroad spur crosses the river between the two municipalities. There may be opportunity for use of the existing structure in some way to accommodate a trail crossing. Possibility of a joint project exists in this respect.
- *West Conshohocken Borough* – An open space finger following the Gulph Mills Creek leads to West Conshohocken from the southern sector of Upper Merion Township. The presence of woodlands in the area is a valuable open space resource of the Township extending to the Borough in some areas. Exploration of access possibilities in the area of Balligomingo Road and an old PECO easement have been scheduled as a joint investigation of the open space committees in both municipalities. Upper Merion owns Kunda Park at the border of these municipalities and access for Upper Merion is very limited. The trail connection may afford benefit to both municipalities. Also, opportunities for continuous west side river trail connections binding West Conshohocken, Lower Merion and Upper Merion into a continuous network should be investigated.
- *Lower Merion Township* – Montgomery Avenue is designated by Montgomery County as a daily scenic road leading into Lower Merion Township. The

woodland and steep slope resources in this part of Upper Merion are common to both municipalities. Actual pedestrian connection is limited but the Upper Merion Bicycle and Pedestrian Network Draft map illustrates potential sidewalk or path connections along Montgomery Avenue and Old Gulph Road. Although the municipalities do not touch along the riverfront, Lower Merion is interested in development of a west side trail also and the two Township's may need to work with west Conshohocken to accomplish a continuous trail. Certain projects in the river along Lower Merion including dam removals and installation of fish ladders will have beneficial effect to the river experience for fishing and boating along the entire lower section of the Schuylkill River Water Trail.

Chester County Communities

- *Tredyffrin Township* – Important adjacent open space relationships include primarily the scenic relationships, heritage areas and trail connections. The Chester Valley Trail makes connection at the west side of Upper Merion Township's developed area at King of Prussia. The Horse Shoe Trail makes connection at the west end of Valley Forge National Park. Trails and roads within the National Park share interconnection with Upper Merion as well. Upper Merion Township has identified possible bicycle trail connections to Tredyffrin Township as well. Difficult connections for pedestrians have been identified at the west end of Croton Road. A neighborhood street connection with pedestrian friendly sidewalks or paths has been suggested by Upper Merion along the south end of Fletcher Road to Tredyffrin Township.

Delaware County Communities

- *Radnor Township* – Woodland resources and a tributary of Gulph Mills Creek riparian areas begin on the Radnor Township areas and follow the creek area in Upper Merion. Arden Road is identified on the Upper Merion Bicycle and Pedestrian Network Draft Analysis Plan as a potential on street bike route leading to Radnor Township. Potential sidewalk or path for pedestrians is also a possible link to Radnor Township along West Matsonford Road.

Montgomery County River Workshops

Upper Merion Township encourages the continuation of workshop forums sponsored by Montgomery County to bring communities together in discussion and seek joint municipality relationships for their common open space goals. The County presented a first workshop in January, 2005 which challenged participants to think regionally in their planning efforts for the benefit of a Schuylkill River Greenway that binds communities, and builds a strong open space system in the region. Upper Merion Township has interest in each of the aspects presented in the workshop. The issues were well defined in the areas of river access, river nature, river trails, river parks and recreation, river business, river views and river heritage. Future workshops should continue to share the common issues and solutions experienced by other municipalities in shaping their plans.

Montgomery County Open Space Plan

Montgomery County has released a Draft of its Open Space, Natural Features and Cultural Resources Plan, dated September, 2004. Important considerations of the County's efforts have been factored into Upper Merion Township's Plan:

Goals

The goals set forth by Montgomery County are supportive of the goals Upper Merion has established for this Plan. The County has set goals for creating greenways along rivers, protecting and managing vulnerable resources, providing access to open space with trails and protecting scenic resources. These have been established in a regional context. Upper Merion Township's goals echo the County's on a local scale. County Goals are particularly pertinent to the Schuylkill riverfront.

Natural Features

The County has identified similar natural features to be protected; riparian areas, steep slopes and woodlands. The County inventory map of significant natural features highlights several categories in Upper Merion. A band of terrestrial features extends through the south of the Township on a line northeasterly through the county. These features are the woodland and steep slope areas which are found in this region. Also of importance is the convergence of Hydrologic and Terrestrial features along the river in the Township. The McKaig Nature Center is identified as a natural areas inventory site for the County study.

Open Space

Upper Merion's place in a regional context of open space is reinforced with discussion and mapping. The Schuylkill Greenway is a primary greenway running east-west for the length of the County. This regional open space system extends into Philadelphia east and Berks County west, also following Chester County for much of the route. A nearby intersecting connection with another primary greenway, the Perkiomen Greenway running northwest also places Upper Merion at an important open space location. While there are no County Parks in Upper Merion Township, the National Park and the County trails, the river and some large open space parcels make up an important regional context of open space for the Township. Upper Merion Township encourages Montgomery County to assist in all efforts to acquire additional open space along the Schuylkill River frontage of this Township. Map #7 provides individual parcel status along the river. Since the railroad is a significant landholder throughout this area, the support of Montgomery County for acquisitions in this area may be needed. The benefit of expanding the County system of open space to include river front in Upper Merion could support the goals of the County Open Space Plan, specifically the following County goals:

- Goal 11 – Preserve Large Interconnected Areas of Significant Open Space.

- Goal 12 - Protect and Manage Wetlands, Streams, Steep Slopes, Woodlands and Natural Habitats.
- Goal 13 – Create a Greenway system along Rivers, Creeks, and other sensitive Natural and Historic Features.
- Goal 14 – Develop a County-wide Network of Interconnected Trails.
- Goal 15 – Provide Park Facilities to Meet the Public’s Recreation Needs.
- Goal 17 – Protect Scenic Roads, Vistas and Viewsheds.
- Goal 18 – Protect Historic Resources and Cultural Landscapes.

Trails

The Chester Valley Trail extension through Upper Merion is an important regional connection. The Chester Valley Trail will extend from the Exton and Downingtown area of Chester County to this Township in Montgomery County. The extension through Upper Merion provides the important regional connection to Montgomery County trails so that the larger regional context can be realized. The King of Prussia Mall and corporate centers in the area may become significant destinations along the trail.

Upper Merion may have opportunity through an increased open space network, to provide intersecting trails. Segments of some trails are in place such as along the Crow Creek. A continuous Crow Creek Trail may become a reality to link the heart of the Township with the Chester Valley Trail and the Schuylkill River.

Historic Preservation and Scenic Values

The County Plan identifies areas in Upper Merion worthy of preservation for their historic and scenic values. Properties on the National Register and National Historic Landmarks exist in the Township and have been previously identified in this study. It is significant to note Valley Forge National Historic Park is the premier heritage tourism site in Montgomery County. A planned expansion to this facility may further attract many persons to the Township. The County Plan also mentions Hanging Rock in Upper Merion for scenic value and the roads in the Township which may be given a classification for scenic value.

Montgomery County Green Fields/Green Towns Program

Upper Merion Township applauds the efforts of Montgomery County and the Green Fields/Green Towns Task Force in producing this program. Upper Merion has prepared this plan to be consistent with the goals of the program to build on past success in preserving valuable open space in the County and to do the Township’s part in identifying potentially valuable open space. The Township will benefit from this program by the 80/20 matching funds provided by the County for this municipality. Upper Merion’s use of the funds allotted will be wisely directed to the open space areas most needed to satisfy the goals of this study and ultimately, the goals of this County program.

Joint municipality projects may be identified to afford even greater leverage of funding and cooperation between communities to achieve successful interconnections and open space systems. In particular, Upper Merion encourages the continued venue of workshops sponsored by the County to bring communities together in discussion of mutual goals and interests in open space areas. Upper Merion Township supports the potential of joint projects with Bridgeport Borough and West Conshohocken Borough to provide for a river front trail along the south side of the Schuylkill River. The Township also recognizes potential for joint projects with Lower Merion Township to the south and communities on the opposite side of the river to the north and east. There may be interest in the potential of a trail bridge crossing to Plymouth Township via the railroad bridge located south of Bridgeport.

Schuylkill River Greenway

The Schuylkill River has been given first priority in the goals of this Master Plan update: ***Make the Schuylkill River frontage of the Township available for use and a vibrant part of the Township's Open Space System.*** The Schuylkill River Greenway is designated a primary greenway in Montgomery County and it runs the greatest distance with regional connection opportunities well beyond the boundaries of the County.

Further discussion is provided in the Optional Plan Elements of this study where the Schuylkill River Greenway is a specific feature of consideration. The significant effort of planners who have led the way in planning for this greenway is strongly endorsed by Upper Merion Township. The system of 42 miles of greenway planned for the Schuylkill River in Montgomery County will provide diversity and green open space for enjoyment and protection of the river and resources along its length. The significance in the regional context is profound and worthy of Upper Merion's support.

IMPLEMENTATION POLICIES & STRATEGIES

Open Space and Resource Protection

Upper Merion Township's system of open space lands should include acquisition of more land for open space whenever it is feasible to obtain funding and the land satisfies the goals and objectives of this plan. It is equally important for the Township to have the ability to adequately maintain, develop and police the land that is acquired. When acquisition does not seem feasible or practical, alternative protections may be employed to still provide elements of open space preservation for the enjoyment of all.

Acquisition factors

Priority status for acquiring land parcels should be considered when certain factors would benefit the community and provide for a more cohesive open space system:

- Viable open space land adjacent to existing parks.
- Land that builds upon an open space linkage system already partially in place along a riparian corridor or other linkage system.
- Land that offers both active and passive open space opportunities.
- Land with resources too valuable to allow development encroachment and where non-acquisition protections are not considered feasible.
- Realistically attainable land from a pricing standpoint.
- Land that may aid in providing access at a particularly critical connection point.

Non-acquisition Protections

Pockets of open space, privately owned recreation space and land holdings in difficult areas to develop are the likely opportunities to acquire and expand the open space system. Municipal actions and planning efforts to bring other forms of protection to bear upon the preservation of open space must also be utilized. The Township's current draft of the Township Comprehensive Plan already considers certain land use objectives to plan for development intensity to accommodate projected growth demands while allowing flexible conditions and opportunities for resource protection and open space. Similar perspectives on preserving open space through planning efforts are encouraged through the goals and objectives of this open space update. The following specific forms of protection are encouraged:

1. Zoning Related Protections

- New land preservation forms of Zoning Districts or Zoning Overlays may offer greater protections of woodlands, riparian corridors or steep slopes.

- Cluster zoning is already an option in local ordinances. This tool may be used for developers to provide preservation of areas suitable for open space set asides and linkage opportunities.
- Upper Merion already employs density variations in zoning effectively. The use of mid-rise and high rise zoning areas where higher density can be effectively accommodated is an option for this township which may allow for less intensity in other areas needing resource protection.
- Rural forms of zoning are not practical in the township due to the extent of development already present. Agriculture, for example is no longer a practical zoning category for land use. Overlay zoning may be considered as one form of protecting the remaining rural qualities of woodlands and steep slopes.
- Enforcement of current resource protection ordinances are being upheld by the Township. Upgrades to strengthen Woodland and Riparian protections may be considered for greater protection of these resources.
- Transfer of Development Rights (TDR's) is being considered in the current draft of the Comprehensive Plan. If such zoning concepts successfully target critical open space opportunity areas as “sending areas” within the TDR set-up, preservation of important open space areas may result. Care must be taken to maintain open space protections within designated “receiving areas” if TDR's are employed.

2. *Mandatory Open Space and Concentrated Growth Districts*

- Upper Merion ordinances already impose a 20% requirement for recreation space, as previously discussed. Recommendations are included in this open space update to effectively utilize this land with specific targeting locations to benefit the open space plan. Whitegate Park is an effective demonstration of the use of this requirement whereby the Township enjoys 5 acres of open land for a neighborhood park.
- Fee-in lieu contributions may be suitably negotiated with the Township to effectively direct acquisition or development of open space within areas better suited for open space preservation and which better support the goals and objectives of this plan.
- Concentrated growth planning within areas already suitably supported with infrastructure is a wise method of preventing random development that may otherwise consume open space. Upper Merion Township is largely developed already. Infrastructure systems of roads, water and sewer and utility services are widespread throughout the Township. As such, the concentrated growth concept seems less applicable to this municipality.

3. *Easements and Covenants*

- Open space access by easements may be required of developers as a form of attaining linkage and access goals of this plan by non-acquisition. The governing body should seek to obtain rights of public access along

riparian corridors and existing easement areas to provide for networks of access and linkage to other open space.

- Conservation easements or covenants may be imposed upon special resource areas to protect the vulnerable resources within any land development. The imposition of this form of protection may be mandated by the governing body or voluntarily required by the seller of a parcel of land to a prospective developer. Land owners of important resource areas may be encouraged by the Township to consider voluntary protections of this type.
- Deed restrictions, as a form of covenant upon the land, may prevent the degradation of valuable resources and open space. Rear yard areas of residential lots adjacent to a riparian corridor may be a suitable example to require the vegetated natural areas to remain by deed restricting a prescribed dimension from the rear lot line.

4. Donations

- Examples of land donated to the Township are occasionally encountered. Some citizens may wish to place the valuable resources of their land into the public domain for others to use and enjoy. Such opportunities are understandably few, however they should not be overlooked.
- Other land transfers to land trust organizations may be encouraged when the land owner desires a form of open space covenant for the future to preserve and protect the land from development. Examples in this Township include two parcels managed by the Natural Lands Trust.
- If the concept of TDR's should be adopted by the Township, donations or land transfers may be more widely used since the land owner in a "sending area" may have the right to sell certain development rights for the benefit of their estate and transfer the protected land to a form of permanent protection in the public domain.

5. Partnerships

- Public-private partnerships to preserve or enhance open space should be identified and utilized wherever an innovative relationship can be formed. Both private free enterprise and non-profit organizations may forge relationships of mutual benefit with the Township resulting in efforts to preserve, protect, enhance or acquire open space.
- Non-profit organizations may be identified to assist in the efforts of acquiring land or brokering alternative landowner conveyance of land to protected status.
- Business enterprises can also support open space and sometimes make the open space more functional. Upper Merion has utilized such partnerships successfully in certain components of the existing open space system. Independent operators have leased area from the Township and contributed to the success of Norview Farm Park. Heuser Park benefited from the filling of the old coal silt basin with material from road construction projects. The work of grading and filling was provided at no

cost to the Township resulting in park land which could be utilized otherwise.

- Opportunities for similar partnerships may abound in the area of riverfront development. As the Township has opportunity to protect the river resources and maintain their beauty, private enterprises may also benefit from business opportunities. Business supporting the passive use of river trails or the recreation use of the river may stimulate cooperation between public and private sectors.
- Upper Merion should explore all possibilities for partnerships with the railroad organizations that currently control the majority of riverfront between the rails and the river.

6. *Permanent protection for Temporarily protected land*

Where the land is temporarily protected by private ownership such as recreation uses, private swim clubs, tennis clubs and golf courses, the Township should be on guard against the possible loss of resource to development. Several properties are identified on Map #6 and discussed in the Existing Conditions and Resources Chapter.

- Private owners may be contacted by the Township to obtain a “right of first refusal” allowing the Township to counter any private buy-out offer from developers.
- The use of TDR’s in respect to these properties may be effective in providing “sending rights” from the development value of these properties. This may be an opportunity for a limited form of TDR to strictly limit the use of TDR’s in the Township to this type sending area with a receiving area designated in appropriate higher density zones.
- The Township may be able to find beneficial partnership opportunities with private recreation operators to help sustain the businesses they run.

Implementing the Plan

The open space committee has reviewed the existing conditions and influencing factors of open space opportunities. The Goals and Objectives have been identified. Conclusion of the matter is dependent upon the future steps taken to implement the plan.

Methods

Upper Merion Township will implement the plan for open space by seeking to acquire land for open space, protection of resources that remain vulnerable in the Township, enforcement of ordinances and adoption of additional ordinance protections. The Township will seek to cooperate with other municipalities to forge partnerships and accomplish mutual goals for their respective communities. The implementation of a continuous west side river trail relies upon these joint efforts. Partnerships with business

and industry and non-profit organizations must also be among the methods of implementation used.

Techniques, Timeline and Phasing

The techniques used for protection of open space will not be exclusive toward the acquisition options. As funding sources or development open space requirements enable acquisitions, they will be made on the basis of higher priority first or opportunity lost evaluations. Techniques other than public funded acquisition the Township will use include:

- 20% recreation space required by developers
- Fee-in-lieu contributions
- Open Space Covenants and Easements
- Ordinance protection of resources

Phasing and implementation of sequential steps in the process of protecting and expanding open space system will be dependent on numerous factors. Initially the use of funding from Montgomery County may enable some key acquisitions based on sites identified. Additional funding sources, grant applications, adoption of a possible Township open space referendum and landowner negotiations may be time consuming aspects of acquisition efforts that slow down the initial momentum of the new plan. However the various Township agencies and committees should be working together to maintain the vigilance for seeking other forms of protections and enforcement of ordinances to expand and protect the open space system. The Township should assign a specific director, agency or committee to make periodic review and report on progress to the governing body in order to keep the issues and implementation strategies of this plan in the forefront of Township wide efforts. An annual report should be prepared by this designated person or group and submitted for review and distribution among the various planning groups of the Township. An update of the plan should again be performed within five years of adoption of this plan and forwarded to the County to report the findings.

The following prioritized schedule is recommended, however it is noted that a constant vigil is required to seize opportunities when they become evident and adjust priorities to satisfy the greatest potentials for implementing parts of the plan.

Priority “A” Sites:

- Sites located near the river front
- Ideally seek to acquire or apply protections within approximately two years
- Recognize the difficulty of railroad related stumbling blocks with regard to time frames but be aggressive and persistent to seek needed cooperation.
- Focus on building connections to accommodate an expanded riverfront experience, access points and facilitate a river trail that both follows the river and steps back from it.
- Explore engineering feasibility to overcome barrier points.

- Leadership in this endeavor is needed from the Park and Recreation Department with support from the Board of Supervisors. A riverfront committee may help to guide the efforts in identifying means and methods to deliver a broad based effort to obtain the necessary land.
- The ongoing consultation, assistance and guidance of the County in the efforts associated with these priority sites is of importance due to the regional importance of the river and their planning partnership with other localities.

Priority “B” Sites:

- Primarily the Glasco Quarry, Gold’s Gym and Glaxo-Smith Kline sites.
- A recommended Three to Five year critical path for acquisition or protection of the most important open space zones of these sites.
- The sites are generally targeted for the recognition of great open space opportunities that would be lost if development prevails.
- Leadership in guarding against the potential of this open space loss and maximizing the potential to preserve the best elements of open space should be headed jointly by the Planning Commission and Park and Recreation Board with support of the Supervisors.

Priority “C” Sites:

- Recommended Five to Ten year plan to expand the open space protections via these sites which may offer increased acres and linkage opportunities.
- Prioritization of sites may be better evaluated in view of success in category “A” and “B” sites and other implementations such as the Chester Valley Trail completion and the Pedestrian and Bicycle Network Plan.
- The Park and Recreation Board should act as a catalyst and reminder to the Board of Supervisors .

Stewardship

This report has identified the value of open space for environmental resources, public enjoyment and scenic qualities. Caution is appropriately given that expansion of open space systems without providing good stewardship of the land acquired or placed in protected status may result in nuisance and degraded conditions. Providing for routine evaluation of the conditions and maintenance of the open space fall jointly under the current Public Works Department and Parks and Recreation Department.

Stewardship is a responsibility of these departments, other agencies and committees of the township and the general public. Planning officials must make wise decisions to make parks and open spaces maintainable when man made conditions are imposed. Elected officials need to support the stewardship plan with appropriate funding to keep the open space system in good condition.

Public organizations and groups may be organized by the Parks and Recreation Department to assist in looking after the facilities, reporting problem conditions and volunteer efforts to clean-up. Upper Merion residents are active in these efforts through a

variety of groups, mother's organizations or neighborhood associations. Promotional events, public activities and awareness campaigns are sponsored by the Parks and Recreation Department to encourage participation in Earth Day activities, Arbor Day, community outdoor concerts etc. These functions already foster a strong sense of community pride and "ownership" in the open spaces offered by Upper Merion Township. Additional "Friends of the Park" type organizations should be organized for new open space additions to offer user input into the stewardship process.

Funding

Funding sources currently known should be continually evaluated and tapped for potential open space project funding. The following sources may be considered:

- Montgomery County Open Space Grants
- Growing Greener
- Pennsylvania DCNR funding
- Schuylkill River Greenway
- Schuylkill River Heritage Area Grant Program (funded through PA DCNR through Pennsylvania Heritage Parks Program in partnership with the National Park Service.
- TEA-21 transportation funding for alternative transportation systems and air quality improvement projects.
- Potential of future real estate tax revenues for open space projects.

Citizen Comment

Ultimately, it is the citizens who benefit from the planning efforts to preserve, protect and expand the open space system to meet the goals and objectives stated. Upper Merion Township has encouraged citizen participation throughout this process of open space planning. Committee meetings have been advertised on bulletin boards, in newsletters and by direct invitation of groups known to have interest in this planning effort. Opportunity for public input has been encouraged and invited at the meetings and extensively disseminated to interest groups by email and public notice.

Additional opportunity for public comment will be provided through the forum of a public meeting to present the Draft of this Open Space and Natural Resource Protection Plan Update. Ongoing opportunity may also be available within the structure of public meetings in the future as open space issues are revealed within development applications under review or presentation of open space concerns at Park and Recreation Board meetings, Planning Commission meetings and Board of Supervisor meetings.

NOTES:

APPENDIX:

- A. Photographs of Schuylkill River – Page 67**
- B. Photographs of Schuylkill River – Page 68**
- C. 1912 Riverfront Map – Plate 3 ***
- D. 1912 Riverfront Map – Plate 4 ***
- E. Bicycle and Pedestrian Network Draft Plan ****
- F. Map #1 –Recreational and Vacant Land *****
- G. Map #2 – Park Identification Map *****
- H. Map #3 – Natural Resources Map**
- I. Map #4 – Riparian Linkage Opportunities Map**
- J. Map #5 – Trail Connections Map**
- K. Map #6 – Open Space Opportunities Map**
- L. Map #7 – Riverfront Properties Map**

Source Acknowledgements:

- * Historic Maps from Pennsylvania Historic and Museum Commission Archives
- ** Provided courtesy of Campbell Thomas & Co.
- *** Upper Merion Township Maps



Figure 1. Existing dock at the Boat House.



Figure 2. Old sycamores and remains of Knickerbocker Ice Co.



Figure 3. Old steps to river looking toward Barbados Island.



Figure 4. Crow Creek culvert under the Railroad.