

## EXECUTIVE SUMMARY

The purpose of this section is to provide an overview of the main points contained in the full report on the area along the Swatara Creek as it flows through lands owned by the Hershey companies. These highlights are grouped under four headings: dealing with the corridor and its significance, the corridor's future under current zoning, a proposal for the corridor and its benefits, and conclusions and next steps.

### **The Swatara Creek Corridor and Its Significance**

The Swatara Creek is a special place whose natural assets repay those who spend the time and effort to acquaint themselves with its features. Whether on foot or in a small boat, recreationists derive quiet pleasures from its varied scenery, its abundant wildlife, its historic artifacts, and the respite it offers from all the noise and distractions which characterize modern society.

The corridor, as studied in this report, extends 10.7 miles from its confluence with Quittapahilla Creek (near Brindnagle's Church) to Hummelstown. Its historic features span many centuries, from two Native American sites to a significant landmark of the Industrial Revolution: the canal bed, towpath, drystone retaining walls and locks of the Union Canal (connecting the Susquehanna and Schuylkill Rivers).

Flowing through gently rolling terrain offering varying types of views of the surrounding farmland in most areas, the creek is bordered by very high steep banks in one section, where canoeists and hikers feel a strong sense of enclosure and wildness. Even the casual visitor is likely to encounter a plethora of wildlife, from green herons and great blues, to ospreys, kingfishers, mallards and wood ducks.

Whether by accident or design, the corridor is fortunate to have survived to this day without any significant encroachment by commercial buildings or residential subdivisions. The most intrusive elements are six bridges, an electrical transmission line, and two quarries across from Hummelstown, but these do not significantly detract from the quality of the overall recreational experience.

Another significant aspect of the corridor is its remarkably unfragmented ownership pattern, which could facilitate progressive land use planning for long-term conservation purposes, given a cooperative atmosphere among the various townships involved. Curving around the northern edge of the

town of Hershey, the Swatara Creek corridor provides a unique opportunity to link the older communities of Sand Beach, Union Deposit and Hummelstown with trails and recreational areas for the permanent enjoyment of local residents of all ages.

### **The Corridor's Future Under Current Zoning**

Although it contains a variety of protective features, current zoning in the corridor is essentially a blueprint for the orderly development of all lands which are not wet, floodprone, or steep. Except for realtors and land developers, few people look at zoning regulations in this way, but the essence of these ordinances is to provide safeguards to prevent land use conflicts and development densities which would overload natural systems and municipal infrastructure. Local governments may differ in their attitudes toward growth, but in the end they must all accept it as inevitable. They do, however, possess the authority to regulate new development so that its intensity and distribution will preserve open space, but these techniques are not included in every zoning ordinance in the corridor, and where they do exist they are voluntary. In other words, landowners have the right, in every municipality in the Study Area, to divide their properties into a checkerboard pattern of lots. Among the townships the major differences concern only the minimum areas and widths of these new subdivision lots.

Because no legal basis can be advanced for excluding floodplains, wetlands and steep slopes from being incorporated into the rear portions of long, deep backyards, current zoning regulations typically allow large rural houselots to extend down to the edge of the creek, replacing ecologically valuable woodland with fertilized lawns, peppering open fields with new houses, and foreclosing future opportunities to create a linear greenway for outdoor recreation along the Swatara. Unless a fair way can be devised to compensate landowners for the market value of their properties, the lands along the Swatara may eventually be sold for the "highest and best use" (a euphemism which really means the most economically rewarding legal use).

Although the ultimate future of the Study Area under current zoning would not be an attractive one, if all landowners exercise their normal property rights, creative planning techniques such as the transfer of development rights (and, to a lesser extent, rural clustering or "open space development design") offer very promising alternatives.

## A Proposal for the Corridor and Its Benefits

The overall organizing concept for the Swatara Creek corridor, as presented in the full report, is for the creation of a "Recreation and Conservation District" (RCD). The basic goal of such a district would be to preserve a natural setting within which environmental education and recreational opportunities may easily be provided for local residents. Emphasis would be on "passive" activities such as canoeing, fishing, walking, hiking, bicycling and the enjoyment of nature, with provision for active recreational pursuits (such as field sports) at specific locations along the corridor where parking and boat ramps may also be available.

In addition to establishing a "core greenway" along the creek, the RCD would also designate broader "Transition Areas" on adjacent lands within the Swatara viewshed. Without proper planning, these open meadows and woodland wildlife habitats would eventually be penetrated by subdivision streets and developed into houselots of whatever minimum size is required. The importance of protecting these transitional areas through progressive land planning techniques cannot be over emphasized, for they constitute a critical part of the greenway in terms of ecology, scenic character, and the overall recreational experience.

Although most of the land needed to implement the core greenway plan is already in Hershey ownership, one 24-acre property (just south of Camp Catherine) has been recommended for acquisition, and trail easements are suggested over two other parcels (along the Union Canal and along Manada Creek). Implementation of these recommendations would connect Hershey properties with one another and with the regional Horse-Shoe Trail, forming an integrated network of footpaths and landholdings. The potential role of "land swaps" to accomplish these objectives deserves further exploration.

The most logical method of achieving compensation to Hershey for the value of lands voluntarily placed in a Recreation and Conservation District lies with the innovative planning technique known as the "Transfer of Development Rights" (TDR), which has been successfully used on a large scale to preserve farmland in Montgomery County, Maryland. Because there seems to be broad agreement regarding where a development should be transferred from (the Swatara Corridor) and to (locations with public utility infrastructure), and because Hershey's existing ownerships in both areas greatly facilitate the use of this technique, the only remaining issue relates to the method of determining the number of "development rights" to be transferred. A practical, common-sense approach to this problem is suggested in the Appendix. If there is sufficient

interest in the overall RCD concept by both Hershey and the various townships in the Study Area, agreement on details will ultimately be reached. All participants stand to benefit substantially from a cooperative strategy for conservation and development.

Benefits to Hershey include the ability to develop land served by utilities more efficiently and intensively, in addition to earning goodwill and boosting public relations. Benefits to participating communities include the ability to provide a first-class area for outdoor recreation and nature conservation, improving property values and the quality of life for their residents, at zero cost for land acquisition.

Even if the TDR mechanism proves too difficult to implement, many of the corridor objectives could be achieved through lesser means (such as density exchanges, rural clustering, limited development, and market-rate acquisition of small areas). In the event that the TDR option fails, strong consideration should be given to utilizing the less sophisticated methods mentioned above to protect not only the core greenway but also large parts of the Transition Areas. In most situations these techniques would not be adequate, but in this case, where Hershey ownership is so extensive, they could perform very well indeed, preserving open space while respecting landowner equity.

After evaluating a number of alternative possibilities for land ownership in the Recreation and Conservation District, a combination strategy has been recommended wherein the greater part of the core greenway along the creek (proposed for passive recreation) would be owned and managed at the county level, while individual areas for active pursuits (such as sports or swimming) would be under township control. Officials in Harrisburg could assist this process by acting as a catalyst and playing a background support role in dispensing technical advice (and possibly some funds to help with facilities provision). Open space protected in the "Transition Areas" could be managed by a private, non-profit entity, such as a land trust or other similar organization.

### **Conclusions and Next Steps**

The relatively undeveloped Swatara Creek corridor possesses a number of special attributes which make it worthy of preservation, but which also make it very attractive for residential development. In the absence of a vision for its future, and a specific plan to bring that future about, the Swatara's assets will most likely be compromised by conventional subdivision and suburban sprawl. To protect the corridor's sweeping scenery, indigenous wildlife and historic sites, and to make it accessible to local residents

as an area for nature conservation, outdoor recreation and environmental education, creative land planning and an unusual degree of public-private cooperation will be needed. Once the potential benefits accruing to all parties are fully appreciated, the idea of creating a "Recreation and Conservation District" along the Swatara should gather momentum and broad-based support. Rarely does an opportunity arise which so fully meets the needs of private property holders and local governments. Even rarer are situations where implementation is facilitated to such a high degree by the presence of very large landowners. Nevertheless, implementation will not necessarily be an easy task. The main challenge lies not in its technical or financial aspects, but rather in the realm of political decision-making.

After securing internal agreement upon the principles of the Recreation and Conservation District concept, Hershey officials should adopt a flexible implementation strategy which meets their needs. Flexibility is recommended because of the number of townships potentially involved and the possibility that political circumstances might shift in a negative or a positive direction during negotiations with municipal representatives.

During the public meeting process it is likely that a certain amount of more detailed planning will be necessary to help test specific ideas or approaches. Some of these exercises might involve preparation of "by right" development plans, sketched out at a conceptual stage, to demonstrate the developability of particular areas and to determine a fair number of "development rights" in those situations.

Throughout the effort to promote greenway corridor protection, as part of an overall strategy to utilize development rights in the most efficient and environmentally responsible manner, progress will be facilitated if the various parties maintain broad perspectives and an awareness of the long-term benefits they each will enjoy when their collaboration succeeds.

The future of the Swatara is by no means determined by existing regulations and land ownership patterns. Changes in both will be required if this very special area is to be permanently protected for wildlife habitat, outdoor recreation, and rural character preservation. Final decisions about the corridor's ultimate use are for a number of private and public officials to decide, jointly or independently. The challenge is theirs.

## **SECTION 1.0 INTRODUCTION**

### **1.1 Purpose and Scope**

The Natural Lands Trust, a Philadelphia-based nonprofit conservation organization, was retained by the Hershey Trust Company to develop a master plan for a Recreation and Conservation District (RCD) along the Swatara Creek. This district would be an area along the creek set aside primarily for the purpose of recreational activities and conservation uses. A number of specific issues were to be addressed in the development of the plan. These included: (1) the physical limits of the RCD, (2) selection and location of facilities and activities appropriate to the setting, (3) ownership and management options, and (4) financial arrangements for long-term operation of the RCD.

Some important goals of the study included providing opportunities for Hershey School students to use the creek and RCD, making recreational opportunities available for members of the community, and achieving a balance between the altruistic interests and fiduciary responsibilities of the Hershey Trust.

The scope of the study has been limited in two ways. First, it has been physically limited to the area of the Swatara dominated by Hershey ownership, described in detail below. Second, it has been limited to a broad, overall view of the entire RCD in order to develop a workable concept. The intent has been to present enough detail to flesh out the broad concept and to make judgments as to its feasibility. It is assumed that as decisions are made further work will be needed, especially with regard to detail design of specific facilities and programs, negotiation of new ownership and management arrangements, development of specific budget proposals, and similar items.

### **1.2 Summary of Planning Process**

The study began with an inventory and review of pertinent information about the Swatara corridor. This review included the Land Use Plan for the Hershey Organizations by Wallace, McHarg, Roberts and Todd and the updated maps which accompany and supplement this report. The Natural Lands Trust also obtained information from the Hershey companies and the following organizations and agencies among others:

Agricultural Stabilization and Conservation Service  
Dauphin County Parks Department  
Dauphin County Tax Assessment Office  
Dauphin County Conservation District  
Derry Township  
East Hanover Township, Dauphin County  
East Hanover Township, Lebanon County  
Federal Insurance Administration  
Horse-Shoe Trail Club  
Lebanon County Tax Assessment Office  
Lebanon County Planning Commission  
North Londonderry Township  
Pennsylvania Historical and Museum Commission  
Pennsylvania Department of Environmental Resources  
Pennsylvania Fish Commission  
The Nature Conservancy  
Tri-County Regional Planning Commission  
Soil Conservation Service, USDA  
South Hanover Township

After reviewing the information thus obtained, pertinent data was then mapped within the study area. A field review was conducted, both by automobile and by canoe along the length of the corridor within Hershey ownership.

Having organized the data into a usable form and gained an understanding for the site, an initial concept was developed both in map and written form. This was reviewed with Hershey staff. Subsequent to that review the concept was revised and further detailed into the present report and accompanying maps.

### **1.3 Location of Study Area**

The proposed Swatara Creek Recreation and Conservation District (RCD) is located along the lower third of the Swatara Creek as it meanders 38 miles from Indiantown Gap down to its confluence with the Susquehanna River in Middletown. The area studied by Natural Lands Trust (Study Area) begins at the confluence of Quittapahilla Creek and the Swatara near Brindnagle's Church in Lebanon County and stretches southwest 10.7 miles, ending in the Borough of Hummelstown in Dauphin County (see Study Area Map). The Study Area also includes a large area on both banks of the Swatara, including the northern edge of Hershey and the lower drainage of Manada Creek. Natural Lands Trust studied an area larger than the proposed RCD to better understand the human context and natural systems of the area before recommending an area and facilities plan for the RCD.

Lands currently owned by the Hershey Companies and lands owned by others are both included in the Study Area. In addition, portions of six municipalities are also included: on the north bank of the Swatara in Dauphin County are South Hanover and East Hanover; on the south bank in Dauphin are the Borough of Hummelstown and Derry Township; and in Lebanon County, East Hanover and North Londonderry Townships occupy the north and south banks respectively (see Study Area Map).

#### **1.4 Definition of "Swatara Creek Corridor"**

Throughout this report, the terms "Swatara Creek corridor" or "Swatara corridor," or just "corridor" are used frequently. These terms are meant to describe an area narrower than the Study Area that would include the stream itself and a land area physically, topographically and visually related to it. This was the primary area of focus in this study. The Study Area by contrast included the very outer limits of concern which in some areas went well beyond the "corridor." The "visual corridor" described in Section 2.1 is a subset of the overall corridor and is only that area that can be seen from the stream.

**SECTION 2.0**  
**DESCRIPTION OF CORRIDOR**

**2.1 Natural Resources**

**2.1.1. Topography And Visual Corridor**

The Hershey area is characteristic of much of the Great Valley, an arcing lowland between Blue Mountain on the north and various mountains to the south, stretching southward into Virginia and north to the Hudson River in New York. The topography is gently to steeply rolling, with views to distant hills. The elevation in the Study Area ranges from 620 feet above sea level on a southern hilltop in Lebanon County to 335 feet above sea level at the Swatara in Hummelstown. The hilltops are generally 150 feet to 200 feet above the banks of the creek.

Most of the Swatara valley has been farmed for over two centuries, so it has a settled, pastoral character of planted fields and pastures, hedgerows, and farm complexes. The only significant woodlands in the Study Area occur in floodplains and on steep hillsides. Where open fields border the Swatara's narrow wooded fringe, the wooded hillsides form the edge of the "visual corridor" from the creek.

The visual corridor is an estimate of the land area that can be seen from the stream, discounting the effect of foliage. It typically extends out to the crest or horizon (not necessarily the ridgeline) of the ridges that line either side of the stream valley. This becomes an important corridor in dealing with streams because it forms the total visual space in which the stream is located. Any changes to the natural landscape within the visual corridor will affect the stream user's experience.

**2.1.2. Hydrology**

The Study Area lies completely within the Swatara watershed. Along its course are three major tributaries, the Quittapahilla, Manada, and Spring Creeks, as well as numerous minor streams. The 100-year floodplain (an engineering determination that provides the basis for federal flood insurance and municipal ordinances) varies in width from nearly half a mile at the northern end of the Study Area, to only 500 feet at High Meadows Campground (see Hydrology and Topography Map). Between these two points the floodplain undulates away and toward the creek depending on

the nearness of adjacent hills. The Union Canal closely follows the outer edge of the floodplain on the Swatara's northern bank.

Because it flows through lands devoted primarily to farming and is therefore impacted by fertilizers and chemical run-off after heavy rains, the quality of the Swatara's water could not be described as pristine, but should not interfere with recreational use. The Pennsylvania D.E.R. classifies this section of the Swatara as a "warm water" stream.

Just to the south of the Study Area is the northern edge of the limestone bedrock region that characterizes the best farmland in the Hershey vicinity. This formation protrudes into the Study Area around the Annville Limestone quarries to the east of the Hershey Cemetery and also in the Spring Creek watershed. The importance of limestone bedrock to hydrology has been described in the Land Use Plan for the Hershey Organizations of 1976, by Wallace, McHarg, Roberts and Todd. Essentially this formation is particularly sensitive to misuse and could therefore adversely impact the quality of water in the Swatara below its confluence with Spring Creek.

### 2.1.3 Wildlife And Special Habitat Areas

Although the wildlife of the area has not been studied in detail by Natural Lands Trust, September field work by Trust professionals revealed heavy use of the stream by water birds such as great blue herons, green herons, kingfishers, wood ducks, ospreys and mallards. It is assumed that the woodlands support white-tailed deer, raccoon, opossum, gray squirrel, red fox, and other typical animals of the Piedmont.

The Pennsylvania Natural Diversity Index (PNDI), a quasi-public agency that maintains records of rare and endangered species and habitats in the state, has no evidence of such species or habitats in the Study Area. The only records at PNDI are for two sites where "plants of special concern", a distinction of lesser rank than endangered or threatened, have been found. One site is on the creek in Hummelstown adjacent to High Meadows Campground. The second is historic (unconfirmed in recent years), along the railroad line across from Hershey Country Club. PNDI does not make public the species for fear of unscrupulous collectors.

Local interest in wildlife is demonstrated by the active management of a Hershey Company floodplain property just to the northeast of the Route 39 bridge. Numerous wood duck boxes are maintained in the wet glade in the center of the property, and the property shows up as a "Bird Sanctuary" on local maps. Further study will identify the individuals responsible and the results of the conservation practices employed there. The sanctuary could well serve as an example for future wildlife management projects in the RCD.

## 2.2 Human History

### 2.2.1 Prehistoric Sites

Human use of the Study Area stretches back to the earliest aboriginal settlement of the Great Valley in Pennsylvania. The Susquehannock tribesmen, who were hunters and gatherers primarily but also grew corn, squash, and beans, have left remains scattered throughout the Swatara corridor. Apparently they preferred sites alongside sharp bends in the creek to straight sections or the surrounding hills for their settlements. The Pennsylvania Historic and Museum Commission has records indicating the presence of concentrations of artifacts in two such locations in the Study Area (see Prehistoric Sites Map). It is not certain what sort of sites these were - villages, temporary camps, or burial grounds.

### 2.2.2 Historic Sites

The early German and Scotch-Irish settlers began arriving in the Swatara watershed in the early 18th century. They set about clearing land for farms and gradually developed an agricultural market economy similar to that which arose in the rest of southcentral Pennsylvania. Many 19th century farm complexes have been preserved and protected by the Hershey Companies on their lands in the Study Area. The Historic Sites Map indicates the location of historic structures dating from at least 1875 (from Beer's 1875 Atlas). Further study would be required to confirm and expand Natural Lands Trust's preliminary findings on historic sites in this area.

The concept of building a canal to connect the Susquehanna and Schuylkill Rivers was first advanced by William Penn in 1690, but actual work on what is now known as the Union Canal did not begin until 1791 and continued to 1827. The canal followed the north bank of the Swatara from Middletown, through the Blue Mountain at Indiantown Gap and

on to the Schuylkill in Reading. By 1840 it was one of the busiest canals in the country, carrying farm products and timber as well as newly important anthracite coal. Eventually railroads eclipsed the canal, which has now been decaying for over a century, but the historic towns of Union Deposit and Sand Beach remain to remind us of its heyday.

Long stretches of the canal, towpath, and at least one lock ruin are still evident in the Study Area (see Existing Trails Map). Forest has reclaimed much of the canal ditch. The canal is most spectacular where steep hills directly adjacent to the creek forced its engineers to carve nearly vertical wall into the embankments and to armor the streambank with dry-laid stone. This is particularly evident in South Hanover between Union Deposit and Hummelstown.

### **2.3 The Corridor's Special Significance**

Clearly, the Swatara corridor is a special place. Despite its location near a busy and prosperous community, it retains in many places a primeval quality, full of birds and other wildlife. Varied topography, floodplain and upland forests, and glimpses of open land beyond give the boater or creekside hiker a rich and diverse experience.

Unlike many other recreational streams, the Swatee complements these natural qualities with an unusual human history, dating from the aboriginal Susquehannock tribesmen, who left behind an extensive archaeological heritage. Well-preserved farm complexes built by German and Scotch-Irish settlers dot the rolling pastoral valley. The remains of the Union Canal, among the most important transportation routes of 19th century America, constantly remind the visitor of this history.

The Swatara, already used informally by people living nearby for canoeing, fishing and hiking, links the older communities of Sand Beach, Union Deposit and Hummelstown and wraps around the north side of Hershey itself. The stream corridor has the potential to more closely link these towns, become a major organizational element to the local community, and a tremendous asset to the quality of life in southern Dauphin County.

**SECTION 3.0**  
**THE CORRIDOR TODAY AND ITS FUTURE**

**3.1 The Corridor Today**

**3.1.1 Land Use And Ownership Patterns**

The Study Area contains the primarily residential towns and villages previously mentioned, post-war suburban subdivisions, and some institutional buildings such as the Milton Hershey High School, the State Police Academy, and a few commercial facilities related to the Hershey Foods Corporation. The entire Study Area is typical of rural communities in Pennsylvania experiencing the transition from a primarily agricultural economy to a suburban one, based on commuter jobs. However, surprisingly few residences or other buildings intrude directly onto the banks of the Swatara, nor have any modern subdivisions compromised the unspoiled rural quality of the visual corridor.

Within the visual stream corridor there are no commercial land uses and residential uses are concentrated in six locations: at the confluence of the Quittapahilla, a half-mile north of the Route 743 bridge, Sand Beach, Union Deposit, mid-slope on the bluff in South Hanover, and on top of the bluff in Hummelstown. In total, approximately two and one half miles (23%) of the streambank of the Swatara within the Study Area is impacted by residential use, primarily on the north side.

The relatively small number of existing homes does not adversely affect recreational experiences along the waterway. However these homes do represent the largest impediment to renovation of the Union Canal towpath because of their location either directly adjacent to, or (in some cases) on top of the canal.

The only industrial uses are two quarries on the northern bank across from Hummelstown. These operations are not visible from the creek, but the noise from their machinery dominates the Swatara on the last two miles of the 10.7 mile long Study Area. Both quarries pump water into the creek from settling ponds.

The remainder of the visual corridor is occupied by farmland and woods. Woodlands are the major cover type within the floodplain, especially where it is relatively narrow. Open fields predominate beyond the Swatara's and Manada's fringe of floodplain forest. Conservation of the plant communities

in both field and forest should remain the highest priority of the wildlife management aspects of the proposed program.

The Hershey Companies own most of the Study Area's south bank, as well as much of the visual corridor on the north bank (see Ownership Map). The parcels outside Hershey control vary from small residential lots to large farms of several hundred acres. The significant sections of the visual corridor outside Hershey ownership are the entire Lebanon County section, the north bank between Camp Catherine and Sand Beach, and the north bank between Union Deposit and Hummelstown. Only one significant parcel in the visual corridor on the south bank is not controlled by the Hershey Organizations.

### 3.1.2 Infrastructure

In addition to industrial, residential and agricultural land uses, the Swatara is also affected by transportation and utility infrastructure.

The primary elements in this infrastructure are the major roads and bridges crossing the Study Area. Route 743, crossing the Swatara two miles south of the confluence of the Quittapahilla, runs along the southern bank for nearly a mile. Sand Beach Road crosses the stream perpendicularly at Boathouse Park. The heaviest concentration of roadways is near Union Deposit. After running adjacent to the Swatara for nearly two miles, Route 39 crosses the stream on a new bridge just a half mile north of the old 39 bridge. The final crossing in the Study Area is the Hummelstown bridge, which forms the southern terminus of the Study Area. These major roads create background noise levels typical of a suburban park, which contrasts with the distinctly wilderness appearance one encounters along the central section of the creek.

The second element in the infrastructure is utilities, including electrical transmission lines, water supply mains, sewers, and water and sewage treatment plants. Transmission lines cross the Swatara three-quarters of a mile below the Route 743 bridge and just south of Boathouse Park. Because they cross perpendicularly and are silent they do not adversely affect the user's experience. The water treatment plant at the confluence of the Manada includes an intake structure on the Swatara, holding ponds, and current construction across the creek. The sewer treatment plants are generally not visible from the creeks, though they probably will be able to be seen from the trails proposed in this report. The primary impact of the treatment plants is

not visual; rather it is their potential for altering the waterway's flow and quality as such facilities expand with the area's growth.

### 3.1.3 Existing Recreational Facilities

The Hershey Organizations own a number of recreational facilities along the Swatara. These include:

Hershey Highmeadow Camp, a commercial overnight visitors campground open to the public.

Camp Milton, a year round camp used by students at Hershey school.

Camp Swatee and Spartan Meadows, camps used by Hershey School students, closed in winter.

In addition, two other facilities are leased out - Boathouse Park to Derry Township and Camp Catherine to the Derry Township Camping Association. Boathouse Park has picnic tables and offers stream access. The Township has proposed installation of three soccer fields at this location. Camp Catherine is used mainly by the Girl Scouts, but also by other local girls' groups.

### 3.1.4 Existing And Proposed Zoning

The Study Area includes six municipalities, three on each bank. The zoning ordinances of these five townships and one borough vary in their allowed uses, but the overwhelming majority of the districts in the Study Area are oriented toward residential uses (see Zoning Map).

These residential zoning districts are divided for purposes of this report into those allowing lots of less than one acre and those requiring lots of at least one acre. On the north bank, East Hanover Township in Lebanon County requires one acre lots throughout its section of the Study Area. All of East Hanover Township in Dauphin County allows lots smaller than one acre except for the drainageway of the Manada and the minor tributary across from Spartan Meadows, where the lots must be at least one acre. The northeastern half of South Hanover is primarily a one-acre district, except for the area around Sand Beach where much smaller lots are allowed. From Union Deposit west the entire area is zoned for lots smaller than one acre. It should be noted that state requirements for unsewered houselots are typically in the range of one acre, a factor which would

supersede smaller houselots allowed under local zoning, until central sewage facilities are provided.

On the south bank, all of North Londonderry Township's (Lebanon County) section of the Study Area has a minimum lot size of one acre. Derry Township in the Study Area is primarily a residential district with a one-acre minimum lot size. Although there are four commercial districts in Derry's section of the Study Area, only two are in the visual corridor. The largest area of is adjacent to High Meadows Campground, where the C-3 district allows a variety of retail, office, and institutional uses.

The five townships have floodplain districts defined by the federal 100-year flood zone. These districts variously regulate the type of development allowed, but only North Londonderry and East Hanover in Lebanon County currently prohibit residential construction in the floodplain. The others allow residences if the structure's floor is a certain height above the flood level. However, since the state requires new septic systems to be located on well-drained soils, unlike the soils commonly found in the floodplain, such areas will mostly remain undeveloped until sewer lines are extended. Changes proposed for Derry Township would also prohibit floodplain development.

Several other zoning changes have been proposed for the Derry Township section of the visual corridor, including "Transfer of Development Rights Overlay District" (TDR) and an "Agricultural/Conservation District". TDR is discussed in the accompanying appendix. The Agricultural/ Conservation District would allow single family residences at a density of one unit per five acres, various agriculturally related uses, and some institutional uses.

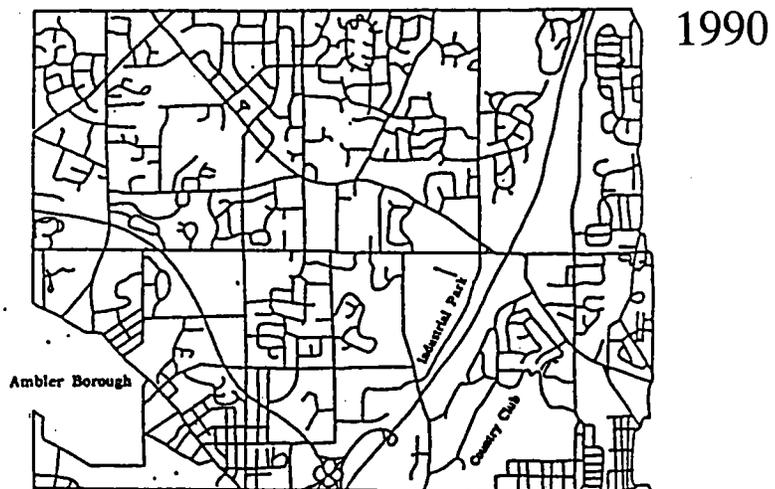
### **3.2 The Corridor's Future**

#### **3.2.1 Consequences Of Implementing Existing Zoning**

Zoning is essentially a tool to ensure the orderly development of land. It prevents dissimilar uses from being established close to one another so as to prevent land-use conflicts and the diminution of property values. It also regulates the intensity of each kind of development to avoid overloading environmental carrying capacities and creating traffic congestion.

In spite of all the beneficial aspects of zoning, it is perhaps ironic that the general public is frequently very unhappy when it is implemented. All too often that is

# Results of Conventional Zoning in Upper Dublin Township, Montgomery County, Pa.



because development which meets all the legal requirements under such regulations nevertheless transforms rural land and open space into subdivisions, shopping centers, etc., which few people really want to see coming into their communities.

In the absence of any more imaginative scheme, the future of the existing rural landscape along the Swatara (and in other parts of the six municipalities included in the Study Area) would ultimately be one of suburban sprawl, because conventional zoning is inherently limited in its ability to prohibit development (except in wetlands, official floodplains, and on steep slopes).

Considering the high standards of the Hershey Companies, it may be assumed that any future development on its properties would be very well designed and carefully implemented. However, meadows offering sweeping views to or from the Swatara would inevitably become dotted with large houselots and criss-crossed with new subdivision streets. Similarly, woodlands currently providing wildlife habitat and offering potential for hiking trails would become private residential yardspace. Although floodplains would not be filled or built upon, they would almost certainly be incorporated into the rear portions of large rural lots (the fact that they flood once a century does not reduce their appropriateness for lawns and gardens: farmers plant crops on fertile floodplain soils as a regular practice).

In summary, the future of the corridor under conventional zoning would be one of regulated development, with no open space necessarily set aside for public outdoor recreation, scenic landscape protection, or wildlife habitat. In the fullness of time it is conceivable that every acre of ground in the Study Area could be suburbanized with lawns.

The accompanying drawings, of growth patterns in a once-rural township in Montgomery County, illustrate the transformation which conventional zoning typically produces.

### 3.2.2 Choices For The Hershey Companies

Of all its holdings, Hershey's lands along the Swatara are arguably the most attractive ones in the eyes of residential real estate developers. At the same time, these same parcels quite possibly offer the best public recreational opportunities for the surrounding townships. Therein lies the crux of the problem. Several possible approaches to resolving this dilemma are described briefly, below:

1. Land Sale for Park Purposes: Although Hershey would presumably be willing to sell its Swatara properties to local, county or state agencies for prices reflecting their fair market value for development, it is highly unlikely that the financial resources needed for such acquisition would be available at any time in the foreseeable future. However, it might be possible for public bodies to prioritize the areas most essential for them to own, and to focus fund-raising efforts toward those specific lands. In this event, it is probable that only a small fraction of the corridor and its viewshed could be purchased, unless a very large, long-term bond were approved for these purposes, say at the county level (as was done several years ago in Chester County). Alternatively, if a large, well-endowed private organization dedicated to open space protection could be interested in buying all or part of the corridor, or if sufficient private foundation monies could be secured, the land purchase option might become possible.

2. Land Swap: If the townships owned land in areas useful to Hershey in achieving its corporate goals, it is possible that such parcels could be exchanged for lands of equivalent economic value in the Swatara corridor. That research was outside the scope of the present study, but the answer to this question would probably be fairly easy to obtain.

3. Land Development: As the real estate market gains strength, land could be developed throughout the corridor. Without impinging upon regulations that prohibit building or filling in wetlands or floodplains, houselots could be laid out to take full advantage of views down to the creek. Lot lines could run right to the edge of the water, or they could be pulled back say 100 feet on each side of the Swatara to create a long, narrow ribbon of private open space with trails for the exclusive use of subdivision residents. Such a layout would typically be part of a "cluster" arrangement in which houselots would be permitted to be reduced in size to reflect the open space produced through this technique. The decision whether to create such a green ribbon would be entirely for the developer to make. Similarly, it would also be his choice whether to designate the trail for private or for public use. To the extent that zoning regulations allow, this "clustering" could produce a significantly wider corridor of permanent open space (including existing meadowlands where scenic views to and from the creek are highly valued). As with the "green ribbon" approach, houselots would become correspondingly smaller, perhaps to the extent that either a central water supply or shared septic disposal facilities would be desirable. Under the clustering approach, the number of

dwellings would remain the same; only their distribution on the property would change.

If fewer dwellings were built, the technique would be called "limited development". Limited development produces a smaller number of more costly homes, and is an applicable tool in markets where there is sufficient demand for expensive residences. Unless limited development is combined with dedication of open space to a public entity there would be no potential for trail provision or public enjoyment of the corridor.

4. Land Development Transfers: Another way of protecting open space along the Swatara involves the "transfer of development rights" from properties in certain areas to different parcels in other areas. This technique is described in detail in the Appendix to this report. It is probably the most useful and least utilized tool in the field of land use planning. Its effectiveness is unparalleled because it can remove development entirely from areas which are legally developable, but where township-wide or regional planning considerations would strongly suggest that open space uses would be most appropriate (for farmland preservation, or for scenic or recreational purposes, for example). Outside Montgomery County, MD it has rarely been used because of the extra difficulties facing developers who must buy not only a parcel to develop but also the development rights from a second parcel, which is preserved when its rights are used on the first parcel.

Because this obstacle does not exist in the present situation, where Hershey already owns sufficient land in areas appropriate for preservation and in other areas appropriate for development at increased densities, the Swatara corridor offers perhaps the best opportunity in Pennsylvania to apply this progressive planning technique. If implemented, it would be possible to maintain the integrity of the entire corridor, preserving all the fields and meadows in the Study Area, protecting the woodlands for wildlife, creating a continuous trail network along the creek and through some forested areas, and providing a number of recreational activity centers as shown on diagrams accompanying this report. Best of all, this future scenario would not cost a single public or private dollar for land acquisition, and would not cause present landowners to sacrifice the economic value of their properties.

**SECTION 4.0**  
**THE SWATARA CORRIDOR CONCEPT**

**4.1 Goals and Objectives for a Swatara Recreation and Conservation District**

If the Hershey Trust elects to proceed with the dedication of a Swatara Recreation and Conservation District the following goal statement and objectives would be appropriate as guiding principles in establishing the RCD.

Goal Statement

The goal of the Swatara Recreation and Conservation District (RCD) is to preserve a natural setting along the Swatara within which environmental education and recreational opportunities may easily be provided for the local community.

Objectives

1. Identify and preserve a permanent open space corridor along the Swatara.
2. Maintain and enhance the historic and natural values of the Swatara corridor.
3. Enhance opportunities for students at the Hershey School to use the Swatara and appreciate its values.
4. Provide recreational opportunities within the Swatara corridor for the general public, but especially for local residents. The emphasis should be on "passive" activities such as nonmotorized boating, fishing, walking and hiking, bicycling, and nature study. A few "active" pursuits such as field sports should also be permitted, but in limited locations.
5. Provide opportunities to experience and interpret the rich historical resources of the Swatara corridor.
6. Provide opportunities for environmental education.
7. Provide the basis for future expansion of the Swatara RCD, both upstream and downstream, by parties other than the Hershey Companies.
8. Provide for long term professional management of resources and programs.

9. Encourage compatible land uses (including conservation) within the visual corridor of the Swatara.
10. Protect and enhance water quality.

## **4.2 The Concept and its Benefits**

### **4.2.1 Concept Description**

Following the goal and objectives outlined above, an RCD along the Swatara would consist of a preserved area of land, centered on the creek and permanently protected from development. It may also incorporate some surrounding lands where development might occur either at low densities or within carefully designed clusters, nestled into the landscape, and laid out to complement and take advantage of the adjacent open space.

An extensive trail network would allow recreational access both along the creek and also from the surrounding communities of Hershey, Hummelstown, Union Deposit, and Sand Beach to the creek. Strung along the trails would be recreational nodes where parking, water access and active recreation uses such as field sports could take place. The natural woodlands and meadows would be managed for the long term health of the ecosystem and for human use and enjoyment. There would probably be a need for an operations center from which to manage both the land and recreational programs. Ideally, this center would also accommodate an environmental education program.

### **4.2.2 Community Benefits**

If the Corridor Concept is adopted and implemented, as described in Section 4.4 ("Recommendations") below, benefits accruing to the six townships in the Study Area would vary in accordance with the amount of protected "greenway" land which would lie within their municipal borders (shown in tabular form in Section 4.4.5). However, because the proposed trail system would presumably be open to the general public, residents of all these townships would be able to enjoy using the corridor for walking, hiking, jogging, and observing wildlife and seasonal changes in the natural landscape. To the extent that active recreational facilities in the greenway corridor may be municipally owned and operated, access to them might be restricted to people residing in specific communities.

It is difficult to quantify concepts such as "quality of life," but it is clear from numerous surveys and opinion polls that a large -- and growing -- number of Americans derive considerable enjoyment and pleasure from simple outdoor experiences such as walking through the woods on a bright autumn day, cross-country skiing along trails after a snowfall, and noting the succession of wildflowers during the spring and summer months.

That people are ultimately willing to pay a little (and sometimes a lot) more for the privilege of living in places where natural areas are both permanently protected and easily accessible is evidenced by the real estate data reported in Section 4.2.4 below. Experiences in communities which have consciously invested in open space protection, such as Lincoln, Amherst and Barnstable, MA show that they have come to be known as highly desirable places to reside, and that they enjoy above-average appreciation in property values. Their reputations tend to attract new residents who recognize the importance of a quality living environment, and they in turn tend to make positive contributions to the civic life of their communities, participating in local governmental affairs and supporting improvements in schools, libraries, and cultural and recreation programs. Townships which do not adopt and follow progressive land use policies tend not to enjoy these benefits to the same extent. It is therefore by no means unrealistic to expect a number of "spin-off" benefits flowing indirectly from the implementation of sound principles of town planning.

#### 4.2.3 Corporate Benefits

Greenway corridor benefits would flow both ways, for the Hershey Companies would be recognized not only locally but also nationally for their role in proposing, nurturing, and helping to implement advanced ideas for balancing the objectives of land conservation and community economic development. There is tremendous interest around the country in achieving both of these goals. If a technique which holds so much promise (TDR) can be shown to work successfully on a fairly large scale in Derry Township, there will undoubtedly be a great deal of coverage in the professional press, as well as in local and regional newspapers. While there will probably be no measurable increase in sales of Hershey Foods products attributable to the implementation of this project, its uniqueness will guarantee a great deal of public attention, especially in this era of diminishing public funds to protect open space.

In addition to the unquantifiable goodwill expected to be earned as a result of creating such a greenway corridor, Hershey would benefit by obtaining permission to develop at increased densities or intensities on other lands it owns, which are in locations that are more appropriate for development due to the presence of urban infrastructure (public water, sewerage, highway accessibility, etc.). In this situation, it clearly behooves both parties (Hershey and the townships) to agree upon creative ways to transfer development from areas everyone would like to protect, to other areas which make much more sense to develop. For Hershey, it is partly a matter of transferring and converting its assets. For the townships involved, participation in progressive land planning produces a future quality of life they could not possibly afford to create through conventional means (i.e., acquisition at fair market value). It is a "win-win" situation, which could be achieved if the various players simply follow old-fashioned Jeffersonian principles of "enlightened self-interest".

(As an historical footnote, it might be added that there is significant precedent for major chocolate manufacturers to take the lead in demonstrating the viability of progressive town planning principles. In Victorian England, both the Cadbury and Rowntree firms founded state-of-the-art living environments for their employees and others, in the communities of Bournville and Earswick. Both were administered by special trusts established for this purpose, whose operating income was derived from interest and from rents.)

#### 4.2.4 Greenways and Property Values

There is a growing body of evidence to show that property values actually increase as a result of open space provision within and around developments. The National Park Service annually publishes an updated and very detailed resource book on this subject, entitled Economic Impacts of Protecting Rivers, Trails and Greenway Corridors. This report cites numerous studies on the measurable increase in real property value generated by proximity to traditional parks and to the newer greenways. Among the reported findings are that:

- house prices declined by an average of \$4.20 for each foot of distance away from a greenbelt in Boulder, CO, and values of homes adjacent to the greenbelt were 32% higher than those for similar residences 3000 feet away

- Urban land adjoining farmland zoned exclusively for agriculture outside Salem, OR was worth \$1200 more per acre than similar land 1000 feet away
- homes across the street from four parks in Worcester, MA sold for \$2672 more (in 1982) than similar homes 2000 feet away
- in Dayton, OH, proximity to an arboretum added 5% to the selling prices, and in Columbus homes which faced a local park traded for 23% higher than similar homes just one block away
- in residential areas around the 1300 acre Pennypacker Park in Philadelphia, the percentage of lot value attributable to the park's proximity rose from 4.2% for lots 2500 feet away, to 9% for those 1000 feet away, to 33% for those just 40 feet away
- in Seattle, homes near the 12-mile Burke-Gilman trail sell for 6% more than other houses of like size, according to a survey of local realtors.

Another very positive sign is that newspaper ads for real estate are beginning to mention proximity to greenways as a selling feature. For example, in the October 7, 1990 issue of the Sunday Raleigh News and Observer, no fewer than nine classified ads noted that the homes andouselots for sale were adjacent to or near greenway corridors. A recent full-page advertisement for a new subdivision in Cary, NC featured a large photograph of that town's Black Creek Greenway, with the caption "The Cary Greenway System is located immediately behind Harrison Place, and leads to Lake Crabtree". In fact, some realtors have started placing additional "for sale" signs in locations visible from the greenway paths. And in Front Royal, VA, a developer who advertised that his second-home subdivision abutted the Big Blue Trail (which was extended along the perimeter of his property, over an easement which he donated to the Potomac Appalachian Club) sold all his houselots within four months (National Park Service, 1990).

#### 4.3 Alternative Options for RCD

There are many possible configurations of an RCD along the Swatara. To simplify matters, the alternatives can be narrowed to four generalized options:

In Option One, only a thin strip of open space 100 feet wide on either side of the stream would be set aside. This would

result in the protection of approximately 200 acres of open space currently owned by the Hershey School. All of this acreage is considered unbuildable, i.e., it is either floodplain, wetlands, or steep slopes (slopes over 15% in grade).

In Option Two, only the stream itself, the floodplain, wetlands, wooded slopes, areas of archaeological importance, and locations with high recreational potential would be protected. This would result in the protection of approximately 1150 acres of open space currently owned by the Hershey School. Approximately 65 acres, or 6% of this area is buildable. However this buildable acreage consists of Camp Catherine and two large archaeological sites.

Option Three, the most ambitious option, would fully protect all lands inside the visual corridor, described in Section 2.1 above. This would result in the full protection of approximately 2600 acres of open space currently owned by the Hershey School. Approximately 1500 acres, or 58% of this area is unbuildable, and 1100 acres or 42% is buildable (Note that the buildable acreage include soils with hydric inclusions and therefore may be somewhat overstated).

Option Four, is intermediate between Options Two and Three, and would divide the proposed RCD into zones. One zone along the stream would be recommended for full protection from the beginning. This fully protected area includes 1285 acres of Hershey ownership. Other adjacent zones would be prioritized for gradual protection over a period of time. Some limited development within some zones would be possible, subject to site design principles to reduce the visual impact of new development by nestling it within the landscape. Land in other zones would be permanently protected using Transfer of Development Rights (TDR) and other techniques.

#### **4.4 Recommendations**

##### **4.4.1 General Recommendation**

It is recommended that the Hershey Trust give strong consideration to Option Four, as explained in detail below. Under this option the Swatara RCD would be divided into three zones - the Core Greenway, Transition Areas, and a Special Woodlands District. Each zone would be prioritized for a different level of protection.

Furthermore, it is recommended that nearby lands outside the corridor, whether owned by Hershey or not, be regulated to

ensure that development which occurs there will be compatible with the Swatara RCD. It should also be designed to take advantage of the opportunities presented by this recreational and conservation resource. The reason for this recommendation is that property values tend to increase next to permanently protected land such as the proposed Swatara RCD. The National Park Service has reported increases in real estate values ranging from about 5% to 33% (as reviewed in Section 4.2.4 above) for properties in close proximity to permanent open space. The experience of the Natural Lands Trust is that similar or even higher values can be achieved, especially if development is purposefully designed to complement open space.

#### 4.4.2 Core Greenway

The Core Greenway of the proposed Swatara Recreation and Conservation District should receive full protection, i.e., development that is not directly related to the recreation and conservation programs of the RCD should be prohibited. This is not in any way meant to exclude appropriate recreational facilities or activities.

The Core Greenway has been designed to include the following specific resource areas (most of which are unbuildable):

1. Swatara Creek
2. Manada Creek
3. The Union Canal (ditch, towpath, occasional locks)
4. The 100-year floodplain
5. Hydric (wetland) soils
6. Steep, wooded slopes adjacent to the above areas
7. Areas of archaeological importance
8. Locations with high recreational potential.

When the core was designed, these areas were first outlined, then minor adjustments were made to allow the boundary to follow property lines and readily identifiable features such as roads and treelines. Where the land is not in Hershey ownership, arbitrary offsets from the stream and canal were applied. When boundaries are finalized, field verification and detailed delineation will be required.

#### 4.4.3 Transition Areas

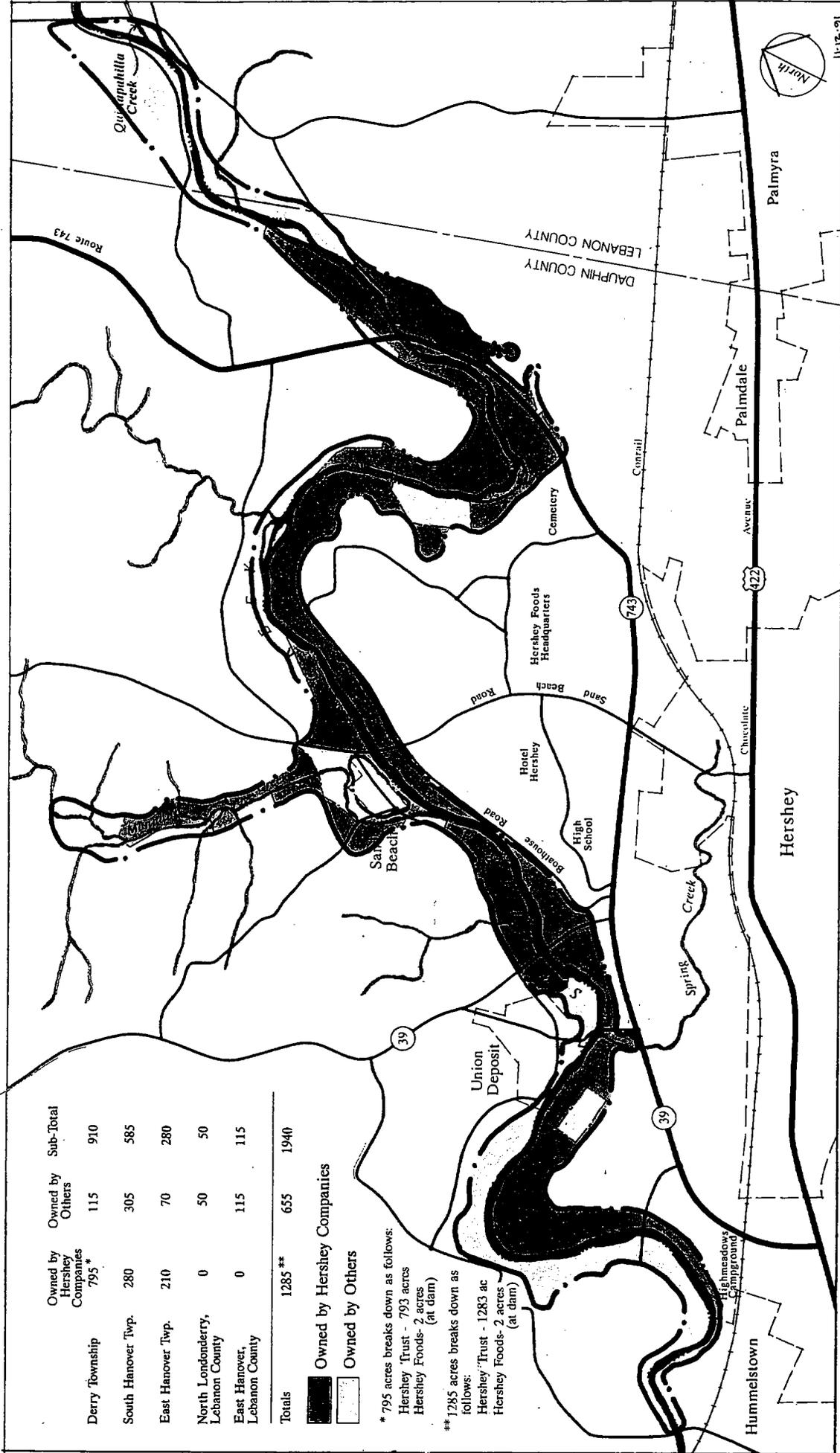
Transition Areas are zones contiguous to the Core Greenway. They are generally comprised of open landscapes such as fields and pastures which are visually and/or physically closely related to the stream. Most of the land within these

Derry Township	Owned by Hershey Companies 795 *	Owned by Others 115	Sub-Total 910
South Hanover Twp.	280	305	585
East Hanover Twp.	210	70	280
North Londonderry, Lebanon County	0	50	50
East Hanover, Lebanon County	0	115	115
<b>Totals</b>	<b>1285 **</b>	<b>655</b>	<b>1940</b>

Owned by Hershey Companies  
 Owned by Others

\* 795 acres breaks down as follows:  
 Hershey Trust - 793 acres  
 Hershey Foods - 2 acres  
 (at dam)

\*\* 1285 acres breaks down as follows:  
 Hershey Trust - 1283 ac  
 Hershey Foods - 2 acres  
 (at dam)



**HERSHEY**  
 Recreation and Conservation District  
*on the*  
**SWATARA CREEK**

# CORE GREENWAY



PREPARED FOR  
**HERSHEY TRUST COMPANY**  
 HERSHEY, PENNSYLVANIA

11-12-91

Areas is presumed to be buildable. It is recommended that these Areas be handled in the following fashion.

1. In the near term, they should for the most part be kept in agricultural use or maintained as meadows (grasses and wildflowers to be mowed once or twice a year). Some reforestation would be appropriate along drainageways. See Section 7.1 for details.
2. Within Derry Township, they should ideally be used as "sending zones" for a new Transfer of Development Rights system, with rights to be transferred first from the areas which are of the highest priority for conservation. As rights are transferred out, protected acreage should be added to the core area.

The protected acreage to be added would depend upon the configuration of the greenway at that point, but in general should be that land which (1) has the highest resource value, (2) would add the greater width to the core area and (3) would most smooth out the boundary (in that order). It should be noted that within each Area, subzones could be delineated and prioritized as an aid to transferring out development rights and incrementally increasing the size of the Core Greenway.

As a backup or supplement to TDR, techniques such as a Density Exchange Option, "Open Space (Rural Cluster) Development," sale of agricultural easements, and others discussed in Section 5.3.1 should be investigated, promoted, and where possible, applied to this situation.

3. Outside of Derry Township, TDR should be promoted at the same time that the sale of agricultural easements (under the state program) and other techniques described in Section 5.3.1 are investigated.

Alternatively, it may be appropriate to encourage "limited development." Limited development involves a significant reduction in the number of dwellings which, due to the greater desirability of their lower density, typically command higher prices (thereby compensating for the smaller number of lots). Typically, limited development also involves much reduced infrastructure costs and receives speedier development approvals. However, it does not necessarily include the creation of open space for public usage.

Subdivision layouts prepared using these approaches should be developed under special controls, including placement of development as far from the Core Greenway as possible, avoidance of resource areas and hilltops, height limits, clustering homes on somewhat smaller lots or into village-like groupings, and planting of wooded buffers.

#### 4.4.4 Special Woodlands District

A Special Woodlands District has been delineated south of the stream and approximately in the center of the proposed Swatara RCD. This is the most extensively wooded area in the entire study area. It links the stream corridor across a ridgeline, and it serves as an important buffer between the developed area to the south and the secluded agricultural area to the north. The Woodlands District has potential for certain recreational uses such as primitive camping and would add some variety to the recreational experience in the RCD.

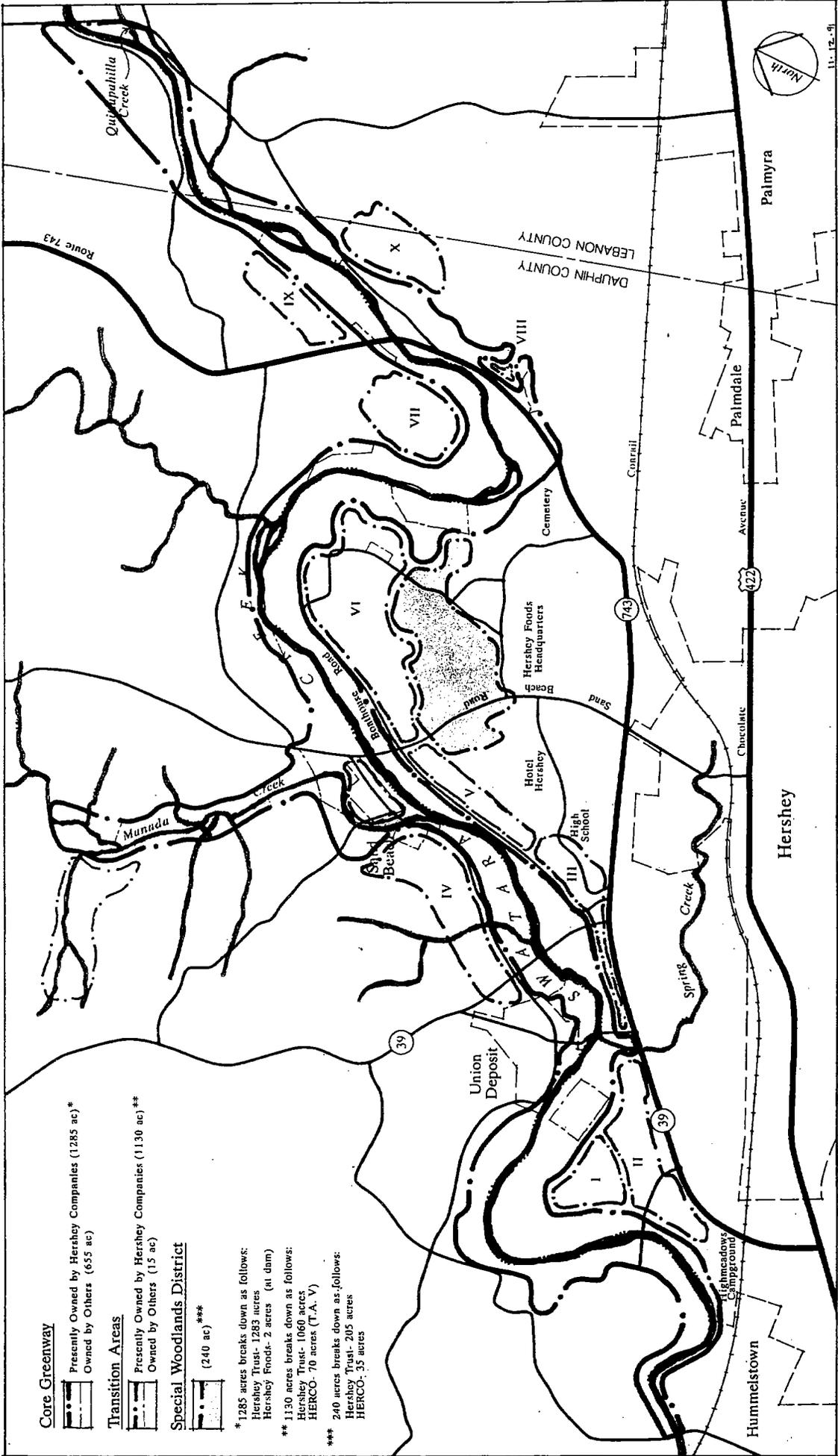
It is recommended that this area be treated similarly to the Transition Areas, except that it be managed as a forest, rather than farmlands or meadows (See Section 7.1 regarding woodlands management). Development here should be minimized and carried out in such a way that it preserves the woodlands to the maximum extent possible. TDR's, limited development, and open space development (rural clustering) are all appropriate techniques here. It is also recommended that consideration be given to reforestation of certain open areas within the forest complex.

If this area is preserved, it could be dedicated for a very special use such as a Milton Hershey Memorial Forest.

#### 4.4.5 Priorities and Acreage Tabulations

The Transition Areas and the Woodlands District have been prioritized as to their relative importance to the integrity of the RCD as follows:

1. Very High - Transition Area VI
2. High - Special Woodlands District  
Transition Areas I, V, VII, VIII
3. Medium - Transition Areas II, IV, IX, X
4. Low - Transition Area III



**Core Greenway**

Presently Owned by Hershey Companies (1285 ac)\*  
Owned by Others (655 ac)

**Transition Areas**

Presently Owned by Hershey Companies (1130 ac)\*\*  
Owned by Others (15 ac)

**Special Woodlands District**

(240 ac)\*\*\*

\* 1285 acres breaks down as follows:

Hershey Trust- 1285 acres  
Hershey Foods- 2 acres (at dam)

\*\* 1130 acres breaks down as follows:

Hershey Trust- 1060 acres  
HERCO- 70 acres (T.A. V)

\*\*\* 240 acres breaks down as follows:

Hershey Trust- 205 acres  
HERCO- 35 acres

**HERSHEY**  
Recreation and Conservation District  
*on the*  
**SWATARA CREEK**

**TRANSITION AREAS**  
AND  
**SPECIAL WOODLANDS DISTRICT**



PREPARED FOR  
**HERSHEY TRUST COMPANY**  
HERSHEY, PENNSYLVANIA



11-12-91

Approximate acreage breakdowns of the RCD are as follows:

DERRY TOWNSHIP	HERSHEY OWNERSHIP			OTHER OWNERSHIP	TOTALS
	BUILDABLE Yes	No	SUB TOTAL		
Core Greenway	160	635	795*	115	910
Transition Areas	520	210	730**	5	735
Woodlands District	105	135	240***	-	240
<b>SUBTOTALS</b>	<b>785</b>	<b>980</b>	<b>1765<sup>†</sup></b>	<b>120</b>	<b>1885</b>
<b>SOUTH HANOVER</b>					
Core Greenway	30	250	280	305	585
Transition Areas	125	50	175	10	185
<b>SUBTOTALS</b>	<b>155</b>	<b>300</b>	<b>455</b>	<b>315</b>	<b>770</b>
<b>EAST HANOVER</b>					
Core Greenway	20	190	210	70	280
Transition Area	155	60	215	-	215
<b>SUBTOTALS</b>	<b>175</b>	<b>250</b>	<b>425</b>	<b>70</b>	<b>495</b>
<b>EAST HANOVER, LEBANON COUNTY</b>					
Core Greenway	-	-	-	115	115
<b>SUBTOTALS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>115</b>	<b>115</b>
<b>NORTH LONDONDERRY, LEBANON COUNTY</b>					
Core Greenway	-	-	-	50	50
Transition Areas	5	5	10	-	10
<b>SUBTOTALS</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>50</b>	<b>60</b>
<b>SUMMARY OF ALL TOWNSHIPS</b>					
Core Greenway	210	1075	1285*	655	1940
Transition Areas	805	325	1130**	15	1145
Woodlands District	105	135	240***	0	240
<b>SUBTOTALS</b>	<b>1120</b>	<b>1535</b>	<b>2655<sup>†</sup></b>	<b>670</b>	<b>3325</b>

\* includes 2 acres of Hershey Foods ownership, remainder is Hershey Trust

\*\* includes 70 acres of HERCO ownership, remainder is Hershey Trust

\*\*\* includes 35 acres of HERCO ownership, remainder is Hershey Trust

<sup>†</sup> includes 107 acres of HERCO and Hershey Foods ownership, remainder is Hershey Trust

In the above table, land is considered not buildable if it is located in the official 100-year floodplain, is comprised of hydric soils, or possesses slopes exceeding 15% in steepness. For the purpose of these calculations, soils with hydric inclusions are presumed to be buildable.

**SECTION 5.0  
CONCEPT IMPLEMENTATION**

**5.1 Acquisition Recommendations**

The following properties and rights-of-way are recommended as high priorities for acquisition:

1. A 24.5 acre steep, wooded tract with approximately 2,000 feet of frontage on the Swatara just south of Camp Catherine because it includes a high quality woodland and is the only inholding blocking trail access along the entire south side of the stream. The principal reasons for recommending fee simple acquisition are to prevent inappropriate development (such as houses overlooking the stream or construction alongside the stream), control resource management activities (overlogging on these steep slopes would lead to erosion), and to unify ownership in this pristine area.
2. A trail easement of approximately 5,400 feet in length along the Union Canal towpath on the north side of the stream, about a mile and a half east of Sand Beach, that would connect Hershey holdings through six other properties. The Boy Scouts formally had a marked trail through this area, so there is some precedent for hiking use of the towpath.
3. A trail easement of approximately 1,750 feet in length through three properties for a relocated Horse-Shoe Trail about a mile and a third north of Sand Beach along Manada Creek. The Horse-Shoe Trail Club should be expected to help with this negotiation. Field work and adjustment of the suggested trail alignment may reduce the number of properties crossed to one or two.

These acquisitions could be made by the Hershey Trust, a land trust, or the entity that will ultimately own and manage the greenway. If these lands were to be acquired by the Hershey Trust, the acquisition strategy could include land swaps, or sale of land in other areas to reduce net costs and compensate for purchases here.

Secondary acquisition priorities should be lands that would serve to widen or lengthen the Core Greenway in critical areas and that would include the high value resources around which the core greenway was designed. Tertiary acquisition priorities would include buffer areas adjacent to the Core which are strongly related to it visually. It is assumed

that parties other than the Hershey Companies, namely, either a land trust or the ultimate owner of the greenway, will be the party that will pursue secondary and tertiary acquisitions.

## 5.2 Ownership Alternatives

For ownership of an open space system like the Swatara RCD, there are both public and private alternatives. Most of these options include transfer of title to an entity other than Hershey. It is assumed that no potential owner would be in a position to buy the entire RCD and that the conveyance would have to be based on other forms of compensation to Hershey. These are discussed in Section 5.3.1 and could include exchanging buildable density to other corporate properties via a TDR system, or through some variation of rural clustering techniques.

The following ownership and management options were considered:

### 5.2.1 Public Options

Township Greenway There appears to be great interest by Derry Township officials in additional facilities along the Swatara, including a creekside trail. Derry has a professional staff and a substantial budget for recreation. Derry seems willing to install and maintain facilities.

The disadvantage of Derry Township ownership is that some of the most interesting areas along the creek (including the Union Canal and an informal bird sanctuary just to the east of Union Deposit) are in other municipalities that do not have Derry's resources. In addition, potential for extending a protected corridor up and downstream would be greatly reduced by reliance on this single level of government. Townships are also limited in their ability to make substantial investments in greenway infrastructure and additional land acquisitions, if needed.

A possible variation on this theme would be to create an intermunicipal authority to own and manage the greenway. This idea would overcome the boundary limitations of Derry Township. However, differences in interest, capability and approach among the various municipalities would have to be addressed and overcome.

A County Greenway could overcome some of the geographic and organizational limitations described above. Dauphin County park officials are very interested in the Swatara. They have indicated an interest in extending the greenway downstream to the Swatara's confluence with the Susquehanna River. But because Dauphin County's park system is more advanced than that in Lebanon County, if ownership were at the county level, the project would probably not extend beyond Dauphin County, at least initially.

A State Greenway would offer the principal advantage of being unconstrained by the jurisdictional boundaries of townships and counties along the stream. The state would have the ability to create a greenway of much greater extent than might otherwise be likely and could bring to bear greater financial and organizational resources. Long linear parks of this sort have precedents elsewhere, including the Erie Canal Park in New York and the park along the Delaware Canal in Pennsylvania.

However, in discussions with the Director of the Bureau of State Parks, he indicated that the state does not have the money at the present time to own or manage this project. He was supportive, however, and indicated the Bureau might be willing to play some role, perhaps as a catalyst to extending the corridor beyond Hershey's holdings. In addition the state already owns some scattered lands along the Swatara that could be a part of some future, extended greenway.

#### 5.2.2 Private Options

A large, well-established nonprofit organization from outside the Hershey area, willing to undertake the stewardship responsibilities of a large preserve, would overcome the jurisdictional problems of local or county government ownership. However, relatively few nonprofits are prepared to undertake long-term stewardship responsibilities and even fewer are committed to providing public outdoor recreation opportunities. A nonprofit would also typically require substantial endowment to ensure that funds were available for the permanent care of the Swatara RCD. Such organizations typically seek endowments large enough that annual operating expenses could be covered by spending only the interest earned by the endowment account.

Candidates include the Chesapeake Bay Foundation (CBF), the Western Pennsylvania Conservancy and the Natural Lands Trust.

A locally based nonprofit could be created specifically for this project. A "Swatara and Union Canal Conservancy" or land trust would offer the advantage of being highly focused, but would have the disadvantage of being inexperienced. A new nonprofit would also require substantial funding to commence operating in addition to the same endowment that an outside nonprofit would need.

The Hershey School could continue to own the lands along the corridor, with conservation easements held by a land trust or conservancy to ensure long term protection of the environment. If this option were selected, it would be highly desirable that a management entity be created to oversee design, construction and maintenance of trails, facilities and natural areas within the RCD and to pursue ways to expand conservation and recreation uses both up and downstream. There may be some concern over liability issues related to allowing the public on this land. For information regarding these issues, please see the Appendix, "Legal Issues Affecting Open Space."

Combinations of the above alternatives could provide other possibilities. For instance, a nonprofit might own the land and care for the natural areas, with a recreational program run by Derry Township and an environmental educational program offered by another non-profit with expertise in that field.

Phasing implications are also important. A nonprofit might be an interim owner until enough land had been transferred to turn the whole thing over to the county.

### 5.2.3 Recommendations

In this situation, the best solution might be for a combination of parties to own, manage, and seek to extend the Swatara Greenway both up and downstream. Within Dauphin County, the county parks department appears to be the most logical candidate for overall ownership and management of the greenway system, especially in light of their interest in extending the greenway downstream. County ownership would provide continuity across township lines. The emphasis of county management should be on a regional trail system and stewardship of the resource. A condition of county ownership should be that the policies, facilities and programs called for in this master plan be implemented.

Within Derry Township, it is recommended that the municipality manage the small nodes of active recreational facilities, especially the sites with athletic fields. This

could be accomplished either through a long-term lease (25 years would be a suggested term) or preferably by a conveyance of title, with trail easements to the county where trails cross township lands.

Further discussion should be held with both the township and county to determine their desire and capability to install, maintain and manage specific facilities described in this master plan. It may be, for instance, that the county would be unwilling to install paved bicycle trails, while the township might be eager to do so. In that case, an agreement should be sought to allow the township to enhance the overall greenway in that fashion. A permanent easement would be an appropriate means of accommodating township participation in the trails component of the concept, as long as the township adhered to overall design standards for signage, parking, etc. Similarly, provision for other facilities, such as camping and an environmental education center, should be worked out in this manner. There may also be political reasons for Derry to have control over certain facilities other than just the sites with athletic fields.

In Lebanon County and upstream, it is recommended that the state's offer to act as a catalyst for greenway extension be accepted. A citizen's group active in protecting the Swatara should also be enlisted to help in this effort. This project could provide an opportunity to create a Lebanon County Recreation Department or a local land trust dedicated to open space preservation along the Swatara.

Ownership of the overall greenway by a local land trust would be the preferred alternative if the county were unable to accept ownership. It would be desirable for that land trust to work out arrangements for other parties (such as the townships) to install, maintain and manage recreational facilities and trails. The Natural Lands Trust would be able to help in setting up a local group, but its funding would have to be assured and would probably have to be raised locally. The Hershey Organizations would have to determine if they were interested in funding such a venture. If they were, one possible source might be the normal charitable giving programs of the Hershey Foods Corporation Fund. Other land trusts have started with corporate funding. A certain number of board members might be appointed by the Hershey Companies initially.

It may make sense to phase land transfers to the nonprofit over a period of years, as it gains experience and raises operational monies. On the other hand, if the Hershey Companies were in a position to fully fund the program from

the start, an experienced staff could be hired and a full transfer could be made within a fairly short period of time.

### 5.3 Financial Implications

#### 5.3.1 Compensation for Dedicating the Swatara RCD

The fiduciary responsibility of the Hershey Trust as administrator of lands owned by the Hershey School requires that consideration be given to ways in which the School can be compensated for setting aside lands in the Swatara corridor. This compensation can take any of eight forms - seven of which result in some real, measurable benefit to the School and one of which probably does not.

1. Land Sale for Park Purposes: As discussed in Section 3.2.2, while it is unlikely that in the present economic climate that any public agency would be in a position to buy any substantial section of the proposed greenway, certain agencies might, over a length of time, be willing to buy certain small areas.
2. Transfer of Development Rights (TDR): The second form of compensation could be through TDR, discussed in detail in Appendix A. This method has the benefit of being easily valued, i.e., each acre dedicated will be worth so many residential units or square feet of commercial space. This ability to calculate values allows decisions to be more easily rendered.
3. Density Exchange Option (DEO): This technique is similar to TDR but does not require the designation of sending and receiving zones. Instead the owners of two parcels agree to move development density from one to another. A proposed DEO program in Howard County, Maryland gives bonus units as an incentive for utilizing this technique. The Hershey Organizations have the benefit of owning enough land not to have to negotiate with other landowners. However, this technique would require new local ordinances.
4. Open Space (Rural Cluster) Development: This technique involves the design of subdivision layouts wherein houselots are grouped in a manner which permits a significant proportion of the parcel to remain unbuilt, to protect important natural resources, or rural character, while allowing the full number of legally permissible dwelling units to be located on less sensitive parts of the property. In this situation, the

open space would be in the greenway. This technique may be particularly applicable to some of the larger Hershey land parcels which extend from the stream (where the open space would be) all the way out to major highways (where the development would be).

5. Bargaining Chips: In the context of proposals for new development elsewhere on Hershey lands, the Hershey Organizations might agree to dedicate a certain amount of greenway in exchange for a specific approval. This would be over and above any required open space requirement that might apply.
6. Sale of Agricultural Easements: As described in more detail in Section 7.2, Hershey could sell easements on portions of its land under the Dauphin County Agricultural Conservation Easement Program. Unfortunately, since this is a competitive program, there is no guarantee that a specific parcel would pass the criteria established by the County Agricultural Land Preservation Board. Current estimates are that the program will pay between \$800 and \$1200 per acre. Because the county takes into account the likelihood of development of nearby lands, this method may be more suitable to the north side of the Swatara than the south.
7. Increase in Property Values of Adjacent Lands: As discussed in Section 4.2.4 above, land values have been shown to increase near protected open space. Given the potential scope of the project under consideration, and the fact that the Hershey Organizations would own many thousand of acres near the greenway, substantial benefits could result from creating the greenway.
8. Unconditional Gifts: The land for the greenway could simply be given without conditions. Obviously, the only compensation that could be counted on in this case would be goodwill, since the Hershey School, as a nonprofit itself, cannot benefit from charitable contributions. However to the extent that HERCO or Hershey Foods is the donor of lands, there is the potential for tax benefits. It may also be that there would be some potential for the School and either of the other companies to swap land and have the profit-making entity donate land for the greenway in order to take advantage of tax benefits. This scenario deserves further investigation.

5.3.2 Capital and Operating Costs

The Natural Lands Trust has made some rough, order-of-magnitude estimates of capital and operational costs of the RCD. These are presented in more detail in Section 6.4. Assuming the county and municipal governments are the owners and operators of the greenway, they should bear the burden of these expenses.

Capital Expenses for Facilities are broken down by phase as follows:

Phase 1.....	\$ 426,000
Phase 2.....	228,000
Phase 3.....	978,000
-----	
Grand Total.....	\$1,632,000

(These costs exclude the athletic fields at Boathouse Park and Old Route 39)

Capital Expenses for Equipment such as vehicles, mowers, tractors, etc. are estimated at \$150,000. These should be purchased by the end of Phase 2.

Annual Operating Expenses once facilities are fully operational are estimated as follows:

Salaries and Benefits.....	\$ 115,000
Property Management Expense.....	25,000
Reforestation and Meadow Establishment.....	33,000
Contingency of 15%.....	25,950
-----	
Grand Total.....	\$ 198,950

Clearly, if a land trust were to be the overall owner of the greenway, it would have to severely cut back on the recreation program or obtain the cooperation of other parties, such as local government, to construct and operate as many of these facilities as possible.

5.3.3 Special Requirements for Non-profit Ownership

An identifiable and stable funding source is vital to the long term viability of the project. If a conservancy or land trust is established to manage and expand the Swatara RCD, that conservancy would require a combination of sufficient endowment income and current contributions to cover expenses. Financial stability would enable the conservancy to attract competent staff, directors and other volunteers to develop and effectively implement its programmatic goals.

Endowment funds should be managed to provide an appropriate balance between needs for current income and long-term asset growth. Current income would be required to cover:

1. Ownership costs such as real estate taxes and property and liability insurance
2. Stewardship costs including property and facilities maintenance, plantings, and equipment repair and replacement.
3. Programmatic costs relating to community outreach and expansion of the RCD.
4. Administrative costs such as adequate liability and Directors and Officers insurance, legal and audit fees, and fund raising and communication with constituents.

In addition to these current income requirements, a contingency fund should be available to cover the repair or replacement of major equipment or facilities.

#### **5.4 Project Phasing and Implementation**

Some important issues related to phasing of the Swatara RCD are discussed below.

Linkages to Development Approvals: If a portion of the greenway is to be used as part of a TDR, DEO or other development related transaction, then that land area will need to be held out of the greenway until the appropriate credits and approvals are obtained, or negotiations concluded.

Public Relations At some future date, the Hershey Companies may find it advantageous to make a significant land donation in the RCD. The Trust is not in a position to make judgments related to the larger public relations issues of Hershey. Obviously, however, advantage could be taken of the generosity and public benefit of creating a Swatara preserve.

Funding Constraints No land should be transferred until the future owner has sufficient funding available to ensure the proper management of the RCD. This by itself may necessitate a phased approach.

Ownership If the owner is to be the county, the transfer could occur at one time. If it is to be a nonprofit group, transfer would be largely dependent on the financial and management capabilities of that organization.

Clearly, a plan for implementing a Recreation and Conservation District along the Swatara is dependent on many other factors. Once the RCD scheme has been endorsed by the Hershey Companies and, in particular, decisions on ownership have been made, an action plan for implementing the project should be developed.

**SECTION 6.0**  
**FACILITIES AND ACTIVITIES WITHIN THE RCD**

This section of the study provides recommendations to meet those programmatic and management objectives defined in the goals and objectives section. Recreational facilities designed for the corridor should focus on the lineal nature of the resource through a system of trails as well as water facilities. They should be designed to enhance the natural amenities of the corridor and to provide the user an opportunity to get away from the "hustle and bustle" of daily life in a tranquil and natural setting. More active recreational facilities are not totally inconsistent with this concept; however, care should be taken to their placement so that they can be adequately removed and/or screened from the corridor so not to detract from the objectives noted above. From a management prospective, it is recommended that the nodes of active recreation facilities be managed by the townships while the more passive trail and water resource facilities be managed by another entity.

**6.1 Phasing Plan for Facilities**

The development of recreation amenities should be considered on a phased basis as demand and resources dictate. The following is suggested as a reasonable order in which to construct new facilities.

Phase 1 facilities would be designed to open the resource to the public on a low cost basis. Facilities recommended would include an unimproved hiking trail from High Meadows Campground to the Route 743 bridge on the north. This phase should also include rerouting the Horseshoe Trail on the south side of the Swatara as shown on the master plan. A natural walking trail on the canal towpath could be improved from Union Deposit to Sand Beach. In addition, modest family picnic areas could be designed at several nodes along the trail. Rest room and water facilities should be provided at the trailheads and at Boathouse Park. A signage system should be installed, and a brochure designed to provide a map and interpret the trail should be prepared.

Phase 2 facilities would expand and enhance the facilities installed in Phase 1. Canoe launch and take-out sites should be considered for the High Meadows Campground area and in a location near the Route 743 bridge. These should be very modest launch ramps with adequate parking. This phase would also entail the extension of a trail along the towpath of the canal from Sand Beach east to Route 743. An equestrian

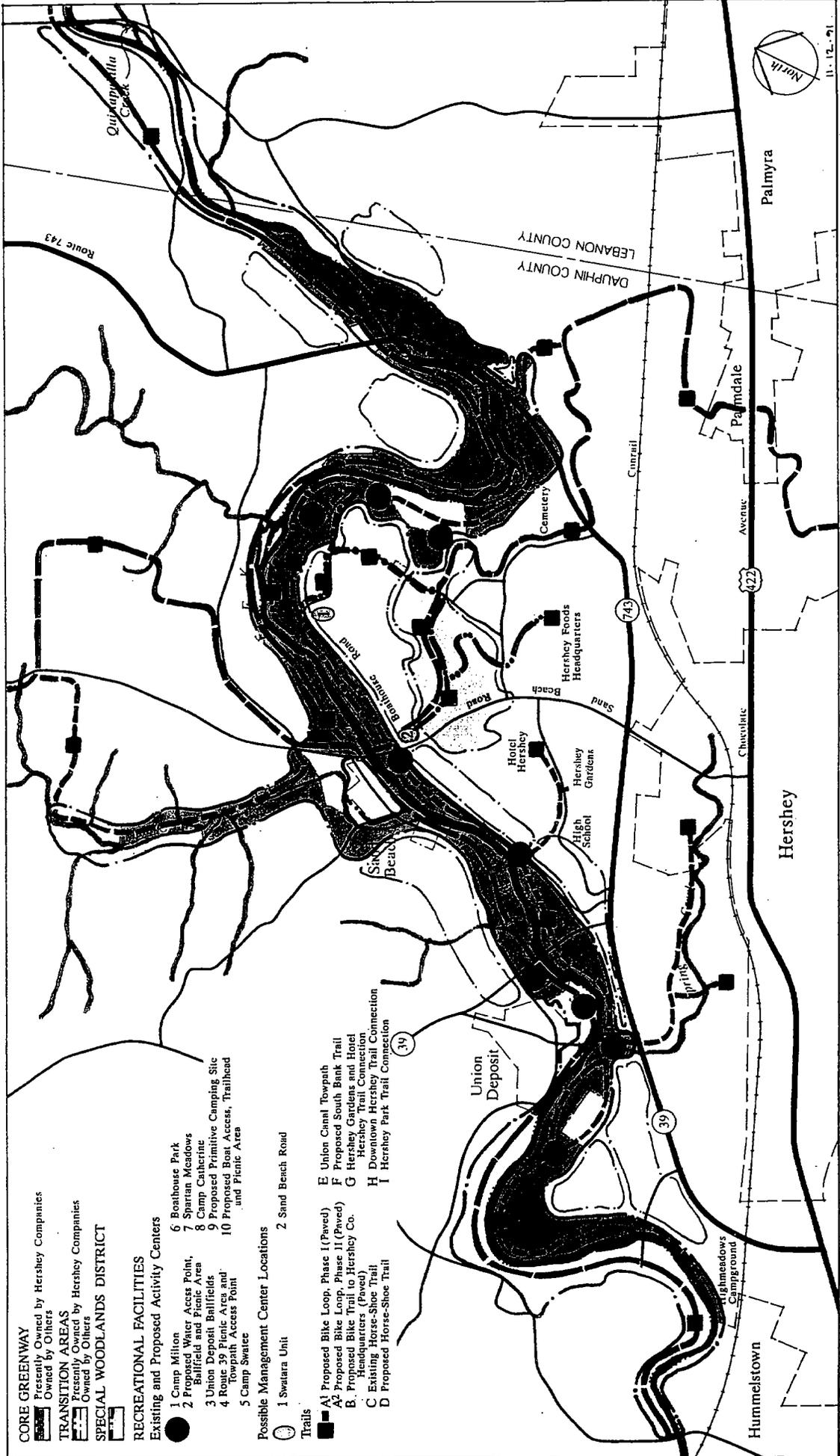
trail paralleling the hiking trail on the south side of the stream should be constructed where physically possible. This phase would also see the establishment of a management center, necessitating some basic improvements to the building(s), depending on layout and condition at the time.

Phase 3 should complete the recreation facilities designed for the corridor as well as provide for management and programmatic facilities. The towpath trail should be completed west of Union Deposit and east past Brindnagle's Church. The Horse-Shoe Trail relocation along the Manada should be completed, assuming the necessary trail easements are in place. Connector trails to Hershey Park and Hershey proper should be built. In addition, a paved trail to accommodate bicycles is recommended on the south side of the stream to extend from the Boathouse Park area north and east. Because of the cost of a paved trail this is designed to be built in two sub-phases. A connecting trail should be built to Hershey Foods new corporate offices as shown on the master plan. An environmental education center is recommended with the construction of a nature trail to support programmatic activities. It is recommended that the Swatara Unit be converted to accommodate management offices, maintenance facilities and storage, and the environmental center during this phase. The paved bike trail should be designed to accommodate the handicapped. Group camping facilities to accommodate Scout troops, church groups and other groups should be considered during this phase. One of the existing campsites should be considered for this purpose. In addition, several units of remote tent camping should be considered during this phase.

Phasing of Active Recreation Facilities: The construction timetable for the active recreation facilities should be consistent with the recreation and park master plan for Derry Township and current plans of East and South Hanover Townships. Three nodes of active facilities that could be managed by the township would consist of an area for ballfields near the old Route 39 bridge, expansion of the facilities at Boathouse Park, and camping and related activities at Camp Catherine. It is further recommended that Camp Milton and Camp Swatee be maintained by the Milton Hershey Schools for their use.

## **6.2 General Recommendations**

All three phases of development are recommended for the RCD; however, their implementation should occur incrementally over a period of time, depending upon the availability of capital and operating funds.



- CORE GREENWAY**  
 Presently Owned by Hershey Companies  
 Owned by Others
- TRANSITION AREAS**  
 Presently Owned by Hershey Companies  
 Owned by Others
- SPECIAL WOODLANDS DISTRICT**
- RECREATIONAL FACILITIES**  
 Existing and Proposed Activity Centers
- 1 Camp Milton
  - 2 Proposed Water Access Point, Ballfield and Picnic Area
  - 3 Union Deposit Ballfields
  - 4 Route 39 Picnic Area and Towpath Access Point
  - 5 Camp Swatze
  - 6 Boathouse Park
  - 7 Spartan Meadows
  - 8 Camp Catherine
  - 9 Proposed Primitive Camping Site
  - 10 Proposed Boat Access, Trailhead and Picnic Area
- Possible Management Center Locations**
- 1 Swatara Unit
  - 2 Sand Bench Road
- Trails**
- A1 Proposed Bike Loop, Phase I (Paved)
  - A2 Proposed Bike Loop, Phase II (Paved)
  - B Proposed Bike Trail to Hershey Co. Headquarters (Paved)
  - C Existing Horse-Shoe Trail
  - D Proposed Horse-Shoe Trail
  - E Union Canal Towpath
  - F Proposed South Bank Trail
  - G Hershey Gardens and Hotel Headquarters
  - H Downton Hershey Trail Connection
  - I Hershey Park Trail Connection

PREPARED FOR  
**HERSHEY TRUST COMPANY**  
 HERSHEY, PENNSYLVANIA



PRELIMINARY  
**MASTER PLAN**

**HERSHEY**  
 Recreation and Conservation District  
*on the*  
**SWATARA CREEK**

It would be prudent to focus initially on needs to: (a) enhance current facilities, (b) provide necessary signage and information brochures, and (c) develop park infrastructure to support recreation facilities.

Sites and activities that presently exist within or adjacent to the proposed Swatara RCD are consistent with its intent and should remain. These include Hershey Highmeadow Camp, Camp Milton, Camp Swatee, Boathouse Park, Spartan Meadows, and Camp Catherine. The present uses of these facilities would be enhanced by the addition of a trail system which would tie together the various facilities and environments and make accessible some very interesting areas, not easily reached at present.

### **6.3 Specific Recommendations**

#### **1. Trail Activities**

##### **a. Activity Description**

The proposed trail network will provide one of the principle means by which visitors will enjoy the Swatara. It has the potential to offer a variety of experiences for visitors of different ages, physical capabilities, and interests. Utilization of the trail system for short walks, longer hikes, environmental education, bicycling and horseback riding are expected to be a major focus for Swatara visitors.

##### **b. Facilities**

It will be desirable to design and maintain a trail network to meet different visitor needs. The most extensive type of trail throughout the RCD will be natural in appearance and suitable for walkers and hikers.

The trail should be 6 to 8 feet wide and should use the natural ground surface. Wood chips and drainage improvements should be placed to mitigate wet areas. The equestrian trail should be separated from the paved biking trail a minimum of ten feet, preferably with a vegetative buffer. As the Horse-Shoe Trail is relocated, consideration should be given to retaining the old trail to create an equestrian loop. The paved biking trail should be 8 to 10 feet wide with slopes generally no greater than 5%.

## 2. Picnicking

### a. Activity Description

Picnicking opportunities within the RCD should be designed to meet the varied needs of family picnickers. Picnicking sites should be selected in a manner which allows access to the stream yet is set back sufficiently so that they do not detract from the natural amenities of the stream corridor. Suggested sites are indicated on the Facilities Plan at locations 2, 4, 6, and 10. Picnicking should also be provided at the proposed Management Center, assuming it is located at the Swatara Unit.

### b. Facilities

Picnicking facilities should include improved sites for families. Picnicking units would consist of up to 20 tables with water, gravel parking area, rest rooms and grills. Composting toilet rest rooms which require electric service are recommended.

## 3. Special Winter Activities

### a. Activity Description

The RCD offers possibilities for cross-country skiing, sledding and possibly ice skating.

### b. Facilities

Ice skating on the creek should be permitted on a spontaneous non-promoted basis to avoid liability. Organized and promoted skating could be considered at Boat House Park but closely supervised by the township.

## 4. Playfields

### a. Activity Description

The RCD can provide multiple-purpose playfields to meet the needs of nearby communities for sports such as softball and soccer, touch football, and less organized activities such as frisbee and kite-flying. Suggested sites are by old Route 39 and Boathouse Park, where Derry Township has specifically indicated an interest in locating new playfields.

b. Facilities

These facilities should be set well back from the stream corridor, and if necessary, a vegetative buffer should be planted.

5. Canoeing

a. Activity Description

In addition to the ramp at Boathouse Park, two additional ramps should be installed as shown on the site plan. Care should be taken at the Meadows Campground to avoid conflicts with the camping activities there.

b. Facilities

The canoe ramps should be hard-surfaced and approximately 15 feet in width. Parking areas of 15 to 20 cars should be considered with the potential for expansion as demand increases. In addition, adequate space should be provided for a minimum of two spaces to accommodate a vehicle with a canoe trailer to handle group canoe activities.

6. Fishing

a. Activity Description

Access to the water should be the primary consideration in developing fishing facilities. Opportunities should be provided on both the north and south side of the stream at convenient locations from public roads.

b. Facilities

Fishing access will be accommodated at the water access and picnic sites.

7. Camping

a. Activity Description

Camp Milton and Camp Swatee should continued to be managed by the Milton Hershey Schools for their needs. Derry Township has expressed interest in managing Camp Catherine as a group camping facility. This is recommended. Since the High Meadows Campground already provides for formal family camping, this type facility

is not recommended; however, several remote primitive units would be recommended for small groups such as a Scout troop. The wooded area near Camp Catherine should be considered for this function.

b. Facilities

The remote unit would simply consist of 5 to 10 cleared areas for tents with a fire ring. Campers would be expected to carry in all water, food, and camping equipment.

8. Natural and Human History Interpretation

a. Activity Description

Natural and human history interpretation consist of educational experiences related to gaining a better understanding of the Swatara's natural and historic resources. Consideration should be given to planning interpretative activities for school children, families and adults, ranging from informal self-discovery experiences to guided trips.

b. Facilities, Materials, Equipment, Staff

Publications, self-guiding trails and outdoor exhibits are all helpful in managing an informal interpretive program and should be considered initially. A paved nature trail to accommodate the handicapped should emanate from the Swatara Unit. It should utilize the pond as well as the stream and other natural resources of the area. An environmental center using Swatara Unit facilities should be designed and operated to accommodate the general public as well as the needs of Milton Hershey School and the public schools. The center should be staffed by a full-time naturalist and part-time interpreters as required.

9. Signage

With the establishment of the RCD, it will be necessary to properly identify this new entity for its visitors and the surrounding communities. The construction and placement of consistent, attractively designed signs identifying major access points and boundaries should be accomplished.

## 10. Staffing, Supporting Facilities and Equipment

Staff and supporting facilities should be considered on a phased basis consistent with the phasing of the construction of recreation facilities on the corridor. Through Phase 1, staffing could be handled by the existing staff of the management entity selected to manage the corridor. With the completion of the Phase 3 facilities, it is recommended that a site superintendent, a minimum of two maintenance personnel, and a part-time ranger force be retained. Programmatic staff for the environmental center should be as noted above.

A management center utilizing the Swatara Unit should be established during the Phase 2 construction. This center would initially handle the maintenance and storage requirements that would begin in the Phase 2 management period. Offices for the site superintendent and park ranger force should be established during Phase 3 as well as the programmatic facilities as noted above. The maintenance facilities should be adequate to provide for storage of equipment and supplies as well as facilities for their maintenance. Maintenance equipment would consist of a pick-up truck, a small tractor with appropriate mowing attachments, and small equipment such as chain saws, weed eaters, and hand mowers. A moped, small motorcycle or all-terrain vehicle should be considered for patrolling the trail system.

All of the facilities considerations presented herein will be further evaluated in the development of detailed plans for the facilities within the Swatara RCD.

### 6.4 Preliminary Budget Estimates

#### 6.4.1 Capital Budget for Facilities

In line with the program described above, a capital budget for facilities has been prepared. Due to the large scale of the project and the current conceptual nature of facility location and specifications, the following estimates should be considered to be rough, order-of-magnitude estimates. Later phases of planning for the RCD will finetune these estimates.

**PHASE ONE**

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**Trails**

South Bank Trail (44,500 lf),  
relocated Horse-Shoe Trail (2200 lf),  
Towpath (Sand Beach to Union  
Deposit - 10,200 lf) \$ 50,000

**Three Picnic Areas**

Picnic tables (60), grills (30),  
parking (60 cars), grading, three  
restrooms (w/ 4 toilets each) 265,000

**Signage**

Information kiosks (5), directional  
signs (10), small trail signs (25),  
trail markers (2000) 30,000

**Brochure**

10,000

**Subtotal**

355,000

**Contingency (20%)**

71,000

**PHASE ONE TOTAL**

**\$ 426,000**

**PHASE TWO**

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**Two Boat Ramps**

Concrete ramps (2), parking (30 cars),  
grading, information kiosk (1) 55,000

**Trails**

Equestrian trail on south bank  
(10,800 lf), towpath (Rt 743 to  
Sand Beach Road - 18,800 lf),  
direction signs (1), small trail  
signs (10), trail markers (1000) 35,000

**Management Center**

Allowance to adapt structure for  
maintenance of Phases One and Two 100,000

**Sub-Total**

190,000

**Contingency (20%)**

38,000

**PHASE TWO TOTAL**

**\$ 228,000**

**PHASE THREE**

<u>Pedestrian connector trails</u> (compacted crushed stone) to downtown Hershey (4200 lf), Hershey Park (4200 lf), Hershey Gardens (3500 lf); pedestrian crossing signal at Rt 39, information kiosk (1) at Hershey Park, direction signs (3), small trail signs (3)	85,000
<u>Union Canal Towpath</u> Rt. 743 to Quittapahilla (11,700 lf), Union Deposit to Hummelstown (17,300 lf), direction Signs (2), small trail signs (2), trail markers (1000)	30,000
<u>Paved Bike Trail</u> First Phase (18,000 lf @ \$165,000) Second Phase (11,500 lf @ \$130,000)	295,000
<u>Primitive Camping</u>	5,000
<u>Environmental Education Center</u> Allowance for renovations to Swatara Unit for interpretive center, paved nature trail, offices, parking, and maintenance center	400,000
<u>Sub-Total</u>	815,000
<u>Contingency</u>	163,000
<b>PHASE THREE TOTAL</b>	<b>\$ 978,000</b>
<b>TOTAL FOR THREE PHASES</b>	<b>\$1,632,000</b>

**Sources for Cost Estimates**

Kerr's Cost Data for Landscape Construction, 1991,  
11th Edition, Norman L. Dietrich, ed., Van Nostrand  
Reinhold, New York, NY

Means Site Work Cost Data, 1991, 10th Edition,  
Kornelis Smit, ed., R.S. Means Inc., Kingston, MA

#### 6.4.2 Capital Expenses for Equipment

Estimated equipment needs for proper management of the Swatara include:

1. Two 50 horsepower Tractors with two brush hogs, tree planter, tree auger, front end loader, post driver
2. Hustler mower
3. Four-wheel Pickup with snowplow and trailer
4. All-Terrain Vehicle
5. Miscellaneous small equipment (chain saws, backpack sprayers, small mowers, etc.)

This equipment should be purchased by the end of Phase 2. The total estimated cost is \$150,000.

#### 6.4.3 Annual Operating Expenses

Phase One: Estimate of total operations are as follows:

Normal operating expenses	\$ 13,000
Reforestation <sup>1</sup> and meadow establishment <sup>2</sup> cost	33,000
<b>TOTAL</b>	<b>\$ 46,000</b>

Phase Two: Estimate of total operations are as follows:

Normal operating expenses	\$ 49,000
Reforestation <sup>1</sup> and meadow establishment <sup>2</sup> cost	33,000
<b>TOTAL</b>	<b>\$ 82,000</b>

Phase Three: Estimates for full implementation of the program are as follows:

<u>Salaries and Benefits</u>	
Superintendent	\$25,000
Environmental educationalist	18,000
Part-time interpreters	8,000
Part-time ranger	5,000
Two maintenance people	36,000
Benefits (at 25% of salary)	23,000
<b>Subtotal</b>	<b>\$115,000</b>

<b>Salary Subtotal</b> (from previous page)		<b>\$115,000</b>
<u>Property Management Expense</u>		
Utilities	\$ 6,000	
Supplies	5,000	
Miscellaneous repairs	4,000	
Equipment	1,500	
Equipment repairs	2,500	
Trash removal	3,000	
Insurance		
Vehicle	500	
Liability	1,000	
Miscellaneous	1,500	
<b>Subtotal</b>		<b>25,000</b>
Reforestation <sup>1</sup> and meadow establishment <sup>2</sup> cost		33,000
<b>Subtotal</b>		<b>173,000</b>
<u>Contingency (15%)</u>		<u>25,950</u>
<b>GRAND TOTAL</b>		<b>\$ 198,950</b>

- <sup>1</sup> Reforestation cost depends on such factors as deer population, extent of exotic vegetation, and success of natural regeneration. If all factors are favorable, cost can be negligible. If all are negative, requiring electrified fencing, tree tubes and regular mowing to establish trees, costs can be as high as \$1,000 per acre. It is recommended that a baseline study be conducted early (at a cost of approximately \$40,000) to establish the most economical method to achieve a viable stand of new forest. An estimated 550 acres is recommended for reforestation. The above costs assume reforestation is conducted over a ten year period at an average cost of \$500 per acre.
- <sup>2</sup> Meadow establishment costs range from zero, if the area is already a healthy pasture or hay field to approximately \$100 per acre for discing and seeding. If herbicides are required, those costs would be additional. If a persistent herbicide like atrazine has been used to maintain crops, it may be necessary to phase in meadows over a period of several years while the herbicide works its way out of the system. An estimated 260 acres is recommended for meadow establishment. The above costs assume meadow establishment is conducted over a five year period at an average cost of \$100 per acre.

## SECTION 7.0 STEWARDSHIP

Whether the Swatara RCD is privately or publicly owned, special attention needs to be paid to stewardship, that is, the management of the land and all its resources. Proper stewardship of the Swatara corridor will perpetuate and improve its natural resources as well as the recreational facilities provided. Sensitive site conditions inherent to much of the stream corridor, such as steep slopes, wetlands and a wide floodplain, underlie this need.

It is often mistakenly assumed that land, once set aside, will take care of itself. However, given the increasing natural and human stresses that are visited on the land, it is rare that a natural area such as the Swatara corridor will persist through a hands-off approach.

Good stewardship can also enhance wildlife habitat and perhaps reduce management costs through changes in present management strategies.

An important initial step would be to undertake a baseline study of the diversity and health of this ecosystem complex. This will provide a benchmark against which to measure the success of future stewardship activities. Ideally, detailed land management plans should then be drawn up to guide stewardship of the lands within the RCD.

### 7.1 Stewardship Guidelines

A map with stewardship recommendations for specific areas owned by the Hershey Organizations has been prepared as part of this study. Five different prescriptions for vegetative cover have been recommended. Three of these - existing woodlands, new woodlands, and meadows - will be naturalistic in appearance and function. The two others - agricultural and turf areas - will be more obviously artificial and will require a higher level of maintenance. Generalized stewardship guidelines for these areas follow:

Existing Woodlands provide crucial benefits to the physical structure and biology of the stream corridor including providing habitat for wildlife. Most importantly, trees stabilize stream banks and protect stream biota from the adverse effects of thermal, sediment, and chemical pollution through shading and the filtration of overland water flow. Careful planning is needed to insure that these functions are not compromised by existing problems or proposed uses. A

detailed survey of the woodlands is recommended to determine the presence of any natural (disease, invasive plants, excessive browse, gullying) or manmade (over cutting, vehicular damage) forces which may be jeopardizing the current or future health of the woodlands. Measures needed to correct present or prevent future problems should be undertaken promptly. Any proposed recreational uses of the woodlands should be located so that it does not impact the stream bank nor any large trees along the bank. Active forest management (which could include selective timber harvesting) is recommended; however, consideration should be given to permitting a section to mature to an old growth forest for environmental interpretation purposes and to provide a habitat which has become extremely rare.

During the course of this study a large wooded area was noted north of Sand Beach along Manada Creek. It is recommended that these existing woodlands be the subject of further study, as they appear to be of significant size and ecological importance. No more specific recommendations are made at this time, however, because at least half the woods are not in Hershey ownership.

New Woodlands are recommended to restore the floodplain forest, create wooded buffers along stream banks, protect drainage ways which are currently in agriculture, reforest existing openings in predominantly wooded areas, and provide ecological connections between existing wooded areas (such connections create corridors for wildlife to move back and forth between larger wooded areas). These areas will over time provide the same benefits as existing wooded areas. In the meantime, while the young forest grows, it will provide an entirely new habitat, attracting and different wildlife species than would otherwise be present. New woodlands will require some management actions over the years, including planting of desirable native trees and shrubs, control of undesirable exotic plants (such as multiflora rose and honeysuckle), efforts to control deer browse, and, ideally, measures to enhance wildlife habitat. It is recommended that a baseline study be conducted to determine the most economical method of accomplishing good reforestation.

Meadows which are fields of grasses and wildflowers mowed once or twice annually, can support both recreational activities and wildlife while helping to preserve stream quality. Playing fields directly adjacent to the stream need to be buffered from the stream by a band of trees, shrubs, or tall grasses and wildflowers to prevent damage to the streambank by mowing equipment or recreational uses. The management of open fields as perennial meadows will provide habitat for many mammal and bird species (Eastern

meadowlark, bobolink, grasshopper sparrow) - many of which have been declining in numbers due to the decrease in this particular habitat. Meadows also provide an aesthetic benefit as various wildflowers and different grasses colonize old fields, displaying a constantly changing scene as the seasons progress. Trails through this diverse environment expand the hiking experience and contrast with wooded areas. The annual mowings needed to maintain fields in this way can greatly reduce labor and equipment costs over that which is required for turf.

Turf, i.e., mowed grass, is recommended only for those area where there are existing or proposed buildings or recreational facilities. In general, the area in turf should be minimized because of high maintenance costs and the negative environmental consequences of fertilizer and pesticides.

Agriculture within the RCD is consistent with the aesthetic and open space goals of the plan. Prudent pesticide and herbicide controls, however, should be effectuated.

## **7.2 Government Programs Which Support Stewardship Activities**

Several federal and state programs exist which offer financial incentives to preserve open space now managed as forest or farmland. One program seeks to set aside farmland to prevent the loss of topsoil from highly erodible sites. Another encourages nonindustrial private landowners to actively manage their woodlands. Both programs are administered by the Agricultural Stabilization and Conservation Service (ASCS), a department of the USDA. A third program, funded by state appropriations, protects farmland from development through the purchase of development rights.

The Conservation Reserve Program (CRP) effectively removes highly erodible land from agricultural production. Enrollment in the program requires that the landowner plant and maintain a permanent cover (either perennial grasses or trees) for 10 years. An annual rental payment is sent to the landowner in October. The program also pays 50% of the cost to establish the permanent cover. To be eligible for the program the land must meet the following three major requirements: (1) be a predominantly highly erodible field; (2) have been planted to an agricultural commodity in 2 of the 5 crop years, from 1986 to 1990; and (3) be physically possible to be planted in the normal manner, at the time of enrollment, to an agricultural commodity. Priority for

final approval is determined by the landowners bid (the amount the landowner is willing to "rent" it for) and the number of environmental benefits, including watershed protection and wildlife habitat, that the land provides. The next sign-up will be held in June of 1992. This program could be used to help establish meadows in areas that were formerly farmed. Contact the county ASCS office for further details.

The Stewardship Incentive Program (SIP) was created by the the 1990 Farm Bill. This program encourages long-term stewardship by assisting woodland owners to actively manage their land for a broad range of resources. The goal for the 20 Northeastern states is to place 10 million acres under management by 1995. Management objectives range from traditional timber production to enhancement of aesthetics, wildlife habitat, or biodiversity. Practices which are cost-shared by the program include management plan development, reforestation, riparian and wetland protection, and wildlife habitat enhancement. To qualify for the program the land must have existing tree cover or other woody vegetation, or be suitable for growing such vegetation, and be owned by a private individual, group, association, corporation, Indian tribe, or other private entity. Eligible landowners must own at least 5 but not more than 1000 acres (authorizations can be obtained for exceptions of up to 5,000 acres for certain organizations) of qualifying land. For additional information contact the district forester.

The Farmland Easement Program in Pennsylvania was created in 1987 when state voters passed a \$100 million bond act to fund a purchase of development rights (PDR) program. This program pays farm owners for the sale of development rights either in perpetuity or for 25 years (Dauphin County's program will only buy perpetual easements). Although the primary goal of PDR programs is to protect the best and most productive farmland from development, it also helps to keep farmland affordable for future generations and provides working capital to keep farms financially stable. The Dauphin County program has been approved and funded initially by the State for \$900,000. A second year (1992) grant is expected. To qualify, the farmland must be within an agricultural district and must successfully compete with other farms according to criteria set by the Dauphin County Agricultural Land Preservation Board. Currently only East Hanover township has an approved Agricultural Security District, a prerequisite for participating in the co-program. The Hershey Trust should consider working with Derry and South Hanover Townships to create township districts. Each district must consist of 500 acres of farmland as a minimum.

Other Agriculture Stabilization and Conservation Service Programs include various cost-sharing programs to assist farmers. These programs are essentially designed to assist farmers in reducing soil erosion. They are briefly described as follows:

1. Farmland Improvement Program

This program involves the installation of various farming practices such as strip cropping, tile drainage system, sod waterways, and diversion construction. This program will reimburse farmers between 50 and 75 percent for the cost of installing these improvements.

2. Obstruction Removal Program

This program entails the removal of wooded areas, fence rows, boulders, etc. from fields. This program will reimburse the farmer 50 percent for the cost of the improvements.

3. Permanent Vegetative Cover

This program entails seeding, etc. to provide a grass cover on pastures and other areas. The program will provide 75 percent reimbursement for the cost of the improvements.

For more information on these programs contact:

Ruth Tallman, Director  
Dauphin ASCS  
1451 Peters Mountain Road  
Dauphin, PA  
(717) 921-2378.

**SECTION 8.0**  
**CONCLUSIONS AND OVERALL RECOMMENDATIONS**

**8.1 Conclusions**

The Swatara, with its rich cultural and natural heritage, is potentially a highly significant resource to the Hershey Organizations and to the surrounding communities. The Swatara corridor also offers a unique opportunity. Here is one of a very few situations where a single landowner controls such extensive holdings along a major stream so deserving of protection and at the same time has land in locations that are appropriate for intensive development.

In the absence of a specific plan and strategy for the corridor, the Swatara's assets are likely to be compromised by conventional subdivision and land development.

But by utilizing innovative planning techniques such as Transfer of Development Rights and by taking advantage of the tendency for land around greenways to increase in value, a Swatara RCD could meet Hershey organizational goals and also benefit the surrounding communities.

This will not necessarily be an easy task, but it should certainly be technically and economically feasible. The greatest difficulties to be encountered are likely to be in marketing the ideas and convincing local government of the need to enact regulations which permit the concept to be implemented. If local government can be brought into the process, however, there is potential for a powerful private/public partnership to make this concept a reality.

**8.2 Recommendations for Plan Implementation**

The concept presented in this report appears to the Natural Lands Trust to represent the most logical approach to a Swatara RCD at this time. Before proceeding further, there is clearly a need for internal review and approval of this concept or some variation on it by the Hershey Trust. Any approval should be contingent on developing an implementation strategy which meets Hershey's interests.

Assuming a concept is approved, an implementation strategy should be developed using the techniques described in this plan. The strategy should have enough flexibility so that it is not completely dependent on a single technique.

Detailed discussions with county and township officials should take place regarding their role in a future greenway and as part of a process to refine and negotiate future ownership and management arrangements. At the proper time, the Bureau of State Parks should be enlisted to help in the process.

More detailed planning will be required to implement the concept. This would include obtaining larger scale, more accurate site data, especially topographic information, with which to test the plan, verify facility locations and layouts, and in general refine and strengthen individual elements of the plan. Additional research is also needed in certain subject areas - historic and prehistoric resources, and the condition of the existing ecosystem, for instance. In some locations, analysis of the impact of innovative regulatory techniques would be useful in developing implementation strategies.

It is assumed that implementation will require several years. During this period, a stewardship strategy should be slowly introduced to make progress toward the ultimate plan, which would rely on existing budgets and staff and not require significantly higher operating expenses.

## **APPENDICES**

## APPENDIX A

### TRANSFER OF DEVELOPMENT RIGHTS: CONSERVING LAND WHILE PRESERVING EQUITY

The rights which property owners possess are both multiple and separable. Landowners can sell, trade or donate certain rights without giving up their actual ownership. One of the most common examples involves easements leased or sold to utility companies to cross private land with transmission lines or underground mains. Coal companies have often sold land while retaining mineral rights, and many ranchers in the West lease grazing rights from the US Bureau Land Management. Property rights encompass many different rights which can be sold to interested parties such as the right to cut timber, to direct stormwater drainage flows, or to develop with buildings.

Of these, the most valuable rights typically pertain to construction and development. Many well-established agricultural preservation programs purchase development rights from farmers for the fair market value difference between developable farmland and undevelopable farmland (such as that found in floodplains). This is an extremely costly process, as the difference to be paid is often between 80% and 90% of the value of a developable parcel to a subdivider.

The same land conservation goals can be attained in a much less expensive manner when development rights are transferred and used elsewhere, as compared with being purchased and extinguished. The right to build 20 homes on land zoned for residential development can be bought by a developer and applied to another parcel in a different part of the municipality, provided that local ordinances have been amended to permit this type of "density exchange."

In order to provide permanent protection to rural land from which rights have been purchased, TDR ordinances typically state that such land may never be developed in the future. In other words, once development rights are purchased and transferred, they do not regenerate on the original parcel for a "second harvest." The greatest selling point about TDR, when it is explained to local officials and the general public, is that it creates permanent open space, as a trade-off for allowing increased density elsewhere. Such ordinances typically offer economic incentives to encourage these transactions, because they are an effective way of deflecting potential development from environmentally sensitive or valuable areas, and attracting it to more appropriate locations served by public utilities (water and sewer lines), where the increased density can be accommodated.

TDR ordinances normally designate "sending zones" where development rights are purchased, and "receiving zones" where they are utilized. Sometimes these zones are delineated on a map, but another alternative is for the ordinance to list criteria which must be met for rights to be sold, and other criteria which must be met for rights to be used to create the increased density. The latter approach is often preferable, because people living near a proposed "receiving zone" will predictably object to increased density near them, placing political pressure on elected officials to reject such ordinance amendment proposals. Criteria for "sending zones" would emphasize those elements which the law seeks to protect (farmland, significant wildlife habitat, scenic views and rural landscapes, outdoor recreational opportunities, etc.). Criteria for "receiving zones" often specify the availability of public water and sewerage and might also include mention of proximity to other types of infrastructure (schools, adequate roads, etc.)

Various methods can be used to determine the number of "development rights" which owners of parcels in the "sending zones" are entitled to sell. In the country's most well-established TDR program, in Montgomery County, MD, the simplest method is used, wherein parcel acreage is divided by 5 (because the underlying zoning establishes 5-acre minimum houselots). On a county-wide scale the percentage of land which is wet or flood-prone (and therefore typically deemed to be unbuildable) is relatively small, and county officials are not bothered by the occasional case where a farmer with extensive flood-prone lands is able to obtain more development rights through TDR than he would have been able to get through actual subdivision. The long-term benefits to the county's agricultural and open space protection program are sufficiently great that occasional "bonuses" to certain farmers are not an issue.

In smaller jurisdictions (e.g., township level) it may be fairer to calculate transferable density on a rough approximation of the number of houselots which could be created under regular subdivision regulations. In more advanced communities, minimum houselot dimensions are subject to further qualifications to prevent a five acre lot being created with only one-half acre of flat dry land. Typically such ordinances will specify that at least 40% of a five-acre lot must be flat and dry. Buildable percentages generally increase as lot size decreases (60% of a one-acre lot, and 80% or 90% of a half-acre lot would be required to be flat and dry, for example).

In the context of five-acre zoning, it would be difficult to argue any convincing case, based upon public health, safety and welfare reasons, to require that more than two acres of upland are needed for a dwelling, a well, and a septic

system. Five-acre lots which may measure 200 feet by 1000 feet, for example, could be upland for the first 400 feet of depth, and floodplain thereafter, as the property continues down a sloping field. The fact that 3/5 of the land, comprising the back end of the lot, may flood once a century, should not be a public concern, as long as structures and filling are not allowed there. In a situation such as this, transferable density would be calculated by preparing a conceptual plan showing how a property could feasibly be subdivided. In those instances where a parcel may be thought to contain a large amount of soil unsuitable for septic systems, the planning commission could require that test pits be dug on a small proportion of the proposed houselots to demonstrate their buildability. (Township officials should select those lots to be tested, based upon their analysis of published soil maps and characteristics of the property.) This is the fairest method of density calculation. Simply dividing the tract size by minimum lot size can be overly generous to certain landowners. Simply subtracting all wetland and flood-prone land from a parcel and then dividing the remainder by the minimum lot size can be grossly unfair to other landowners (who could demonstrate a greater number of houselots viable under a conventional subdivision approach).

Although TDR has most often been used to protect farmland from intrusive residential subdivisions, it has also begun to be used to minimize or eliminate new development along certain highway corridors, and to focus new construction at particular nodal locations (such as near major intersections). Such approaches are designed to reduce the potential for "strip commercial development" while recognizing the equity of people owning land along the highway.

It is also possible to transfer density from residentially zoned areas to commercially zoned areas. In such cases a conversion factor is specified in the ordinance, stating that each dwelling unit is equivalent to a certain amount of commercial or industrial floorspace. This is a particularly appealing concept from a municipal tax viewpoint, because the potential number of new houses (typically representing a net tax drain) is reduced, while commercial and industrial properties (which do not directly heighten the burden on local schools) increase.

One of the obstacles to TDR becoming more frequently used is, fortunately, not a major factor in Hershey. That obstacle involves the additional time and effort required of developers to put together two land deals simultaneously. Where a large private landowner possesses developable properties in different locations (with the appropriate characteristics for sending and receiving zones), such transactions are unnecessary.

APPENDIX B  
DAUPHIN COUNTY AGRICULTURAL LAND PRESERVATION BOARD  
Agricultural Conservation Easement Program  
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## I. Introduction

Dauphin County is developing at an unprecedented rate. The 1987 Farm Census indicated that 11,129 acres of farm land were lost in a five year period. Analysis by the Open Space Task Force showed that in 1989, 20.25 acres of land were subdivided in the County each day. Unfortunately, much of the prime agricultural lands that will be needed for food production for future generations are also the lands that are most easily developed. The Agricultural Land Preservation Board is interested in preserving a resource that once lost will never be regained.

In January 1990 the Dauphin County Commissioners appointed a seven member board, The Dauphin County Agricultural Land Preservation Board, to develop and administer a program to preserve agricultural lands in Dauphin County.

## II. Purpose

The Dauphin County Agricultural Land Preservation Board has as its purpose to protect viable agricultural lands by acquiring agricultural conservation easements which prevents the development or improvement of the land for any purpose other than agricultural production and to encourage land owners to make long term commitment to agriculture by offering them financial incentives and security of land use.

1. To provide compensation to landowners in exchange for their relinquishment of the right to develop their private property.
2. To protect normal farming operations in Ag Security Areas from incompatible non-farmland uses that may render farming impracticable.
3. To protect farming operations from complaints of public nuisance against normal farming operations.
4. To assure conservation of viable agricultural lands in order to protect the agricultural economy of this Commonwealth.
5. Maximize agricultural conservation easement purchase funds and protect the investment of taxpayers in agricultural conservation easements.
6. Maximize the purchase of Farmland Easement rights to best utilize the purchase funds allocated to Dauphin County by the Commonwealth of Pennsylvania.
7. Coordinate with surrounding counties the establishment of adjoining Agricultural Security Areas and the purchase of adjacent county easement rights.
8. Encourage and assist Dauphin County Municipalities in the establishment of Agricultural Security Areas.

9. Enforce compliance with the Agricultural Conservation Easement Program as stated in Act 149 - Procedure For Inspecting, Monitoring, and Enforcing an Easement outlined in Appendix G.
10. Establish and review specific goals and to do all other lawful acts permitted by the bylaws as they may be amended from time to time.

### III. Purchase Procedure

Landowners interested in selling an agricultural conservation easement to Dauphin County and the Commonwealth of Pennsylvania should submit a completed application by February 1 (Round 1) or July 1 (Round 2) of each year to the Dauphin County Agricultural Land Preservation Board in care of the Dauphin County Conservation District.

Applications submitted by February 1 (Round 1) will have priority over applications submitted July 1 (Round 2) according to an annual allocation of funds.

After each round of evaluations an applicant not meeting the criteria or who is dropped may apply for subsequent rounds but will have no priority over other applicants.

A separate application shall be required for each farm and tract offered for easement purchase.

The County Board shall review the application and determine if it is complete and meets the minimum criteria set forth on page 9.

If the application is complete and the minimum criteria are met a member or representative of the County Board shall review the farmland tract and discuss the county program with the applicant. The County Board shall evaluate all timely applications which meet the minimum criteria and rank them, according to the county's numerical ranking system. The County Board reserves the right to limit the number of applications it chooses to appraise.

#### A. Appraisal Procedure

The appraisal procedure will follow the regulations provided by the Commonwealth. Appraisals will be based primarily on an analyses of comparable sales. If comparable sales information is not available for farmland values, a value based on crop production or capitalization of rental income may be used. See Appendix E for the details of how appraisals shall be conducted.

#### B. Easement Value and Purchase Price

An easement must be purchased in perpetuity for Dauphin County farms.

The value of an easement in perpetuity shall be the difference between the market value and the farmland value contained in the appraisal report.

The purchase price of an easement shall not exceed but may be less than the easement value.

The applicant, may at the applicant's expense, retain another independent real estate appraiser to determine the easement value. This second appraisal must be completed in accordance with the state regulations as found in Appendix E.

If the applicant secures an independent appraisal, the easement value shall be determined using a combination of the two appraisal reports using the formula described in Appendix E.

#### C. Approval of Purchase by the Dauphin County Board

Final purchase decisions will be based on the rank and score, cost factors and consistency with the Planning Map.

If the County Board decides not to make an offer to purchase the easement on the farmland tract, the applicant will be notified in writing.

#### D. Purchase Negotiations with Applicants

After the County Board has decided to make an offer for the purchase of an agricultural conservation easement, the board or its representative will meet with the applicant to discuss the offer. At this meeting, the appraisal reports will be reviewed with the applicant. A formal offer for purchase of a conservation easement shall be submitted to the applicant in writing and accompanied by the appraisal report. The offer must be less or equal to the appraised value of the easement.

Within 30 days of receipt of the written offer from the County Board an applicant may either:

- (1) accept the offer;
- (2) reject the offer; or
- (3) secure an independent appraisal as set forth by the state regulations.

The failure of the applicant to act within 30 days shall constitute rejection of the offer.

If the offer of purchase is accepted by the applicant, the County Board and the applicant shall enter into a contract of sale. The contract shall be conditioned upon the approval of the State Agricultural Land Preservation Board, and be subject to the ability of the applicant to provide good title to the premises, free of any encumbrances such as liens, mortgages, options, rights of others in surface mineable coal, land use restrictions, adverse ownership interests, and other encumbrances which would adversely impact the County and Commonwealth's interest in the farmland tract.

#### E. Agricultural Easement Deed

After the contract of sale has been signed by both parties, the applicant must execute a deed at closing. This deed shall adhere to the Commonwealth's agricultural easement deed requirements as found in Appendix H.

#### F. Review and Decision

(a) The State Board shall acknowledge receipt of the application for review. The State Board shall notify the County Board if the application is incomplete and request that additional information or documentation be supplied.

(b) Within 60 days of receipt of a complete application for review, the State Board may approve or disapprove the purchase.

- (1) If the application is approved, the State Board shall execute the contract of sale.
- (2) If the application is disapproved, the State Board shall immediately notify the County Board in writing of the reasons for disapproval. The County Board may resubmit the application if the purchase recommendation has been revised to address the State Board's reasons for disapproval. The resubmittal shall be treated as a new application.
- (3) The County Board may withdraw its application from the State Board at any time prior to action by the State Board. The County Board may resubmit the application for reconsideration. The resubmittal shall be treated as a new application.
- (4) Failure of the State Board to act on an application within 60 days of its receipt shall constitute approval by the State Board.

(c) A decision of the State Board to disapprove a purchase shall be an adjudication subject to the provisions of the Administrative Agency Law, 2 Pa. C.S.A. section 101 et seq. The owner of the farmland tract proposed for easement purchase or the County Board may appeal a decision of the State Board to disapprove the purchase of an easement. An appeal shall be made to the Secretary of Agriculture and must be filed in writing with the Secretary within 30 days of the State Board's action. An appeal from the decision of the State Board shall be governed by the provisions of 1 Pa. Code Part II (relating to general rules of administrative practice and procedure).

The following documents must be submitted to the State Agricultural Land Preservation Board for review before joint State/County easement purchases are approved and state funds are released. See Appendix H for the full details of what must be submitted to the State Board.

1. Deed Conveying Easement
2. Title Insurance
3. Statement of Costs

- a. Easement purchase price
- b. County appraisal costs
- c. Legal fees for title search, preparation of documents, and attendance at closing.
- d. Recording fees
- e. Survey costs
- f. Other costs
- g. Amount of state funds requested for purchase
- h. Amount of county funds allocated for purchase

4. Summary Report (20 copies)

- a. Description of farm
- b. Quality of farmland tract
- c. How the farm will contribute to the County's agricultural productivity.
- d. Likelihood of conversion to other uses
- e. Conservation practices used
- f. Purchase price discussion
- g. Statement of costs
- h. Certification that information is true and correct
- h. Appendix
  - i. Application form
  - ii. Locational maps
  - iii. Soils report
  - iv. Crop report
  - v. Evaluation of application
  - vi. Subordination agreements
  - vii. Other relevant documents and information

IV. Ranking System

Applications will be ranked using a two part Land Evaluation and Site Assessment (LESA) system. The Land Evaluation part looks at the quality of the soils and the Site Assessment part considers locational factors that may have an impact on current or future viability of a farm. The total possible points is 300.

Land Evaluation

- A. Scores in this section are based on soils data obtained from the Dauphin County Soil Survey. The Soil Survey was published in 1963 by the USDA Soil Conservation Service in cooperation with the Pennsylvania State University and the Pennsylvania Department of Agriculture.
- B. Scoring methodology - Each soil mapping unit found in Dauphin County has been assigned a score based on its land capability classification and productivity for corn. Based on these factors, each soil has been assigned a relative value with 100 being assigned to the best soils for agricultural production in the county. All the

other soils in the county have been assigned relative values less than 100. See Appendix D for a listing of the relative values for all the soils in the county.

- C. Determining the farm's score—Using the worksheet found in Appendix C, each farm under consideration will be assigned an average relative value for the soil types making up the score making up the tract. The highest average relative value a farm can receive is 100.

### Site Assessment

The site assessment portion of LESA consists of 14 factors which relate to the viability of the site for present and future agricultural use. These factors consider development impacting farm operations. Each application will be researched for each of the 14 site assessment factors. The maximum score a farm can receive on the site assessment is 200.

1. Acreage of Prime Farmland and/or State Importance Soils on Farmland. Point Total 15

\* as described in July 1984 "Important Farmlands of Dauphin County, Pa. (Same as Class 1, 2 and 3 soils.)

- (15) 80 acres or more
- (12) 60 - 79 acres
- (9) 40 - 59 acres
- (6) 20 - 39 acres
- (3) 5 - 19 acres
- (0) 0 - 4 acres

2. Percent of Tract Used for Cropland, Pasture, or Grazing Point Total 15

%	<u>Points</u>
90-100%	15
80-89%	12
70-79%	9
60-69%	6
55-59%	3
less than 55%	0

3. SCS Conservation Plan Conformity: Point Total 20

- a. Fully implemented OR
- b. Conservation practices used to the full extent necessary.

Plan 91%-100% implemented or unnecessary as determined by the SCS	20
Plan 50-90% implemented	16
Plan 25-49% implemented	12
Less than 25% implemented	8
Plan in process	4
Plan needed, not in process	0

Conservation planning assistance is available free of charge to any farmer in the county from the Soil Conservation Service and the Dauphin County Conservation District. Cost sharing funds for implementation of conservation practices are available from the Agricultural Stabilization and Conservation Service.

Explanation: Conservation practices and planning are important for maintaining productive soils and viable farmland.

4. Compatibility with Township Comprehensive Plan Point Total 16

- (16) Tract is in an area designated for agriculture.
- (16) No comprehensive plan but tract located in a cluster of 5 or more contiguous farms.
- (12) No comprehensive plan but tract located in a cluster of at least 3 contiguous farms.
- (0) Farm is in an area designated for non-agricultural uses.

Explanation: In Dauphin County most land use decisions are made at the local level. A township comprehensive plan should reflect its citizens' desires and plans for future use of the land. If a community is serious about preserving farmland, farmland areas should be clearly designated in their land use plan.

5. Compatibility with Township Comprehensive Plan (Sliding Scale Agricultural Zoning) Point Total 20

- (20) Tract and all land immediately adjoining the tract are zoned for agricultural use.
- (10) Tract is zoned for agriculture, but some of the adjoining land is zoned for non-agricultural uses.
- (0) Tract and adjoining land is zoned for non-agricultural uses.

Any zoning district that encourages agricultural activities and limits non-agricultural development to small percentages (less than 25%) of existing tracts will be considered a sliding scale agricultural zone.

Explanation: If a tract is located in an area that a township has zoned primarily for agricultural use, this shows a strong commitment from the township for agricultural preservation.

6. Percentage of Land Within Two Miles in an Agricultural Security Area Point Total 16

- (16) greater than 50%
- (12) 25% - 49%
- (8) 1% - 24%
- (0) less than 1%

This factor will be determined using the county's Agricultural Security Areas map, compiled from information on Agricultural Security Areas filed with the Dauphin County Recorder of Deeds. The area that the percentages will be based on will be determined by measuring a 2 mile radius from an approximate center point on the tract.

Explanation: Areas where agriculture has been given protection by township supervisors, and where landowners are committed to agriculture, provide supportive environments for farming.

7. Proximity to Permanently Protected Farmland Point Total 24

- (24) Two or more farms have perpetual conservation easements within 2 miles of the tract
- (12) One farm has an easement within 2 miles of the tract
- (0) No farms have easements within 2 miles of the tract

Explanation: Grouping agricultural conservation easement purchases in an area will help to develop a nucleus of farms which can support each other and reduce conflicts with incompatible land uses. As farms are protected with easements through the farmland protection program, protected farms will be mapped to maintain a current record of all permanently protected farmland in the county.

8. Percentage of the Area Within 2 Miles in Agricultural Use Point Total 16

- (16) 90% - 100% of area is in agricultural use
- (14) 75% - 89% of area is in agricultural use
- (12) 50% - 74% of area is in agricultural use
- (8) 25% - 49% of area is in agricultural use
- (4) 1% - 24% of area is in agricultural use
- (0) none of the area is in agricultural use

Explanation: Areas that are mostly agricultural are more viable than areas that have a mixture of agricultural and non-agricultural land uses.

9. Land Use Adjacent to the Tract Point Total 16

- (16) 100% of the land adjoining the tract is in non-urban uses.
- (14) 75% -99% of the land adjoining the tract is in non-urban uses.
- (12) 50% -74% of the land adjoining the tract is in non-urban uses.
- (8) 25% to 49% of the land adjoining the tract is in non-urban uses.
- (4) 1% to 24% of the land adjoining the tract is in non-urban uses.
- (0) The tract is completely surrounded by urban land uses.

Explanation: Farms surrounded by non-urban land uses are more viable than farms surrounded by urban uses.

10. Distance from Public Sanitary Sewerage System Point Total 14

- (14) No sewer line within 2 miles
- (10) No sewer line within 1 mile
- (8) No sewer line within 1/2 mile
- (4) No sewer line within 1/4 mile
- (2) Sewer line within 1,000 feet.
- (0) Sewer line adjacent to site.

Explanation: If a sanitary sewer line of sufficient capacity is available close to a farm, the farm is more likely to be surrounded by incompatible land uses than a farm without available sewer.

11. Distance to Public Water Distribution System                      Point Total 10

- (10) No water lines within two miles
- (8) No water lines within one mile
- (6) No water lines within 1/2 mile
- (4) No water lines within 1/4 mile
- (2) Water line within 1,000 feet
- (0) Water line at site

Explanation: A site serviced by water lines is more likely to be surrounded by incompatible land uses than a farm without available public water.

12. Condition of Farm Buildings on Tract                                      Point Total 10

- (10) Farm buildings are in good repair.
- (6) Farm buildings are adequate.
- (4) Farm buildings are in poor repair.
- (0) There are no farm buildings on the tract.

Explanation: Sound farm buildings are important to the overall viability of a farm.

13. Buffering of Parks, Environmentally Sensitive Areas, Historic Structures or Districts                                      Point Total 6

- (6) Tract is adjacent to a park or environmentally sensitive area.
- (3) Tract is adjacent to historic structures or districts.
- (0) Tract is not adjacent to parks, environmentally sensitive areas, historic structures or districts.

14. Gross Receipts    Point Total 2

- (2) 100,000
- (1) 25,000 to 99,999
- (0) under 25,000

V. MINIMUM CRITERIA FOR DAUPHIN COUNTY FARMS

1. The farm must be located in an Agricultural Security Area.
2. The farm must be used as part of a normal farming operation that is capable of generating annual gross receipts greater than \$25,000.
3. The farm must contain at least 50% of soils which are available for agricultural production and are of capability classes I-IV, as defined by the soils surveys published by the USDA-SCS.

4. The farm must contain 50% harvested cropland, pasture or grazing lands.
5. If harvested cropland, be capable of producing sustained yields per acre equal to the county average yield per acre for each crop as published by the Pennsylvania Agricultural Statistical Service (PASS).
  - a) For crop yields not reported by PASS, the farmland tract must demonstrate a history of sustained yields as evidence by information providing by the applicant concerning the volume of farm sales over the two year period immediately prior to the date of the application.
  - b) For land idled because of government programs, yield data must be provided by applicant for the base year.
6. The farmland tract must be at least ten acres in size.
7. Consideration will be given to land stewardship including:  
Use of conservation and best management practices (soil erosion, sedimentation control and nutrient management).
8. Consideration will be given to the likelihood that the farmland will be converted to non-agricultural use.
9. All easements purchased for perpetuity only.
10. Applicant must submit entire parcel or parcels as described by the deed of the farm.

#### VI. PUBLIC INFORMATION PROGRAM

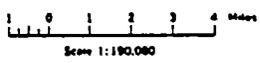
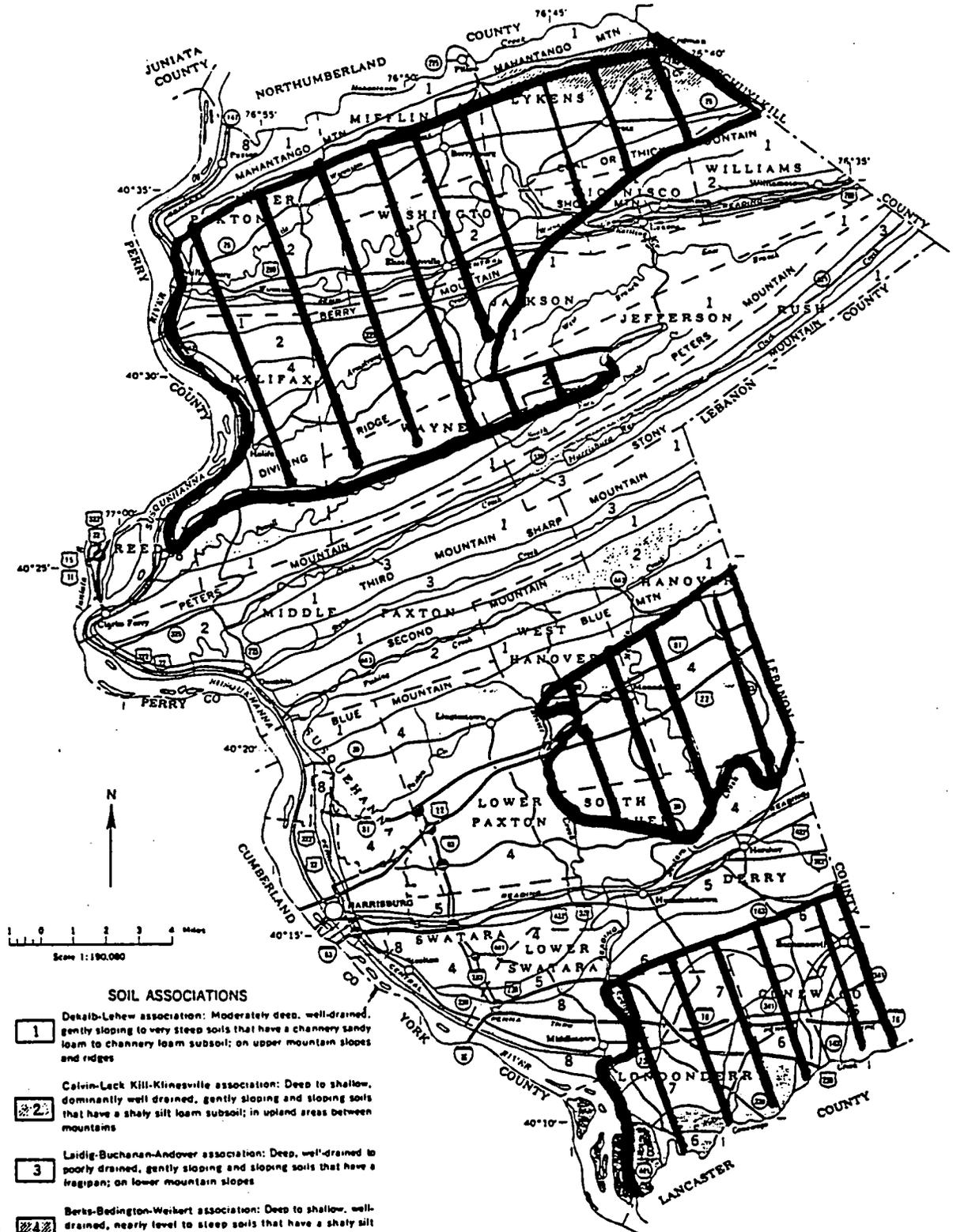
Copies of the Dauphin County Agricultural Conservation Easement Program are available to the public by contacting the Dauphin County Conservation District, 1451 Peters Mountain Road, Dauphin, PA 17018 or by calling (717) 921-8100.

The Dauphin County Agricultural Land Preservation Board will publicize the County Program through newsletters, press releases, farm publications and newspapers.

An informational folder outlining the easement program will be available for the public and for use at meetings.

The County Program will be presented through public meetings, news conferences, meetings with landowners in Ag Security areas, and invited presentations. A slide and/or VCR presentation will be available for use at meetings to explain the program.

DAUPHIN COUNTY, PENNSYLVANIA  
GENERAL SOIL MAP



SOIL ASSOCIATIONS

- 1 DeKalb-Lehigh association: Moderately deep, well-drained, gently sloping to very steep soils that have a channery sandy loam to channery loam subsoil; on upper mountain slopes and ridges
- 2 Calvin-Lack Kill-Klinesville association: Deep to shallow, dominantly well drained, gently sloping and sloping soils that have a shaly silt loam subsoil; in upland areas between mountains
- 3 Laidig-Buchanan-Andover association: Deep, well-drained to poorly drained, gently sloping and sloping soils that have a fragipan; on lower mountain slopes
- 4 Berks-Bedington-Weibert association: Deep to shallow, well-drained, nearly level to steep soils that have a shaly silt loam to shaly silty clay loam subsoil; on uplands
- 5 Hagerstown-Duffield association: Deep, well-drained, nearly level to gently sloping soils that have a silty clay loam to clay subsoil; on uplands
- 6 Lewisberry-Penn-Athal association: Deep and moderately deep, well-drained, gently sloping and sloping soils that have a dominantly gravelly sandy clay loam to shaly silty clay loam subsoil; on uplands
- 7 Brecknock-Meshaminy association: Deep, well-drained, gently sloping and sloping soils that have a clay loam and silty clay loam subsoil; on uplands
- 8 Duncannon-Cheves-Tioga association: Deep, well-drained, nearly level and gently sloping soils that have a fine sandy loam to silt loam subsoil; on terraces and flood plains mostly along the Susquehanna River

NOTE -  
This map is intended for general planning.  
Each delineation may contain soils having sub-  
types different from those shown on the map.  
Use detailed soil maps for operational planning.

November 1970



APPENDIX C

LEGAL ISSUES AFFECTING OPEN SPACE  
For Temple University's Open Space Planning & Management Seminar

Saturday, October 26, 1991

By Kate Harper, Esquire

I. Pennsylvania laws which limit the liability of private landowners:

A. The Pennsylvania Recreational Use of Land and Water Act ("RUA") 68 Pa. Purdon's Statutes § 477-1 et seq; February 2, 1966, states:

Except as specifically recognized or provided in Section 6 of this Act, an owner of land owes no duty of care to keep the premises safe for entry or use of others for recreational purposes, or to give any warning of a dangerous condition, use, structure, or activity on such premises for persons entering for such purposes. (§3)

Nothing in the Act limits in any way liability which otherwise exists: (1) for wilful or malicious failure to guard or warn against a dangerous condition, use, structure or activity; (2) for injury suffered in any case where the owner of land charges the person or persons who enter or go on land for the recreational use thereof... (§6)

Cases under the Act have applied it to a variety of situations, including a snowmobiling accident on a lake (the snowmobile hit a snow covered tree stump); a bicycle accident on a public playground; a minibike accident on a vacant lot; a sliding board accident in a township playground; a case where a hunter was overcome with gas from vacant land being used as a landfill; a hiking mishap where the hiker stepped into a hole on an outdoor earthen hiking trail; and an accidental drowning in the Tookenay Creek.

Other cases have held the RUA does not apply to a drowning in a private, indoor swimming pool; to injuries from a broken filter in a public, outdoor swimming pool; to injuries received in a cement city (outdoor) basketball court; to a severe cut received in a fall on a city playground; or to a drowning in an outdoor, city-owned pool.

Additionally, a landowner can lose the Act's immunity by (a) charging a fee or (b) a wilful and malicious failure to warn. For example, the Court felt a jury should decide whether a wilful and malicious failure to warn existed when a coal mine owner testified he knew there was a 150-foot deep strip mining pit abutting a public road (a young man was killed when he drove his car off the road into the pit).

B. The Pennsylvania Rails to Trails Act  
36 Pa. Purdon's Statutes § 5611 et seq; December 18, 1990, states:

Except as specifically recognized by or provided in subsection (d), an owner or lessee who provides the public with land under this Act or who owns land adjoining any trail developed under this Act owes no duty of care to keep the land safe for entry or use of others for recreational purposes, or to give any warning to persons entering or going on that trail land of a dangerous condition, use, structure or activity thereon.

The exceptions are largely the same as the RUA.

II. Pennsylvania Laws Limiting the Liability of Public (Government) Landowners

A. The Political Subdivision Tort Claims Act  
42 Pa. Consolidated Statutes Annotated § 8541 et seq.;  
October 5, 1980

Governmental immunity generally

Except as otherwise provided in this subchapter, no local agency shall be liable for any damages on account of any injury to a person or property caused by any act of the local agency or an employee thereof or any other person. (§ 8541)

Acts which may impose liability. - The following acts by a local agency or any of its employees may result in the imposition of liability on a local agency:

- (1) Vehicle liability...
- (2) Care, custody or control of personal property...

(3) Real property. - The care, custody or control of real property in the possession of the local agency, except that the local agency shall not be liable for damages on account of any injury sustained by a person intentionally trespassing on real property in the possession of the local agency. As used in this paragraph, "real property" shall not include:

(i) trees, traffic signs, lights and other traffic controls, street lights and street lighting systems;

(ii) facilities of stream, sewer, water, gas and electric systems owned by the local agency and located within rights-of-way;

(iii) streets; or

(iv) sidewalks.

(4) Trees, traffic controls and street lighting. - A dangerous condition of trees, traffic signs, lights or other traffic controls, street lights or street lighting systems under the care, custody or control of the local agency, except that the claimant to recover must establish that the dangerous condition created a reasonably foreseeable risk of the kind of injury which was incurred and that the local agency had actual notice or could reasonably be charged with notice under the circumstances of the dangerous condition at a sufficient time prior to the event to have taken measures to protect against the dangerous condition.

(5) Utility service facilities...

(6) Streets...

(7) Sidewalks. - A dangerous condition of sidewalks within the rights-of-way of streets owned by the local agency, except that the claimant to recover must establish that the dangerous condition created a reasonably foreseeable risk of the kind of injury which was incurred and the the local agency had actual notice or could reasonably be charged with notice under the circumstances of the dangerous condition at a sufficient time prior to the event to have taken measures to protect against the dangerous condition. When a local agency is liable for damages under this paragraph by reason of its power and authority to require installation and repair of sidewalks under the care, custody and control of other persons, the local agency shall be secondarily liable only and such other persons shall be primarily liable.

(8) Care, custody or control of animals. - The care, custody or control of animals in the possession or control of a local agency, including but not limited to police dogs and horses. Damages shall not be recoverable under this paragraph on account of any injury caused by wild animals, including but not limited to bears and deer, except as otherwise provided by statute.

[Note:] Limited definition. - As used in this section the amount of time reasonably required to take protective measures, including inspections required by law, shall be determined with reference to the actual equipment, personnel

and facilities available to the local agency and the competing demands therefor. (emphasis added)

...

Additionally, any damages which may be awarded are limited:

42 Pa.C.S.A. § 8553:

(b) Amounts recoverable. - Damages arising from the same cause of action or transaction or occurrence or series of causes of action or transactions or occurrences shall not exceed \$500,000 in the aggregate.

(c) Types of losses recognized. - Damages shall be recoverable only for:

(1) Past and future loss of earnings and earning capacity.

(2) Pain and suffering in the following instances:

(i) death; or

(ii) only in cases of permanent loss of a bodily function, permanent disfigurement or permanent dismemberment where the medical and dental expenses referred to in paragraph (3) are in excess of \$1,500.

(3) Medical and dental expenses including the reasonable value of reasonable and necessary medical and dental services, prosthetic devices and necessary ambulance, hospital, professional nursing, and physical therapy expenses accrued and anticipated in the diagnosis, care and recovery of the claimant.

(4) Loss of consortium.

(5) Loss of support.

(6) Property losses.

(d) Insurance benefits. - If a claimant receives or is entitled to receive benefits under a policy of insurance other than a life insurance policy as a result of losses for which damages are recoverable under subsection (c), the amount of such benefits shall be deducted from the amount of damages which would otherwise be recoverable by such claimant.

The big question the cases address is: what is the actual cause of the injury? Cases have held: a County was immune from suit where horses in a horse-pull contest on County land were under the control of others when they broke away and injured some in the crowd; a City was immune from suit where a trespasser tripped over tree trimming debris left by City workers and injured himself when he leaned against an abandoned building in an effort to break his fall (the real estate exception excludes trespassers and the Court found the tree had not caused the injury but "merely facilitated the injury" which was caused by a broken window in the structure); and a City was immune when a traveler slipped on a paper bag on the steps of the Frankford El (the injuries were not caused by a condition of the land but by "the person who dropped the paper bag on the platform.")

But the Courts have refused immunity where a 9-year-old girl was severely injured in a swimming pool diving accident caused by the City's negligent conduct in painting over depth markers and racing stripes. Interestingly, the Court refused to find the City liable where a 23-year-old man swam in a City public pool after closing and drowned. (There was no evidence any defect in the pool caused the drowning). The case might be difficult if the City knew trespassers frequently used the pool, and failed to repair the fence that gave them access.

- B. The Sovereign Immunity Statute  
42 Pennsylvania Consolidated Statutes § 8521-8528  
provides similar protection to Commonwealth agencies,  
with similar limitations and exceptions.

### III. Other Considerations

- A. Insurance
- B. Easements, Rights of Way and Releases