

# Taking the Next Step:

Hillsborough Township  
Municipal Assessment

**October 2004**



## *The Stony Brook-Millstone Watershed Association*

Since 1949, our member-supported organization has worked on behalf of local residents to protect, preserve and enhance our local environment. We are dedicated to caring for the integrity of the natural ecosystems of the 265-square miles of central New Jersey drained by the Stony Brook and the Millstone River. We focus on environmental education, watershed stewardship and water resource advocacy – helping future generations understand the wonders and workings of the natural world we are preserving on their behalf.

We are headquartered on a 830-acre nature reserve in Pennington that includes a community supported organic farm, nature center, pond, and a 14-mile trail system that leads visitors through our woodlands, wetlands, and fields.

Many activities within our watershed affect the quality of streams, wetlands, ground water and forests. By changing how we carry out these activities, we can improve our environment and our quality of life. So whether at home, work or play, we can all make a difference.

**If you have questions about this report or want to learn more about membership support, volunteer opportunities, and new programs please contact us at:  
(609) 737-3735.**



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Pennington, NJ

[www.thewatershed.org](http://www.thewatershed.org)

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# Executive Summary

**P**icture it: Autumn, 2024, Hillsborough Township, New Jersey. Main Street, Hillsborough is bustling with shoppers, visitors, and families. A visiting family decides to roam about town, while a resident family takes to food shopping at the local farm stand. After window-shopping along Main Street, shoppers duck into one of cafés on Main Street for lunch and an ice cream. Cheers and applause can be heard coming from the Park on the other side of the school, as residents make their way through the neighborhood to locate the festivities. There is a celebration going on to commemorate the 20<sup>th</sup> anniversary of greenways, open space, the booming economy, and the historic presence preserved in the Township. Everyone is celebrating the healthy waterways, the clean air, and a sense of community spirit. Local officials have also set up booths to continue generating support and ideas for the incoming administration. At the end of the day, some folks ride their bicycles home or hop on a light rail train to their nearby neighborhood, picking up a couple groceries at the store on the walk home from the station.

*Sound like a Utopia? Maybe.* But the issues are real and municipal officials have the opportunity to make decisions that will lead to this heightened standard of living. They can enact ordinances and educate the public, but they can't do it alone.

Over the years, municipalities have been contacting the Stony Brook-Millstone Watershed Association (the Association) requesting guidance with various planning or environmental issues. The Association decided that responding to these issues comprehensively would be most effective. Thus, the Association created the Municipal Assessment Program. This program is designed to identify the issues in a municipality that are retroactive to preserving natural resources or enhancing quality of life in and around the community. It takes strong community leadership to step back and evaluate goals, policies and strategies and figure out how to connect them with their ultimate vision. Hillsborough Township was ready for this challenge and the Association was, in turn, excited to work with such a dedicated and open community.

The Association would first like to commend Hillsborough Township for their ongoing projects and past accomplishments, which include:

- ⌘ Providing new services for residents in Hillsborough Township, such as the YMCA and a new Post Office.
- ⌘ Providing diverse services, and amenities for residents in the Township. Hillsborough, a community of about 35,000 people, offers a total of 8 schools, numerous recreational facilities, a variety of shopping outlets and community programs for every age and interest.
- ⌘ Recruiting leaders for Township Board and Committees that are committed to building a strong community.

After Hillsborough Township formally partnered with the Association through a resolution, we began the municipal assessment process with a collection of survey responses from municipal officials, staff, and consultants to determine the community's vision. The Association then reviewed the Township's Master Plan, land use ordinances, policies, and best management practices. These two steps guided the evaluation, which is divided into four major themes: Land Use Planning Techniques, Land Conservation Techniques, Direct Municipal Responsibility for the Environment, and Watershed Stewardship Projects. Using the Master Plan and survey responses as the Township's overall vision, the evaluation of the Township's ordinances and best management practices led to determining areas that need to be strengthened so that Hillsborough can realize its vision. These areas became the focus of the assessment report and a "step" toward making the connection.

Each chapter - or "step" - in the assessment report lists the Township's *Goal* according to the Master Plan and survey responses and the *Current Protection* the Township has on the books. The heart of each step focuses on the *Options* for new opportunities, as suggested by the Association. Here the municipality is given a menu of choices for planning and conservation projects to implement now and in the future. In the *Did You Know* section you can read about information such as population change within the Township and what surrounding communities are doing. Finally, *Additional Resources* provide additional information or guidance about that particular subject.

As a catalyst to achieve responsible planning and environmental quality, it is the Association's intention that this report serve as a guide and inspiration for work, such as the aforementioned accomplishments. Future boards and committees should refer to this document for ideas and guidance and to make connections with other communities and local organizations. As an interim step in the implementation of these practices, the report offers a variety of recommendations, which the Association is partially funded to help implement.

This report is a general guide to current and future projects for this community that will connect goals with implementation and implementation with vision. The results of this analysis for Hillsborough Township are documented in this report, entitled "**Taking the Next Step**". Outlined below, and in no particular order, are the 13 strategies for achieving Hillsborough Township's goals. (Please refer to the report for more detail).

⌘ **Establishing a Town Center**

*Township Goal:* Create a Town Center with a Main Street core in the development area.

Use development regulations to guide the development of the town center and main street and preserve open space through clustering of residential uses.

*Current Practices:* Hillsborough Township is currently going through Phase II of the Master Plan reexamination process which will be focused on the Town Center/Main Street concept.

*Recommendation:* Create design regulations and standards that allow for flexible densities and bulk regulations to obtain the town center vision that is desired.

⌘ **Protection of Critical Areas**

*Township Goal:* Protect environmentally critical areas. Environmental Committee is to ensure that protection of environmentally critical areas is consistent with its own goals.

*Current Practices:* Soil Erosion and Sediment Control regulations, protection for Natural Features and designation of Mountain Zone.

*Recommendations:* Create and adopt a Critical Areas Ordinance that protects environmentally sensitive places in the township.

§ **Stream Corridor Protection**

*Township Goal:* Protecting environmentally sensitive areas of the Township from destruction or degradation, including stream corridors, watersheds, aquifers, rivers, viewsheds, and other vegetation.

*Current Practices:* Currently, Hillsborough Township does not have a Stream Corridor Ordinance.

*Recommendations:* Adopt a comprehensive stream corridor ordinance.

§ **Groundwater and Wellhead Protection**

*Township Goals:* Limit development in the Mountain zone due to existing geology, the desire to protect water quality, and because of the presence of headwaters.

*Current Practices:* Efforts in the township do not include groundwater protection as an objective of open space preservation.

*Recommendations:* Adopt ordinances to protect ground water quality and educate the public about initiatives.

§ **Septic System Maintenance**

*Township Goals:* More education about septic systems and protecting drinking water.

*Current Practices:* Board of Health regulations for Individual Subsurface Sewage Disposal Systems Ordinance.

*Recommendations:* Adopt ordinances and policies to improve performance and monitoring of septic systems.

§ **Preservation of Rural Character**

*Township Goal:* Expand efforts to preserve open space and farmland and provide linkages with neighboring townships.

*Current Practices:* Open Space Tax, Right to Farm regulations, Tree Preservation regulations, and Optional Cluster Development regulations for the Agricultural zone district.

*Recommendations:* Develop language in the Phase II Master Plan that states the desire and objectives to protect the environs.

§ **Historic Preservation**

*Township Goal:* Historic and archaeological preservation and development that is consistent with community character.

*Current Practices:* Published a book that highlights the important historic landmarks in the township and details their origins and importance of the time.

*Recommendations:* Develop a program or materials for new residents that will spark an interest in protecting historic resources.

§ **Protection of Viewsheds**

*Township Goal:* Protect and maintain prevailing rural character, including scenic landscapes resulting from natural topography and agricultural lands. Also, retain attractive vistas from public rights-of-way including views of hills, valleys, ridgelines, farmlands and other natural areas.

*Current Practices:* Zoning designation for the mountain areas that is very detailed in limiting development due to environmental constraints.

*Recommendations:* Develop ordinances that protect views on a variety of levels.

⌘ **Soil Erosion and Sediment Control**

*Township Goal:* Using sensitive design standards to minimize any impact to critical soils.

*Current Practices:* Purpose is to control soil erosion and sediment damages and related environmental damage by requiring adequate provisions for surface water retention and drainage and for the protection of exposed soil surfaces.

*Recommendations:* Adopt a monitoring program to ensure soil erosion management and sediment control.

⌘ **New Construction Practices**

*Township Goals:* Provide development that does not impact the land or surrounding habitat.

*Current Practices:* Done in accordance with the approved plat that contains soil erosion and sediment control provisions.

*Recommendations:* Emphasize the importance of considering alternative construction practices, particularly in critical areas.

⌘ **Environmental Ordinance Enforcement**

*Township Goal:* To advance environmental projects through ordinances and by funding appropriate infrastructure.

*Current Practices:* Language in the Land Development Ordinance, or in individual ordinances, does not consistently require monitoring or enforcement of ordinances.

*Recommendations:* Enforce local ordinances through monitoring and education.

⌘ **Public Participation and Education**

*Township Goals:* To foster community spirit by encouraging residents to embrace the diversity of the township and its potential for growth and improvement.

*Current Practices:* Public work sessions and an informational website that includes the township's code.

*Recommendations:* Continue to encourage public participation.

⌘ **Municipal Official Education**

*Township Goals:* Better accessibility of local officials. Seek out interested and qualified residents to sit on boards and committees.

*Current Practices:* Ensuring municipal officials and staff are knowledgeable about environmental issues, as well as other township issues.

*Recommendations:* Require training and site walks for committee members.

Ultimately, Hillsborough Township must develop strategies that work toward achieving the current vision of the community and for future generations of residents. By committing to follow through on this report, the Association and Hillsborough Township are achieving the mission of preserving and enhancing the watershed and the communities within it. This report is the next step in creating that vision.

# Acknowledgements

We commend Hillsborough Township's leaders and professionals for participating in this program and for allowing the Association to evaluate current practices. It is difficult for anyone, whether an individual or a municipal body, to have the courage to evaluate current work, determine where and how to improve a current system, and if necessary develop a new strategy. We want the readers of this report to look at not only what can be done, but what has already been accomplished in Hillsborough Township.

Our hope is that Hillsborough will learn from and expand on their own experiences, challenges, and successes, as well as those of surrounding municipalities, keeping in mind that zoning and policies should look regionally to provide comprehensive and sensible growth. We also look forward to partnering with the township in embracing new opportunities that protect and enhance the character and natural environment that makes Hillsborough a special place to live.

We wish to thank the Geraldine R. Dodge Foundation and the U.S. EPA for their generosity in funding this project, and the members of the Township Committee, Planning Board, Environmental Committee and staff for their responses to our survey. We would also like to acknowledge the individual input of Mayor Steven Sireci, Planning Board Chair Marian Fenwick-Freeman, Planning Board member Lynn Winters-Mineo, Township Planner Robert Ringelheim, Township Administrator Kevin Davis, Health Officer Dr. Glen Belnay and all those who responded to the survey. Your time and dedication to this project was greatly appreciated.



**Farm on Hillsborough Rd.**

*Although the information in this document has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement WS982909-03-0 to the Stony Brook-Millstone Watershed Association, it has not gone through the Agency's publications review process and, therefore, may not necessarily reflect the views of the Agency and no official endorsement should be inferred.*

## How To Use This Report

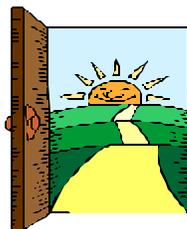


After evaluating the survey responses, we reviewed Hillsborough Township's Master Plan and its land use ordinances, policies, best management practices using a background study developed by the Association. To guide our evaluation, we developed a checklist that covers areas important to land planning techniques, land conservation, how the municipality handles environmental issues and what watershed stewardship projects are underway. We also interviewed key personnel to complete the assessment.

Each "step" in the assessment report lists the Township's *Goal* for that step according to the Master Plan and survey responses and the *Current Protection* the Township has on the books. The heart of each step focuses on the *Options* for new opportunities, as suggested by the Association. Here the municipality is given a menu of choices for planning and conservation projects to develop now and in the future. In the *Did You Know* section you can read about information pertaining to Hillsborough Township and what communities state and nationwide are doing. Finally, *Additional Resources* provide additional information or guidance about that particular subject.

This report serves as a guide for future boards and committees to inspire work on new projects and to support those tasks before them. It also provides an opportunity for those municipal groups to support other community and local non-profit groups.

## Next Steps



As Hillsborough Township continues its work enhancing quality of life, this document serves as guidance for future projects and provides ideas on where to begin. Once the Assessment report is adopted and a short list of priorities is determined, the Association will work with Township officials to develop more detailed information, models and guidance to help implement that list. This partnership will allow for the Association to support Hillsborough Township and to also learn from your experiences.

The Association will work by your side in your efforts to provide Township citizens with a sense of community, a healthy environment and a strong economy, all within a rural setting. We realize that the Township has already begun implementing some of the options listed in this report (for example, involving the public in a master plan and visioning process for the Town Center concept). We offer our assistance to the Township in their efforts to achieve comprehensive planning and ensure that the plans relate to the strategies of the surrounding communities. By committing ourselves to follow through on this report and its results, the Association is achieving its mission of protecting and preserving the watershed.

# Highlights of Your Town



When beginning this assessment, members of the Hillsborough Township Committee, Planning Board, Environmental Commission, and various staff and consultants articulated their goals and vision for the Township by responding to our survey. We feel it is important to note the proactive measures that have been implemented within the Township and that have created the unique place that is Hillsborough Township.

## Good Things...

Officially established in 1771, Hillsborough Township was a crossroads for travelers and originated as a farming community. Through the decades Hillsborough became a residential community that continues to support a strong farming heritage. Currently, Hillsborough Township has open spaces, farm fields, pockets of neighborhoods, recreation areas, a growing commercial market, and a few families who have remained in the Township for generations. All of these examples can be attributed to the Township's history of leadership in government positions, as well as in grassroots and community organizations that have helped to further protection efforts.

Some other examples of Hillsborough's work includes:

- ⌘ **Open Space Protection** - As of 1995, Hillsborough Township has 68 percent land use in open space (Agriculture, Forest, and Wetland areas). A majority of that land is in the Sourland Mountains where trails and streams wind through the forested hills to reveal a mysterious past. The Open Space Committee has also been diligently working to protect greenways along streams through the use of conservation easements.
- ⌘ **Farmland Preservation** - In 2002, Hillsborough Township joined the other Sourland Mountain municipalities in rezoning their Mountain District from 5 acres/unit to the current 15 acres/unit with options for clustering development on a lot. The nearby Agricultural Zone regulations also increased from 3 acres/unit to 10 acres/unit with development options that are intended to reduce sprawl and preserve the rural landscape.
- ⌘ **Duke Estate** - 1,200 acres of the 2,700-acre parcel, located in the northern portion of the township, was recently rezoned as an Open Space and Cultural Landscape District. Plans for outdoor events and tours are underway as the Township hopes to increase tourism and a community spirit, while protecting this large piece of land and the wildlife that resides there. This rezoning is seen as "a major step in (our) plans for open space preservation in Hillsborough" - Mayor Sireci.
- ⌘ **Tree Preservation Ordinance** - The Township Committee unanimously passed an ordinance that will establish a special advisory committee to advise the Planning Board on issues related to tree removal. The ordinance will help protect trees from unnecessary removal during a construction project and will help to replant trees elsewhere, should it be necessary to remove trees during a project.



# Next Steps

# Introduction

**The elected and appointed officials in Hillsborough Township have a challenging task:** balance natural resource protection with economic prosperity, encourage business, provide residential services, and determine where best to site a variety of land uses in the township. Hillsborough Township leaders strive to ensure that the needs of current residents are met and that there will be high quality of life for residents in the future. To carry out this important task, officials rely on their Master Plan to provide a vision for the future and use zoning, policies and ordinances as the tools to ensure the prosperity and health of their township.

The Stony Brook-Millstone Watershed Association (the Association) recognizes the magnitude of this task, especially in knowing that the protection and health of a watershed relies a great deal on the land use laws and policies that govern development. Thus, we developed the Municipal Assessment Program. In partnering with municipalities we provide an outside evaluation of current practices and we support planning that protects the natural environment and ensures the vision in the Master Plan is achieved.

By developing a Master Plan that guides both growth and conservation, clearly states goals and objectives, and highlights a vision for the future, Hillsborough is planning for quality of life for both current and future residents. The leaders recognize their current position and are actively working to ensure that their community retains its historic character, environmental health, and viable economy.

We were excited to partner with Hillsborough Township on this project, as it is a community undergoing tremendous growth and struggling to maintain its agricultural roots, simultaneously. Hillsborough has many historic landmarks, including homes and churches; a farmland preservation program that has protected many farms and offers the opportunity for innovative planning techniques such as clustering development to protect agricultural activities; a major highway corridor that serves as a thruway and will soon become Main Street; a treasured natural resource in the Sourland Mountains that provides recreation and serenity for all to enjoy; and well-educated, dedicated representatives who have worked to provide all of this for Hillsborough Township citizens.

This unique combination of elements presents an opportunity for the Township to share experiences with surrounding municipalities and with the Association. Making the bold move to assess their own practices, Hillsborough Township is advancing efforts to take on the challenge of protecting and enhancing these qualities.



## STEP

1

# Establishing a Town Center

**GOAL:** Hillsborough Township's Master Plan Reexamination Report (1999) states that a "town center with a Main Street core should be planned within this community's development area" and that "development regulations should guide the development of the town center and main street and preserve open space through clustering of residential uses."

Survey respondents felt that along with guiding development, the township is working to develop criteria for design of the town center, the longevity of the area and a sense of community.

Hillsborough plans to utilize the Town Center, in cooperation with the Route 206 bypass, as a means to protecting the environs. While providing amenities, including affordable housing and new retail/commercial uses, in the center of the Township, the rural areas along the edge of the Township will remain rural.

## CURRENT PROTECTION:

Hillsborough Township is currently undergoing Phase II of the Master Plan reexamination process which will focus on the Town Center/Main Street concept. The Master Plan subcommittee has met with consultants to create a zoning map and design standards. Residents will have the opportunity to participate in a visioning process, called the "Zoning Game", that portrays the different techniques and planning strategies to create a Town Center for Hillsborough Township. This workshop is scheduled for October 28, 2004 at 6 pm.



Route 206 - proposed site of Town Center/Main Street concept.

## **OPTION: UTILIZE THE PHASE II MASTER PLAN TO SPECIFICALLY LAY OUT DETAILS FOR FLEXIBLE DENSITIES, BULK REGULATIONS, AND ARCHITECTURAL DESIGNS, TO OBTAIN THE TOWN CENTER VISION THAT IS DESIRED.**

Specifically, the Township should consider:

- ⊗ Applying design standards that are already in the works. Such design standards include, pedestrian and bike friendly streets and sidewalks, mixed-use designs that include affordable residential and commercial/office uses, connections to neighboring residential areas using paths, and placement of open spaces for maximum use and minimum maintenance.
- ⊗ Using Transfer of Development Rights to increase density of development in the Town Center, while protecting the outer, more rural areas.
- ⊗ Ensuring that zoning changes for the Town Center allow for both new structures and rehabilitated or redeveloped existing structures.
- ⊗ Ensuring that zoning changes allow for a variety of housing types and affordability levels.



## Did You Know?

There are a number of Town Center success stories around the country. A couple of them include:

- *Reston Town Center, Virginia* - An active mix of uses provides a destination for the community. A community space was centrally located within the development for events and other promotions. Programming activities and special events keep residents and visitors aware of the town center. One of the challenges with this project is that the main arterial roadway that serves this area does not go through the project. The roadway bypasses the project on the east side of the development, but the project does have excellent visibility from the roadway. The pedestrian-oriented retail street and this active roadway are not compatible. This separation of modes preserves the walkability of the center.

Another key to the success of this development project is that the developer was able to control the quality of the built environment. Parcels within the project were not sold to others for development. The Reston Town Center developer/owner was able to establish and maintain control of the land use and urban design components throughout the project.

- *West Palm Beach, FL* - The goal of this effort was to bring disparate projects together and place them within a coherent context. The new code is simple and succinct. It promotes small-scale, incremental growth. The coding of buildings is based on building type rather than on an abstract floor-area ratio. In conjunction with the regulating plan, this method of coding will result in the physical predictability of the environment. The height and physical configuration of a building is described in advance, leaving the investor free to build within its envelope.



## Additional Resources

***Stony Brook-Millstone Watershed Association*** has available:

- ☞ ***Washington Town Center*** Zoning Map and Ordinances. New Jersey's first Neo Traditional Town Center and the nation's first such community designed by the municipality. Twelve years in the making, the efforts of the Washington Township Committee and Planning Board are now taking shape.
- ☞ ***The Neighborhood Model***. Albemarle County (VA) Department of Planning and Community Development. The County's Neighborhood Model gives design guidelines and ordinance language to allow narrow, tree-lined streets, and the mix of uses for buildings in a town center. It also suggests policy and regulatory changes needing to be made to local laws and ordinances.



## STEP

### 2

## Protection of Critical Areas

**GOAL:** One of three major goals of the 1980 Master Plan was to “Protect environmentally critical and historic areas”. This was primarily initiated by the State Wetlands Act and led to objectives set forth in the 1992 updated Master Plan, where the Environmental Committee (EC) was charged with ensuring that language in the Master Plan promoted protection of environmentally critical areas and was consistent with the EC’s goals.

### CURRENT PROTECTION:

Hillsborough’s Natural Resources Inventory (NRI) provides a brief description of critical areas in the Township such as flood hazard areas, slopes greater than 12 percent, hydric soils and other concerns such as private wells and septic systems. Some protection is provided in the following sections of the Land Development Ordinance, but critical areas can be further protected through stronger definitions and enforcement of their protection:

§188-64 Natural Features. Language in this section does not address habitat protection among natural features. Protection can be afforded through more stringent regulations for wetlands, steep slopes, and streams. Currently, the Township specifies the need to protect steep slopes, but does not define a steep slope. The Township’s NRI specifies critical slopes as 12%, however, further protection can be afforded by including this information in the Land Development Ordinance.

§188-99.4 MZ Mountain Conservation District. Purpose is stated to preserve and protect the fragile ecosystem of the Sourland Mountain District. Lot sizes, areas for clearing trees, and impervious cover are all regulated. Although the Township specifies that the “Design of development should foster natural resource protection”, critical natural resources are not required to be removed from the buildable area calculations of a site.

### **OPTION: ENSURE PROTECTION OF CRITICAL AREAS BY DEVELOPING GUIDELINES FOR DEVELOPMENT WHERE CRITICAL RESOURCES EXIST.**

Specifically, the Township should consider:

- ⊗ Providing language for stream buffers that includes the 100-year floodplain, wetland transition areas, and any identified critical habitat beyond the immediate stream corridor. This language should apply to stream corridors still intact to prevent remediation in the future. (See Step 3 “Stream Corridor Protection” for more information).
- ⊗ For all construction projects approved, ensure regulations for development minimize disturbance, especially in the Sourland Mountain area. Best Management Practices for construction can be applied throughout the construction process. BMPs can be used in operating equipment to on-site management of resources. (See Step 10 “New Construction Practices” for more information).
- ⊗ The designation of a responsible party to enforce regulations set forth in the ordinance. The Township should decide who to delegate this responsibility to. It may be a different person for different issues (I.e. the Engineer might oversee construction practices, but an Environmental Enforcement Officer might oversee conservation easements along stream corridors).
- ⊗ An education component for residents to learn more about the special natural features of the area. Education about local, critical resources should be encouraged especially for residents living within the Sourland Mountain area.



## Did You Know?

- ⊗ Critical Areas in Hillsborough Township include, but are not limited to, the Sourland Mountain slopes, habitat, and high groundwater recharge areas.
- ⊗ If critical areas are maintained with minimum disturbance, they provide the benefit of:
  - ⊗ Protection of unique, fragile, and sensitive elements of the natural environment
  - ⊗ Fostering an awareness and education of the public regarding the significance of critical areas
  - ⊗ Protection of the public from natural hazard conditions
  - ⊗ Prevention and/or reduction in the likelihood of damage to property and personal injury, and subsequent reduction in costs to the public
  - ⊗ Balancing private property rights with the need to protect public health, safety, and welfare, and the preservation of environmentally sensitive areas.



**Salamanders in the Sourlands**



## Additional Resources

- ⊗ **Stony Brook-Millstone Watershed Association.** River Friendly programs for residents, businesses, and golf courses. Contact Amy Weaver or Peggy Savage for more information. 609.737.3735
- ⊗ **Montgomery Township Critical Areas Ordinance.** Ordinance No. 03-1119. This ordinance amends and supplements their land development ordinance in the subsection regarding the “critical areas map” and including “enforcement by township officials”. Stony Brook has this ordinance on file. Tel: 609.737.3735 Fax: 609.737.3075. [www.thewatershed.org](http://www.thewatershed.org)
- ⊗ **New Jersey’s Landscape Project.** Critical area mapping for community land-use planning and imperiled species protection. Find out more about the Landscape Project at: <http://www.njfishandwildlife.com/ensp/landscape/index.htm>
- ⊗ **Livable Communities Coalition.** “Habitat Protection: The Critical Areas Ordinance, 2004”. The LCC is a broad-based coalition of neighborhood, affordable housing, transportation, land use, and environmental advocates dedicated to preserve open space, farmland, wildlife habitat and forestland in King County, WA. [http://livablecoalition.org/article\\_04\\_CAO3.htm](http://livablecoalition.org/article_04_CAO3.htm)



## STEP

### 3

## Stream Corridor Protection

**GOAL:** As stated in the 2002 Master Plan Update, objectives for natural resources include protecting “the environmental and environmentally sensitive areas of the Township from destruction or degradation, including...stream corridors...watersheds, aquifers, rivers, viewsheds...and other vegetation.”

Respondents felt that water quality is somewhat protected by the rezoning of critical areas and that stream corridor protection is progressing.

**CURRENT PROTECTION:** Currently, Hillsborough Township does not have a Stream Corridor Ordinance (SCO). There is language for stream protection throughout the Land Development Ordinance mostly in the Purpose sections. There is no one specific section for protection of stream corridors or water quality.

The LDO also has language regarding flood prevention, but again, there it does not prevent stream degradation in terms of water quality or to prevent loss of habitat. It is mostly protection from structural damage of buildings.

before



after



Restored stream corridor on the Royce Brook

### **OPTION: ADOPT A STREAM CORRIDOR ORDINANCE AND ENSURE AN EXPLICIT DESCRIPTION IN THE MASTER PLAN AND CONSERVATION ELEMENT**

The stream corridor ordinance should include:

- ⊗ Protection of the stream corridor that includes protection of the flood plain, plus 100 feet.
- ⊗ Clear definitions for “flood plain”, “stream” and “impaired”.
- ⊗ Minimum acreage measurements for the stream’s watershed.
- ⊗ Language to assign monitoring and enforcement to a township official or an outside person. Volunteers are a useful and inexpensive way to ensure protection strategies are working and not violated.
- ⊗ Consideration of the prohibition of parking areas, loading areas and golf courses in the stream corridor.
- ⊗ Maintenance of the streambank vegetation with native species trees, shrubs and grasses and a policy of not mowing healthy streambank flora.
- ⊗ Extension of the stream corridor if wetlands, flood plains, steep slopes or critical habitats are adjacent.
- ⊗ Best Management Practices for streambank restoration in impaired areas.
- ⊗ Apply for NJ DEP “319” grants to financial support water quality monitoring projects.



## Did You Know?

- ⌘ A stream corridor, or stream valley, is a complex and valuable ecosystem which includes the land, plants, animals, and network of streams within it. Recognition of the value of stream corridors has come with the understanding of what has been lost through uninformed or misguided actions on many streams and the watersheds that nourish them.
- ⌘ It is easier and less expensive to protect these areas now rather than trying to restore them in the future. If stream corridors are maintained in their natural condition, with minimum disturbance, then they are instrumental in performing the following functions:
  - Removing sediment, nutrients, and pollutants by providing opportunities for filtration, absorption and decomposition;
  - Reducing stream bank erosion by slowing stormwater velocity, which aids in allowing stormwater to be absorbed in the soil and taken up by vegetation;
  - Preventing flood related damage to surrounding communities;
  - Displacing potential sources of nonpoint-source pollution from the water's edge;
  - Providing shade that maintains cooler water temperatures needed by certain aquatic species during the hot summer months;
  - Maintaining genetic diversity;
  - Helping maintain adequate flows of filtered water to underground aquifers; and
  - Providing greenway corridors for wildlife.

The Watershed Association is actively revamping our model Stream Corridor Ordinance to be available for municipal use.



## Additional Resources

- ⌘ **Stony Brook-Millstone Watershed Association.** The Watershed Association has a model Stream Corridor Ordinance and an Implementation Package on file for municipalities to use and tailor language to their own needs. Tel: 609.737.3735 [www.thewatershed.org](http://www.thewatershed.org). The Watershed Association also has various stream corridor ordinances from other New Jersey communities including: Montgomery Township, East Windsor Township, Holmdel Township, and Clinton Township.
- ⌘ **NRCS Technical Resources for streambank restorations.** This document is a benchmark document that is being used by a variety of agencies and others who are interested in restoring the functions and values of the nation's stream corridors. <http://www.nrcs.usda.gov>. *FISRWG (10/1998). Stream Corridor Restoration: Principles, Processes, and Practices.* By the Federal Interagency Stream Restoration Working Group.



## STEP

### 4

## Groundwater and Wellhead Protection

**GOALS:** Protect groundwater in areas where geology is shown as unsuitable to sustain septic system use (1996 Master Plan). Constraints on septic systems could cause them to fail and contaminate private wells. A second goal is to protect “pristine waters (that) cannot be maintained without protection of their watershed areas” (2002 Agricultural Zoning District Ordinance).

Another goal is to limit development in the Mountain Zone because of existing geology, as stated above, and because of the presence of headwaters to streams in the area (2002 Master Plan).



Farm on Hillsborough Rd.

**CURRENT PROTECTION:** Specific language is not listed for protecting groundwater or for public or private wellhead protection.

In terms of water supply, the township’s land development ordinance refers to utility services, but does not have a map delineating wellheads or their surrounding areas for protection of the water supply. There are well testing standards in place that include special interference testing for the MZ wells, but in this zone, lot sizes should be taken into account when establishing an acceptable drawdown.

Hillsborough is protecting water supplies by working with local and state agencies and through the rezoning of the mountain and agricultural districts (Survey Responses).

### **OPTION: ADOPT ORDINANCES TO PROTECT GROUND WATER QUALITY AND EDUCATE THE PUBLIC ABOUT INITIATIVES.**

Specifically, the Township should consider:

- ⌘ Developing a “Wellhead and Aquifer Recharge Protection Plan and Map” to focus on the prevention of discharges of hazardous substances and toxic wastes, identify wellhead locations, and cross-reference the Critical Areas language as stated in the Land Development Ordinance.
- ⌘ Creating a Wellhead and Aquifer Recharge Protection Overlay Zone to accompany ordinance language and to implement the Plan and Map.
- ⌘ Encouraging the use of retention basins or rain gardens to control stormwater. See the NJ DEP Best Management Practices Manual (2004) for measures to ensure the most ground water recharge.
- ⌘ Distributing information to residents in order to educate them on best management practices in the home for water conservation.
- ⌘ Limiting impervious cover in new development to ensure maximum groundwater recharge.
- ⌘ Locate sites on the Hopewell Fault that lie within the Township boundaries and plan proactive strategies to protecting this resource.



## Did You Know?

- ⌘ The new 15 acre/unit zoning enacted in the Mountain Zone was, at least in part, due to the groundwater geology and the desire to protect existing groundwater resources in the Sourland Mountains.
- ⌘ The Sourland Mountain area (E. Mountain Rd, Amwell Rd and Wertsville Rd) has two underlying formations – argillite and diabase – that covers 16 percent of the Township. This type of geology includes dense formations with little permeability or porosity. Therefore, groundwater resources in this area must be carefully conserved and returned to the ground in any way possible.
- ⌘ Royce Brook watershed covers about one-third of the Township and includes areas under active development. If not properly planned and maintained, erosion, flooding, and degradation could occur.
- ⌘ Eighty-eight percent of Township residents have private wells, while the other 12 percent is serviced by Elizabethtown Water Company.
- ⌘ Wellhead protection is a preventive program designed to protect public water supply wells. The goal of wellhead protection is to prevent contaminants from entering public water supply wells by managing the land that contributes water to the wells.



## Additional Resources

- ⌘ **Model Wellhead Protection Implementation Package.** The Stony Brook-Millstone Watershed Association is producing a series of implementation packages to assist municipalities in developing protective ordinances. Please contact the Watershed Association for a copy of the Wellhead Protection Implementation Package. Phone: 609.737.3735 [www.thewatershed.org](http://www.thewatershed.org)
- ⌘ **Low Impact Development Manual.** The Stony Brook-Millstone Watershed Association created this manual with materials from the Puget Sound Action Team. This document provides examples from around the country that apply development strategies to increase groundwater recharge. The Watershed Association has this document on file for review. See contact info above.
- ⌘ **Groundwater Report for the Sourland Mountains.** M2 Associates. This hydrogeological report provides scientific and technical information on the water supply within the Sourland Mountain Region, of which Hillsborough is a part. The Watershed Association has this document on file for review. See contact info above.
- ⌘ **DRAFT Model Well Testing Ordinance.** Hunterdon County Environmental Toolbox. While this model ordinance is still in draft form it provides language for municipalities to apply to their own well testing needs. The Watershed Association has this DRAFT model ordinance on file for review and use. See contact info above.



## STEP

# 5

## Septic System Management

**GOAL:** Respondents to the survey felt that in terms of protecting water quality, the rezoning of the mountain and agricultural districts was a major effort toward achieving that goal. However, they also felt that more education about septic systems is needed.

**CURRENT PROTECTION:** There is no separate ordinance for maintenance of septic systems, but §7:9A-3.6 of the Land Development Ordinance states the Board of Health regulations for Individual Subsurface Sewage Disposal Systems Ordinance. It regulates soil testing and design and location of a septic system.

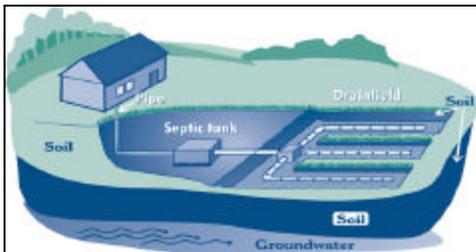


Diagram of a Septic System - Courtesy U.S. EPA

According to the Township's Health Officer, the township does not regulate maintenance or pump-outs or provide an incentive for system maintenance. However, the Township does conduct a sanitary survey every 10 years to discover failing septic systems.

Currently, the Township allows for Community On-Site Wastewater Systems (COWS) on clustered properties. While this provides one solution for management of septic systems (a Homeowner's Association would be the responsible party) and greater open space opportunities, the Township could find greater protection of ground and well water with a separate Septic System Management Ordinance. Through the ordinance a management program would be established to monitor septic systems to avoid malfunctions, protect public health and the environment. The Township would be able to maintain records and manage septic systems through license issuance and renewal, which would only come after evidence of pumping and/or inspection is submitted to the Township.

### **OPTION: ADOPT ORDINANCES AND POLICIES TO IMPROVE PERFORMANCE AND MONITORING OF SEPTIC SYSTEMS**

Specifically, the Township might consider:

- ⊗ Adopting a septic system monitoring policy/ordinance for residential systems to detect failing septic systems. The Township should assess alternatives for failing septic systems, such as COWS or mound systems.
- ⊗ Working with the Stony Brook-Millstone Watershed Association to produce education materials to distribute to residents regarding proper maintenance and care of a septic system.
- ⊗ Regularly scheduling educational programs on septic system upkeep and the possible affect on individual drinking water sources.
- ⊗ Applying for a Smart Growth grant for community septic systems, retrofitting any current failing systems.
- ⊗ Providing incentives, and perhaps financial assistance, for septic system maintenance.



## Did You Know?

- ⌘ Hillsborough's 1996 Master Plan states that almost 95 percent of the township is rated severe for septic systems and may require alternative systems. Soils that are "severely" constrained for septic suitability do not have the capability to support proper percolation or drainage of water into a drainfield from the septic tank. Should a septic system be constructed in a severely constrained area, failure of that system, and potential contamination of drinking water could occur. The Master Plan also states that "virtually the entire Royce Brook watershed has a severe rating (for septic suitability) (p.7)".
- ⌘ Limitations of soil to handle septic systems can range from slight to moderate to severe. The more severe the rating, the more likely a septic system will fail, especially if it is not maintained properly.
- ⌘ Only about 25 percent of the families in the Township are served by individual septic systems. The majority of the denser areas (about 75% of the land base) is served by sewers.
- ⌘ Homeowners that have both a well and septic system on their property need to take extra care of both utilities.

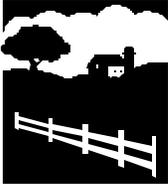


Courtesy US EPA



## Additional Resources

- ⌘ ***Stony Brook-Millstone Watershed Association.*** Septic System Education guide and materials. The Watershed Association has produced a set of septic system education materials for municipalities to use and tailor to their communities. Materials can be found on the web at <http://www.thewatershed.org/WSM/library.html> or call 609.737.3735 for hard copies of these brochures. The Watershed Association is also available to present a Septic System Maintenance Education Program for residents, homeowners and municipal officials.
- ⌘ ***On-Site Wastewater Disposal Management District.*** Montgomery Township Board of Health. Ordinance #99-02 requires that all homeowners or home occupants with septic systems be a member of the Management District. This includes all systems to be installed, altered or repaired as per this ordinance. The Watershed Association has this ordinance on file for review. Phone: 609.737.3735
- ⌘ ***U.S. Environmental Protection Agency.*** The US EPA has information related to Septic System maintenance, as well as groundwater protection. It can be found on the web at [www.epa.gov](http://www.epa.gov), search on "septic system".



## STEP

### 6

## Preservation of Rural Character

**GOAL:** The 1999 Master Plan Reexamination report states that the Township wishes to “expand efforts to preserve open space and farmland and provide linkages” with neighboring townships. The updated 2002 Master Plan states an objective to “protect and maintain the prevailing rural character...”. Respondents to the survey felt that rural character could also be preserved by limiting development based on the environmental constraints throughout the Township, but especially in the Sourland Mountain area.

Hillsborough recognizes the loss of rural lands throughout the Township. By concentrating development in the Town Center, the Township will be able to protect open space in the environs.

### **CURRENT PROTECTION:**

Hillsborough Township has an Open Space Tax at \$0.039 to help protect open lands.

§188-109, Tree Protection Ordinance. The Township’s LDO regulates “removal of more than 3 trees per year, removal of trees on residential lots and cropping and trimming that could cause harm to the health of the tree.” This protection could be strengthened in the LDO by adding definitions for Diameter at Breast Height (DBH) - to classify trees according to size, Forest/Tree Stand - to identify large groupings of trees that should be protected for habitat protection, and Specimen Tree - to identify specific trees for protection.

§163-1, Right to Farm language in the LDO includes the right to utilize land for farm practices, protects the practices from being considered a nuisance and includes BMPs to safeguard public health, safety and welfare.

§188-99, Land Development Options. An Open Lands Ratio is permitted for the Agricultural Zone when subdividing land. This technique, similar to clustering, will allow the community to retain a rural character.

### **OPTION: EMPHASIZE IN THE PHASE II MASTER PLAN THE TOWNSHIP’S DESIRE TO PROTECT THE ENVIRONS. LIST OBJECTIVES PLANNED TO ACHIEVE THAT GOAL.**

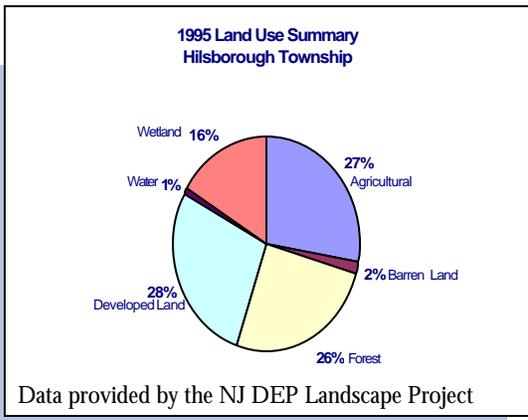
Specifically, the Township should consider:

- ⊗ Ensuring Master Plan language emphasizes the Township’s need or want to create a town center, in part to protect rural lands on the outskirts of town.
- ⊗ Preparing a Developer’s Checklist of environmental protection measures that the developer answers during the application process. This will help to ensure the open lands ratio designated in the newly rezoned Agricultural District is seen as an option and is encouraged to protect environmentally constrained lands.
- ⊗ Prepare a Woodlands Management Plan and Ordinance to ensure protection of woodland habitats and rural character.
- ⊗ A separate Right to Farm Ordinance to continue to allow and support farmers in promoting their agricultural businesses. The ordinance should support tours, seasonal events, educational programs related to farming and other innovative programs to keep farming viable.
- ⊗ Consulting with the Farm Bureau to ensure that the township’s goals are in line with the state agricultural program.
- ⊗ Including NJ’s Landscape Project data into your Open Space Plan to further protect Threatened and Endangered species and their habitats in the township.



### Did You Know?

As seen in the chart on the right, Hillsborough Township's land use is fairly split between developed land, agriculture and forest. The latter two pie pieces will become increasingly smaller should they become developed land.



- A community can define rural character in its own way, according to the rural nature of the community. Once rural character is defined, the community can go forward in protecting those resources. Some definitions of rural character may include the following elements: *tree-lined streets - farmlands - woodlands - clean air and water - undeveloped open space - natural streambanks - natural lake shorelines - outdoor recreation opportunities - small villages and communities.* These elements can be protected through the following:

  - **Woodlands Ordinances** - protect trees in a larger mass and provide additional, more comprehensive benefits to a habitat. A Woodland area or corridor consists of tree canopy, the tree stand, the understory, and the ground cover. Protecting woodlands on this level will help to increase infiltration of rainwater, maintain the wildlife habitat, shield unpleasant noises, and slow stormwater runoff.
  - **Purchase or Transfer of Development Rights (P/TDR)** - usually directed toward the protection of farmland. TDR is more likely to aid a community in achieving rural character goals and this practice is now supported by the State of New Jersey. In applying TDR, a Township must assume areas where higher densities are acceptable, for instance, in the proposed Town Center designated area.
  - **Other Development Incentives** - could include clustering, options for lot averaging, and density bonuses where a developer provides amenities to enhance rural character and receives additional allowable units in return. Hillsborough already applies an open lands ratio in their clustering language, but options should be considered based on the nature of the site to be developed.



### Additional Resources

- Stony Brook-Millstone Watershed Association.** The Watershed Association has all the recent information regarding legalities of TDR, funding and other general information. Phone: (609) 737-3735.
- Building Greener Communities-Planning for Woodlands Conservation.** North Jersey Resource Conservation and Development Council. Community Development to improve economic and community development in rural areas. Phone: (908) 735-0733 Fax: (908) 735-0744. The Watershed Association has this publication on file for review. (609) 737-3735.
- Planners Web.** The Planning Commissioner's Journal. Transfer of Development Rights Resource page located at: [www.plannersweb.com/tdr.html](http://www.plannersweb.com/tdr.html). This website gives information for starting a TDR program and links to other communities with TDR Programs such as Boulder, Colorado and Montgomery County, MD.



## STEP

### 7

## Protection of Viewsheds

**GOAL:** The 2002 Master Plan update states two goals to protect viewsheds. In Land Use Management, the township would like to protect and maintain prevailing rural character, including scenic landscapes resulting from natural topography and agricultural lands, among other landscapes. In Community Design, the township strives to retain attractive vistas from public rights-of-way including views of hills, valleys, ridgelines, farmlands and other natural areas (p.5).

Respondents to the survey agreed that viewsheds need more protection. They feel this can be accomplished by educating residents, mapping viewsheds and by developing ordinances to limit development in scenic areas.

### **CURRENT PROTECTION:**

Hillsborough Township has a zoning designation for the mountain areas that is very detailed in limiting development due to environmental constraints, but there is a lack of language regulating development to protect a view; using, for example, height restrictions and easements.



**View from top of Sourland Mountain**

### **OPTION: STRENGTHEN ORDINANCE LANGUAGE TO PROTECT SCENIC RESOURCES IN THE TOWNSHIP.**

Specifically, the Township should consider:

- ⌘ Defining what a Viewshed is in Hillsborough Township then identify those Scenic Resources (vistas and viewsheds) for maximum protection. One definition describes a scenic resource as an attribute that gives identity to a community and makes it an appealing place to live. Vistas may be specific, extraordinary views, or vistas of segments of the community.
- ⌘ Conducting a visual assessment of significant views in the Township. Photograph the views and mark their locations on a map, including the point at which the view “ends”. This can be done for fields, mountains, and scenic roads, as the Township wishes to protect them.
- ⌘ Including in the development regulations a restriction on the height of buildings in areas that offer significant views. For example, on the Sourland Mountain, the height of buildings should not exceed the height of trees, so as not to detract from the view of the mountain.
- ⌘ Including in the development regulations the placement of structures on a property in relation to the significant view. For example, a house proposed for construction on an open parcel, such as a subdivided farm field, should be located on the property in the least intrusive manner.
- ⌘ Involving the residents of Hillsborough Township in learning about and protecting viewsheds and scenic resources. Hold a photo contest to allow residents to highlight their favorite views in the Township.



## Did You Know?

- ⌘ Communities are increasingly using conservation easements, overlay zoning, historic districts, design guidelines, transfer of development rights, and other measures to protect scenic areas from degradation.
- ⌘ Protecting scenic beauty offers communities many substantial benefits, such as higher property values and increased tourism revenue.
- ⌘ Preserving scenic vistas and viewsheds helps a community to preserve its unique charm, build civic pride, and attract positive growth.
- ⌘ Telecommunications towers can disrupt views just the same as buildings. A community can place a moratorium on the construction of new telecommunication towers as they decide on alternative design and location. Some innovative locations include the interior of church steeples or on top of farm silos - depending on the size of the tower. Some other regulations include:
  - Restricting the types and heights of facilities within certain zoning districts;
  - Limiting tower height to no more than 10-20 feet above other features such as trees and buildings;
  - Imposing setbacks of at least 150 percent of the tower's height.



## Additional Resources

- ⌘ **Scenic America.** Mission is “to safeguard America's natural beauty and community character.” This is a national organization that works to protect viewsheds and scenic vistas. They offer a variety of options for municipalities to encourage in order to protect viewsheds, including - conducting visual assessments through the use of volunteers, giving tax breaks to property owners who donate land, purchasing land (which can be the most expensive, but most effective way to protect views), establishing design guidelines and review for greenbelts and overlay zoning and the organization itself offers grants for community groups to accomplish any one (or all) of these tasks. Scenic America 1634 I Street, NW Suite 510. Washington, D.C. 20006 PH: (202) 638-0550 FAX: (202) 638-3171 [www.scenic.org](http://www.scenic.org)
- ⌘ **Banisch Associates, Inc.** Sergeantsville, NJ. This planning consulting firm has contributed to numerous New Jersey communities’ Master Plans and Conservation Elements. In 2003, Banisch Associates developed a Scenic Resources Map for Bedminster Township. Master Plan text refers to Scenic Resources within the Conservation Plan Element. The Watershed Association has access to this Master Plan, but it can be found on the Bedminster Township website: [www.bedminster-nj.com](http://www.bedminster-nj.com).
- ⌘ **Scenic Resources Ordinance.** The State of Maine has an ordinance protecting Scenic Resources that applies to the entire state, but is encouraged to be used as a model for communities. The Watershed Association has access to this ordinance, but it can be found on the state’s Historic Preservation Commission website: <http://www.state.me.us/mhpc/>



## STEP

# 8

## Historic Preservation and Education

**GOAL:** Hillsborough's 1992 Master Plan states that an objective for historic preservation includes, "Historic and archaeological preservation and development that is consistent with community character" (p.6).

Respondents to the survey felt there is a need to protect the diminishing farming heritage. There was also the sentiment to protect the "truly historic" places. One suggestion for education was to utilize existing historic structures for cultural centers, museums, boutiques, offices and parks.



**A Historic Shed on Rte. 206**

**CURRENT PROTECTION:** §188-109 of the LDO allows for a historic preservation committee (HPC) as "an agency which will... advise the Hillsborough Township Planning Board to the extent permitted by law on the administration of a system of preservation rules...and which will complement existing land use construction codes." Historic district boundaries are identified on the official Zoning Map.

Currently, the Township's HPC is able to review development applications for a historic site or building and submit comments to the Planning Board. The Township needs to ensure that the LDO has language for regulations pertaining to demolition and alteration of a historic building and construction on a historic site. The purpose here is to avoid developers from tearing down historic buildings and constructing new buildings, that may be inappropriate, in their place.

### **OPTION: IDENTIFY HISTORIC RESOURCES AND CREATE A PLAN TO DETERMINE AND ENSURE THEIR PROTECTION.**

Specifically, the Township or HPC should consider:

- ⌘ Develop a program or materials for new residents that will spark an interest in protecting historic resources.
- ⌘ Educating new residents about the history of the township to spark an interest in protecting the community's historic resources.
- ⌘ Ensuring that local officials work with the HPC to identify what needs to be preserved.
- ⌘ Creating and adopting a design ordinance for alterations to or development of a historic site.
- ⌘ Rehabilitating historic buildings to integrate into new development projects.
- ⌘ Conducting a tour of Hillsborough Township that includes historic homes and districts and the Sourland Mountains.



## Did You Know?

- ⌘ Historic preservation can be the keystone of a comprehensive residential and commercial revitalization strategy, as it creates more jobs, income, and wealth than comparable new construction. (source: *National Trust for Historic Preservation*)
- ⌘ A municipality with scarce resources for Historic Preservation can spend funding wisely by targeting a handful of structures that are historically/ architecturally/ culturally important to the community. It is often unrealistic to preserve every historic building or site in a community.
- ⌘ There are easy ways to preserve history everyday. Some examples include:
  - **Exploring your family's history in the town.** Show your kids the places where you went to school or where you got married; take your parents to a place that's important in your life.
  - **Touring your hometown.** Visit a historic site in your area or stop by the local historical society or museum. Check the events calendar in the newspaper or on the Web, then go to one of the street fairs or festivals or neighborhood tours you've always meant to enjoy.
  - **Shopping on Main Street.** Park your car at one end of town and walk up and down to get through your errands. Enjoy the history and character of the buildings as you go from place to place.
  - **Asking your neighbors about your neighborhood.** Talk to people who've lived on your street longer than you have. Find out what they remember about living there, and about the people who have moved on.
  - **Joining an organization -- or two -- dedicated to preservation.** Become a member of, or find out about groups in your area.



## Additional Resources

- ⌘ **National Trust for Historic Preservation in the United States.** Offers funding for protection of historic building, neighborhoods, and landscapes. Contact them at: 1785 Massachusetts Ave., N.W., Washington, DC 20036, U.S.A. [http://www.nationaltrust.org/heritage\\_tourism/index.html](http://www.nationaltrust.org/heritage_tourism/index.html)
- ⌘ **Preservation New Jersey.** Offers educational tours, training workshops and publications pertaining to historic preservation in New Jersey. Contact them at: 30 S. Warren Street. Trenton, NJ 08608. Telephone: 609-392-6409. Fax: 609-392-6418 [info@preservationnj.org](mailto:info@preservationnj.org)
- ⌘ **NJ State Historic Preservation Office.** Offers grants for preservation of historic resources in New Jersey. P.O. Box 404. Trenton, NJ 08625-0404 Telephone: 609-292-2023, 292-2028, 984-0140. Fax: 609-984-0578. Email: [njhpo@dep.state.nj.us](mailto:njhpo@dep.state.nj.us)



## STEP

# 9

## Soil Erosion Management and Sediment Control

**GOAL:** The 1996 Master Plan indicated the need to protect environmentally critical areas by placing development toward the center of the township and by using sensitive design standards to minimize any impact.

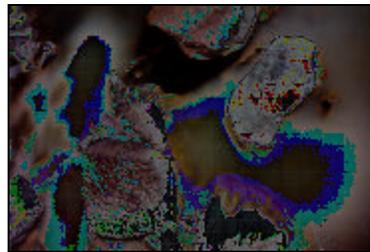
This Master Plan also states that “soil logs should be taken throughout a site under review”. This will help determine soil health and will be a reference to site construction projects appropriately.

Respondents to the survey felt that the township needs to “implement strict development regulations based on environmental constraints” which includes unstable soils.

**CURRENT PROTECTION:** Chapter 251 Soil Erosion and Sediment Control. Purpose is to control soil erosion and sediment damages and related environmental damage by requiring adequate provisions for surface

water retention and drainage and for the protection of exposed soil surfaces.

Currently, the Township’s regulations for Soil Erosion and Sediment control particularly apply to removal of soil. To strengthen protection against degradation of soil health, language should be added that requires maintaining soil health throughout a construction project.



**Sedimentation in a Sourland stream.**

### **OPTION: ADOPT A MONITORING PROGRAM TO ENSURE SOIL EROSION MANAGEMENT AND SEDIMENT CONTROL.**

Specifically, the Township should consider:

- ⌘ Enforcing the language of the soil erosion/sediment control chapter in the Land Development ordinance to protect soil health and minimize sedimentation and soil erosion on a construction site.
- ⌘ Incorporating your local Soil Conservation Service to assist you in developing a Soil Erosion and Sediment Control Plan. Tailor County information to protect resources in your own community.
- ⌘ Strengthening and enforcing language in the development regulations to address construction on steep slopes, particularly in riparian areas.
- ⌘ Creating a monitoring plan that revisits construction (and/or residential) sites after the project is complete and includes an assessment of the developed area.



## Did You Know?

Soil erosion is the detachment and movement of soil particles by water, wind, ice, or gravity.

Sediment is the result of erosion. Once soil particles have detached from the surface, are transported from their site of origin and have come to rest on other ground surfaces or in bodies of water, watercourses, or wetlands, they are referred to as sediment.

### **Why be concerned about soil erosion and sediment control?**

The removal of vegetative cover, the disturbance of soils in areas with steep slopes may cause increased surface water runoff, soil erosion, and siltation, and other undesirable or dangerous conditions or hazards, resulting in pollution increased flooding and water-related damage, unsightly landscapes, and other threats to the public health, safety, and welfare.

*Protection of Surface Water Quality:* Urban runoff and construction site erosion have been identified as significant sources of non-point source pollution.

*Mitigation on Construction Sites:* Construction site erosion is a significant source of sediment and other NPS pollutants. Soil erosion from a construction site without proper soil erosion and sediment control practices in place can average between 20-200 tons/acre/year--This is ten to twenty times greater than typical soil losses on agricultural lands.



## Additional Resources

- ☞ ***Stony Brook-Millstone Watershed Association.*** The Watershed Association is producing a variety of Model Ordinance Implementation Packages for municipalities to use in their communities. We are currently drafting a Soil Erosion and Sediment Control Ordinance Implementation Package. While it is still in draft form we have done extensive research and can offer guidance to municipalities looking to strengthen soil erosion and sediment control language in their municipal regulations.
- ☞ ***Soil Erosion and Sediment Control Act, Chapter 251, January 1, 1976.*** Policy of the legislature to provide for the conservation of the soil and soil resources of this state, and for the control and prevention of soil erosion. Find out more at [http://www.mercerscd.org/chap\\_251.html](http://www.mercerscd.org/chap_251.html)
- ☞ ***Enforcing Sediment Regulations in North Carolina.*** Paterson, Robert G. University of Texas at Austin. One of the most glaring deficiencies in the watershed protection literature today is the lack of research on the behavioral elements that must be met to improve outcomes. For more information read this article at: [www.stormwatercenter.net/practicte/62-Enforcing](http://www.stormwatercenter.net/practicte/62-Enforcing)



## STEP

### 10

## New Construction Practices

**GOAL:** Hillsborough Township is experiencing rapid growth and development, and has said in the various Master Plans that they wish to provide development that does not impact the land or surrounding habitat.

While soil erosion management and sediment control are important goals for protecting water quality and critical soils, the Township could provide language in the Master Plan to further those goals by implementing construction practices that limit disturbance at the construction site and in the long run.

**CURRENT PROTECTION:** §188-85 Soil Removal and Redistribution. Done in accordance with the approved plat that contains soil erosion and sediment control provisions.

Any disturbance of more than 5,000 square feet needs to provide language on the plans for controlling or preventing erosion and other provisions for maintaining the safety of the site as well as prevention of degradation.

Any disturbance of one acre or more or one-quarter acre of impervious cover will trigger regulation by the NJ DEP Phase II Stormwater Rules.



### **OPTION: EMPHASIZE AND ENCOURAGE SENSITIVE CONSTRUCTION PRACTICES, PARTICULARLY IN CRITICAL AREAS.**

Specifically, the Township should consider:

- ∅ Establishing individual Construction Site Soil Erosion Control measures or adopting an ordinance to promote, regulate and monitor these practices.
- ∅ Creating a checklist and ensure it requires the data necessary to make informed planning decisions (soils, hydrogeology, water quality, location of environmentally sensitive areas, etc.).
- ∅ Requiring developers to submit the checklist before approving construction permits.
- ∅ Ensure accurate mapping of Critical Habitat Areas prior to granting construction permits.
- ∅ Requiring submission of an Environmental Impact Statement for any new large scale development, prior to granting construction permits.
- ∅ Encouraging the use of pervious material, including porous pavement, green parking lots, gravel and other alternatives on all construction sites to ensure minimal soil disturbance.
- ∅ Tailoring MLUL language to reflect Hillsborough Township's needs for requiring new construction practices.
- ∅ Ensuring necessary fees for monitoring and enforcement are adopted in current regulations.



## Did You Know?

Section C.40:55D-45.2 of the NJ Municipal Land Use Law, General Development Plan Contents, states that an environmental inventory may include, but not be limited to, a general description of the probable impact of the development on the environmental attributes of a site.

Critical Slope areas often serve as habitats for threatened or endangered species of plants and wildlife, and these species may be adversely affected by inappropriate development. The New Jersey Office of Smart Growth suggests that construction standards that minimize soil disturbance during construction in Critical Slope areas should be prepared and implemented by municipalities with the technical support and assistance of State agencies. Critical Slope areas that are cleared during development or forestry activities should be revegetated with native vegetation according to appropriate soil conservation and stormwater management techniques.

Aside from protecting critical habitats, limiting soil erosion on construction sites can prevent runoff and sedimentation in nearby waterways. Some techniques currently used to alleviate this environmental degradation include examples from around the country:

- ⌘ **Minnesota Urban Small Sites BMP Manual.** Gives examples of Vehicle Track Pads, Grading and Sequencing of construction. <http://www.metrocouncil.org/environment/Watershed/BMP/manual.htm>.
- ⌘ **Conyers, GA - Construction Practices Brochure.** Gives examples to control erosion and sediment movement at the construction site. [http://www.conyersga.com/client\\_resources/cityhall/construction%20practices.doc](http://www.conyersga.com/client_resources/cityhall/construction%20practices.doc)



## Additional Resources

- ⌘ **Stony Brook-Millstone Watershed Association.** River-Friendly Golf Course, Business and Resident Certification Programs. River-Friendly materials help businesses, residents, golf courses and municipalities learn about water conservation and create goals to improve their own practices at home and at work. Residents, businesses, golf courses and municipalities can become River-Friendly certified by completing their goals to conserve water and maintain their property in an environmentally conscious manner. Contact the Watershed Association for more information. Phone: 609.737.3735. [www.thewatershed.org](http://www.thewatershed.org).
- ⌘ **Construction Site Erosion Control Ordinance.** Boise, Idaho. Municipal Code Chapter 8-17. This ordinance is a model for construction site erosion control that includes goals for minimizing depositing and tracking sediment, utilizing appropriate materials and equipment for construction, regulating temporary structures and materials, and for inspecting during the construction process. The Watershed Association has this ordinance on file for review. See contact information above.



## STEP

### 11

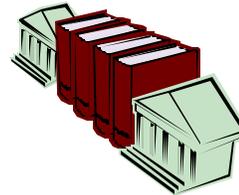
## Environmental Ordinance Enforcement

**GOAL:** To advance environmental projects through ordinances and by funding appropriate infrastructure, according to a few survey respondents.

**CURRENT PROTECTION:** Language in the Land Development Ordinance and in individual ordinances, does not consistently require monitoring or enforcement within ordinances.

The Township's Environmental Commission and Historic Preservation Committee are charged with providing comments on subdivision and site plan applications. While they do not have the authority to enforce a law, they do have the power to make recommendations to the Township Committee to consider enforcement measures on certain issues.

In order to protect environmental resources in the community, the Township should apply their power to enforce regulations by delegating the task to another official, hiring outside assistance, or advertising for volunteers to assist - depending on the issue. Volunteers can be used for such projects as visual assessments and documenting activities on conservation easements.



### **OPTION: ENFORCE ORDINANCES THROUGH MONITORING AND EDUCATION.**

Specifically, the Township might consider:

- ⌘ Providing a checklist for developers to submit to the Environmental Commission and/or the governing body, to avoid repercussions for violations.
- ⌘ Creating a document or table that helps to ensure that all staff and officials understand what is on the books, how it is implemented and who, or what entity, enforces the ordinance.
- ⌘ Hiring or appointing personnel or volunteers to act as an enforcement officer whose main focus is to monitor actions that may be questioned by the township and to increase communication between staff and amongst the community. (See the Additional Resources Section on the next page for more examples).
- ⌘ Making information regarding violations and penalties available to the public in order to ensure a clear understanding of repercussions.
- ⌘ Educating residents on alternative actions to avoid violations which could lead to penalties.
- ⌘ Combining any new ordinances or regulations with an educational component (i.e. a program or letter to residents or to the newspaper) to ensure residents understand the need for the change and their part in upholding that change.



## Did You Know?

- ⌘ Ordinances are created to protect citizens' health and well-being and to maintain a certain quality of life. Enforcement of these ordinances relies on the commitment of the municipal officials to uphold the standards that they have established.
- ⌘ Hiring volunteers or students is an inexpensive and efficient way to ensure that ordinances and regulations are being upheld in the Township.
- ⌘ New Jersey is known as a strong "home rule" state. The 1917 Home Rule Act was later supplemented by the Optional Municipal Charter Law, which provides for various forms of self-governance while restating to future interpreters and judges the broad police powers jurisdiction of municipal government.



## Additional Resources

- ⌘ **Volunteers and Interns.** As previously mentioned, this is a very inexpensive and efficient way to monitor preserved lands, easements, and open spaces. One example that proves the success of this approach is the Hunterdon County Farmland Preservation Program. Every summer they hire a college student - usually with an educational focus in an environmentally-related field - to "inspect" the preserved farms in the program. The intern collects information on each property, interviews the landowner/farmer, walks the property, takes pictures, then determines if that property is in compliance with the County's program regulations. This is a great way for a student to gain experience in the field and the municipality/county obtains current information on each of their properties. Contact Hunterdon County FPP for more information on this summer program: (908) 788-1490.
- ⌘ **The Environmental Manual for Municipal Officials.** This document gives overviews on municipal land use and environmental law, case studies and case law, and is available through the Association of New Jersey Environmental Commissions. [www.anjec.org](http://www.anjec.org). The Stony Brook-Millstone Watershed Association has this resource on file.
- ⌘ **Municipal Tools for Environmental Protection.** This document provides options for protecting environmental resources in a municipality. It is available through ANJEC. [www.anjec.org](http://www.anjec.org). The Stony Brook-Millstone Watershed Association has this resource on file.
- ⌘ **Zoning Ordinance Enforcement.** Long Hill Township, New Jersey. A Zoning Enforcement Officer inspects properties where non-permitted or prohibited uses are suspected, and will issue an order or a citation as appropriate to enforce the law. Any resident who suspects a non-permitted or prohibited use should contact the Zoning Enforcement Officer, and file a complaint. More information on this type of enforcement can be found at 908-647-8000 or at: <http://www.longhillnj.org/lht/zonenfor.htm>



## STEP

# 12

## Public Participation and Education

**GOAL:** To keep residents throughout the township interested in local issues and encourage them to participate in events that move toward betterment of the town, according to survey responses.

There was a feeling amongst all survey respondents that residents in the township are apathetic toward environmental issues and that they would like to spark passion in residents.

To foster community spirit by encouraging residents to embrace the diversity of the township and its potential for growth and improvement (1999, Master Plan).



**Hillsborough Middle School**

**CURRENT EFFORTS:** The township held a 3-day planning workshop in 1997 that brought together officials, businessmen, farmers, students, seniors and randomly selected citizens. Through this event participants created a mission statement including five goals for the township's future. From that workshop, three advisory committees were formed to study a Town Center concept, a Main Street design, and options for senior housing.

Hillsborough Township maintains a website that has recently been adding informational news briefs about issues or events in the town.

In an effort to increase public participation in the Master Plan process, the Township Planning Board is preparing a public work session for the fall. This activity will allow residents, professionals, and planning board members to work together to create a Master Plan portraying the vision of all Hillsborough Township residents.

### OPTION: CONTINUE TO ENCOURAGE PUBLIC PARTICIPATION

Specifically, the Township might consider:

- ⊗ Expanding the information available on Hillsborough Township's website ([www.hillsborough-nj.org](http://www.hillsborough-nj.org)). Include links to discussions of current community issues of concern and various solutions. Also, creating a link to the Stony Brook-Millstone Watershed Association for reports, programs, or other resources that may be helpful to finding answers to questions and issues.
- ⊗ In addition to posting minutes and meeting agendas, encourage Committee members to write a regular column in the local newspapers to keep residents informed on key programs and issues, including educational programs.
- ⊗ Creating fun programs for residents to understand the value and importance of the community and their role in it. For example, hold a Community Day and feature local businesses, organizations and services.





## STEP

13

# Knowledge Base of Municipal Officials

**GOAL:** According to survey respondents, local officials should maintain accessibility, interest and qualifications that represent the whole community.

**CURRENT EFFORTS:** While local officials volunteer their time to sit on boards and committees they remain knowledgeable about township issues and seek out opportunities for educational programs, as they are able.



### **OPTION: ENCOURAGE TRAINING AND ENCOURAGE SITE WALKS FOR COMMITTEE MEMBERS TO BETTER UNDERSTAND HOW DECISIONS MADE IN THE MUNICIPAL BUILDING WILL LOOK ON THE GROUND.**

Specifically, the Township should consider:

- ⊗ Encouraging members of their Township Committee, Planning Board, Environmental Commission, Open Space Advisory Committee and Historic Preservation Committee to participate in continuing education. This could include hosting a training workshop in the Township and inviting neighboring municipalities to attend.
- ⊗ Encouraging Planning Board and Environmental Commission members to conduct site walks prior to any application approval.
- ⊗ Ensuring that Township Officials participate in the cross-acceptance process and that Township plans are consistent with the State Plan and surrounding municipal master plans.
- ⊗ Encouraging the Environmental Commission to conduct more public education campaigns to heighten the awareness of environmental issues in the township and to possibly increase the feeling of ownership and value for the environment amongst residents.
- ⊗ Keeping township staff members, elected and appointed officials aware of documents that are updated and those that need updating. Ensuring that the process to update these materials includes a public process to maintain a cohesive end product, such as a Natural Resources Inventory.