# Taking the Next Step:

Cranbury Township Municipal Assessment

February 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 825-acre nature reserve in Pennington that includes a community supported organic farm, nature center, pond, and a 12-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.



www.thewatershed.org

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### **Executive Summary**

**Picture it: Autumn, 2024, Cranbury Township, New Jersey.** Main Street, Cranbury is bustling with shoppers, visitors, and families. One family decides to attend the Historic House Tour, while out-of-towners take 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. Music 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, as local officials have 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, picking up a quart of milk at the store below their apartment.

*Sound like a Utopia? Maybe.* But the issues are real and municipalities, in general, 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, the Stony Brook-Millstone Watershed Association (the Association) had received numerous requests from municipalities who needed 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 Project. This project 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 a strong community to step back and evaluate their goals, policies and strategies and figure out how to connect them with their ultimate vision. Cranbury 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 Cranbury Township for their ongoing projects and past accomplishments, which include:

- © Designating Farmland Preservation and Commercial/Industrial Development areas within the Master Plan. Clear language such as this will help to appropriately site land uses in the future.
- Maintaining the historic character and scenic vistas of the Township in the midst of surrounding growth and development. Over 872 acres of farmland have been preserved with pending approval for an additional 489 acres to enter the preservation program.
- © Including environmental education into community events scheduled throughout the year.
- © Encouraging the well-informed public to participate in meetings, which aids in providing for the community as a whole.

The municipal assessment process started with a collection of survey responses from the municipal officials, staff, and consultants. 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 four themes led to determining where the vision cannot be implemented by what is on the books. 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* show where the Township can do further research about that particular area.

As a catalyst to achieve responsible planning and environmental quality, this report serves as an excellent guide and inspiration for work, such as the above 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 funded to help implement.

This report is a general guide as to what can be done and what has been done in a community to connect goals with implementation and implementation with vision. The results of this analysis for Cranbury Township are documented in this report, entitled **"Taking the Next Step"**. Outlined below are the 11 strategies for achieving Cranbury Township's goal. (Please refer to the report for more detail).

#### **60** Stream Corridor Protection

- *Township Goal:* "Flood plains are valuable natural resources which should be preserved as part of the proposed linear open space system."
- *Current Practices:* Encroachments (of floodways) shall be prohibited, including fill, new construction, substantial improvements and other development.
- *Recommendation:* Create and adopt a comprehensive stream corridor ordinance with language protecting water quality and related ecosystems.

#### Groundwater Protection

*Township Goal:* Protection of the water quality of the two aquifers is of prime importance to maintain adequate potable water in the region.

*Current Practices:* Development shall use the Best Available Technology for stormwater management by natural drainage strategies.

*Recommendations:* Adopt additional ordinances and policies to protect groundwater quality.

#### ℘ Open Space Preservation

*Township Goal:* Retain open space areas having important historical, cultural, or locational significance.

*Current Practices:* The Township has approved a \$0.03 Open Space Tax and is working to preserve farmland and surrounding open space.

*Recommendations:* Adopt additional ordinances and policies to ensure further permanent protection of the Township's open space.

#### *<sup>(</sup>p***) Preservation of Rural Character**

*Township Goal:* "Preserve the natural amenities which establish the Township's rural character, including scenic vistas and farmland."

*Current Practices:* Land Use Ordinance allow for design standards that permanently deed restrict environmentally sensitive areas, scenic viewsheds, and open space, where farmland preservation is the main goal.

*Recommendations:* Adopt individual ordinances that ensure the implementation of objectives set forth in the Master Plan and Conservation Element.

#### **Woodlands Protection**

*Township Goal:* Preserve existing woodlands areas through a Woodlands Protection Ordinance.

*Current Practices:* Cranbury Township has a Shade Tree Commission that is responsible for street trees in the Township and for making recommendations to the Planning Board regarding shade trees.

*Recommendations:* Create and adopt a Woodlands Protection Plan and Ordinance that includes language for woodlands habitats, as well as for significant specimen trees.

#### Protection of Natural Resources and Critical Habitats

*Township Goal:* Provide a continuous greenway network along streams, scenic areas and critical environmental areas.

*Current Practices:* Critical habitats and wildlife are protected through language in the Land Use Development Ordinance.

*Recommendations*: Adopt ordinances and land use policies to ensure further preservation and protection of wetlands and critical habitats.

#### Stormwater Management

*Township Goals:* Master Plan language describes actions to ensure water quality, including low impact development techniques.

*Current Practices:* Development shall use Best Available Technology to accommodate stormwater management by natural drainage strategies.

*Recommendations:* Create and adopt a stormwater management plan that includes an ordinance, BMPs, implementation, and enforcement.

#### © Traffic Calming Measures

*Township Goals:* Reduce traffic through the Village; establish roadway design standards to preserve streetscapes on Village and rural roads; provide a network of pedestrian and bicycle paths linking uses throughout the Township.

*Current Practices:* No specific regulations or standards currently exist in the Land Development Ordinance.

*Recommendations:* Create and adopt a circulation plan that reduces traffic in the village and includes alternative transportation.

#### ℘ Specific Construction Guidelines

*Township Goals:* Any construction in the Township should be approached in a sensitive manner.

*Current Practices:* The Township allows for construction related to a use such as necessary sidewalks, driveways, drain systems, etc... that does not alter the land contours by more that one foot.

*Recommendations:* Develop construction guidelines that ensure the protection of environmental and public health.

#### ℘ **Resident Participation**

*Township Goals:* To further educate residents so as to encourage more participation. *Current Practices:* Education programs such as nature walks and community days help to involve the public and heighten their awareness of the assets of the community.

*Recommendations*: Continue to encourage public participation.

#### *()* Education of Township Officials

Township Goals: More communication between residents and officials.

*Current Practices:* Officials are encouraged to expand their expertise and knowledge in order to better educate residents.

*Recommendations:* Encourage site walk and training sessions for committee members.

Ultimately, Cranbury 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 Cranbury Township is 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 Cranbury Township's leaders and professionals for participating in this program and allowing the Association to evaluate current practices. It is difficult for anyone, whether an individual or a municipality, to have the courage to evaluate current work, to determine where and how to improve a current system, or to 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 Cranbury Township.

Our hope is that Cranbury 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, sensible regional 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 Cranbury a special place to live.

We wish to thank the William Penn and Geraldine R. Dodge Foundations for their generosity in funding this project, and the members of the Township Committee, Planning Board, Environmental Committee and staff for their enthusiastic responses to our survey. We would also like to acknowledge the individual input of Mayor Pari Stave, Planning Board Chair Tom Harvey, Environmental Committee Chair John Persico, Township Engineer Cathleen Marcelli, Township Administrator Fred Carr and all those who responded to the survey. Your time and dedication to this project was greatly appreciated.

#### Introduction

The elected and appointed officials in Cranbury 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. Cranbury 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 Project. 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 the vision for the future, Cranbury is planning for quality of life for 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, sense of community and viable economy.

We were excited to partner with Cranbury Township on this project, as it is a community active in planning for both preservation of land and character and development of large, industrial warehouse uses. The community has a defined historic village, including homes, shops, and churches, that is listed on the National Register; a farmland preservation program that has protected many farms; a major highway corridor that serves as a thruway and as a destination route; and a wellinformed and well-educated public that is active in events and issues throughout the township.

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, Cranbury Township is advancing efforts to take on the challenge of protecting and enhancing these qualities.

## How to Use This Report



After evaluating the survey responses, we reviewed Cranbury 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 Cranbury Township and what communities state and nationwide are doing. Finally, *Additional Resources* show where the Township can do further research about that particular area.

This report serves as an excellent 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 nonprofit groups.

## **Next Steps**



As Cranbury 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 Cranbury 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 (such as developing educational programs, like nature walks, to portray the value of environmental protection). 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 Cranbury 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 experience that is Cranbury Township.

## **Good Things...**

Cranbury Township's Main St., including some of the homes and shops, is listed on the State Register for Historic Places. The Main St. is a unique experience in and of itself and the Township has created specific committees and programs dedicated to protecting this character. This is just one example of the proactive measures taken in the Township to enhance the already charming character, while allowing for commercial and economic development in the appropriate places. Some other examples of Cranbury's work includes:

- Clearly designating in the Master Plan and on updated maps, the locations for Farmland Preservation and for Commercial/Industrial Development. Having this clear language will aid the Township in protecting farmland, farming, scenic vistas and open space. It will also allow for appropriate commercial development along the major highway corridors so as not to upset protected areas.
- In the midst of all the surrounding growth and development, Cranbury Township has successfully kept development at bay while managing to maintain a rural character with exceptional vistas. Since 1993, over 872 acres of farmland have been preserved, with pending approval for participation in the program increasing that number by 489 acres. Located west of the village, this area encompasses existing preserved agricultural lands, future agricultural acquisition, pending agricultural preservation, or permanent open space. Having this designation of a farmland preservation area allows for assessed farmland to support agriculture as a viable business.
- So Environmental education has also taken a front seat as the Environmental Commission and various outside organizations, like the Watershed Association, have educated residents and municipal officials on the value of protecting their home and environment.
- Having a well-educated, well-informed public that participates in meetings and programs. Because of this dedication, Cranbury Township is able to provide for the community as a whole.





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## **Stream Corridor Protection**



<u>GOAL</u>: The Master Plan states that: "Flood plains are low, flat areas located on one or both sides of a stream channel which are subject to frequent flooding... development in flood plains should be limited because of the potential for flood damage. In addition, flood plains are valuable natural resources which should be preserved as part of the proposed linear open space system."

Goals stated from the surveys do not reflect a concern for stream corridor protection. In fact, many responses revealed that there is a disconnect between land use and water quality.

#### CURRENT PROTECTION:

Objectives in the Master Plan provide for conservation easements along stream corridors to protect water quality. This objective, however, reduces the buffer width from 200 ft to 75 ft stating that it is "sufficient" and "easier to administer".

Chapter 87-17 of the Land Use Ordinance states that:

"encroachments (of floodways) shall be prohibited, including fill, new construction, substantial improvements and other development..."

#### **OPTION:** CREATE AND ADOPT A COMPREHENSIVE STREAM CORRIDOR ORDINANCE WITH LANGUAGE PROTECTING WATER QUALITY AND RELATED ECOSYSTEMS.

Specifically, the stream corridor ordinance should include:

Protection of the stream corridor including a stream buffer of 100-ft beyond the 100-yr flood line.

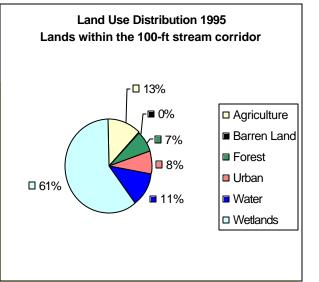


- Clear definitions for *flood plain*, *stream corridor*, and *impaired*. The
   Watershed Association has been working with the Hunterdon County Municipal Toolkit
   Committee to tailor a Stream Corridor Ordinance for municipalities in our Watershed.
- $\wp~$  Minimum acreage measurements for the stream's watershed should be consistent with DEP's standards.
- Maintenance of the streambank vegetation with native species trees, shrubs and grasses and a "no-mow" policy within the protected corridor.
- © Monitoring and penalty provisions.
- 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 funding that will help start these projects.
- Begin to collect water quality information in order to ensure that the quality of local streams remain healthy and able to support designated uses and a diversity of biota.



If stream corridors are maintained in their natural condition, with minimum disturbance, 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.
- <sup>®</sup> Helping maintain adequate flows of filtered water to underground aquifers; and
- Providing greenway corridors for wildlife.
- Provide the Watershed Association is actively revamping our model Stream Corridor Ordinance to be available for municipal use.



- Model Stream Corridor Protection Ordinance and Implementation Package prepared by the Stony Brook-Millstone Watershed Association (609-737-3735).
- ANJEC, "Protecting Our Streams" (P.O. Box 157, Mendham, NJ, 07945, 973-539-7547).
- North Jersey Resource Conservation and Development, Technical Guidelines for Streambank Restorations (908-735-0733).
- © Society for Ecological Restoration (www.ser.org).
- Seth Wenger and Lori Fowler, "Guidebook for Developing Local Riparian Buffer Ordinances" (Office of Public Service & Outreach, Institute of Ecology, University of Georgia, 706-542-3948) (1999).
- Seth Wenger, "A Review of the Scientific Literature on Riparian Buffer Width, Extent and Vegetation" (Office of Public Service & Outreach, Institute of Ecology, University of Georgia, 706-542-3948) (1999).
- United States Department of Agriculture, "Riparian Forest Buffers: Function and Design for Protection and Enhancement of Water Resources" (202-512-2250) (1991).

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## **Groundwater Protection**



<u>GOAL</u>: Master Plan goals include, "Protection of the water quality of the two aquifers is of prime importance to maintain adequate potable water in the region."

Further... "This can be accomplished through careful site development techniques in the aquifer recharge area, including open space preservation, lot averaging development patterns and adoption of a BMP ordinance."

Responses to the Framework Questionnaire include:

- "improve awareness"
   "
- <sup>(p)</sup> "need an understanding of recharge"
- © "aquifer recharge protection"

<u>CURRENT PROTECTION:</u> §150-61 states that "Development shall use the Best Available Technology for stormwater management by natural drainage strategies."

Other language potentially protecting groundwater is stated in §150-53 where language is needs to be more specific to regulations set by the NJ DEP or the Township Board of Health for well installation.

There does not seem to be a BMP ordinance for aquifer recharge as stated in the Master Plan Goals.

## **OPTION:** Adopt additional ordinances and policies to protect groundwater quality

- Educating land/homeowners about Best Management Practices (BMPs) for maintaining ground water quality.
- Adopting an ordinance that regulates fertilizer and pesticide application for agriculture, commercial, and residential uses.
- Developing ordinance language that updates old catch basins and monitors drainage basins, such as requiring a retrofit of concrete basins into bioretention basins that include vegetative cover.
- Implementing BMPs for the Township's Department of Public Works in the areas of fertilizer and pesticide application, road salt or sand application, use and storage of chemicals and the reduction thereof, and disposal of hazardous materials.
- Adopting an ordinance that encourages the use of grey water systems, especially in heavy commercial development. Also consider limiting lawn irrigation and promoting water conservation, limiting impervious cover, and ensuring sustainable site design.





- Water is a finite resource that moves from the clouds to the land through precipitation and then back to the clouds through evapotranspiration. Rain catches airborne pollution and dust, carrying these particles down to the land and its surface waters. Stormwater washes across parking lots, roads and lawns, carrying pollutants into storm drains that eventually dump into streams and lakes. Since most of these pollutants do not evaporate, much remains in the water, as a permanent part of the hydrologic cycle. That is why it is critical to ensure that pollutants do not have the opportunity to enter the water cycle.
- Cranbury Township contains stream networks for Cranbury Brook and the Millstone River. The Township also serves as part of the recharge area for both the Potomac-Raritan-Magothy system and the Merchantville Formation-Woodbury Clay.
- Cranbury Township has successfully deterred development in the Agricultural Preservation Areas. This has kept the area rural and allows for individual wells. Cranbury allows for development in areas by where sewer and public water accessible are to the commercial and industrial zones of the Township.



- StreamWatch Program, Stony Brook-Millstone Watershed Association (609-737-3735 or www.thewatershed.org).
- Nonpoint Education for Municipal Officials (NEMO) University of Connecticut, Cooperative Extension System (www.nemo.uconn.edu).
- © Sauer, Leslie J. The Once and Future Forest: A Guide to Forest Restoration Strategies. Island Press.
- NJDEP, Revised Manual for New Jersey: Best Management Practices for Control of Nonpoint Source Pollution from Stormwater. (www.state.nj.us/dep/watershedmgt/bmpmanual. htm)

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<u>GOAL</u>: To "Retain open space areas having important historical, cultural, or locational significance."

The survey responses were overwhelmingly in support of maintaining the open space and providing the means necessary. It is clear that the respondents felt this is a major vision and goal for the Township in order to protect open areas and viewsheds.

<u>CURRENT</u> <u>PROTECTION:</u> The Township has approved a \$0.03 Open Space Tax and is working to preserve farmland and surrounding open space. The Township is also incorporating lot averaging options into their land use site plans for RLD-3 Low-Density Residential Areas. The intent is to "…preserve open space…and to maintain a time-tested pattern of development that has made Cranbury an exceptional place to live."

Site design standards for this zoning designation include "permanently deed restrict(ing) the environmentally sensitive areas, scenic viewsheds and open space areas identified... in the Master Plan".

"The minimum preservation area shall be five contiguous acres."

#### **OPTION:** Adopt additional ordinances and policies to ensure further permanent protection of the Township's open space.

- Developing and funding a conservation easement monitoring and enforcement program. Working with volunteers to collect data on easements in the Municipality. Asking questions regarding where they are located, who holds the easement, and if they have been following conservation requirements.
- Making site visits to the property and document any activity that may be subject to enforcement. Deciding who will be responsible for the inspection and what the protocol for violations should be.
- © Ensuring that passive and active uses of open space are clearly defined, are sited appropriately and are consistent with surrounding land uses.
- © Continuing to work with land trusts, neighboring municipalities and the county in their acquisition of open space and conservation easements.
- Adopting a cluster development ordinance in designated areas. Including standards to guide the preparation of management plans for the conservation lands - such plans establish management objectives, outline procedures, and define responsibilities for maintaining the conservation areas.
- Developing a network of bicycle and pedestrian paths to reduce traffic and to provide for the enjoyment of preserved open space. Linking these networks to commercial and residential areas.



- Creating a Conservation Plan will help a municipality decide what the future uses of preserved lands will be. Active uses like hiking and horseback riding trails allow for access to and use of open space. Passive uses like stream buffers help to increase the protection of these areas. Both of these uses can foster an appreciation for open space, whether it is for actively enjoying the area or valuing the serenity of the space.
- Open space preservation not only benefits the environment and enhances quality of place, it can also benefit residents when it comes to tax time. It often costs a municipality less to buy selected open land than for residents to pay the higher taxes that result from development to build additional schools, to improve roads and to increase municipal services. Some studies have indicated that when a community buys and preserves land rather than allowing houses on every farm field, they break even on their investment within a few years.
- Increased Property Values When we preserve open space, we make our communities more desirable places to live by enhancing:
  - <sup>6</sup> Attractive settings
  - (>>> Wildlife and natural area accessibility
  - © Recreational opportunities
  - © Environmental education possibilities
- © Seizing these opportunities increases the property values surrounding the preserved space.
- © Conservation easements are a great way to protect open space.
  - They allow the landowner to retain title to the property and are able to continue to use it, subject only to certain specific restrictions.
  - Landowners also retain the right to sell, lease or bequeath the property.
  - The easement is granted in perpetuity and will apply to all future owners.
- Conservation easements are also permitted as a charitable tax deduction for qualified easements. IRS regulations issued in 1986 established specific guidelines governing qualified easements (Reg. Sec. 1.170A-14).

## Additional Resources

- Brandywine Conservancy. Environmental Management Center, Brandywine Conservancy P.O. Box 141, Chadds Ford, PA 19317 610-388-2700
- © The Green Acres Program, NJDEP. (www.state.nj.us/dep/greenacres)
- Association of New Jersey Environmental Commissions. (Tel: 973-539-7547, Fax: 973-539-7713, E-mail: anjec@aol.com, www.anjec.org)
- Natural Lands Trust. (www.natlands.org/planning/growgreen.htm)
- NJ Conservation Foundation. (www.njconservation.org)

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<u>GOAL</u>: As stated in the objectives for the Master Plan, the Township should "Preserve the natural amenities which establish the Township's rural character, including scenic vistas and farmland."

Also, the Master Plan lists the reduction and minimization of the impact of development to environmental resources.

Respondents to the Framework Questionnaire specifically stated that they want to protect farmland and Township's farming heritage. Some respondents also recognized that preserving farmland, in turn preserves scenic views in the Township. <u>CURRENT PROTECTION:</u> Section 81 of the Land Use Ordinance lists requirements pertaining to Right-to-Farm language.

Section 150-41 allows for design standards that permanently deed restrict environmentally sensitive areas, scenic viewsheds, and open space, where farmland preservation is the main goal.



## **OPTION:** Adopt individual ordinances that ensure the implementation of objectives set forth in Master Plan and Conservation Element.

Specifically, the Township should consider:

- © Educating residents and elected officials about the importance and value of protecting open space and the natural environment, by creating an inventory of these resources and by holding education programs, like nature walks.
- Adopting ordinances that allow for Low Impact Development strategies when planning for new development. Including Best Management Practices options like, pervious paving and bioretention basins. If these practices are included in an ordinance, require site visits during the construction phase and administer penalties for violations to deter improper use.
- Providing education to developers and residents about the benefits of low impact development.
- Adopting ordinances that allow for the expansion of permissible farm-based businesses and programs that sponsor equity protection, and farmland preservation.
- Providing financial assistance to farmers in their conservation efforts. Look to your County Agricultural Development Board for aid.
- Encouraging local farmers to participate in programs that reduce nonpoint pollution coming from their farms, conserve water and buffer local waterways.





- Developing a visioning process and involving citizens in it creates a community where everyone's voices are heard and ideas are taken into consideration. A variety of voices and ideas will make for a diverse and energetic community. Finalizing the town's vision should include a vote by the townspeople regarding the recommendations on the table.
- So Using this process to maintain rural character within appropriate areas of the Township will provide for a community proud of its farming heritage and their contribution to it.
- Agriculture is the largest single provider of scenic vistas in the state, as it is in Cranbury Township.
- As of 1997, only 5 percent of the state's farmland had been preserved from development. Cranbury Township has approximately 61% lands in Agricultural use, the majority of which are preserved.
- Between 1986 and 1995 Cranbury Township lost 4% or 374 acres of its agricultural land. There are currently around 9,346 acres or 61% of assessed lands in the Township. This includes both agriculture and forested lands.



- Randall Arendt, E.A. Brabec, HL. Dodson, C. Reid, and R.D. Yaro, 1994. Rural by Design: Maintaining Small Town Character, (available through Planners Book Service 312-786-8454)
- © The Green Acres Program, NJDEP (http://www.state.nj.us/dep/greenacres).
- <sup>6</sup> Trust for Public Land (www.tpl.org/index.cfm).
- The Nature Conservancy, New Jersey Chapter Office (200 Pottersville Road, Chester, NJ 07930, Tel: 908-879-7262, Fax: 908-879-2172, Website: http://nature.org/wherewework/northamerica/states/newjersey/).
- Natural Resources Conservation Service, Mercer County Contact (303 West Main Street, Freehold, NJ 07728-2522, Tel: (732) 462-1079 ext. 3, Fax: (732) 462-3499, Website: www.nj.nrcs.usda.gov/).
- South Jersey Resource Conservation & Development Council, Inc. (854 South White Horse Pike, Suite 3, Hammonton, NJ 08037, Tel: 609-561-3223, Email: steve@sjrcd.org, Website: www.sjrcd.org).



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## **Woodlands Protection**



<u>GOAL</u>: The Master Plan hopes to, "Preserve existing woodland areas." The document suggests this be accomplished with a Woodlands Protection Ordinance that would limit the destruction of trees and would allow for planting trees along side of roads to reinforce the Township's rural character.

Respondents to the survey have visions for a serene environment that incorporates the planting of new trees and preservation of old trees. They feel this will add to the quality of life and keep in line with the rural character of the Township. <u>CURRENT PROTECTION:</u> Cranbury Township has a Shade Tree Commission that is responsible for "Regulating, maintaining, and controlling ornamental trees and shrubbery along the streets and in the public places of the Township." The commission make recommendations to the Planning Board in regard to planting shade trees, in general.

The Township's Land Use Development Ordinance has language that calls for the protection of existing vegetation and the character of the site. Also ground cover is required for prevention of soil erosion.

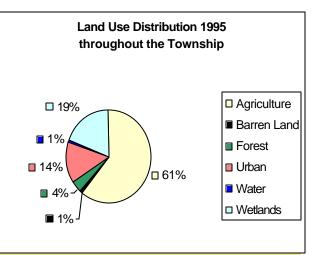


#### **OPTION:** CREATE AND ADOPT A WOODLANDS PROTECTION PLAN AND ORDINANCE

- Taking an inventory of existing trees within the Township. The inventory should include everything from Native and Historic trees to Disturbed trees or Scrubshrub.
- Developing a plan that shows the reasoning for preservation of the identified trees. Is it for ecological, social, or economic reasons? Or for habitat protection, recreation, or water quality?
- Developing a plan that shows how the trees will be protected. Are only individual trees protected or "woodland" areas? Will they be protected through Natural Resources Protection, Land Use Planning, or Community Design Techniques?
- © Creating an ordinance that delineates woodlands habitat and significant specimen trees prior to the site design and application process for new construction.



 According to current GIS Data, provided by the GIS Center, Cranbury Township has about 611 acres of Forest that provides for threatened and endangered species habitat. These areas should be targeted for protection.



- According to §150-56 of the Cranbury Township Land Use Development Ordinance, "Landscaping improves the livability of residential neighborhoods, enhances the appearance and customer attraction of commercial and industrial areas, improves the compatibility of adjacent uses, screens undesirable views and can reduce air and noise pollution."
- In 1995 Cranbury Township had about 4% of land use in Forest. This was a 10% increase from 1986.
- New Jersey woodlands have many species of trees (near 90), and differences in typography, soils, drainage and vegetation located in a relatively small area. Three of the five major forest regions in the U.S. are found in New Jersey. This makes our forests tremendously diverse, interesting and useful.
- There are some 1,864,300 a cres classified as timberland in New Jersey of which 75% is privately owned. Approximately 464,000 acres are in state forests, parks, and other public lands.
- New Jersey has lost 8,000 woodland acres per year to other uses since 1956.



North Jersey Resource Conservation and Development Council (RD&D). Contact Donna Drewes. 54 Old Highway 22, Suite 201 Clinton, NJ 08809-1389 Phone: (908) 735-0733 website: www.northjerseyrcd.org.

The New Jersey Forestry Association. "Dedicated to the wise use and management of the States forest land resource in a manner which will provide many products and services for the benefit of all our citizens, now and for future generations. These include economic and environmental benefits such as wood products, wildlife habitat, recreational opportunities, watershed protection, air purification, soil stabilization, temperature amelioration, windbreaks, urban buffers and landscape beautification. These values are most important to New Jersey in the face of its continued rapid growth and urbanization." P.O. Box 130 Milmay, N.J. 08340 Tel: 856-696-5300 Fax: 856-205-0009 www.njforestry.org

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## Protection of Natural Resources and Critical Habitats



<u>GOAL</u>: One Master Plan goal is to "Provide a continuous greenway network along streams, scenic areas and critical environmental a reas."

Another Master Plan objective is to map natural resources for all subdivision and site plan applications. Mapping should delineate all natural resources, environmentally critical areas and historic resources as defined in the Master Plan.

Again respondents to the Survey want to improve the awareness and education of the importance of environmental protection. Protection is likely to increase if residents and officials are more knowledgeable about critical habitatsespecially those within Cranbury Township.

<u>CURRENT PROTECTION:</u> Critical Habitats and Wildlife are protected through language in the Land Use Development Ordinance. §150-84(e) cites General Provisions for applications, "site plan must have an EIS when required which includes site description and inventory of... vegetation, wildlife, critical areas and wetlands".

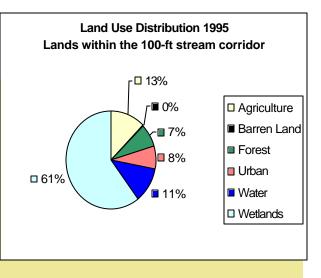


## **OPTION:** Adopt ordinances and land use policies to ensure further preservation and protection of wetlands and critical habitats.

- © Creating a Natural Resources Inventory to determine the need for special protection areas or zoning that protects critical habitats and prepare an action plan to protect those critical resources identified.
- © Looking at neighboring municipalities to ensure that open space and greenway zoning at the boundaries makes sense.
- Specifically citing areas for protection and listing implementation strategies in the Master Plan to strengthen reasoning for protection.
- © Creating a critical areas map to be referred to prior to Township approval of a construction permit and to be used in the permitting review process.
- Adopting an ordinance that requires commercial development to include landscaping for wildlife.
- Initiating and promoting cooperation between the Township and adjacent municipalities to advance the consistent development of open space goals, policies and plans.



- Wetlands are a critical resource that provide important wildlife habitat and play a key role in flood prevention, surface water management, groundwater recharge, and removal of sediment and pollutants.
- A majority of wetlands (61% in 1995) in the Township are located within the 100 ft stream



buffer. Since 1986 this number has stayed fairly the same. This proves that protection already put forth has helped in maintaining these critical areas.

- According to NJDEP's Landscape Project, Cranbury has 611 acres of State Threatened Forests and 360 acres of threatened wetlands, both forested and emergent. These areas provide habitat for various species and therefore, should be protected.
- The State Development and Redevelopment Plan has as a statewide policy for the protection of biological diversity, forests, wildlife habitat, critical slope areas, and water resources through preservation and protection of contiguous open spaces, connecting corridors, and public lands and management of the character and nature of development (SDRP, Statewide Policy #12).



- D&R Greenway, Inc. protects and preserves central New Jersey's treasured open space. Contact them at: Delaware & Raritan Greenway 1327 Canal Road, Princeton, NJ 08540.
   Tel: (609) 924-4646. Fax: (609) 924-5577. Email: info@delrargreenway.org Website: www.delrargreenway.org
- New Jersey Conservation Foundation's mission is to preserve New Jersey's land and natural resources for the benefit of all. Contact them at: New Jersey Conservation Foundation Bamboo Brook, 170 Longview Road Far Hills, NJ 07931 Tel: 908-234-1225 Fax: 908-234-1189 Email: info@njconservation.org Website: www.njconservation.org
- New Jersey Department of Environmental Protection. The Landscape Project is a pro-active, ecosystem-level approach for the long-term protection of rare species and their important habitats in New Jersey. Website: http://www.state.nj.us/dep/fgw/ensp/landscape/about.htm

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GOAL: As stated in the survey responses, one goal of the township is to ensure proper stormwater management procedures. One respondent noted that there must be an understanding that "Stormwater is not a disease, it is a resource".

The Master Plan describes various goals for water quality and lists actions that relate to stormwater management. For example, actions ensuring water quality include lot averaging, reduced road widths, shared driveways and parking, zoning and design standards. While not specifically cited for stormwater management, some of the objectives listed will apply to the NJ DEP Stormwater Regulations, when adopted.

PROTECTION: CURRENT Language in §150-61 states that "Development shall use best available technology to accommodate stormwater management by natural drainage strategies."

§150-61A(3) language protects water quality by "...enhanc(ing) water quality of stormwater runoff."

#### **OPTION: CREATE AND ADOPT A STORMWATER MANAGEMENT** PLAN THAT INCLUDES AN ORDINANCE, **BMPs**, IMPLEMENTATION, AND ENFORCEMENT.

- © Finding financial assistance to retrofit all catch basins with hoods.
- © Coordinating a program to clean out ALL catch basins as needed.

- © Implementing a public education campaign about throwing litter into catch basins. Encouraging volunteer groups to do storm drain stenciling as an educational tool. © Preparing for the new Stormwater Rules by reviewing current stormwater practices
- and understand how these rules may modify your current practices. Applying Best Management Practices (BMPs) such as stormdrain stenciling and Non Point Source pollution education programs.
- © Partnering with neighboring municipalities to create a comprehensive stormwater management plan to help protect water resources.
- © Including monitoring and enforcement language in a management plan. Deciding who will be responsible for the inspection and what the protocol for violations should be.
- © Encouraging the use of bioretention basins in new development and applying BMPs for monitoring and maintenance. These BMPs could include: native vegetation, grassed areas, and removal of any concrete structures.



Stormwater and nonpoint source pollution are major sources of pollutants entering our water, contributing up to 60% of our existing water pollution problems (NJDEP 2/28/02). Stormwater washes across parking lots, roads and lawns, carrying pollutants into storm drains that eventually dump into streams and lakes. Most of these pollutants do not evaporate and remain a permanent part of the hydrologic ecosystem. That is why it is critical to ensure that pollutants do not have the opportunity to enter the water cycle.

The effects of stormwater/nonpoint pollution can prohibit recreational activities (beach closings, fish advisories); impact the tourism economy (commercial fishing and shellfishing) and increase drinking water treatment costs. There are alternatives to the way we choose to plan our communities, commute to work, or treat our lawns that can aid in protecting water supplies.

The USEPA Clean Water Act Phase II rules (published in December 1999) mandate a Municipal Stormwater Regulation Program. The NJDEP Stormwater Program was proposed in January 2003 and addresses pollutants entering our waters from many storm drainage systems owned or operated by local, state, interstate, or federal government agencies. Tier B municipalities, like Cranbury Township, are required to implement best management practices and include public education and outreach. When the rules are put into play most of New Jersey's municipalities will be required to apply for the NJPDES permits 30 days after the rules take effect. The Program will allow phased-in approaches which will aid municipalities in implementing the new rules in a feasible manner.



- © Clean Water Network. "Technology Fact Sheet for BMPs". (www.cwn.org)
- Center for Watershed Protection (410-461-8323 or www.cwp.org). Also see their project, The Stormwater Manager's Resource Center, an extensive educational website that contains more than 3,000 pages of technical content (www.stormwatercenter.net).
- NJ DEP Stormwater Website includes information on the State's stormwater permitting and management programs, including the municipal stormwater regulation program and more. (www.njstormwater.org).

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**Traffic Calming Measures** 

<u>GOAL:</u> The Master plan states the following Objectives in the Circulation Plan:

- © Reduce traffic through the Village
- So Establish roadway design standards which preserve the streetscapes of the Village and rural roads
- Provide a network of pedestrian and bicycle paths which link community facilities, commercial areas and residential neighborhoods.

Respondents to the survey stated that they would like to see reduced truck traffic in the Village and improved overall traffic safety measures throughout the Township. <u>CURRENT PROTECTION:</u> Section 1-1 of the Master Plan has sufficient language for protection.

Specifically, ensuring adequate parking; reducing traffic in Village; providing a network of pedestrian and bicycle paths; improve traffic safety along Route 130 corridor; promoting transportation management strategies to reduce peak hour trips; encouraging residential and nonresidential growth designed to be serviced by mass transportation; matching development growth potential with traffic improvements and roadway capacity.

#### **OPTION:** CREATE AND ADOPT A CIRCULATION PLAN THAT REDUCES TRAFFIC IN THE VILLAGE AND INCLUDES ALTERNATIVE TRANSPORTATION.

Specifically, the Township should consider:

- Researching traffic patterns and evaluating how the volume of traffic is affecting the community. Developing a circulation plan to either accommodate traffic or alleviate it completely.
- Researching and applying traffic calming measures. Developing ordinance language for new construction or for retrofitting existing residential roadways to accommodate traffic calming measures such as raised crosswalks, street interruptions involving placement of trees, or altering street alignments.
- Improving accommodations for pedestrian and bicycle transportation. Allowing for bike lanes on residential streets. Designs can vary from the center of the roadway to the outer lanes.
- © Encouraging large scale employers to coordinate a circulation plan amongst the businesses within a certain proximity to each other.



#### **Did You Know?**

- © Traffic, in Cranbury Township, increased over 82% between 1980 and 1989 and alternative traffic patterns often include rerouting through the Village.
- Between 1970 and 1999, the U.S. population grew by 33%. During this period, however, the U.S. Department of Transportation found that vehicle miles traveled grew disproportionately by 143%.
- Sharing a ride or car pooling, even if it is done just once or twice a week, will reduce traffic congestion and pollution, and will save you money. The average driver spends about 44 cents per mile including ownership and maintenance.
- Riding a bike is a great way to travel and it can help you and the air get into good condition. Vehicles on the road create more than 25% of all air pollution nationwide.
- It is vital that a community's circulation system includes a variety of transportation alternatives. This has several beneficial effects. It disperses circulation, instead of concentrating it in a few law extension on collectors. It requires smaller

concentrating it in a few key arterials or collectors. It requires smaller facilities (narrower streets, less dedicated turn lanes, less mechanical traffic control devices). It allows streets to retain a pedestrianoriented, human scale, as opposed to the over-engineered, autooriented collectors and arterials of the suburbs (NJ State Plan).



## Additional Resources

It All Adds Up to Cleaner Air is a unique public education and partnership-building initiative developed collaboratively by several federal agencies to help regional, state and community efforts to reduce traffic congestion and air pollution. Visit their website at

http://www.italladdsup.gov/

- Provide the NJ State Plan offers suggestions on Traffic and Transportation. Since New Jersey is the most densely populated and heavily traveled state in the country, it is important to make sure that increasing traffic congestion isn't a way of life. http://www.state.nj.us/osp/resources/traffic.htm http://www.njchoices.com/
- © The *Tri-State Transportation Campaign* is an alliance of public interest, transit advocacy, planning and environmental organizations working to reverse deepening automobile dependence and sprawl development. **www.tstc.org**
- Neighborhood Traffic Calming: Seattle's Traffic Circle Program is a neighborhood program that incorporates a variety of traffic calming techniques to alleviate traffic and to deter auto accidents. For more information and visuals go to http://www.usroads.com/journals/rmej/9801/rm980102.htm

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<u>GOAL</u>: Respondents to the survey stated that any construction in the Township should be approached in a sensitive manner. One comment was directed at the construction of a new school, that it is sensitive to the design of surrounding buildings and sensitive to the land.

Soil erosion and sediment control measures were also listed in the survey as an important goal for sensitive construction, as well as for water quality.

#### CURRENT PROTECTION:

§150-62 *Soil Disturbance* allows construction of specific uses that are not commercial. It also allows for other construction related to the use such as necessary sidewalks, driveways, drain systems, etc... that does not alter the land contours by more that one foot.

The Township also regulates the quality of imported fill.



#### **OPTION:** DEVELOP CONSTRUCTION GUIDELINES THAT ENSURE THE PROTECTION OF ENVIRONMENTAL AND PUBLIC HEALTH.

- Ensuring that Township checklists require the data necessary to make informed planning decisions (soils, hydrogeology, water quality, location of environmentally sensitive areas like wetlands areas, etc.). Requiring identification of wetlands with development applications prior to approvals.
- Adopting an ordinance to ensure that the site receives limited clearing and grading of forests and native vegetation and minimize soil compaction for the minimum amount needed to build lots, allow access and provide fire protection.
- © Ensuring that necessary fees for monitoring and enforcement are adopted in current ordinances and determine who will oversee the enforcement of the ordinance.
- Applying Low Impact Development strategies and standards to the Township, as described by NJ DEP in their BMP Manual, including: requiring minimal impervious cover allowed on a site and encouraging the use of pervious material, including porous pavement, green parking lots, gravel and other alternatives.
- © Updating general development plan requirements to ensure appropriate and responsible construction practices that conform to any new cluster options.



### **Did You Know?**

- When developing standards based on sustainability guidelines, remember to consider the following:
  - © Specify minimum disturbance
    - <sup>6</sup> Work with the natural contours to avoid excessive earthmoving
    - © Limit removal of natural vegetation
    - © Keep building and parking footprints as compact as possible
  - Maintain natural hydrological cycle
    - No net increase of volume of runoff
    - Limit impervious cover, use pervious material
    - Maintain recharge
  - (*p*) Maintain water quality
    - © Use native species and limit chemical site maintenance
    - Avoid direct discharge to streams and lakes
    - Avoid excessive earthwork during development
    - Use low maintenance, water quality BMPs like stormdrain stenciling or no-mow policy in maintenance requirements.



- Stony Brook-Millstone Watershed Association's River-Friendly Golf Course, Business and Resident Certification Programs (www.thewatershed.org).
- Hance, B.J., J. Morris. Reviewing Golf Course Proposals: Materials for Local Officials. Cook College, Rutgers University. For copies coall the USGA or the Center for Environmental Communication, Cook College 732-932-8795 (www.aesop.rutgers. edu/~cec)
- National Park Service has developed "Guiding Principles of Sustainable Design" that includes specifics on site design (www.nps.gov/dsc/dsgncnstr/gpsd/toc.html).
- Hellmuth, Obata and Kassabaum, Inc. 1998. Sustainable Design Guide. Washington DC: Hellmuth, Obata and Kassabaum, Inc.
- American Planning Association, New Jersey Chapter (www.njapa.org/index.html).
- © The Low-Impact Development Center (www.lowimpactdevelopment.org).



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## **Resident Participation**



<u>GOAL:</u> Survey respondents described Township Cranburv residents as "educated" and as being very involved and informed about the Township's projects and decisions. However, other respondents noted the lack of communication between municipal officials and their residents.

The survey showed that Cranbury Township residents care deeply about their environment and in communicating better with the municipality, they will continue to come out to participate in meetings and take a more active role in the community. <u>CURRENT PROTECTION:</u> Cranbury Township holds a variety of educational and fun programs for residents of all ages. One example was a recent nature walk along the West Property that SBMWA led. Many residents and officials turned out for this program and left with high praises for the educational value of the program.

The Township also sponsors a day long festival, Cranbury Day, in September where residents come out and meet neighbors, friends, and representatives.

The Township keeps residents informed by posting meeting agendas and minutes on the web, in the Cranbury Press, and in the quarterly newsletter.

#### **OPTION:** CONTINUE TO ENCOURAGE PUBLIC PARTICIPATION

Specifically, the Township might consider:

- Expanding the information available on Cranbury Township's website. 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, and other resources that may be helpful to finding answers.
- 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



informed on key programs and issues, including educational programs. Holding a neighborhood planning meeting to encourage public participation in the planning process.

© Creating fun programs for residents to understand the value and importance of the community and their role in it. For example, hold a photo contest to highlight areas that the community feels are important.





<u>GOAL</u>: Many of the respondents noted concerns for better communication between residents and officials. The survey showed a number of respondents feeling that there needs to be more communication between these two groups.

Other respondents felt that there needs to be more education, for residents and officials, on the value of protecting the environment so as to better protect it. <u>CURRENT PROTECTION</u>: Officials should be encouraged to expand their expertise and knowledge in order to better educate residents, as well.



**OPTION:** ENCOURAGE TRAINING AND SITE WALKS FOR COMMITTEE MEMBERS.

Specifically, the Township should consider:

- Requiring members of their Township Committee, Planning Board, Environmental Commission 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.
- © Requiring Planning Board and Environmental Commission members to conduct site walks prior to any application approval.
- 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 and other officials.
- 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.

