

# Taking the Next Step:

West Amwell Township  
Municipal Assessment

April 2003



# **Executive Summary**

The elected and appointed officials in West Amwell have a challenging task. They must balance natural resource protection with economic prosperity, encourage business, provide residential services, and determine where best to site residential, commercial and agriculture zones in the township. West Amwell Township's leaders also 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 daunting task, officials look to their Master Plan to provide the 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 the task that municipal leaders face and also realizes 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 to partner with municipalities to provide an outside evaluation of current practices and support proactive measures that protects the natural environment and ensures the vision in the Master Plan is achieved.

The Association was thrilled when West Amwell Township agreed to partner with us on this project. The Township is a rural community that has, thus far, missed the development boom of the 1990's and early 2000. The community clearly wants to preserve the agricultural, environmental, historical and visual attributes that make this community a unique oasis in central New Jersey. The challenge is in making this vision a reality as development encroaches. By developing a Master Plan that guides both growth and conservation, clearly states their goals and objectives and highlights the vision for the future, West Amwell can move forward in a cohesive manner and begin to implement this vision with the appropriate tools.

The leaders recognize their current position and are actively working to ensure that their community retains its rural character, sense of community and pristine environment. By compiling technical information and hiring expert consultants, updating their Master Plan, and developing an Open Space Plan, the Township is working towards their goals.

Another step in this journey was taken by choosing to participate in the Municipal Assessment Project that takes a comprehensive look at the municipality's vision and the current zoning, ordinances and policies meant to achieve it. The results of this analysis are documented in this report, entitled "Taking the Next Step", that highlights areas where the municipality has set positive examples in current practices and areas where planning strategies, already in place, could be enhanced or where new strategies could be developed.

This report outlines a list of areas where various tools could be implemented to help ensure the goals of West Amwell become a reality. The 11 areas include:

1. Master Plan Development
2. Protection of Surface and Groundwater
3. Preservation of Rural Quality
4. Protection of Stream Corridors
5. Monitoring and Performance Standards for Septic Systems
6. Protection of Wetlands, Open Space Woodlands, and Wildlife Habitat
7. Retaining a Sense of Community
8. Specific Construction Guidelines
9. Preservation and Protection of Historic Structures, Lands and Views
10. Resident Participation
11. Knowledge Base of Municipal Officials

The document is meant to be an interim step in the implementation of practices that work to balance land use planning with environmental protection. After the Township prioritizes the areas they would like to develop, the Association will provide support for implementation.

## **Acknowledgements**

We commend West Amwell's leaders in 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, determine where and how to improve a current systems or begin 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 West Amwell.

Our hope is that West Amwell will learn from and expand on the experiences, challenges, and successes of surrounding municipalities, keeping in mind that zoning and policies should correspond with surrounding areas 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 that makes West Amwell 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 Commission and staff for their enthusiastic responses to our Framework Questions. We would also like to acknowledge the individual input of Peter Buchsbaum, Nancy Palladino, Betty Jane Hunt, Randy Hoagland and Bob Clerico for their time in helping us collect the necessary information.

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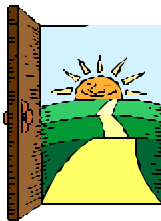
## How to Use This Report

After evaluating the survey responses, we reviewed West Amwell Township's Master Plan and its land use ordinances, policies, best management practices using a checklist 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 document lists the Township's *Goal* for that step according to the Master Plan and survey responses, 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 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.

The assessment document 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 non-profit groups.

## Next Steps



As West Amwell Township continues its work enhancing quality of life, this document can serve as guidance for future projects or provide ideas on where to begin. Once the Assessment document 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 West Amwell Township and to also learn from your experiences.

The Association will work by your side in your efforts to provide the citizens that reside in the Township 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 hiring a hydrogeologist to better understand carrying capacity and working on developing a Master Plan the clearly outlines the future of West Amwell). 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 West Amwell Township Committee, Planning Board, and Environmental Commission 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 character that is West Amwell Township.

## Good Things...

The Township has a Historic Preservation Committee that is devoted to cataloging and passing on information about West Amwell's past. Mt. Airy and Rocktown villages are examples of the detailed documentation regarding building sites and history that have been collected. The Township also employs numerous activities that contribute to the health of the environment and to sound planning strategies. Some of those current practices include:

- ⌘ Working to create a Master Plan that is intended as a guide for community decision-makers on the public, and private policies and activities needed to steer pending change in West Amwell to a successful outcome.
- ⌘ The Township's natural resources protection policy works to preserve the ecological, agricultural, and scenic resources.
- ⌘ Making educational material about septic system maintenance for residents available at the municipal building.
- ⌘ Providing language regarding critical habitats in an ordinance that contains provisions for the disturbance of sloped areas, stream corridors and cluster development.
- ⌘ The Township has an historic district that overlays the area of Mt. Airy.
- ⌘ Using a checklist for pending development applications, as well as a soil erosion and sediment control ordinance and requiring preliminary site sketches.
- ⌘ The Historic Preservation Committee has done a pictorial inventory of historical sites, completed video interviews, participated in the County Fair and conducted historic homes tour.
- ⌘ The Township has developed a website, distributes a yearly newsletter, mailed notices inviting input in the Master Plan reexamination and developed news bulletins to help highlight issues of concern.
- ⌘ The Township also has enforced a \$0.04 tax rate for open space and an Open Space Committee to oversee its distribution.

West Amwell Township has participated in the fact finding of Matt Mulhall's Hydrogeological Report that describes the nature of the Township's (and surrounding municipalities) hydrogeological makeup. This information is very useful in determining necessary actions to preserve water quality and quantity.

In the midst of all the surrounding growth and development, West Amwell Township has managed to maintain a rural character. The Township has 8,570 acres of assessed farmland to support farming as a viable business. Critical habitats have also taken a front seat as 71% of West Amwell's land use is still in Forest and Wetlands.



# Next Steps

## STEP

### 1

## Master Plan Development



**Current Protection:** As stated in the 1988 *Comprehensive Master Plan and Background Report*,

“This Master Plan is intended as a guide for community decision-makers on the public; and private policies and activities needed to steer pending change in West Amwell to a successful outcome.”

The municipality has an obligation to ensure environmental sustainability and must balance the impacts of growth with the constraints of local environmental resources. To ensure that this occurs, West Amwell must develop a clear blueprint that lays out the goals and objectives, the specifics of intended development and the strategies necessary for success.

**Future Direction:** The Master Plan should do more than steer pending change. It needs to be a proactive document, painting the picture of the municipality's future in a manner that serves the community's character, and public welfare.

To establish these strategies, the right questions must be asked, the best available data collected and the detailed technical information understood. Solid planning is necessary to ensure where and how development will occur.

### **OPTION: DEVELOP A MASTER PLAN THAT DESCRIBES THE FUTURE OF WEST AMWELL TOWNSHIP**

Specifically, the Township might consider:

- ✧ Ensuring that Master Plan updates specifies their goals and objectives clearly.
- ✧ Identifying and using available technical data, such as Aquifer Recharge, Water Quality, Master Plans, build-out analyses, and economic reports to make zoning and planning decisions. Specifically, looking at Hopewell, Montgomery, East Amwell, and Hillsborough Townships' documents.
- ✧ Providing data on development trends within the Township and how natural resources have been and could be affected.
- ✧ Identifying where and how development and conservation should occur, taking into consideration existing infrastructure and potential impacts.
- ✧ Consider carrying capacity and the limitations of the natural environment and utilizing this information to make careful zoning and planning decisions.
- ✧ Involving the public and utilizing their expertise, historical knowledge and ideas for their community.
- ✧ Providing consistency with the State Development and Redevelopment Plan.
- ✧ Updating and utilizing the 1977 Natural Resource Inventory that outlines the necessary information for thoughtful planning.
- ✧ Adding GIS information for the Conservation and Open Space elements of the Master Plan, landscape issues, soils data, hydrogeological study, work of the Sourland Planning Council, and other necessary water quality data.
- ✧ Clearly depicting the look of the Township if “build out” occurs so that community members understand their future.

## Master Plan Development





## Did You Know?

- ⌘ Master Planning and implementation is not about applying restrictions, but rather providing direct guidelines for the future.
- ⌘ In December 2002, Herbert Simmons of the Office of State Planning highlighted that West Amwell lies within two major planning areas - PA 4, Rural Plan Area and PA 5 Environmentally Sensitive Area. Mr. Simmons also suggested that the township:
  - ⌘ Outline potential growth centers—Mt. Airy and along the Route 179 interchange
  - ⌘ Plan these growth centers in great detail
  - ⌘ Develop techniques and support for farmers to continue farming
- ⌘ Municipal Land Use Law (MLUL) states that , “*land use can be guided to promote public health and safety.*” (NJSA 40:55:D-2 et seq.). This principal should be the core of any proposed planning action.
- ⌘ The provision of infrastructure, such as sewer and roads, should always follow extensive planning and zoning, not vice versa. Sound planning should foster growth that is contingent upon the appropriate infrastructure for the area.
- ⌘ The US Census Bureau predicts that New Jersey’s population will grow by 11% between 2002 and 2020. If a municipality wants this growth to be positive, action in planning for the future must occur.
- ⌘ West Amwell’s Natural Resource Inventory provides a useful tool that aids in planning for the future, as well as understanding the process of getting there. Updating this document will keep residents and officials aware of the natural makeup of the Township.
- ⌘ Utilize existing data available from the County, other municipalities (Hopewell, East Amwell and Montgomery Townships), State and local nonprofits. Such data often provides a more regional picture as well as saves West Amwell additional expense of collecting the same data again.



## Additional Resources

- ⌘ Stony Brook-Millstone Watershed Association ([www.thewatershed.org](http://www.thewatershed.org)) has been involved with local municipal planning efforts and is available to answer questions, recommend consultants and review ordinances.
- ⌘ American Planning Association, New Jersey Chapter ([www.njapa.org](http://www.njapa.org))
- ⌘ Association of New Jersey Environmental Commissions: Developing a vision for your master plan ([www.anjec.org/html/vision.htm](http://www.anjec.org/html/vision.htm))
- ⌘ New Jersey Department of Community Affairs ([www.state.nj.us/dca](http://www.state.nj.us/dca))
- ⌘ New Jersey League of Municipalities ([www.njslom.com](http://www.njslom.com))
- ⌘ New Jersey State Plan ([www.state.nj.us/osp/plan2/main.htm](http://www.state.nj.us/osp/plan2/main.htm))

## STEP

### 2

## Protection of Surface and Groundwater



**GOAL:** In the Master Plan goals include, “Protect the quality of environmental resources, especially groundwater.” Further, “The quality and quantity of groundwater resources should be one of the determinants of future land use plans.”

Responses to the Framework Questionnaire included:

- ⌘ “to keep the environment safe for residents, both human and wildlife, especially as it concerns drinking, stormwater, septic and streams...”
- ⌘ “Protect water supply.”
- ⌘ “Maintain good water quality in lakes and streams. Protect existing wells.”

**CURRENT PROTECTION:** Part V, Article I, Section A (1,2) deals with Stormwater Management and focuses on maintaining natural stream channels, enhancing the quality of surface runoff and protection from flooding.

We applaud the Township for realizing that water is a precious resource and conducting the necessary studies, particularly those by M<sup>2</sup> Associates, Inc., to determine the impacts of further development on the watershed. Information such as groundwater recharge and nitrogen dilution provide much needed information for changes in zoning and updating ordinances.

### **OPTION: ADOPT ADDITIONAL ORDINANCES AND POLICIES TO PROTECT SURFACE AND GROUNDWATER QUALITY**

Specifically, the Township might consider:

- ⌘ Adopting zoning that protects ground water recharge and quality. The Township needs to analyze rezoning issues in terms of well use and the potential impact on future residents. The Township’s Goals and Objectives in the Master Plan need to be clear about the process for protecting groundwater.
- ⌘ Adopting an ordinance that regulates fertilizer and pesticide application for agriculture, commercial, and residential uses.
- ⌘ Developing ordinance language that deals with updating old catch basins and management of drainage basins. Encouraging the use of naturalized detention basins and infiltration basins. The EPA Phase II Stormwater Rules will address alternatives to stormwater management when published.
- ⌘ Implementing Best Management Practices (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 new construction. Also consider limiting lawn irrigation and promoting water conservation, limiting impervious cover, and ensuring sustainable site design (see Step 8).
- ⌘ See Septic System Recommendation in this report. (Step 5)
- ⌘ Begin to collect water quality information in order to ensure that the quality of local streams remains healthy and able to support designated uses and a diversity of biota. The Watershed Association and other experts are valuable resources for helping implement this strategy.



## Surface and Ground Water



## Did You Know?

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, 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.

Amwell Township contains stream networks for Alexauken Creek, Swan Creek, Moores Creek, and the headwaters of Stony Brook and the Neshanic River.

Biological monitoring of aquatic insects in West Amwell by the NJ Department of Environmental Protection (NJDEP) is performed at two sites in the municipality—at Alexauken Creek at Lambertville Road and Moores Creek at Barry Road. In general, both streams do fully support the breadth and diversity of aquatic life representative of a healthy stream ecosystem. Both sites were rated non-impaired in 1992 and 1997. Crappies, Darters, Suckers, and Sunfish were noted in Moores Creek during the 1992 monitoring cycle.

The majority of West Amwell Township's residents are served by well water. This supports the strategy for groundwater protection, as this is a resource that will sustain the future.



## Additional Resources

- ⌘ StreamWatch Program, Stony Brook-Millstone Watershed Association (609-737-3735 or [www.thewatershed.org](http://www.thewatershed.org)).
- ⌘ Nonpoint Education for Municipal Officials (NEMO) University of Connecticut, Cooperative Extension System ([www.nemo.uconn.edu](http://www.nemo.uconn.edu)).
- ⌘ Center for Watershed Protection (410-461-8323 or [www.cwp.org](http://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](http://www.stormwatercenter.net)).
- ⌘ Natural Resource Defense Council, *"Stormwater Strategies: Community Responses to Runoff Pollution,"* May 1999
- ⌘ 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](http://www.state.nj.us/dep/watershedmgt/bmpmanual.htm))

## STEP

### 3

## Preservation of Rural Quality



**GOAL:** The first goal for the Township is to, “retain the rural character of West Amwell as shaped by farmland and natural wildlife habitats.”

The survey responses were overwhelmingly in support of maintaining the rural character and preserving productive farmland and the farmer. It is clear that the respondents felt that in order to ensure that West Amwell was “a good place to raise a family,” farming must be a focal point.

**CURRENT PROTECTION:** The Township has begun laying the foundation to ensure the rural character of its community continues. The 1995 reexamination report proposes not to expand sanitary sewers. The Township has approved a \$0.04 Open Space Tax and is working to preserve farmland and surrounding open space. The Right to Farm Ordinance (§84-1) lays the foundation for preserving farming.

### **OPTION: ADOPT ADDITIONAL ORDINANCES AND POLICIES TO ENSURE FURTHER PERMANENT PROTECTION OF THE TOWNSHIP’S RURAL QUALITY**

Specifically, the Township might consider:

- ⌘ Adopting ordinances that allow for the expansion of permissible farm-based businesses and programs that sponsor equity protection, and farmland preservation.
- ⌘ Review neighboring municipalities’ zoning, ordinances and their supporting documentation to gain ideas for West Amwell.
- ⌘ Providing financial assistance direction to farmers in their conservation efforts.
- ⌘ Developing and funding a conservation easement monitoring and enforcement program.
- ⌘ Continuing to work with land trusts, neighboring municipalities and the county in their acquisition of open space and conservation easements. In addition, help monitor conservation easements throughout the Township.
- ⌘ Adopting a cluster development ordinance in designated areas. Include 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.
- ⌘ Encourage local farmers to participate in programs that reduce nonpoint pollution coming from their farms, conserve water and buffer local waterways.



Rural Character



## Did You Know?

- ⌘ Between 1986 and 1995 West Amwell Township lost 5% or just over 250 acres of its agricultural land. There are currently 8,570 acres of assessed lands in the Township. This includes both agriculture and forested lands.
- ⌘ As of 1997, only 5 percent of the state's farmland had been preserved from development.
- ⌘ Of New Jersey's 4.8 million acres, 1.9 million remain undeveloped and unprotected, two-thirds of which are forests and one-third of which are agricultural lands.
- ⌘ New Jersey is ranked second in the country in the production of blueberries, spinach, and peaches and ranked third in the production of cranberries.
- ⌘ New Jersey is ranked third overall in the country in farm product sales and farmers produce more than 100 different kinds of fruits and vegetables annually.
- ⌘ From 1950 to 2000, land in farms in New Jersey dropped by more than one-half — from 1.8 million to 0.8 million acres and the number of farms dropped by about two-thirds — from 26,900 to 8,600 farms. Between 1970 and 2000, the average New Jersey farm shrank from 123 acres to 86 acres.
- ⌘ In 1998, New Jersey's 9,600 farms, occupying 830,000 acres, generated cash receipts totaling \$828.7 million. Virtually all of the state's farms are family owned and operated. The average per-acre value of New Jersey farmland in 1999, including land and buildings, was \$8,370, the highest average value of farmland anywhere in the nation.
- ⌘ Agriculture is the largest single provider of scenic vistas in the state.



## Additional Resources

- ⌘ Randall Arendt, E.A. Brabec, H.L. 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>).
- ⌘ Trust for Public Land ([www.tpl.org/index.cfm](http://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/](http://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:



## STEP

### 4

## Protection of Stream Corridors



**GOAL:** As stated in the objectives for the Master Plan, the Township should provide, “for future growth and development but not at the expense of its environmental resources.” The natural resources protection policy works to preserve the ecological, visual, agricultural, and scenic resources.

Respondents to the Framework Questionnaire specifically stated that they want to protect the water supply, have healthy watershed areas and maintain good water quality in lakes and streams. Specifically, “land preservation for maintenance of sufficient corridors and habitats for avian diversity and wildlife.”

**CURRENT PROTECTION:** Ordinance 01-03, titled Critical Environmental Areas, deals with Stream Corridor Protection. This ordinance specifies that “Where critical areas do not exist, a vegetative buffer of at least 50 feet on either side of the stream channel shall be established.”

The Ordinance also suggests that, “The corridor shall have sufficient width and vegetation to trap a majority of silt, to detain the overland flow for possible recharge and to decrease velocities discharged to the stream”



### OPTION: ADOPT A COMPREHENSIVE 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 corridor**, and **impaired**. The Watershed Association has been working with the Hunterdon County Municipal Toolkit Committee to tailor a Stream Corridor Ordinance for this region.
- ⌘ Minimum acreage measurements for the stream’s watershed should be consistent with DEP’s standards.
- ⌘ Monitoring and penalty provisions.
- ⌘ Maintenance of the streambank vegetation with native species trees, shrubs and grasses and a “no-mow” policy.
- ⌘ 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 319 grants to feed planning for the above.



## Stream Corridors



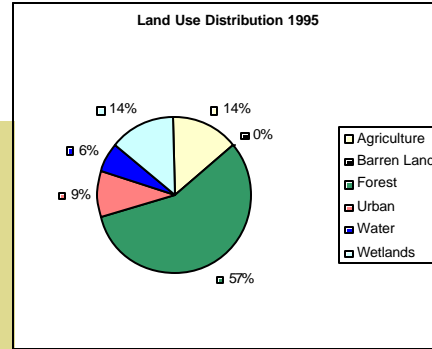


## Did You Know?

According to 1995 data, 81% of the land within the 100-foot stream buffers of West Amwell Township were forested and wetlands (see chart). 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, 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

- ⌘ 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](http://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).

## STEP

### 5

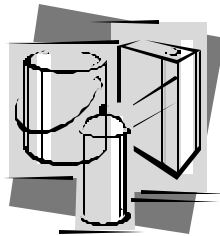
## Monitoring and Performance Standards for Septic Systems



**GOAL:** The Master Plan hopes to, “Assure the protection of the natural resources... from the effects of improper wastewater disposal. Improper disposal of sewage effluent can drastically degrade land and water resources.”

Respondents to the Framework Questionnaire wanted to,

- ⌘ “prevent pollution by too many septics”
- ⌘ “We have ordinances relating to septics and wells, but need to beef these up...”
- ⌘ Protect water supply



**CURRENT PROTECTION:** Land Use Ordinance, Part V: Design and Improvement Standards Section K states, “Individual on-site sewage disposal systems and wells, when proposed by an Applicant and permitted under this Ordinance, shall be designed, tested and installed following the requirements of the WAT Board of Health, its agents, and the applicable State Statutes.”

Educational material is available for residents at the municipal building.

### OPTION: ADOPT ADDITIONAL 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. This includes conducting routine inspections and pumpouts. If after the inspection it is determined that a pumpout is not needed, a licensed inspector must send a letter to the Township Board of Health stating this.
- ⌘ Adopting an ordinance requiring regular pumpouts and upgrades on expansions when a house is expanded or altered.
- ⌘ Expanding distribution and updating educational information concerning septic system maintenance. Include information on who to contact in the Township if the resident has problems or questions. This is a critical first step in a long-term Township septic system management plan. Other municipalities, local nonprofits, Hunterdon County or state may already have material that can be easily and quickly adapted.
- ⌘ Applying for a Smart Growth grant for community septic systems and for retrofitting the current failing systems.
- ⌘ Providing incentives, and perhaps financial assistance, for septic system maintenance.





## Did You Know?

- ⌘ All of West Amwell Township is on septic systems.
- ⌘ Nationwide, failure rates for septic systems vary, but the regional rate of septic failure is reported to range between 5 and 40%, with an average of 10%. Failing septic systems can contribute nitrogen, phosphorus and harmful bacteria to local surface and ground waters.
- ⌘ Improperly maintained septic systems can result in health risks for humans and cause water quality problems.
- ⌘ Montgomery Township is one of eight municipalities in the State that has a comprehensive Septic Management Program. West Amwell Township might look to Montgomery to implement a similar program, one that fits the needs of West Amwell.
- ⌘ Incomplete treatment of wastewater can result in the spread of hepatitis, dysentery and other diseases caused by harmful bacteria, viruses and parasites in the wastewater.
- ⌘ High levels of nitrate in surface and groundwater can also result from inadequately maintained septic systems.
- ⌘ Matt Mulhall, a local hydrogeologist, conducted a study and compiled a report describing groundwater and soils along the Hopewell Fault line. In this report it is discussed that nitrogen dilution has a significant effect on septic systems and protecting local wells.



## Additional Resources

- ⌘ River Friendly Resident Manual, Stony Brook Millstone Watershed Association (609-737-3735 or [www.thewatershed.org](http://www.thewatershed.org)).
- ⌘ NJDEP, Division of Water Quality, Onsite Wastewater Management Program ([www.state.nj.us/dep/dwq/sep\\_site.htm](http://www.state.nj.us/dep/dwq/sep_site.htm)).
- ⌘ Raritan Basin Watershed Management Project, Draft Ground Water Technical Report ([www.raritanbasin.org/ground\\_water.htm](http://www.raritanbasin.org/ground_water.htm)).
- ⌘ New Jersey Smart Growth Grants, Department of Community Affairs and Office of State Planning ([www.state.nj.us/osp/resources/sggrants.htm](http://www.state.nj.us/osp/resources/sggrants.htm)).
- ⌘ Handouts for home owners to aid in record keeping ([www.shelterpub.com/\\_shelter/septic\\_record\\_folder.html](http://www.shelterpub.com/_shelter/septic_record_folder.html); National Onsite Wastewater Recycling Association 1-800-966-2942)
- ⌘ Rutgers Cooperative Extensions and NJDEP both produce educational materials.
- ⌘ Other Townships, including Montgomery, Byram, Sparta, Bedminster and Mount Olive Townships, have passed septic maintenance ordinances that can serve as an excellent starting point.

## STEP

6

# Protection of Wetlands, Open Space Woodlands, and Wildlife Habitat



**GOAL:** The Master Plan's states, "Other features such as floodplains, steep slopes, wetlands, and prime agricultural soils should have protection policies and land use regulations."

**CURRENT PROTECTION:** Critical habitats are mentioned in Ordinance 01-03 that contains provisions for the disturbance of sloped areas, stream corridors and cluster development.

Respondents to the Survey wanted:

- ⌘ Healthy watershed areas; large areas of wildlife/bird habitat;
- ⌘ Protection of forest cover and wildlife habitat.



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.

## **OPTION: ADOPT ADDITIONAL ORDINANCES AND LAND USE POLICIES TO ENSURE FURTHER PRESERVATION AND PROTECTION OF WETLANDS, OPEN SPACE, WOODLANDS, AND WILDLIFE HABITATS.**

Specifically, the Township might consider:

- ⌘ Determining special protection areas and creating zoning that protects these critical habitats, specifically those areas mentioned by the respondents (forests, wildlife habitat, Sourland Mountain). Also, look at neighboring municipalities to ensure that zoning at the boundaries makes sense regionally.
- ⌘ Adopting an ordinance that requires commercial development to include landscaping for wildlife. Developing a Landscaping/Tree Preservation ordinance.
- ⌘ Reviewing current steep slope protection ordinance, to ensure development does not take place on steep slopes, particularly in the Sourland Mountain region.
- ⌘ Initiating and promoting cooperation between the Township and adjacent municipalities to advance the consistent development of open space goals, policies and plans.
- ⌘ Encourage Open Space Committee to maintain recreation and open space master plans and maps, which will support your vision.
- ⌘ Language in your Master Plan should clearly define your goals for protection of critical areas. Specifically citing areas for protection and listing implementation strategies will strengthen your reasoning.
- ⌘ Create a checklist and map showing critical areas to be completed prior to Township approval of a construction permit.

## Habitat Preservation



## Did You Know?

- ⌘ The positive news is that West Amwell Township has lost only about 4 acres of wetlands, from 1986 to 1995.
- ⌘ According to NJDEP's Landscape Project, West Amwell has two critical habitat areas; one in which the Cooper's Hawk is a State Threatened and Endangered Species (T&E) and the other where the Wood Turtle is a State Threatened Species.
- ⌘ The State Development and Redevelopment Plan has as a statewide policy 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).
- ⌘ According to the most conservative estimates, New Jersey has lost over 20 percent of our wetlands since 1900 and almost 50 percent since colonial times.
- ⌘ By reducing the overall area of impervious surfaces and lawns, the total volume of stormwater runoff is reduced.
- ⌘ Of New Jersey's 4,748,000 acres some 1,864,300 are classified as forestland, 75% of which are privately owned. Three of the five major forest regions in the United States are found in New Jersey.



## Additional Resources

- ⌘ 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](mailto:info@delrargreenway.org) Website: [www.delrargreenway.org](http://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](mailto:info@njconservation.org) Website: [www.njconservation.org](http://www.njconservation.org)
- ⌘ The Sourland Planning Council works to promote and encourage a comprehensive approach to planning, conservation, preservation of open space, protection of natural resources and protection of places of historic interest for the Sourland Mountains and its environs. Contact them at: Sourland Planning Council P.O. Box 538 Neshanic Station, NJ 08853

## STEP

### 7

## Retain Sense of Community



**GOAL:** Many of the objectives of the Master Plan stress the need to retain the sense of community — “small-scale schools, country roads, and villages..” The Master Plan suggests that future land use planning focus on the creation of a sense of place which allows residents to identify their place within a neighborhood. Village centers should be fostered and historic features retained.

This same sentiment was echoed in the surveys with respondents highlighting the need to blend village-clustered homes, farm buildings and open fields.

**CURRENT PROTECTION:** The Township has an historic district that overlays the areas of Mt. Airy.

The Historic Preservation Committee has been active. They have completed a pictorial inventory of historic sites, completed a video that interviews Township citizens, participated in the County Fair, organized a tour of historic homes and have developed note cards, mugs and throws.

### **OPTION: IMPLEMENT A PLAN THAT DIRECTS MIXED-USE DEVELOPMENT WITHIN VILLAGE CENTERS AND DEVELOPS CLEAR DESIGN STANDARDS.**

Specifically, the Township might consider:

- ⌘ Mapping the appropriate areas in the Township to locate mixed-use development, including soil type, septic suitability and community waste system suitability.
- ⌘ Introducing ordinances that provide for the implementation of increased use of housing over retail development.
- ⌘ Modifying current design standards or developing simple design standards so they are easy to interpret. As an example, look to Cranbury’s Historic Preservation design standards, as well as Lambertville’s.
- ⌘ Establishing architectural review for design standards in Historic areas.
- ⌘ Including drawings and pictures in the design standards of what your commercial and residential development should look like.
- ⌘ Encouraging public participation in the visioning process for village centers and design standards.



Sense of Community



## Did You Know?

- ⌘ Healthy sustainable communities give consideration to social, economic, and ecological values.
- ⌘ Involving citizens in the visioning process 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.
- ⌘ Commonly used village design techniques include:
  - ⌘ A mixed use center, various gathering places, public buildings, open areas, and a variety of residential buildings all interwoven and in close proximity.
  - ⌘ Civic buildings carefully placed reinforce the character of the traditional village.
  - ⌘ An inter-connected hierarchy of roads, pathways, sidewalks and trails that serve equitably the needs of the pedestrian, the bicycle and the automobile.
  - ⌘ A traditional village has a defined village and a rural/semi-rural edge composed of parks, heaths, greenbelts and wilderness preserves or conservancy areas.
- ⌘ Since 1990 the population of the Township has increased by 132 people (from 2,251 to 2,383) and the number of households increased by 140 (from 844 to 984).



## Additional Resources

- ⌘ New Jersey Office of State Planning ([www.state.nj.us/osp/osp.htm](http://www.state.nj.us/osp/osp.htm)).
- ⌘ Association of New Jersey Environmental Commissions (Tel: 973-539-7547, Fax: 973-539-7713, E-mail: [anjec@aol.com](mailto:anjec@aol.com), Website: [www.anjec.org](http://www.anjec.org)).
- ⌘ Center for Watershed Protection ([www.cwp.org/index.html](http://www.cwp.org/index.html)).
- ⌘ Randall Arendt (author of *Growing Greener*) ([www.greenerprospects.com](http://www.greenerprospects.com)).
- ⌘ *Sustainable Development in the Little River Watershed*, North Hampton, NH (June 1999)

## STEP

### 8

## Specific Construction Guidelines



**GOAL:** The objectives for the Master Plan specifically state, “To develop standards to ensure good visual quality and design for all land use categories.”

Respondents to the Framework Questionnaire highlighted the need to ensure careful planning especially in and around environmentally sensitive areas.



**CURRENT PROTECTION:** Determining where growth and development should occur is an important first step, but it is only a first step. It is important to consider the best manner in which to develop a site. Thus, specific guidelines for site construction are essential.

Currently, West Amwell has checklists for pending development applications, a soil erosion and sediment control ordinance and requires preliminary site sketches.

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

Specifically, the Township might consider:

- ⌘ 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.
- ⌘ Ensuring necessary fees for monitoring and enforcement are adopted in current ordinances.
- ⌘ Update general development plan requirements to ensure appropriate and responsible construction practices that conform to any new cluster options.
- ⌘ 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. Refer to low impact development standards as described by NJ DEP in their BMP Manual. Apply strategies to the Township.
- ⌘ Revisit the issue of minimal impervious cover allowed on a site.
- ⌘ Encouraging the use of pervious material, including porous pavement, green parking lots, gravel and other alternatives.
- ⌘ Developing requirements that direct rooftop runoff to pervious areas, such as yards, vegetated areas or dry wells.
- ⌘ Updating golf course ordinance, specifying best management practices, stream buffering, stormwater management and monitoring practices.



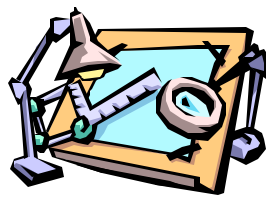
## Did You Know?

- ⌘ When developing standards based on sustainability guidelines, remember to consider the following:
  - ⌘ Specify minimum disturbance
    - ⌘ Work with the natural contours; 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
  - ⌘ 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



## Additional Resources

- ⌘ Stony Brook-Millstone Watershed Association's River-Friendly Golf Course, Business and Resident Certification Programs ([www.thewatershed.org](http://www.thewatershed.org)).
- ⌘ Hance, B.J., J. Morris. *Reviewing Golf Course Proposals: Materials for Local Officials*. Cook College, Rutgers University. For copies call the USGA or the Center for Environmental Communication, Cook College 732-932-8795 ([www.aesop.rutgers.edu/~cec](http://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](http://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](http://www.njapa.org/index.html)).
- ⌘ The Low-Impact Development Center ([www.lowimpactdevelopment.org](http://www.lowimpactdevelopment.org)).

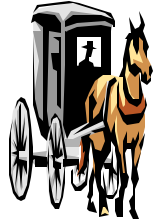




## STEP

9

# Preservation and Protection of Historic Structures, Lands, and Views



**GOAL:** One element of rural character in West Amwell is the historic structures related to agriculture and small crossroads communities. These structures contribute to the sense of community and community heritage, the preservation of which is a goal of the Master Plan

**CURRENT PROTECTION:** The Historic Preservation Committee has done a pictorial inventory of historical sites, completed video interviews, participated in the County Fair and conducted historic homes tour. When necessary, they advise the planning board.

Many survey respondents cited the need to identify and protect historic sites, retain a sense of continuous community, and enhance Mt. Airy and Rocktown as community centers.

However, there is a lack of regulation that safeguards historic resources and acknowledges and permits special treatment for historic assets.



## OPTION: ADOPT ADDITIONAL ORDINANCES AND POLICIES TO ENSURE FURTHER PRESERVATION AND PROTECTION OF HISTORIC STRUCTURES, LANDS, AND VIEWS.

Specifically, the Township should consider:

- ☞ Ensuring that the Historic Preservation Committee receives a copy of every application for development or a permit in historic districts or concerning historic sites so that it may provide comments on the application. The Committee should also be charged with creating a design standard manual that clearly defines standards for development and/or redevelopment of historic resources. Applicants should refer to this when developing their plans.
- ☞ Utilizing resources for historic preservation that already exist. Linda Weber, a County Planner has developed a design guideline for Lambertville.
- ☞ Updating the list of historic sites in the municipality. The Township should also work with the Committee to present these sites to the public in an appropriate manner (i.e., signage, parking facilities, etc.).
- ☞ Prioritizing historic sites for preservation and inclusion on the NJ Register of Historic Places and the National Register of Historic Places.
- ☞ The Township should encourage cooperation among local and regional entities involved in similar historic preservation initiatives.
- ☞ Adopting an ordinance to protect viewsheds. Map viewsheds and scenic vistas.

Historic Preservation





## Did You Know?

Being listed on the New Jersey Register includes the following benefits:

- ⌘ Public recognition of a property's historical, architectural, or archeological significance.
- ⌘ Eligibility for rehabilitation or restoration grants or loans from the New Jersey Historic Trust (if the property is owned by county or local government or by a local non-profit organization).
- ⌘ Protective review of state, county or municipal projects that might "encroach upon, damage, or destroy" a listed property.

West Amwell Township's website includes a thorough historical recount of the establishment of the Township. The website also includes detailed information regarding the area's climate, geology, and physiology.



## Additional Resources

New Jersey's Historic Preservation Office, located within the Division of Parks and Forestry, Department of Environmental Protection, brings expertise in a variety of fields essential to preserving historic resources. Contact them at: NJ Dept. of Env. Protection, Division of Parks and Forestry, Historic Preservation Office P.O. Box 404 Trenton, NJ 08625-0404 Tel: (609) 292-2023 Fax: (609) 984-0578 Email: [njhpo@dep.state.nj.us](mailto:njhpo@dep.state.nj.us) Web site: [www.state.nj.us/dep/hpo/](http://www.state.nj.us/dep/hpo/)

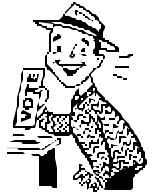
The New Jersey Historic Trust is a non-profit historic preservation organization affiliated with the Department of State. Contact them at: New Jersey Historic Trust P.O. Box 404 Trenton, NJ 08625-0404 Tel: 609.984.6017 Fax: 609.984.7590 Email: [njht@dep.state.nj.us](mailto:njht@dep.state.nj.us) Web site: [www.njht.org](http://www.njht.org)

Preservation New Jersey's mission is to protect and promote the state's historic resources, communities and landscapes through education and advocacy. Contact them at: Preservation New Jersey 30 South Warren Street Trenton, NJ 08608 Tel: 609.392.6409 Fax: 609.392.6418 Email: [info@preservationnj.org](mailto:info@preservationnj.org) Web site: [www.preservationnj.org](http://www.preservationnj.org)

## STEP

### 10

## Resident Participation



**GOAL:** Survey respondents suggested that while the residents are united in their desire to preserve the rural character of the Township, there is an increasing rise in apathy and lack of public participation, cynicism for open space protection, and lack of understanding that development can affect the safety and health of residents.

Township residents care deeply about their environment and with more encouragement, education and innovative participatory techniques they will come out to participate in meetings and take an active role in the community.

**CURRENT PROTECTION:** The Township has developed a website, distributes a yearly newsletter, mailed notices inviting input in the Master Plan reexamination and developed news bulletins to help highlight issues of concern.

West Amwell Township sponsors a booth at the annual County Fair to publicize events, programs, and important issues.

The Township keeps residents well-informed by posting meeting agendas and minutes.

### OPTION: CONTINUE TO ENCOURAGE PUBLIC PARTICIPATION

Specifically, the Township might consider:

- ⌘ Expanding the information available on West Amwell Township's website. Include links to discussions of issues of concern and various solutions. For example, if clustering is an option, link to sites which describe various cluster options with advantages and disadvantages clearly listed. Also create 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.
- ⌘ Hold a neighborhood planning meeting to encourage public participation in the planning process.
- ⌘ Hold a photo contest to highlight areas that the community feels are important.



## Resident Participation

## STEP

11

## Knowledge Base of Municipal Officials



GOAL: Many of the respondents noted a concern that there needs to be further expertise and understanding of the potential for poor planning to lead to deteriorating communities and environmental health.

CURRENT PROTECTION: Officials should be encouraged to expand their expertise and knowledge in order to base decisions on sound facts and ensure that the Township does not become polarized.

### **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 training in the Township and inviting neighboring municipalities to attend.
- ⌘ Encouraging the Planning Board and Environmental Commission to conduct site walks. The Township should continue its policy of organizing group site walks, with professionals present, on large projects.
- ⌘ Encouraging elected and appointed officials to read the Natural Resources Inventory from 1977. While the information needs to be updated, Volume I provides an excellent starting overview of the planning process, the questions that need to be asked and the data that should be collected.
- ⌘ Reviewing Master Plans of other municipalities within the region. Specifically looking at Hopewell Township. This will enhance official's knowledge of planning strategies in the area.

**Educated Municipal Officials**

