

# anjec

## REPORT

AUTUMN 2005

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# Director's Report

## ERIs – Building Blocks to Good Planning

Over the years ANJEC has gained great appreciation of the importance of environmental commissions creating and using an Environmental or Natural Resources Inventory (ERI/NRI) as a building block for good land use planning. Delineating the municipality's natural resources is the first step in their protection. It relies on knowing where the resources are and their significance within the ecosystem.

In 1967 Ian McHarg wrote *Design with Nature*, which advocated mapping and measuring natural processes and using this information in making land use planning decisions. Since that time, our understanding has grown of the necessity for land use planning to reflect and work with existing natural systems to preserve the features that humans, other animals and plant species rely on for survival. Relying on the natural systems also will mean that land development can avoid costly engineering that attempts to mimic the natural systems that it has destroyed, or future restoration to fix problems caused when we ignore how nature works.

Looking at natural resources means evaluating how all related features work in the system. For example, stream systems include the stream banks, floodplains, wetlands and streamside vegetation that all interact with the stream and maintain its health and the viability of the plants and animals that depend on the stream for food, water and habitat.

NJ's lawmakers and regulators have realized the need to have an inventory to protect natural resources. The Municipal Land Use Law states that the land use element of the municipal master plan should take into account natural conditions, including "topography, soil conditions, water supply, drainage, floodplain areas, marshes and woodland" - all resources that should be included in the ERI/NRI. The law also recognizes that the environmental commission gains expertise by compiling an inventory. It states that when the commission has done an index of natural resources it shall receive a copy of all development plans submitted to the municipality. (NJSA 40:55D-27b).

The State Planning Commission recently adopted requirements for municipalities to receive initial Plan Endorsement. They include requiring the municipality submit an ERI/NRI to achieve endorsement. The environmental commission should be part of this process to be sure that municipality is using the ERI/NRI to do its planning.

The commission should keep its inventory up-to-date and be sure that commission members read and use it. The municipal planning board should use the data in its master plan in delineating the intensity and location of development in the town. When the master plan is up for review, the commission should be sure that its recommendations protect the sensitive areas delineated in the inventory. When the town proposes its affordable housing plans for COAH certification, the planned housing should not infringe on sensitive areas, but instead focus the development or redevelopment in centers or areas with infrastructure.

The inventory also will be helpful in prioritizing open space, farmland and historic sites for preservation. In site plan review it can serve as a general guide to alert the planning board to look for site-specific considerations.

The commission can also recommend that the governing body pass specific ordinances to protect the sensitive environmental features documented in the inventory. For more information on inventories, ordinances and grants available for commissions to create or update inventories, contact ANJEC Resource Center at 973-539-7547 or resourcecenter@anjec.org. ANJEC's *Environmental Resource Inventory* Resource Paper is an on-line publication on our website at www.anjec.org.

Sandy Batty  
Executive Director

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The Association of New Jersey Environmental Commissions is a private, non-profit educational organization serving environmental commission and open space committee members, concerned individuals, non-profits, and local officials. ANJEC's programs aim to promote the public interest in natural resource preservation, sustainable development and reclamation and support environmental commissions and open space committees working with citizens and other non-profit organizations.	
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# Clean Water, Sewers, and Septics

By Jody Carrara, ANJEC Coastal Planning Project Director and  
Abigail Fair, ANJEC Water Resources Project Director

**D**o you remember when towns throughout NJ depended on septic systems? Wastewater was routed to the ground, filtered by soil and returned to the ground water. It was a perfect system that ensured the sustained capacity of the water supply and infrastructure. In the early 70's, when federal funding became available, many towns built sewer plants and installed their first sanitary sewer pipes. Think of the population growth since the 80's. In barrier island towns, small seashore bungalows have become duplexes and quadruplexes. In scores of communities meadows and forests have become major development areas. Throughout NJ, traffic has become horrendous. These are perhaps the most visible examples of the changes accompanying the installation of sewers.

To protect the state's streams, lakes and ground water, the state requires every municipality (or a regional agency authorized by NJDEP to act for a municipality) to have a **Waste-water Management Plan (WMP)** and to update it every six years. These plans lay out the provision of sanitary sewer/septic needs for the next 20

years. A map diagrams the municipality's streets, the existing and future sewer pipes and septic systems and environmentally sensitive areas. A guide to the future, it identifies areas for more intense development. Ideally, the mapping for future sewer-served areas should focus on the existing center of town, and not on the countryside. Accurate assessments of future wastewater needs, impacts to the community and the environment are essential.

## Why Is A WMP Critical For Your Town?

**Protecting Water Quality:** According to the State Water Supply Master Plan, the secondary impacts from the growth induced by expanded sewer service can nullify any water quality improvements made by advanced wastewater treatment.

**Meeting Infrastructure Needs:** The Municipal Land Use Law (MLUL) requires subdivision and site plan ordinances to *ensure adequate water supply, drainage, shade trees, sewerage facilities and other utilities necessary for essential services to residents and occupants (emphasis added)*. (NJSA 40:55D-

38) Accurate wastewater management assessment needs are critical for a municipality's planning and realization of its future growth goals and needs. The master plan and zoning ordinance determine where growth can occur and at what density.

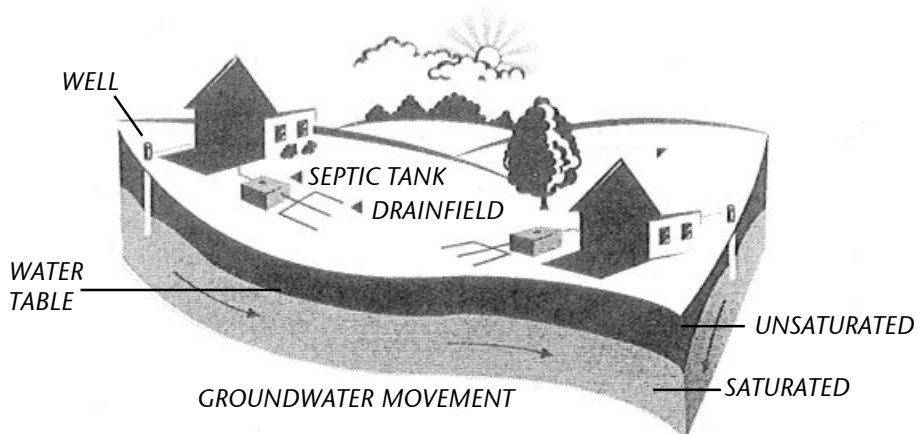
**Strengthening State Protection of Local Natural Resources:** All NJDEP permits must be consistent with regional Water Quality Management Plans (WQMPs). (See **WMPs and Water Quality Management Plans** on page 4). For example, a WMP approved and incorporated into the WQMP that establishes wetlands as valuable natural resources requiring protection could prevent NJDEP from issuing a permit that would disturb wetlands.

**Preventing the Over-Sewering that Brings Development:** The *State Plan* categorizes any approved WMP sewer service area, even with no pipes in the ground, for growth (Planning Areas 1 or 2). Too often towns designate large future sewer areas to avoid future amendments.

## Key WMP Elements

A **build-out analysis** enables a town to project what new residential, office and/or commercial development current zoning will allow over the next 20 years. It provides a guide and analysis of the town's capability for the needed new infrastructure.

A build-out analysis enables officials and residents to visualize and evaluate future development by assessing impacts on road capacity, water supply, the school system and tax base. Many towns have concluded that existing zoning will bring too many new homes, insufficient taxes for local services and increased traffic congestion. They opt for an open space plan, large-lot zoning, mandatory clustering, and reduction in building cover, which can all help reduce infrastructure needs.



The municipal WMP and Master Plan should assess the **water supply** needed for the sewers and/or septs to serve the future population. Certain places like Cape May apply a principle that sewer systems need a fresh water/waste water ratio of approximately 5 to 1. Without an accurate water supply assessment, a municipality will probably face major infrastructure expenses. For example, since Cape May City's (Cape May) population, especially in the summer, has grown larger than the local aquifer's capacity, the municipality had to construct a \$5 million desalination plant that produces up to two million gallons of water daily.

A WMP should be consistent with other master plan elements, such as the now-required Stormwater Management Plan. Both require build-out analyses for information to help evaluate and avoid potential negative impacts to water resources. For example, research has shown that a mere 12 percent of impervious cover in a watershed creates pollution impacts on water bodies. It's a good idea for municipal WMPs and master plans to address how much additional impervious cover future development will produce and what mechanisms the municipality will use to insure minimum negative impacts on water quality.

WMPs must also exclude **environmentally sensitive lands** (including wetlands, steep slopes, streams, and vernal ponds) from sewer service areas. Existing or future sewer lines in these areas allow serious negative impacts.

### WMPs and Regional Water Quality Management Plans

NJDEP determines whether proposed WMPs are consistent with a federally mandated **Regional Water Quality Management Plan (WQMP)**. The MLUL also requires municipalities to "ensure adequate water supply, drainage, shade trees, sewerage facili-

ties and other utilities necessary for essential services to residents and occupants." (NJSA 40:55D-38)

The 1977 federal Clean Water Act requires states' plans to prevent water pollution from point (e.g., sewage plants, factories) and nonpoint sources (e.g., stormwater, septic systems). This requirement

forced towns to correct local wastewater pollution problems. Because sewage plants and pipe networks construction were costly, many towns included much larger sewer-served areas to cover the costs better. This brought sprawl development.

NJDEP and six counties who created their own WQMPs manage the regional WQMPs. The six county regional planning entities manage individual WMPs. NJDEP must approve both regional and individual WMPs as well as amendments, or additions/deletions of sewer service areas.

### Pros and Cons of the Current System

The current rules and regulations appear to be a good future planning system. They ensure the sustainability of municipal infrastructure and natural resources. But there are some problems. Most NJ municipalities are using WMPs from the 80's or 90's when sewers seemed to be the answer to water pollution problems, and when nobody had heard of the necessity for sustainability. As of summer 2005, **only 14 WMPs are up to date, with 11 WMPs pending, 55 WMPs never adopted and 110 WMPs out of date.** This means almost all local "authorities or agencies" are deciding where to put sewer lines without the benefit of a build-out analysis, water supply capacity analysis and the other assessments required by WMP regulations.

Water quality protection was the initial reason for the construction of sewer systems and WMPs. (Understandably, urban areas could not


survive without them). Unfortunately, many municipalities' goal of increased development has surpassed the statewide goal of clean water. Growth is inevitable, but planned growth, based on natural and man-made capacities is the ideal. In areas such as beach resort towns, old or undersized septic systems on small or poorly maintained lots caused pollution of the streams, bays and ocean. Instead of requiring larger lots and septic maintenance, the towns expanded areas served by sewer pipes. Result? High-density development and increased pollution from stormwater. This has ultimately undermined the water quality protection sought by sewer installations.

Sewers have become the driving force behind development. An overwhelming majority of municipalities are using old WMPs that neglect sustainability and critical area protection. Is this "Catch 22" happening in your town? Are sewer lines "planning" the future, rather than a master plan and WMP which carefully assess future water supply and pollution capacity? Are sewers mapped for wetland areas and farms? How will build-out at the current zoning affect the taxes?

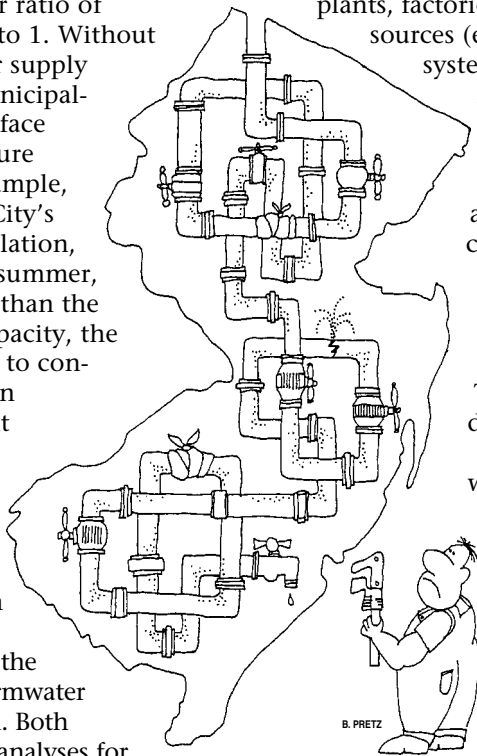
### What You Can Do

Check with your municipal engineer or wastewater authority to see if your town has a Wastewater Management Plan (WMP). Find out how you can help update your WMP. Get involved in municipal planning meetings so that residents, not sewer lines decide the future.

### FOR FURTHER INFORMATION

- ANJEC's on-line *Directory of Environmental Consultants* at [www.anjec.org](http://www.anjec.org)
- NJDEP regulations and guidance documents at ([www.state.nj.us/dep/watershedmgt/wqmps.htm](http://www.state.nj.us/dep/watershedmgt/wqmps.htm)) 

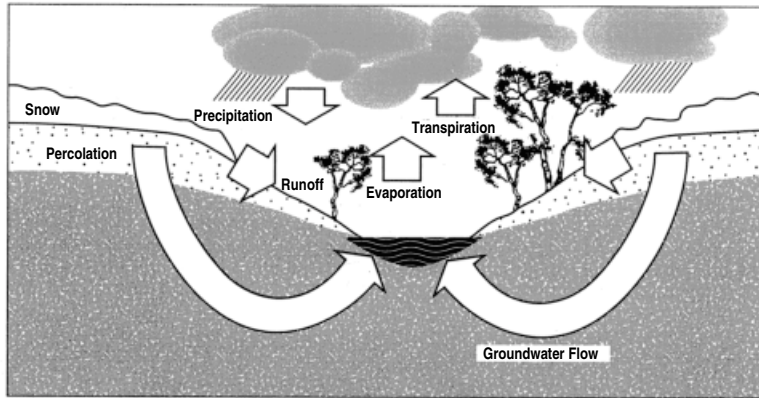
ANJEC's *Meeting Community Needs* brochure shows the connections between development, water pollution, sanitary sewers and septs and outlines key municipal actions to insure future clean water and sustainability. For a copy, go to ([www.anjec.org/html/waterresources.htm](http://www.anjec.org/html/waterresources.htm)), call 973-539-7547, or email [info@anjec.org](mailto:info@anjec.org).



# Resource Center



By Peter Craig, ANJEC Resource Center Volunteer



Hydrologic Cycle

## Ground Water in NJ Part I

The NJDEP's Water Supply Administration, soon to be called the Division of Water Supply, provides access to a wealth of information on the state's drinking water systems on its website ([www.nj.gov/dep/watersupply](http://www.nj.gov/dep/watersupply)). Scores of surface drinking water systems serve about half NJ's residents. The potable surface water sources include lakes, reservoirs, streams and the like.

Roughly half of the rest of NJ's population drinks water from community or private wells; that is to say, from ground water.

The opposite side of the human water use cycle, discharge of liquid waste, also occurs mainly by surface or subsurface (i.e., ground water). Almost all urban environs have systems which collect wastewater (sewage) for processing and purification, and discharge treated streams to surface water destinations. The separation of sources and destinations in the surface-surface cycle is both obvious and readily easy to monitor and regulate.

Almost all rural environs, on the other hand, obtain potable water from the ground and send waste streams through subsurface disposal systems (septic systems) back into the ground. Here the degree of separation of potable water sources and wastewater

destinations is anything but obvious, and not at all susceptible to easy monitoring. A large proportion the estimated 320,000 NJ septic systems are paired with private wells located on the same parcel of property. This source-destination category serves one million NJ citizens.

### Ground Water Usage

With this issue we begin a series of articles dedicated to an examination of ground water usage in NJ, particularly in the rural and exurban well-septic environment. Although ground water is a renewable resource, it is not infinite.

- How do we establish appropriate limits on the rate of withdrawal?
- What features of the well septic-system prevent the contamination of potable sources with waste constituents?
- What regulations and controls apply to such systems, and are they effective?

Central to the potable water use issue is the notion of ground water recharge, or an estimate of the amount of precipitation that falls upon the land and infiltrates downward to replace yearly loss. For sustainability, an aquifer's "safe yield" is taken to be equal to the annual ground water recharge.

And key to the issue of preventing the direct recycling of waste as potable water in well-septic systems is the question of nitrogen dilution. Because nitrate nitrogen does not naturally occur in deeper ground water aquifers, it is invoked as an indicator of potable supply contamination by waste streams or other surface sources such as fertilizers.

### NJDEP Regulatory Divisions

Three NJDEP divisions regulate the NJ's water use: Water Supply, Water Quality, and Watershed Management. They administer a bewildering array of permitting, management and planning programs. The Pollution Discharge Elimination System (NJPDES) administered by the Division of Water Quality regulates larger systems, including capacities over 2,000 gallons per day. State regulations (NJAC 7:9A) specify the design and construction requirements of smaller individual septic systems. County or municipal health departments accomplish the permitting and installation oversight.

Future *Resource Center* articles will cover these topics in more detail. Finally, we will ask whether there is a better way. Although there are "alternative designs" for subsurface wastewater treatment, they have found few applications as yet in NJ. We will look at how they work and the impediments to their use, and try to identify the wave of the future in protection of our precious ground water resources. Stay tuned. 🌱

### Future Resource Center Ground Water Articles

- Concepts and applications of recharge and "safe yield;"
- Effectiveness and efficiency of NJDEP's nitrogen dilution model for water supply protection;
- Current septic system permitting and installation system's advantages and limitations;
- Future possibilities for subsurface water treatment.

# Smart Growth Updates



By Barbara Palmer, ANJEC State Plan Project Director

## New Schedule for Cross-Acceptance

The State Planning Commission's (SPC's) revised schedule for the completion of cross-acceptance with the counties delays the publication of a new *State Development and Redevelopment Plan* by about a year, to December 2006.

The delay is in part an effect of the *Plan's* greater importance. A record number of municipalities and counties participated in cross-acceptance with substantial attention to detail, submitting well over a thousand requests for mapping changes. At the request of the Office of Smart Growth (OSG) staff for review guidelines, the SPC passed a resolution approving guidelines for mapping changes and historic sites in September.

Negotiation meetings between the county and the SPC staff, this fall and into January 2006, could be important for municipal environmental

commissions. If your municipality had requested a change to the current plan or map and you are concerned about an issue to be discussed, ask your county planners to notify you when the meeting is scheduled.

After the negotiation sessions, the SPC plans to adopt a statement of agreements and disagreements in March, distribute a draft final State Plan and Draft Infrastructure Needs Assessment (INA) in May and an Impact Assessment in July. They've scheduled six public hearings on the *Draft Final State Plan* and Draft INA in September through mid-October and will accept county and municipal written comments within 30 days after the last public hearing.

For meeting and deadline dates, go to OSG website at [www.nj.gov/dca/osg/plan/crossacceptance.shtml](http://www.nj.gov/dca/osg/plan/crossacceptance.shtml)



## State Plan Endorsement and Environmental Protection

ANJEC has been following closely the first petitions for Initial Plan Endorsement (IPE) and the review process at the Office of Smart Growth (OSG). The State Planning Commission (SPC) developed Plan Endorsement to provide technical assistance and coordination for municipalities, counties, regional and state agencies to meet the goals of the State Planning Act and implement the *State Development and Redevelopment Plan*. It is also the way to establish center boundaries, and critical environmental, historic and cultural sites in Planning Areas 1,2 and 3.

By mid-October, 19 municipalities had filed for IPEs, three municipalities individually (Dover Township (Ocean), Ocean Township (Ocean), Plainsboro (Middlesex) and 16 through two regional petitions (Middlesex County Strategic Planning Area 1 and Western Monmouth County.) Twelve of the 19 participating municipalities have environmental commissions.

About 70 municipalities are currently in the process of filing petitions, either on their own or as part of a regional group. Currently, SPC has granted IPE status only to Asbury

Park (Monmouth). IPE filing is a requirement of third round Council on Affordable Housing (COAH) certification. The 120 or so towns that have a December 20, 2005, deadline for COAH filings will also be submitting petitions soon.

### Important Role of Environmental Commissions

The development of a commonly supported vision of a community's future and the recognition of the limited capacity of the natural and man-made infrastructure to support that vision is an important aspect of the Endorsement process. As advisors to the municipal government, the environmental commission is in an ideal position to assist in the petition process. The 2004 Plan Endorsement


Guidelines state, "Involving the public in every step of the Plan Endorsement process is critical." This makes sense. It is the public that has to support a town's development plans, because the public – the residents and property owners – will be carrying out those plans. In spite of these guidelines, most filed petitions unfortunately have had minimal participation by the public and environmental commissions.

The Endorsement Petition is an excellent opportunity for environmental commissions to address development and land preservation issues in their towns. Please ask to see your municipal petition and become involved. Your commission should

- Be in charge of putting together the Natural/ Environmental Resource Inventory (NRI/ ERI), a required element of the petition;
- Review the maps that are being filed, to make sure that environmental factors are properly considered.

The development of neighboring communities affects your town as well. You may want to review your neighboring communities' development plans and file comments covering your concerns with the SPC.

#### FOR FURTHER INFORMATION


- Plan Endorsement, guidelines, list of municipalities applying for IPEs – [www.nj.gov/dca/osg/plan/endorsement.shtml](http://www.nj.gov/dca/osg/plan/endorsement.shtml)
- NRI/ERI, community visioning – Smart Growth Survival Kit at [www.anjec.org/](http://www.anjec.org/) or call 973-539-7547 

### Requirements for Initial Plan Endorsement Petitions

- ✓ Master Plan with all its required elements;
- ✓ Status of optional elements like open space, agricultural retention, farmland preservation, wastewater management, etc;
- ✓ Community vision and public participation;
- ✓ Proposed changes to the State Plan Policy Map;
- ✓ Existing Planning Maps—zoning and land use;
- ✓ Environmental/Natural Resource Inventory—including any available local information on steep slopes, beaches and dunes, open space, public lands, wetlands, critical environmental sites, etc.

## Downzoning Upheld in Appellate Court

In a September 2005 decision the NJ Superior Court Appellate Division upheld East Amwell's (Hunterdon) "down-zoning" ordinance that changed minimum zoning in its agricultural zone from 3 to 10 acres. Challenged by a group of local farmers and the NJ Farm Bureau, farmers claimed that the downzoning deprived them of their land's full value, and prevented the town from


fulfilling its obligation for a variety of housing. The court, citing the Mount Laurel II decision, found that a municipality that has met its COAH obligation, which East Amwell has, and is not in a growth area (i.e. Planning Areas 1 and 2), which East Amwell is not, has no further obligation to provide for housing. This decision is of interest to all municipalities in Planning Areas 4 and 5 as well as the Highlands that are considering downzoning as a tool to preserve open space. 

## Brownfields Site Remediation Bill Signed into Law

Acting Governor and Assembly Speaker Albio Sires had the honor, while Governor Codey was on vacation, of signing legislation in September that enables counties and local redevelopment agencies to receive financial assistance and grants from the State's Hazardous Discharge Site Remediation Fund (HDSRF). The new law strengthens the ability of counties, municipalities and government redevelopment agencies to clean up and reuse contaminated former industrial sites for housing, recreation or conservation. Previously, only private parties or municipal entities were eligible to receive financial assistance from the fund.

The HDSRF program has existed since the early 1990s and holds \$116.5 million in funding. The law provides a 50 percent reimbursement of clean up for land used for affordable housing and up to 75 percent in reimbursement for land used for recreation or conservation purposes. Under the new law, governments can apply for grants even if they don't own the property. The law directs that funding priority be given first to properties that pose an imminent threat to a drinking water source, to human health, or to a significant ecological area.

#### FOR FURTHER INFORMATION

- Department of Community Affairs – [www.nj.gov/dca/osg/commissions/brownfields/index.shtml](http://www.nj.gov/dca/osg/commissions/brownfields/index.shtml)
- Department of Environmental Protection – [www.nj.gov/dep/srp/brownfields/](http://www.nj.gov/dep/srp/brownfields/) 



**ANJEC's Directory of Environmental Consultants**

*Information on environmental professionals and businesses operating in New Jersey and surrounding regions. You can search by keyword (including company name) or service area.*

Check out the Directory at [www.anjec.org](http://www.anjec.org) and click on "Environmental Consultants" Available 24 hours a day, 7 days a week

# Zoning Initiatives to Protect Groundwater

Results of Studies Funded by an ANJEC Smart Growth Planning Grant

By Sally Dudley, ANJEC Report Editor

For towns that depend on ground water and septic systems, zoning that protects water supply and water quality is important for the community's sustainability. The State Planning Commission has designated virtually all of Harding Township (Morris) in southeastern Morris County an Environmentally Sensitive Planning Area (PA-5) given the township's wide range of natural resources, low intensity development and low growth. And the township is in the Highlands Planning Area.

Federal, state, county and local governments and nonprofits have preserved more than 40 percent of Harding's land - in the Great Swamp National Wildlife Refuge, the Jockey Hollow Section of Morristown National Historical Park, the Morris County Loantaka Brook Reservation, municipal parks and open space, and a number of private (nonprofit) conservation areas. Suburban development surrounding these public resources has increased significantly over the last two decades.

In 2003, the Harding Planning Board adopted the environmental commission's updated Environmental Resources Inventory (ERI), an important component of the Master Plan's background studies. The ERI

- Emphasized the sensitivity and importance of the township's dependence on ground water and the high quality of its surface water;
- Noted that the township's decisions on protecting water quality will have direct

impacts on the ecology of the Great Swamp National Wildlife Refuge;

- Recognized the significance of the township's water resources; and
- Observed that most of the township's residences and commercial developments depend on septic systems and private wells.

Based on this information, the ERI recommended that the township perform a carrying capacity study to analyze the capability of the soils to accommodate development that is reliant on individual septic systems.

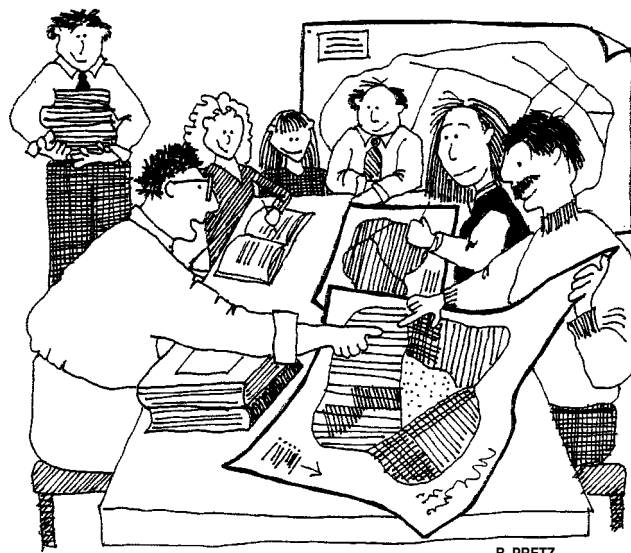
## First Steps

Harding Township requested funding from ANJEC's Smart Growth Planning Program to evaluate whether its groundwater resources could support the development allowed under current planning and zoning. The goals were to conduct a carrying capacity analysis of the township's

water resources and develop Master Plan amendments reflecting the study's results. ANJEC awarded Harding \$22,625, which the township matched with cash and in-kind services from the environmental commission, planning board, township administrator, health administrator, professional consultants and support staff.

The grant enabled Harding Township to fund a carrying capacity study by engineers from Maser Consulting, PA. The study analyzed the geology and soil. Based on current population density, it applied the NJ Geological Survey's nitrate dilution model to determine what future development densities would be needed to ensure that residents would have access to sufficient high quality water resources. Nitrate is a septic system contaminant. Regulatory programs frequently use groundwater nitrate concentrations as an indicator of overall water quality.

The study noted that most of the streams in Harding's dense network, both within and outside the Great Swamp National Wildlife Refuge, are of exceptional environmental value. It also pointed out that poorer soils, located in several sections throughout the township are less effective in diluting nitrates. Based on the geology and soils, the study recommended increasing the 3-acre minimum lot size in areas with substantial amounts of poor soils to prevent septic system contaminants from threatening the streams' water quality. The township's project report cites the carrying



B. PRETZ




capacity study's recommendations as "significantly influencing the township's future land use policies."

After the carrying capacity analysis, the township's professional planners, Kimball & Kimball, with assistance from the environmental commission, used the township's Geographic Information System (GIS) to conduct a build-out analysis. It concluded that a lowering of development density would be necessary to achieve long-standing Master Plan goals to retain the township's rural quality and to make sure that there would be enough high-quality ground water given residents' dependence on individual wells for drinking water.

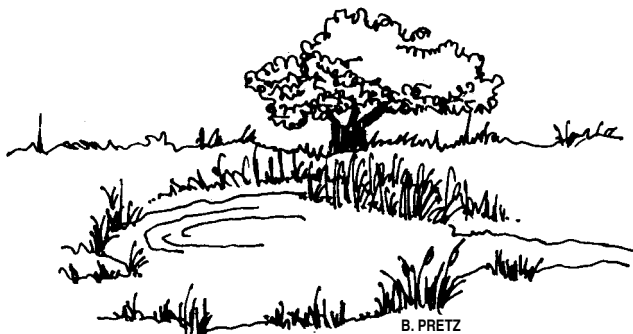
### Planning Board Actions

The planning board held numerous meetings and sought additional information to address concerns expressed by the public. The Planning Board also stressed the importance of protecting groundwater resources and the township's rural character. After four months of public dialogue, the planning board proposed a Master Plan amendment to lower development density from 3 to 5 acre zoning in five areas covering nearly one-third of the municipality. The township committee accepted the recommendation and passed an ordinance a few

months later that requires minimum 5-acre lots, and allows for lot-averaged subdivisions (minimum size 3 acres, to be offset by larger, deed-restricted lots) in the designated areas. Existing dwellings or structures on undersized lots in the designated areas may be enlarged, altered or rebuilt in conformance with the standards and limitations of the previous 3-acre zoning.

A local weekly newspaper congratulated Harding Township for taking good steps that demonstrate that "towns can act to deter sprawl. In the end," an editorial says, "Harding will have done what any town has the opportunity to do, at least to some degree, through the powers of its Planning Board and municipal government, and that is to take charge of its own destiny.... The steps it took were good ones and future generations will surely benefit from the foresight shown by the Planning Board today." 

Thanks to generous funding from the Geraldine R. Dodge Foundation, ANJEC has been able to offer municipalities with environmental commissions more than \$700,000 in Smart Growth Planning Grants to for 76 local projects since 2002.



ANJEC's **Stormwater Management for Municipalities** CD includes:

- Stormwater management Power Point presentations for developed and developing communities;
- Sample fliers and background information for educational programs; and
- A model Stormwater Management Plan that could be applied to both Tier A towns (those with at least 1,000 people per square mile and a population of at least 10,000) and Tier B towns (those with less than 1,000 people per square mile and a population less than 10,000) towns.

Just \$5.00 (20 percent discount for members) plus shipping. Send order to ANJEC, PO Box 157, Mendham NJ 07945 or fill out and mail or email a Publication Order Form from [www.anjec.org/html/publist.htm#orderforms](http://www.anjec.org/html/publist.htm#orderforms).



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## Share Your Local Ordinances to Help Protect the Environment

Does your town have strong ordinances to protect natural resources, including water, air, land and habitat through zoning, development standards, open space preservation, and regulations for tree, slope and stream corridor protection?

ANJEC's Ordinance DataBase has more than 500 examples available to our members. If your municipality has passed an ordinance that's helping preserve important environmental resources, please send a copy of the ordinance to ANJEC's Resource Center. That will help us strengthen our database and spread the effectiveness of your ordinance by making it available to environmental commissions and local officials throughout NJ. Thanks for your interest and help. 

### ANJEC's Resource Center

Contact Information

[resourcecenter@anjec.org](mailto:resourcecenter@anjec.org)  
ANJEC Resource Center  
PO Box 157, Mendham, NJ 07945  
973-539-7547

# Energy Audits of Municipal Government Facilities: Lessons Learned

By James Sherman, Chair, Montclair (Essex) Environmental Commission<sup>1</sup>

## Background

In 2001, concurrent with a Montclair Township Council Resolution adopting sustainability as official township policy in the acquisition and delivery of municipal-level goods and services, the Montclair Environmental Commission (MEC) developed and published the *Sustainable Montclair Planning Guide* (available at [www.mtcenv.com](http://www.mtcenv.com)). The resolution and the guide reflect the belief that the scientific case for human-induced climate change has been made beyond a reasonable doubt and that local action is required in the face of federal inaction. Literally, thinking globally and acting locally.

A substantial portion of the *Sustainable Montclair Planning Guide's* policies, programs, and projects are designed to reduce greenhouse gas emissions<sup>2</sup> (GHG), principally carbon dioxide (CO<sub>2</sub>). Early on, the MEC recognized the need to put together "baseline" emission inventories in an Energy Audit (EA) to verify the success of its efforts to reduce municipal level GHGs. In addition, an EA would help reveal conservation and "green energy" opportunities. The township completed its first EA in August 2005, almost three years after the environmental commission initially presented the need of this important study to the township council.



The balance of this article will give environmental commissioners and municipal officials around NJ a condensed version of "lessons learned" along the way. We hope that other communities will authorize an Energy Audit and follow through on its recommendations without some of the snafus experienced by the Montclair Environmental Commission.

## Why Do an Energy Audit? Why Do it Now?

In all the work related to the *Sustainable Montclair Planning Guide*, the MEC was always keenly interested in being able to make the case that we should implement projects that are good for the environment and make sense economically. Importantly, early on energy auditing companies advised us that the township could expect approximately 20 percent in energy savings annually in its operating budget.

Energy Audits will identify energy conservation options by "dollarizing"

current annual costs and potential future savings from conservation measures and renewable green energy. They will also identify existing HVAC (heating, ventilation and air conditioning) systems like boilers and air handling equipment in need of immediate replacement or repair. EAs just make good government sense.

To start looking into an EA, the MEC requested copies of the township's energy bills for an initial baseline calculation. What the MEC found was jumbled confusion though no one individual's fault. The township had upwards of a dozen different PSEG energy accounts, all with separate meters and separate billing statements. But there was no separate tracking of the township's energy costs. At the least, the EA lets the town know what it is spending on energy.

## Public Contracting Issues

One of the most important "lessons learned" from the MEC's experience was getting the legal considerations right from the start. Toward this end, several members of the MEC met with the township attorney to find out the legal requirements for bid solicitations and contract award. We were advised that the process could be done informally with an RFP (request for proposal) prepared by the MEC, a notice of bid, and getting just three bids as a

<sup>1</sup> Co-author of the *Sustainable Montclair Planning Guide*, the author wishes to acknowledge the work of MEC Commissioners and Energy Audit sub-committee members Sam Pinkard and Merwin Kinkade, who performed countless hours of work on behalf of the community. References to the MEC are references to the work of this sub-committee. The views expressed herein are the author's alone and do not constitute any form of legal advice about public contracting law. For further information, contact James Sherman at: [jsherman@theshermanlawfirm.com](mailto:jsherman@theshermanlawfirm.com)

<sup>2</sup> Greenhouse gases absorb radiation, and are the main cause of global warming. Concentrations have increased significantly with our growing use of industrial products, electricity and fossil fuels.

professional services contract. The MEC's bid solicitation resulted in five proposals. An MEC member designed a unique matrix to weigh the bids objectively. Through this process, one of the bidders was the clear winner against more than 28 different criteria. The MEC will be glad to share the criteria and decision matrix with any interested NJ environmental commission.

Thereafter, the township attorney changed his mind and decided that the EA contract was not a professional services contract and therefore would require a full formal bid process conducted by the township purchasing agent with a formal newspaper notice of the bid solicitation. In addition to this reversal, a single member of the community who was an unsuccessful bidder (see **Types of Energy Companies** below), attacked the MEC commissioners for awarding the contract on the basis of favoritism. This included emails to the then mayor vilifying the personal integrity of MEC members. This state of affairs delayed the EA by more than a year. With the arrival of a new mayor and new township manager, Montclair implemented the EA within about a half a year. Early on, the MEC met with the new town manager to discuss the EA. The town manager immediately understood the utility of the EA and moved it forward quickly.

### Types of Energy Auditing Companies

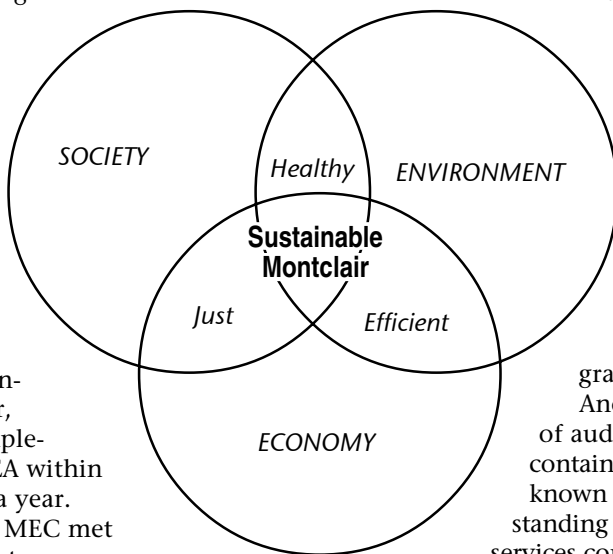
Several different kinds of EA companies emerged. The first, and rare kind of bidder, is a company that has the required skills in both engineering and financial analysis, and the demonstrated ability to deliver "turn key" project management services. In our experience there are

### Acronyms

- EA – Energy Audit
- CO2 – carbon dioxide
- DPW – Department of Public Works
- ENSCO – energy services companies
- GHG – greenhouse gas emissions
- HVAC – heating, ventilation and air conditioning
- kW – kilowatt
- MEC – Montclair Environmental Commission
- NJBPU – NJ Board of Public Utilities
- PV – photovoltaic power
- REC – solar renewable energy certificates
- RFP – request for proposal

only a handful of these companies. The second, and much broader category, consists of non-responsive bidders who for a variety of reasons were unable to deliver project management of turn-key energy systems, or perform a range of analyses including NJ Board of Public Utilities' (NJBPU) clean energy program rebates. Another category of auditing firms contained what are known as "ENSCOs" standing for "energy services companies."

Apparently, as a result of the deregulation of NJ's retail energy markets, large utilities created ENSCOs to take advantage of public funds for energy audits made available through the NJBPU's "societal benefits" program. MEC learned that ENSCOs were in decline for several reasons including information that the EAs were only "paper" audits of lighting systems. Another unattractive feature was ENSCO contract terms whereby the township would share energy savings with the ENSCO on a 50-50 basis. For these and other reasons,



MEC decided ENSCOs were inferior to other bidders.

### Major Bid Award Criteria

In the end, the MEC determined that the successful bidder would need more than the standard technical-mechanical engineering skills. To make the EA work, the bidder needed to be able to provide

- Sophisticated economic and financial analyses,
- Total project management services, including overseeing the bid solicitation and award process for sub-contractors, and
- Delivery of "turn key" energy conservation and renewable green energy systems.

This, in turn, required a working knowledge of both the NJBPU's energy rebate programs and the various available forms of municipal and private financing techniques.

### Current Status

Montclair Township's EA contained 36 different recommendations in three broad categories.

- Renewable green energy systems (in Montclair and statewide, solar arrays, which are solar modules mounted on support structures);
- Energy conservation techniques (a/k/a demand side management) such as remote occupancy sensors, programmable thermostats, high-efficiency lighting, and variable frequency drives at water pump stations;
- HVAC equipment in need of immediate replacement or repair.

Implementing all 36 projects would cost slightly over \$2 million with financial savings of approximately \$88,000 per year and reduction of GHG emissions by 562 tons per year. The overall pay back time, including expected NJBPU rebates, is indicated as approximately 11 years.

The single largest green energy system project is a solar installation on the Department of Public Work's (DPW) building roof. Based on an expected NJBPU rebate of \$4/watt to "buy down" the cost of the solar array, approximately one-half of the total cost will be offset for a net cost of approximately \$480,000. A 120 kW PV installation would generate approximately \$16,000 in utility cost savings per year,

and reduce GHG emissions by 122 tons per year. In addition, it is estimated Montclair will be able to sell solar renewable energy certificates (RECs) worth approximately \$24,000.

In early 2005 fall, the MEC met with the township manager for a preliminary review of the EA. The township manager is planning to schedule an information session for the township council to help the elected officials better understand the EA and its recommendations. A separate and simultaneous board of education facility EA, supported by the township council, identified the opportunity for three substantial solar installations: at the DPW building, Montclair High School, and one of the middle schools. If the same project management company implements additional solar installations under the original bid specifications, the township and board of education may realize additional savings. 🌱

## Sign Up for ANJEC's Monthly Email Newsletters

*Green City Gazette* offers environmental information and resources relating to urban and developed communities, highlighting action alerts, upcoming relevant events, books, newspaper and magazine articles, web sites and various odds and ends. Available at [www.anjec.org/html/greencitynew.htm](http://www.anjec.org/html/greencitynew.htm)

*Highlands Herald* covers environmental and land use issues relating to the Highlands conservation and planning areas, with action alerts, Highlands Council issues, summaries of books, newspaper and magazine articles, references to relevant web sites. Available at [www.anjec.org/html/HighlandsHeraldnew.htm](http://www.anjec.org/html/HighlandsHeraldnew.htm)

To subscribe for either or both, send your email address to [info@anjec.org](mailto:info@anjec.org). 🌱

# ANJEC in the City

By Ana Baptista, Project Director,  
ANJEC Urban Environmental Assistance

## What's that SMELL? Tackling Odors in Your Community

Have you ever been so disturbed by an odor in your neighborhood that you have to roll up your car windows or close up the house? Many cities and towns throughout NJ face this nagging problem, especially when the summer heat compounds odor and air pollution. Odors can be exacerbated by hot, stagnate air or the direction of prevailing winds. Odor problems can emanate from the normal operations of facilities such as sewage treatment plants and other industrial facilities or they can be the result of accidents or malfunctions at these facilities. They can also be the result of local emissions, like a neighbor or a local restaurant burning garbage in their backyard.

Meters cannot detect odors, unlike noise pollution. Inspectors and residents must rely on their sense of smell to detect odor problems. While determining the presence, source and severity of odors can be highly subjective, the NJDEP trains county health inspectors to refine this process. Inspectors can use a scale to rate the severity of odors. It ranges from 1, which is a very light odor (may not be distinguishable) to 5 which is so strong it is overpowering and intolerable.

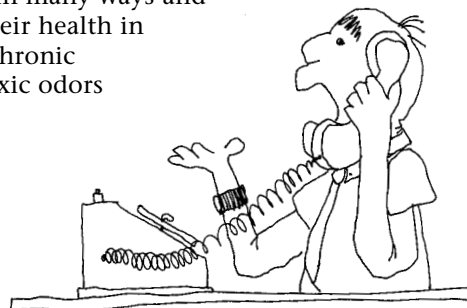
Foul odors can diminish a person's quality of life in many ways and even impair their health in severe cases. Chronic exposure to toxic odors can decrease olfactory senses, exacerbate respiratory ailments like asthma, and provoke physiological

problems. Recently, a study of residents in South Camden (Camden) showed that many people in the community had a diminished sense of smell because of the years of exposure to sewage and other chronic odors. Beyond the physical distress, odors can cause a host of social and psychological problems such as stigmatizing entire communities, limiting a person's mobility and ability to enjoy the outdoors or even normal, daily activity because the smell is so disturbing. Severe and persistent odors can wreak havoc on a community by destroying the quality of life and character of the environment.

### Odor Regulations

According to the state's Air Pollution Control Act regulations, (NJAC 7:27) Subchapter 5, "Air pollution' means the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property...." (emphasis added)

This is a longstanding law, based on the idea that individuals have the right to the free and unencumbered enjoyment of their property and environment. Under this law, odors that cause you to restrict your activity are illegal. If for example, odor prohibits you from going outside or forces you to close your windows, it can be considered a violation of the Air Pollution Control Act.



B. PRETZ

## Investigating Odor Complaints

NJDEP enforces Subchapter 5 through the state's regional or county health departments. In response to an odor complaint, a health inspector is dispatched to the area of the complainants' home to verify the presence of the odor and asks the complainant to fill out a form, which states that the odor in question *"unusually interferes with the enjoyment of life and property."* The inspector then proceeds upwind of the area to identify the source of the smell and verify its severity. If a facility is suspected as the source, the inspector verifies that it is the sole source of the smell and enters the site to identify the specific area or process inside the facility where the odor is coming from. The inspector can then determine and notify the facility of whether there will be a violation. Violations can result in penalties from \$150 up to \$1,400. Continuing violations may be subject to penalties as high as \$15,000 per violation.

If your community has a chronic and persistent odor problem, residents are encouraged to organize their efforts to locate the source of smells and work with agency representatives to implement long term solutions to the problem. Municipalities can also look into local zoning ordinances that may ban certain emissions and odors from wafting onto neighboring property lines. Many towns have existing air pollution and odor ordinances that they can enforce locally through code enforcement.

Communities like South Camden organized petition drives and education campaigns to force state and local agencies to remediate the source of chronic odors at the local sewage treatment plant. They informed residents how to document their odor complaints and push for more rigorous mitigation measures from violating industries. In some cases, individuals and communities have filed public nuisance lawsuits to stop the illegal intrusion of foul odors into their communities.

There are limits to what municipalities can regulate in their zoning with respect to air pollution. The

state generally has jurisdiction over any permitted facilities. But in cases involving smaller, unregulated facilities, local officials can make a difference. In the case of fast food restaurants for example, which are not permitted under state and federal law for air emissions, some local municipalities have required these establishments to install odor capturing technologies to reduce emissions and odors to the surrounding area. Companies will generally not install this upgraded technology unless a town requests it in its planning process. Thus there are opportunities at the preliminary stages of planning to consider mitigating future odor problems for smaller, local sources of odors.


## What To Do If You Detect An Odor Problem

You can report an odor problem to the NJDEP's toll free, 24-hour hotline at 877-927-6337. NJDEP then notifies the area health department to send out an inspector. If a complaint is lodged after normal business hours, the inspector gets dispatched the following business day. In the case of emergencies or severe odor problems (category 5) residents can contact local emergency responders, including fire and police departments. When you call with an odor complaint you should try to give as much detailed information as possible to help inspectors evaluate the complaint. The following information may be useful to note.


1. Guess the source of the odor.
2. Describe the odor in as much detail as possible - "rotten egg smell," acrid chemical smell, rubber or fuel, diapers, sewage, etc. The more descriptive the better!
3. Is the odor constant - how long has the smell lingered - when did it start?
4. Which direction is the odor coming from? North, south, east or west?
5. Where and when can you be reached?

You can also contact your local county health department directly to speak with inspectors. NJDEP recommends that you first call NJDEP with odor complaints to ensure that your complaint is properly channeled to the right agency and recorded.

## FOR FURTHER INFORMATION

- Local air pollution and odor ordinances, ANJEC Resource Center, 973-539-7547 or (resourcecenter@anjec.org)
- NJDEP Odor Fact Sheet at [www.nj.gov/dep/enforcement/odor.pdf](http://www.nj.gov/dep/enforcement/odor.pdf)
- NJDEP Office of Compliance and Enforcement, for information on odor issues and the process, [www.nj.gov/dep/enforcement/contact-hotline.html](http://www.nj.gov/dep/enforcement/contact-hotline.html)
- Regional NJDEP Offices
  - Northern Regional Office (Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Warren) 973-656-4444
  - Central Regional Office (Mercer, Middlesex, Monmouth, Ocean and Union) 609-584-4100
  - Southern Regional Office (Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Salem) 856-614-3601 

## A Reminder and An Opportunity

It's annual report time for Environmental Commissions. The enabling state legislation sets the responsibility very clearly: "An environmental commission **shall** (*emphasis added*)...make an annual report to the governing body of the municipality " (NJSA 40:56A-4). Sending copies to local officials, reporters and newspapers and posting it to local web sites offer a great opportunity to publicize your commission's accomplishments and goals. Last but not least, please send a copy to ANJEC (email to [info@anjec.org](mailto:info@anjec.org), or send to ANJEC, PO Box 157, Mendham, NJ 07945). These reports provide success stories to share with other commissions and guide us to areas where we could better serve commissions with training, information and guidance. 



Reports on Environmental Commission Activities

By Pam McIntosh, ANJEC Resource Center Staff

## Manasquan Chair Honored with Environmental Excellence Award



MAYOR RICH DUNNIE

NJDEP Commissioner Bradley Campbell and Alice Hemphill, chair of Manasquan (Monmouth) Environmental Commission.

Alice Hemphill, chair of the Manasquan (Monmouth) Environmental Commission for two and a half decades, received this year's NJDEP Environmental Excellence Award for Environmental Stewardship. Her constant leadership and significant initiatives have addressed a variety of important environmental issues. In the early 1980's she started a pilot recycling program that resulted in the town adopting one of the first Monmouth County recycling ordinances. Her leadership to save Fisherman's Cove resulted in a new county park. And she put together environmental education programs, implemented two projects for water quality monitoring and stream restoration and organized regular litter cleanups. No stranger to dealing with opposition, Mrs. Hemphill led the commission's successful effort for

a dune stabilization project, over opposition from a beachfront homeowners association who complained that dune grass and fences would block their views. The purpose of the dune grass and fences is to trap windblown sand and restore dune heights to what they may have been before human interference. Manasquan won a lawsuit filed by the homeowners association and is starting an "Adopt a Dune" program.

Alice has put her heart and soul, along with innumerable hours, into protecting Manasquan's environment and richly deserved to be acknowledged for her efforts. Her approach to the commission projects is a key to her success. Each one must be of interest to the community, satisfy a real need, inspire colleagues to be passionate and willing to support it in face of opposition. Part of her stated philosophy is to have a project start small and prove its worth. Then the rest will take care of itself. 🌱

## Bordentown City Set to Purchase Property

The Bordentown City (Mercer) Environmental Commission has won a fight to preserve a three-acre property, one of the city's few good-sized undeveloped areas. Four years

ago, a proposal for eight houses on the site spurred Mike Hunninghake (Bordentown City Environmental Commission Chair, and former ANJEC Urban Project Director) to form an environmental commission and ultimately to get on the city's planning board. With negotiations and financial assistance from Dennis Davidson and the D&R Greenway the city has just signed a contract with the developer to purchase the property. The fight to preserve this property spurred a whole movement within the city to preserve open space within its one square mile. It will be part of the Blacks Creek Greenway. 🌱

## Long Beach Island Joint Environmental Commission

Five of the six municipalities of Long Beach Island in Ocean County – Barnegat Light, Beach Haven, Harvey Cedars, Ship Bottom, and Surf City have formed a joint environmental commission to address the barrier island's pressing environmental issues including stormwater management and beach erosion. This is the first joint commission with more than two municipalities participating. Unfortunately, Long Beach Township, which covers the largest land area of any of the municipalities, has yet to join. Formation of the joint commission will enable the municipalities to address regional issues, such as stormwater management and compliance with the new stormwater regulations in a cohesive manner. 🌱

## Township Distributes Free Soil-Testing Kits

When studies done by the Cranbury (Middlesex) Environmental Commission revealed that stormwater runoff resulted in pollutants, including phosphorus flushing into Brainerd Lake and Cranbury Brook, the commission began working to encourage residents to reduce their contribution to this contamination. To encourage residents to minimize and prevent overuse of fertilizer on their lawns and gardens, the commission is making free soil testing kits available so they can determine just what their lawn needs. With a prepaid Rutgers University soil sample kit, residents will receive analysis and advice from the Rutgers University Soil Testing Laboratory about the necessity of applying fertilizer or lime. 🌱

## Sharing Minutes with Adjacent Commissions

Long Hill Township (Morris) Environmental Commission regularly reviews the minutes from neighboring municipal commissions. This helps keep them informed of what their neighbors are doing and what issues they are addressing. Sounds like a good starting point for communicating across borders. 🌱



# Good Earthkeeping

Information commissions can duplicate to use in their communities

## Environmental 'Heads Up' for Winter



Before the cold weather arrives, there are many things a homeowner can do to help keep fuel bills under control and reduce a household's "pollution contribution" through the heating and shoveling season.

Insulation is essential for all external walls, floors and especially the attic, to keep heated air inside where it belongs. With insufficient insulation, you're paying to heat the great outdoors, and burning lots of unnecessary fuel. If the walls are cold, or there's a draft coming down the attic stairs, around window frames or electric outlets, those are sure signs of wasted heat. For more about insulation guidelines and options, read the US Department of Energy's *Insulation Fact Sheet* at: [www.ornl.gov/sci/roofs+walls/insulation/ins\\_08.html](http://www.ornl.gov/sci/roofs+walls/insulation/ins_08.html).

### Save Energy and Dollars

Single-pane windows are energy losers. New Energy Star double-pane windows have features including low-E coatings, gas fills, spacers, and high-resistance frames. Replacement windows are expensive, but can save energy, improve comfort levels, and add to a building's resale value.

If you have an aging furnace, there couldn't be a better time to think about installing a new, high-efficiency one. Energy Star-rated furnaces ([www.energystar.gov](http://www.energystar.gov)) are about 15 percent more efficient than standard models. That proportion of an annual

heating bill these days can be hundreds of dollars. As fuel prices increase, so does the payback on fuel-saving measures.

To reduce fuel consumption year-round, consider converting to a geothermal system. Geothermal heat pumps use the relatively constant temperature of the ground to help heat a building in winter and cool it in the summer. Compared to conventional systems, geothermal yields 30 to 70 percent savings in the heating mode, and 20 to 50 percent in the cooling mode. Nearly one million geothermal systems are in use currently in the US.

### Avoid Air Pollution

If you aren't in the market for a new system, make sure your existing furnace is running at its best by having regular maintenance/cleaning, and replacing air filters as directed. Prevent heat loss by sealing and insulating ductwork that passes through unheated or uncooled areas. A programmable thermostat will save fuel by automatically turning down the heat at night or during the hours a building is unoccupied. Zone

heating allows you to turn off the heat in rooms that aren't in use.

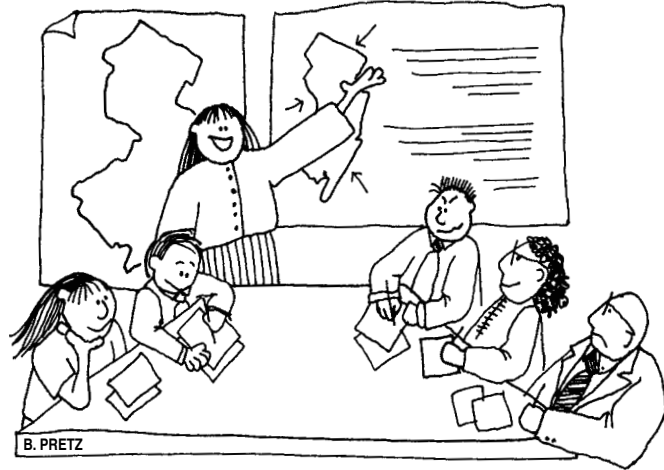
Wood stoves, charming though they may be, are significant air polluters. The good news is that catalytic combustors, similar to catalytic converters, are now available for wood stoves. Catalytic combustors decrease emissions and increase overall fuel efficiency by 25 to 30 percent. Consult the web site ([www.eere.energy.gov/consumerinfo/factsheets/bb5.html](http://www.eere.energy.gov/consumerinfo/factsheets/bb5.html)) or a woodstove dealer for more information on making a woodburning stove more environmentally friendly.

### Deal With Icy Areas

Another environmental consideration in winter is the use of ice-melting substances. Unfortunately, much of what we spread on roads and sidewalks to make them less slippery quickly finds its way into streams, lakes and groundwater. Whether it's salt, calcium chloride, cinders or sand, there's an environmental downside to each. Salt is corrosive and kills trees. Calcium chloride is easier on nearby vegetation than salt. However, it contains the same chloride component as salt, and chloride is harmful to many forms of marine life. Sand and cinders clog storm sewers and cover stream bottoms, which increases flooding problems and also impacts marine life.

One way to reduce the need for deicing chemicals is to fix any ice-creating drainage problems before winter begins. For example, patch the gutter that drips onto the front steps, or redirect downspouts away from walkways. If you can't achieve necessary safety levels by shoveling early and often, or having someone do it for you, use de-icing products only as directed. *More isn't better!* Whatever you do spread, make sure to sweep it up once the surface is clear.

In every season, we should be on the lookout for things we can do in our daily lives to conserve resources and cut pollution. Every bit helps! 🌱



# Thanks to ANJEC's Current Members

## 266 Environmental Commissions Four Open Space Committees and Two Planning Boards

### Environmental Commissions

#### Atlantic

Buena Vista  
Egg Harbor Twp  
Galloway  
Hamilton  
Hammonton  
Linwood  
Northfield City  
Weymouth

#### Bergen

Alpine  
Closter  
Cresskill  
Demarest  
Emerson  
Fair Lawn  
Glen Rock  
Harrington Park  
Haworth  
Leonia  
Mahwah  
New Milford  
Norwood  
Oakland  
Oradell  
Paramus

Ramsey  
Ridgefield  
Ridgefield Park  
Ridgewood  
Saddle River  
Teaneck  
Tenafly  
Wyckoff

#### Burlington

Bass River  
Bordentown City  
Bordentown Twp  
Burlington Twp  
Chesterfield  
Cinnaminson  
Edgewater Park  
Evesham  
Florence  
Hainesport  
Lumberton  
Medford  
Medford Lakes  
Moorestown  
Pemberton Twp  
Southampton  
Willingboro

#### Camden

Camden County  
Clementon  
Gibbsboro  
Haddon  
Haddonfield  
Lindenwold  
Pine Hill  
Voorhees  
Waterford

#### Cape May

Avalon  
Cape May  
Cape May Point  
West Cape May

#### Cumberland

Commercial  
Fairfield  
Maurice River  
Upper Deerfield  
Vineland

#### Essex

Caldwell  
Cedar Grove  
Essex County  
Fairfield  
Livingston

Maplewood  
Millburn  
Montclair  
Roseland  
Verona  
West Caldwell

#### Gloucester

Clayton  
Deptford  
Franklin  
Harrison  
Logan  
Mantua  
Monroe  
Pitman  
South Harrison  
Swedesboro  
Washington  
Woolwich

#### Hudson

Bayonne  
Jersey City  
Secaucus

#### Hunterdon

Alexandria  
Bethlehem  
Califon



Clinton Town  
Clinton Twp  
Delaware  
East Amwell  
Franklin  
High Bridge  
Holland  
Kingwood  
Lambertville  
Lebanon  
Lebanon Borough  
Raritan  
Readington  
Stockton  
Tewksbury  
Union

### **Mercer**

East Windsor  
Ewing  
Hamilton  
Hightstown  
Hopewell Twp  
Lawrence  
Princeton  
Washington  
West Windsor

### **Middlesex**

Cranbury  
East Brunswick  
Highland Park  
Metuchen  
Middlesex  
Monroe  
New Brunswick  
North Brunswick  
Old Bridge  
Piscataway  
Sayreville  
South Brunswick  
South Plainfield  
Woodbridge

### **Monmouth**

Aberdeen  
Allentown  
Atlantic Highlands  
Belmar  
Bradley Beach  
Brielle  
Colts Neck  
Fair Haven  
Freehold  
Hazlet  
Holmdel  
Howell

Lake Como  
Little Silver  
Manalapan  
Manasquan  
Marlboro  
Middletown  
Millstone Twp  
Monmouth County  
Ocean  
Oceanport  
Red Bank  
Roosevelt  
Rumson  
Shrewsbury Borough  
South Belmar  
Spring Lake Heights  
Tinton Falls  
Wall

### **Morris**

Boonton Twp  
Chatham Twp  
Chester Boro  
Chester Twp  
Denville  
East Hanover  
Florham Park  
Hanover  
Harding  
Jefferson  
Kinnelon  
Lake Hopatcong  
Long Hill  
Mendham  
Mendham Twp  
Mine Hill  
Montville  
Morris Twp  
Morristown  
Mount Olive  
Mountain Lakes  
Pequannock  
Randolph  
Rockaway  
Roxbury  
Washington

### **Ocean**

Barneget  
Berkeley  
Brick  
Dover Twp  
Lacey  
Lakewood  
Ocean County  
Ocean Twp  
Pine Beach

Plumsted  
Pt. Pleasant  
Pt. Pleasant Beach  
Stafford

### **Passaic**

Bloomington  
Clifton  
Hawthorne  
Pompton Lakes  
Ringwood  
Wayne  
West Milford  
Salem  
Alloway  
Penns Grove  
Pilesgrove-Woodstown  
Quinton  
Salem

### **Somerset**

Bedminster  
Bernards  
Bernardsville  
Branchburg  
Bridgewater  
Franklin  
Green Brook  
Hillsborough  
Montgomery  
Peapack-Gladstone  
Somerville  
Warren  
Watchung

### **Sussex**

Andover  
Byram  
Fredon  
Green  
Hopatcong  
Sparta  
Stanhope  
Stillwater  
Vernon

### **Union**

Berkeley Heights  
Clark  
Cranford  
Fanwood  
Linden  
Rahway  
Springfield  
Summit

### **Warren**

Allamuchy

Belvidere  
Blairstown  
Franklin  
Frelinghuysen  
Greenwich  
Hackettstown  
Hardwick  
Harmony  
Hope  
Independence  
Knowlton  
Liberty  
Mansfield  
Warren County  
Washington  
White

### **Open Space Committees**

Harding (MO)  
Monroe (GL)  
Ringwood (PA)  
Woolwich (GL)

### **Planning Board**

Hunterdon County  
Laurel Springs (CA)

## **What does ANJEC membership offer?**

- ✓ Access to our **Resource Center's** extensive publications, reports and ordinances, as well as our expertise and contacts via toll-free phone or email
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