Natural Resource Inventory

20 Points | Bronze Priority | Silver Priority

Updated February 2012

The Natural Resource Inventory (NRI), also known as an Environmental Resource Inventory (ERI), serves as an index of natural resources and is a compilation of text and visual information about the natural resource characteristics and environmental features of an area. It provides baseline documentation for measuring and evaluating resource protection issues. The NRI is an important tool for environmental commissions, planning boards, and zoning boards of adjustment. The NRI can be adopted as part of a Master Plan and serves as the first step to protecting and preserving the natural resources within a municipality. It can also be integrated into the plan as the basis of the conservation element, providing the documented basis for the development of resource protection ordinances, or it can be included in an Appendix to the Master Plan. NRIs are dynamic documents and should be revised and refined as additional information and updated data become available.

A municipality will earn 20 points toward Sustainable Jersey certification for a Natural Resource Inventory completed **from within 10 years of the June submission deadline** or for an older Inventory that has been reviewed and updated **from within 10 years of the June submission deadline**.

Who should lead and be involved with this action?

Environmental Commissions have been given the power to conduct the Natural Resource Inventory, but an NRI can be initiated by the municipal Planning Board and/or governing body. Integrating the NRI into the Master Plan and zoning will require coordination with the Planning and Zoning Boards. Ultimately the Mayor and council/committee, and the public, will have to become involved and approve any significant changes.

Timeframe

The timeframe to complete or update an NRI varies, depending on the local government

structure, support for the project, and funding available. Since it is a dynamic document, new material can and should be phased in over time.

The time it takes to complete a Natural Resource Inventory depends on how much information the municipality has already collected or if it already has a similar document available on which to build. Completing an NRI in-house may take longer than hiring a consultant, depending on the amount of time staff or volunteers can dedicate to completing the task. However, it is possible to complete an NRI within a year.

Once the municipality completes an NRI, it should institutionalize the process for updating it. Minimal staff time will be required for institutionalizing the process by which the NRI is regularly updated. The Environmental Commission, municipal staff, volunteers, or consultants can update the entire NRI at regular intervals or can update specific sections as new data becomes available. Completing the updates in house may take longer than hiring a consultant, depending on the amount of time staff or volunteers have to dedicate to this task. While the timing varies depending on the type and extent of updates, it is possible to update an existing NRI in less than a year.

Project Costs and Resource Needs

The resources needed to complete or update a NRI will vary, depending on how the Environmental Commission or other municipal governing body decides to complete the action. The Environmental Commission and Planning Board should be an integral part of the process, however spending money will require municipal governing body approval.

The NRI can be completed or updated in house or by hiring a consultant. Municipal structure and existing staff capacity will also impact the types of additional resources needed to conduct an NRI. For example, mapping is a required element of an NRI and geographic information systems (GIS) skills and software will be needed for an in-house job. Experienced municipal officials have indicated that an NRI typically costs a municipality between $8,000 and $15,000, if developed by a consultant or less if done in-house. Minimal staff time will also be required for institutionalizing the process by which the NRI is regularly updated.

Information for NRIs can be collected from a myriad of sources, including but not limited to: New Jersey Department of Environmental Protection (NJDEP), the Association of New Jersey Environmental Commissions (ANJEC), municipal engineers, planners, and tax assessors, county planning board staff, the County Soil Conservation District, the Federal Emergency Management Agency, and regional planning agencies like the Pinelands Commission and Highlands Council, among others. Most, if not all of the data, can be obtained from NJDEP's GIS (see http://www.nj.gov/dep/gis/) at no charge. See the "Resources" section for an extensive listing.

Why is it Important?

An NRI is an important land use tool as the natural resources identified in the NRI should be taken into account throughout the land use decision-making process. By integrating the NRI into the Master Plan and land use decision making process, the inventory will serve as the basis for where the community should seek to protect, integrate and/or conserve resources. Communities should begin their planning with the resources available and their ability to sustain a population while ensuring clean water and safe living conditions. An NRI should also serve as an educational tool for the public as it shows a community's citizens and visitorswhere their resources are and provides insights about why certain land use decisions are made.t also empowers citizens, environmental commissions, and planning boards to think about how they can further protect and plan for the sustainability of the municipality's resources.

An NRI should be used:

- As a factual basis for municipal land use planning;
- As a resource in the preparation of the land use element of the municipal Master Plan;
- As a comprehensive guide in the Site Plan review process;
- As a basic tool in determining zoning regulations, municipal ordinances, or other land use management techniques;
- As a basis for a land capability analysis and for determining the intensity and location of development;
- As an indicator of sensitive areas and areas suitable for certain kinds of development;
- As a tool to increase understanding of natural systems, and their limitations and opportunities for use;
- As a long-term planning tool to identify potential land use and natural resource problems;
- As an educational tool for residents to learn more about their community and its environment;
- As a way to save dollars by avoiding future problems and mitigation costs;
- As a tool for making decisions about the placement of infrastructure, roads, sewers, schools, etc.

What to do, and how to do it ("How to")

Below we have listed the requirements for earning points for this action.

The NRI must have been completed or re-examined/updated**from within 10 years of the**

June submission deadline.

The NRI should be incorporated into the Master Plan and meet the standards listed in the What to Do section, At a minimum, all NRIs submitted for Sustainable Jersey points shall include information and mapping (to the greatest extent possible) for the following: Geology; Geography/Topography; Climate; Air; Hydrology; Soils; Wetlands; Vegetation; Wildlife (including Threatened and Endangered Species habitat); Existing Land Use and Transportation maps; and address regional relationships.

The municipality must have a policy for regularly updating the NRI that includes who is responsible and how often this will occur.

We have provided extensive guidance and recommendations for implementing the action. You do not need to follow this guidance exactly as long as your final product meets the requirements.

I. PASS A RESOLUTION TO COMPLETE OR UPDATE A NATURAL RESOURCE INVENTORY (NRI)

Follow municipal procedures to pass a resolution that establishes the process by which the NRI will be completed or updated. This resolution will vary from municipality to municipality depending on the type of municipal government and whether funding is requested from the municipal budget. The resolution should allocate sufficient resources to this project to ensure its completion. It is also good practice to include and update the public as early as possible in this process.

II. DEVELOP A NATURAL RESOURCE INVENTORY

Guidance is derived from the Association of New Jersey Environmental Commissions (ANJEC's) Resource Paper on Environmental Resource Inventories (ERIs) (http://www.anjec.org/pdfs/EnvironmentalResource04.pdf):

1) Decide what to include – Look at other NRIs for ideas. There are many ways to organize an NRI; it should be unique to each municipality.Depending on a locality's objectives; it may be desirable to emphasize certain environmental resources.

**Requirement: At a minimum, all NRI's submitted for Sustainable Jersey points shall include information and mapping (to the greatest extent possible) for the following: Geology; Geography/Topography; Climate; Air; Hydrology; Soils; Wetlands; Vegetation; Wildlife (including Threatened and Endangered Species habitat); Existing Land Use and Transportation maps; and address regional relationships.

2) Decide who will do what – An NRI can be completed in-house by the Environmental Commission, municipal staff (planner, engineer, intern), or other members of municipal boards. Or a municipality can hire an outside consultant to draft the NRI. If an outside consultant is hired to do the NRI, a municipal contact person for the consultant should be identified.

3) Develop a work plan – develop a schedule for completing each element of the inventory and set target dates for completion.

4) Locate and contact sources of information. See the “Resources” section for detailed data sources.

5) Inform the public and adopt the NRI at a public meeting – municipalities may hold multiple public meetings during the process so that additional resources and information can be identified to enhance the process.

6) Once completed, integrate the NRI into municipal land use decision-making procedures by adopting it into the municipality’s Master Plan.

7) **Maintaining this inventory with current data is** essential for it to remain a useful resource for the municipality. Follow municipal procedures to institutionalize the process for updating it. Determine whether the updates will be accomplished by municipal staff, volunteers, or outside consultants. Decide whether the whole NRI will be updated at regular intervals or whether sections will be updated individually as new data becomes available. Decide how updates will be funded. Municipalities should, at the minimum, review the data sets used to create maps and gather information to see which have been updated every 10 years following the adoption of a NRI or re-examination.

III. RE-EXAMINE/UPDATE AN EXISTING NATURAL RESOURCE INVENTORY

1) If the current NRI is more than 10 years old, follow the municipal policy for updating it. Municipal procedures for updating the NRI should be institutionalized; if not, this should be done first. This includes determining whether the updates will be accomplished by municipal staff, volunteers, or outside consultants; deciding whether the whole NRI will be updated at regular intervals or whether sections will be updated individually as new data becomes available; and deciding how updates will be funded.

2) A hired consultant, municipal staff, Environmental Commission and/or volunteers should review the contents to determine which data sets are out of date and what new information may now be available to add to the inventory.

3) Use data sources in the Resources section and in ANJEC’s Resource Paper on Environmental Resource Inventories (ERIs) (http://www.anjec.org/pdfs/EnvironmentalResource04.pdf) to update the data sets. **Municipalities should provide documentation or a summary of what was updated or reviewed in the NRI**.

4) Continue the use of the NRI in municipal land-use decision-making procedures.

What to submit to get credits/points

Below we have listed the requirements for earning points for this action.

The NRI must have been completed or re-examined/updated **from within 10 years of the June submission deadline**.

The NRI should be incorporated into the Master Plan and meet the standards listed in the "What to Do" section. At a minimum, all NRIs submitted for Sustainable Jersey points shall include information and mapping (to the greatest extent possible) for the following: Geology; Geography/Topography; Climate; Air; Hydrology; Soils; Wetlands; Vegetation; Wildlife (including Threatened and Endangered Species habitat); Existing Land Use and Transportation maps; and address regional relationships.

The municipality should establish a policy for regularly updating the NRI that includes who is responsible and how often this will occur.

Submit the following documentation to verify the action was completed to the above standards. (Log in to the password protected webpage where you submit your online application for certification to write in the text box and upload documents).

In the text box, please provide a short narrative (300 word max) to summarize what was accomplished and the general steps taken to accomplish it.

- Upload: NRI with documentation to show that it was completed or updated **from within 10 years of the June submission deadline**. For an updated NRI, please indicate what has been reviewed and/or updated.
- Upload: Documentation that the municipality has incorporated the NRI into its Master Plan.
- Upload: Statement or documentation that the municipality has a policy for regularly updating the NRI.

IMPORTANT NOTES: You can upload up to six separate documents for each action. Please excerpt relevant information from large documents. Please remember that your submissions will be viewable by the public as part of your certified report.

Spotlight: What NJ towns are doing

KINGWOOD TOWNSHIP

A notable achievement of the Kingwood Township Environmental Commission was the creation of the Environmental Resource Inventory (ERI) in 2004 with an update in 2009. The ERI is a 169-page document rich in facts, pictures, tables, maps, references and general descriptive information that will aid in ecologically-based planning for the Township. It shows and explains the natural characteristics and environmental features of the municipality, including surface and ground water, soils, geology, steep slopes, wetlands, open space,

human impacts and regulatory framework. Current Chair of the Commission, Deborah Kratzer, of Kratzer Environmental Services, prepared the update as a volunteer. It is conveniently available on a CD, with the maps in an easily accessible, interactive format that allows for use as a planning and educational tool for the community. It is an outstanding contribution to help Kingwood in conservation efforts

and can serve as a model for other communities in New Jersey.

http://www.kingwoodtownship.com/ktdocuments/ERI_Kingwood_2009_January.pdf

WOODBRIDGE

In 2008, the Woodbridge Township Environmental Commission completed its ERI. The decision to produce an ERI came about mainly out of frustration. As the Commission received requests for "Letters of Interpretation" and opinions on proposed development projects, it lacked a single reference to answer questions that arose. In addition, the town's recently completed Open Space Inventory confirmed that little open space remained in Woodbridge, so what was left needed protection. The current ERI gives the Commission a better understanding of local resources and sets the stage for a more meaningful planning process.

After receiving a grant from ANJEC in 2006, Commission members were elated, but at the same time knew that they had a lot of work ahead. Their challenges included matters such as scheduling meetings around everyone's busy schedules, acquiring information from a multitude of sources, and editing, editing, and more editing. ANJEC staff offered both guidance and encouragement along the way. Approximately two years after the kick-off meeting, the ERI was presented to and approved by the Town Council. Since that time it has been adopted as a part of the Master Plan, which will allow for its use in review of all future development plans.

http://www.twp.woodbridge.nj.us/LinkClick.aspx?fileticket=oE3cf6DWcrg%3d&tabid=751&mid=2647

OTHER EXAMPLES OF NATURAL RESOURCE INVENTORIES

Bedminster Township Natural Resource Inventory

http://www.bedminster.us/index.asp?Type=B_BASIC&SEC=%7BA78C838C-97B8-4305-9AC9-AB5FFD3ABBEF%7D

Borough of Belmar Environmental Resource Inventory

http://www.belmar.com/useruploads/files/Belmar_ERI.pdf

Elk Township Environmental Resource Inventory

http://www.dvrpc.org/reports/08010.pdf

Franklin Township (Somerset) Environmental Resource Inventory

http://www.franklintwpnj.org/2907-ERI-Final-07-08-08.pdf

Resources

GENERAL RESOURCES

The Association of New Jersey Environmental Commissions (ANJEC)

offers technical, financial, and resource support to municipal Environmental Commissions and other local officials that seek to develop an NRI. ANJEC also has digital copies of many sample NRIs available on CDs. See http://www.anjec.org/ERIs.htm for links to NRIs from a sampling of New Jersey municipalities.

Delaware Valley Regional Planning Commission:

See Open Space & Natural Resources under Publications Directory for pdf files of NRIs.

http://www.dvrpc.org/Products/

Garden State Greenways:

http://www.gardenstategreenways.org

Highlands Council:

http://www.highlands.state.nj.us/njhighlands/actmaps/maps/gis_data.html

NJ Department of Environmental Protection (DEP) Office of Planning and Sustainable Communities:

http://nj.gov/dep/opsc

Pinelands Commission:

http://www.state.nj.us/pinelands/landuse/gis/datas/

INFORMATION RESOURCES:

NJDEP has developed an extensive GIS database of basic geographic information for New Jersey. Municipalities can obtain GIS data pertaining to their locality. Additional assistance or information may be obtained from various offices within the NJDEP depending on the topic. http://www.state.nj.us/dep/gis/.

The following is an updated list of contacts for topics that are generally included in a Natural Resource Inventory. Additional sources and/or topics can be included in the NRI, but this list serves as a starting point from which a municipality can begin to gather the information needed

to conduct an NRI or to update an existing NRI.

A. Geology

1) Bedrock type and characteristics (structure, type, age)

2) Depth to bedrock

3) Unconsolidated materials (loose rocks, sands) and thickness

4) Mineral resources (sand and gravel)

5) Geologic cross sections

Data Sources:

http://www.state.nj.us/dep/njgs/

For information on the status of geological mapping in a specific area, call the NJ Geological Survey (NJGS) at (609-292-1185) and ask to speak to a staff geologist. *The Geology and Geography of New Jersey*by Kemble Widmer (1964) should be available at county or college libraries.

B. Geography/Topography

1) Slope, relief, elevation

2) NJ physiographic region and subregions

Data Sources:

http://www.state.nj.us/dep/njgs/pricelst/pubsinfo.htm

For U.S. Geological Survey (USGS) 7.5 minute quadrangle maps, contact NJ Geological Survey, Maps and Publications Sales Office, Box 417, Trenton, NJ 08625 (609-777-1038). Call to find out which maps will be needed need for the individual municipality.

C. Climate

1) Prevailing air currents

2) Maximum/minimum fluctuations in temperature

3) Seasonal precipitation

4) Topographic protection (wind)

5) Fog-bound areas

6) Air quality: For rural areas where air pollution is not a big issue, information about stationary or vehicular sources of air pollution can be included in this section. For urban areas, air quality issues may require a separate section in the Natural Resource Inventory. (see section *D. Air*, below).

Data Sources:

For climatological data, contact a local or county library or airport weather services. The NOAA National Climatic Data Center (NCDC) in Ashville, NC (828-271-4800) has data that can be ordered directly through the NCDC website at: www.ncdc.noaa.gov. The Office of the NJ State Climatologist is located at Rutgers University, School of Environmental and Biological Sciences, http://climate.rutgers.edu/stateclim/.

D. Air

1) Air quality: national “Clean Air” standards

2) State, county, local air monitoring sites and statistics

3) Static sources of air pollution

4) Major vehicular air pollution areas

Data Sources:

For air quality information and major licensed air emission sources, contact NJDEP’s Bureau of Air Quality Planning (http://www.state.nj.us/dep/baqp/index.html) or 609-292-6722, or Bureau of Air Monitoring (http://www.njaqinow.net/Default.aspx) by sending an e-mail to bamweb@dep.state.nj.us or call at 609-292-0138.

E. Hydrology

1) Groundwater

a. Aquifer outcrop; location, extent, thickness

b. Direction and rate of groundwater movement

c. Groundwater recharge and discharge areas (possibly outside municipality)

d. Depth to groundwater

e. Well locations and gallons per minute

f. Quality of groundwater, pollutant sources

2) Surface Water

a. Types, location, names, direction of flow

b. Watershed and subwatersheds

c. Designation/classification of surface water bodies and tributaries (trout production trout maintenance, etc.)

d. Low flow of streams — mean 7 day/10 year recurrence interval

e. Floodplains, wetlands, marshes, bogs

f. Quality, limnology, dissolved and suspended solids

g. Liquid waste and disposal systems

h. Intakes, outfalls, dams

Data Sources:

1) For local surface and groundwater data, use USGS maps from NJGS (see Section B, *Topography*, for NJGS address and phone). Other sources are the municipal engineer, county Planning Board, and local watershed associations. For information on flood-prone areas, contact the Federal Emergency Management Agency (FEMA) or by calling (800-358-9616).

2) For information on facilities having a permit to discharge****into local surface or ground water, contact the NJDEP's (Bureau of Permit Management) at 609-984-4428.

3) For information on the location of wells, see local and county Health Departments.

4) For information on wellhead protection, contact NJDEP's Division of Watershed Management at 609-984-0058. To determine if aquifer recharge areas have been mapped, call NJGS Bureau of Water Resources at 609-984-6587.

5) Water supply companies and municipal water departments are also sources of information.

6) For surface water classifications, see *Surface Water Quality Standards*, *N.J.A.C.*7:9-4.1 (http://www.nj.gov/dep/rules/nj_env_law.html) with additional information available from the DEP's Division of Watershed Management or by phone at (609) 984-0058.

F. Soils

1) Soil types, texture, stoniness, depth, hydrological types

2) Shrink-swell potential

3) Frost heave potential

4) Erodibility, potential soil loss in cubic feet per year

5) Percolation rates

6) Depth to groundwater

7) Surface runoff, permeability, perviousness

8) Fertility (vegetative capability)

9) pH

10) Nutrient absorption

Data Sources:

County soil surveys and soil erosion and sedimentation control information are available from the county Soil Conservation District or county Planning Board.

G. Wetlands

1) Identifying factors

a. Wetlands vegetation (hydrophytes)

b. Wetlands soils (hydric soils)

c. Hydrology (presence of water sufficient to support wetlands vegetation)

2) Types of wetlands

a. Marine (open ocean and associated coastline)

b. Estuarine (salt and brackish marshes, coastal rivers and bays)

c. Riverine (freshwater rivers and streams)

d. Palustrine (freshwater marshes, bogs or swamps)

e. Lacustrine (freshwater lakes, reservoirs or large ponds)

3) Wetlands classifications

a. Exceptional resource value wetlands (discharge into trout production waters or their tributaries, or provide habitat for threatened or endangered species)

b. Ordinary resource value wetlands (isolated wetlands or those more than 50% surrounded by development, less than 5,000 sq. ft., or drainage ditches, swales and detention facilities)

c. Intermediate resource value wetlands (neither exceptional nor ordinary)

Data Sources:

Contact county Planning Boards and municipal clerks for wetland permit reports and watershed associations for wetland species information. Cross-check information from the *Hydrology* and *Wildlife* sections, above, to link wetlands data to the protection of surface waters and species habitat.

H. Vegetation

1) Types of vegetation

2) Fire hazard, history of wildfire

3) Pollution affected types

4) Historic, recreational value

5) Economic value

6) Known/possible habitat for endangered/ threatened plant species

7) Forest cover

8) Agricultural area

Data Sources:

The New Jersey Natural Heritage Programidentifies New Jersey's most significant natural areas through a comprehensive inventory of rare plant and animal species and representative ecological communities. From the inventory, the Natural Heritage Database compiles information on the distribution, biology, status, and preservation needs of these species and communities. Established in 1984 through a cooperative agreement between The Nature Conservancy, a private conservation organization, and the NJ Department of Environmental Protection, full administration of the program was assumed by the NJDEP in 1986. http://www.nj.gov/dep/parksandforests/natural/heritage/index.html

The New Jersey Natural Heritage Program is part of an international network including State Natural Heritage Programs and Conservation Data Centers, all building on the same data collection methodology. The Database is updated continuously and is used to set state, national, and global priorities for the preservation of natural diversity. For additional information, fill out a data request form available online or call (609) 984-1339.

For information on agricultural areas, contact the county Agricultural Development Board. See "Wetlands" section, above, for information on wetlands vegetation.

I. Wildlife

1) Beneficial species habitats

2) Rare, threatened and endangered species habitats

3) Nuisance and hazardous species habitats

4) Abundance and distribution within habitat and season

5) Economically valuable species

Data Sources:

For information on significant wildlife habitats, contact the NJDEP's Natural Heritage Program, see "Vegetation" section, data sources. For additional information on animal species and locations, contact the NJDEP's Endangered & Nongame Species Program at 609-292-9400.

New Jersey's Landscape Project (revised and updated May, 2008, is a pro-active, ecosystem-level approach for the long-term protection of imperiled species and their important habitats in New Jersey. The NJ Division of Fish and Wildlife's Endangered and Nongame Species Program (ENSP) began the project in 1994. Its goal: to protect New Jersey's biological diversity by maintaining and enhancing imperiled wildlife populations within healthy, functioning ecosystems. http://www.state.nj.us/dep/fgw/ensp/landscape/index.htm

For information on birds and bird habitat, contact the NJ Audubon Society at (908) 204-8998.

J. Land Use

1) Existing

a. Open space, public and private (including easements). This section should also include an inventory of *permanently preserved* farmland and open space lands. Permanently preserved lands include those lands acquired with state Garden State Preservation Trust funding, municipal & county dedicated land preservation trusts, or any funding source with the requirement that the land remain in perpetuity).

b. Roads, railroads, pipelines, reservoirs

c. Recreation areas, public and private

d. Agricultural areas

e. Industrial areas

f. Waste treatment and disposal facilities (sewage and solid)

2) Proposed

a. Zoning

b. Master plan

Data sources:

Local tax and zoning maps are available from municipal clerks, and from municipal and county master plans, municipal engineers and planners.

K. Historic And Cultural Factors

1) Historic sites, districts, areas

2) Historic roads, bridges and trees

3) Existing or possible archaeological sites

4) Scenic qualities, viewsheds

Data sources:

Local and county historic commissions and historical societies, municipal and county master plans and the NJDEP's Historic Preservation Office can provide this data. http://www.state.nj.us/dep/hpo/ or (609) 984-0176.

L. Existing And Planned Infrastructure

1) Transportation

2) Water

3) Sewage

4) Waste treatment, disposal, recycling facilities

5) Energy utilities

6) Educational facilities

Data sources:

Municipal and county Health and Planning departments, municipal engineers, municipal and county Master Plans, the local Board of Education, utility companies and authorities, transit organizations.

M. Noise Factors

1) Noise sensitive areas in community

2) Significant sources of noise

3) Day/night permitted sound levels

4) Decibel equivalents of typical sounds

Data sources:

Local Board of Health, county Board of Health.

N. Regional Relationships

1) State Development and Redevelopment Plan

2) County Master Plan

3) Regional plans (e.g. Pinelands, Hackensack Meadowlands, D&R Canal)

4) Problem areas (e.g. flooding, air pollution)

5) Watersheds (see E. *Hydrology* above)

Data sources:

For information on the State Development & Redevelopment Plan, contact the NJ Office of Planning Advocacy (http://www.nj.gov/state/planning/) at (609) 292-7156. For the county Master Plan, contact the county Planning Board. For individual special protection areas: Pinelands Commission or (609) 894-7300, New Jersey Meadowlands Commission or (201) 460-1700, Delaware & Raritan Canal Commission or (609) 924-5705. For information on Watershed Management Plans, contact the NJDEP's Division of Watershed Management or by phone at (609) 984-0058.

O. Contaminated Sites

1) Superfund or other contaminated sites

2) ISRA sites (Industrial Site Recovery Act)

3) Incinerators — resource recovery facilities

4) Hazardous substances storage and use

5) Underground storage tanks (USTs)

Data sources:

For known contaminated sites in a municipality, call NJDEP's (Site Remediation Program) at (609) 292-1250). For ISRA sites, visit the NJDEP's website for more information, http://www.nj.gov/dep/srp/isra/.

For existing and proposed resource recovery facilities (incinerators), call NJDEP's Division of Solid & Hazardous Waste at (609) 633-1418.

For a listing of certain hazardous substances used or stored in a town, call the NJDEP's Office of Pollution Prevention and Right to Know (609) 777-0518. Local Emergency Planning Committees in every county and municipality may also be helpful.

P. Critical Environmental Areas

A separate critical environmental areas map, showing environmental features that merit special consideration or protection, can be compiled to help with your town's resource planning. Features that can be displayed on the map include:

- Wetlands (See G.)
- Steep slopes (See B.)
- Floodplains, floodways (See E.)
- Aquifer recharge areas (See E.)
- Prime agricultural soil areas (See F and H)
- Soil limitation areas (See F and J.)
- Endangered/threatened species habitat (See H. and I.)
- Trout associated waters (See E.)
- Water supply (See C.)

NRI updates

Townships with NRIs older than a few years should consider an update for several reasons besides gathering points toward Sustainable Jersey certification. In recent years, NJDEP has created or updated about 50 GIS data layers, although not all are applicable to every municipality (see http://www.state.nj.us/dep/gis/)

Some examples include:

- Surface Water Quality Standards,
- Surface and ground water discharges,

- The Landscape Project,
- Natural Heritage Priority Sites,
- Groundwater contaminated areas,
- Water Quality Management Planning Areas (WQMPA),
- Sewer Service Areas and
- Historic districts, properties, and archeological grids.

Open space

High resolution aerial photography taken in 2007-2008 became available in 2009. And State-owned open space GIS data were updated in December 2008. However, this layer does not include county, municipal or privately preserved lands. Some of that information can be obtained through GIS maps from New Jersey Conservation Foundation's Garden State Greenways, the Highlands Council and the State's Green Acres program, but municipalities should also maintain a simple spreadsheet or database containing block and lot, ownership, etc. about preserved properties. This information can then be "joined" to the GIS parcels data for mapping.

Soils

Soils data maintained by the National Resources Conservation Service is updated with some frequency due to changes in terminology, nomenclature and interpretations rather than changes in the soils themselves (Updates vary by county; see http://soildatamart.nrcs.usda.gov/