CHAPTER: 6

Putting the Inventory to work

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A natural resources inventory provides a deeper understanding of community resources and a foundation for thinking about the future. Using the results of the NRI requires evaluating the community's long-term goals and how they relate to its resources, and enables planners to make decisions that reflect community needs and values. This view on the future can help preserve community character and quality of life, and ensure that residents continue to benefit from ecosystem services like clean water.

After completion of the NRI, the work group can devise a strategy for regular review of inventory data, incorporating updated information and revising inventory maps as appropriate, adding new goals as future community needs become apparent, and ensuring that the inventory becomes an integral part of community planning. For an NRI to be effective over the long term, the results should continually be in active use.

As major inventory goals are accomplished, planning boards, conservation advisory councils (CACs), and other town officials should consider a range of activities designed to protect sensitive natural resources from incompatible uses. Where natural resources extend beyond town boundaries, opportunities exist for intermunicipal cooperation. Open space planning (discussed later in this chapter) can be an effective way to implement the inventory results. Appendix G contains a model law for adoption of the municipal NRI.

Below are several suggestions for making good use of the NRI results.

Make the Inventory Available

The outcomes of the NRI work group's efforts will quickly be forgotten if there aren't some permanent reminders around for town officials and the public to use. Consider the various groups and individuals that might use the NRI maps and have additional copies made for them. These might include the planning board, CAC, consulting planner or engineer, and/or other organizations such as trusts and county planning departments. The likelihood of these decision-makers using the NRI may be higher if the work group presents the results of the NRI and suggestions on how it can be incorporated into municipal planning at a pre-scheduled board meeting or a special session.

Display a selection of the inventory maps in a public area, such as the town hall (alongside tax maps if these are displayed) and library. GIS-generated maps can be easily reduced or enlarged for all or part of the study area to reflect the needs of specific boards or projects. If the municipality has a website, a digital copy of the NRI can be posted for viewing or download. Community and other related groups can be asked to share the NRI website link with their members or on their own web pages.

Public Education

An NRI provides a valuable opportunity to educate residents about the importance of the community's resources. The work group can develop an outreach plan to determine the best strategies for sharing the inventory results with the public. Early on, familiarity with the project can be fostered by publicizing the work group's meetings, through articles in local newspapers, updates on the community's website, and by engaging stakeholders at public meetings. Once the inventory is complete, the primary goal of outreach and educational programs should be to provide factual and objective information about the NRI project. Community events can be used as opportunities to display the inventory results and have NRI work group participants on hand to answer questions and provide information. Municipal meetings are a good time to present a display of inventory maps. A brochure or fact sheet describing the major findings of the inventory can help to get information out. Work with local landowners to encourage stewardship of the land, and to show them how they can contribute to the environmental health of the community.

The more informed the community is about the NRI, the more likely the inventory will be used on a regular basis, especially by local boards during municipal decision-making. Once key priorities for using the inventory have been decided, sponsor public education programs

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focused on those priorities. For example, if land protection is a priority, sponsor a land protection workshop for local landowners; if the objective is to evaluate water resources, focus on issues centered around that topic such as volunteer stream monitoring. Educational programs are an effective method for clarifying key natural resource issues and establishing the groundwork for their protection.

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Comprehensive Planning

The NRI provides an effective tool for developing or updating the natural resources section of a community's comprehensive plan. In New York, municipal land-use regulations must be adopted in accordance with a comprehensive plan (Town Law, Section 272-a, Village Law, Section 7-722 or General City Law, Section 28-a). Therefore, the comprehensive plan acts as a "blueprint" for local zoning and other land-use regulations. A successful comprehensive plan not only recognizes the importance of natural resources like streams, aquifers, wetlands, and forests, but it also presents recommendations and implementation strategies to protect those resources. These strategies can serve as the basis for future land-use regulations, and as a basis for acquisition and other conservation implementation strategies.

A successful comprehensive plan not only recognizes the importance of natural resources like streams, aquifers, wetlands, and forests, but it also presents recommendations and implementation strategies to protect those resources.

If an NRI is developed after a recent comprehensive plan update, it can be officially incorporated by a simple amendment to the comprehensive plan. The NRI can also serve the purpose of building on the natural resources information included in the comprehensive plan or implementing recommendations in the plan that pertain to natural resources such as the designation of Critical Environmental Areas (see below). If the comprehensive plan is outdated, the NRI can provide the basis for revising and updating the natural resources section of the plan. Whichever may be the case, an NRI can become an important decision-making tool to ensure that a community's natural resources are sustained into the future.

Watershed Plans

Some communities develop watershed plans to identify, prioritize, and manage their water resources. The information contained in an NRI can contribute to a watershed assessment or characterization report, which becomes part of a watershed plan. The *watershed characterization report* provides context for a watershed planning process and can be used to educate partners and stakeholders on watershed conditions, generate local support, and identify specific actions needed to improve watershed management. The characterization includes information similar to an NRI, including geographic setting and special features, review of existing data, and maps that show features such as subwatershed boundaries, municipal jurisdictions, water features, parcels, roads, land use, land cover, open space, zoning, and SPDES permit locations. Depending on the size of the watershed being assessed, an NRI's study area may contain all or part of the watershed; the watershed planning team would need to evaluate what data need to be added, updated, or analyzed to meet its goals and objectives. When watersheds cross municipal boundaries, check to see if adjacent communities have completed NRIs. *Watershed Plans Guidebook: Protecting and Restoring Water Quality* provides step-by-step guidance on the watershed planning process.

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Critical Environmental Areas

Municipalities may designate specific geographic areas within their boundaries as "Critical Environmental Areas" (CEAs) under the State Environmental Quality Review Act (SEQRA). According to the DEC, an area can be designated as a CEA if it has an exceptional or unique character with respect to one or more of the following:

- a benefit or threat to human health;
- an exceptional or unique natural setting (e.g., fish and wildlife habitat, forest and vegetation, open space, and areas of important aesthetic or scenic quality);
- exceptional or unique agricultural, social, cultural, historic, archaeological, recreational, or educational values; or
- an inherent ecological, geological, or hydrological sensitivity to change that may be adversely affected by any physical disturbance.

A CEA designation can alert project sponsors to the community's concern for the resources contained within the CEA and it raises overall awareness of special environmental features in a community. This can include the decision-making processes of other units of government, such as highway departments or the State Department of Transportation. The information and maps in the NRI can provide the basis for identifying CEAs in a community.

Following designation, potential impacts to the characteristics of the CEA become relevant areas of concern that warrant specific, articulated consideration in determining the significance of any Type I or Unlisted actions pursuant to Section 617.7 of SEQRA. While the CEA does create a heightened sense of awareness of the importance of an area during SEQRA reviews, its designation does not ensure long-term protection or give the municipality any permitting authority, zoning restrictions, or other jurisdictions that did not already exist before designation of the CEA.

Open Space Inventories and Plans

NYS General Municipal Law Section 239-y defines *open space* as any area that is characterized by natural scenic beauty or whose condition or quality is such that it will enhance the present or potential value of surrounding developed lands, or would support desirable patterns of development or planning objectives in the community, or enhance the conservation of natural or scenic resources. Open space serves many purposes, whether publicly or privately owned, and can include parks, recreational sites, scenery, trails, forests and woodlands, wetland and stream corridors, rare or important habitats, farms, and historic properties.

Conservation Advisory Councils and Open Space Inventories

NYS General Municipal Law Section 239-y authorizes conservation advisory councils to "conduct research in the land area of the municipality for which it was created;" "…keep an inventory…of all open areas within the municipality with the plan of obtaining information pertinent to proper utilization of such open lands including lands owned by the state, any other municipality within the state or by the particular municipality itself;" and "keep an inventory and map of all open marshlands, swamps and all other wetlands in a like manner." The CAC "…may recommend to the governing body of the municipality a program for ecologically suitable utilization of such areas."

NYS General Municipal Law Section 239-y authorizes conservation advisory councils to complete an open space inventory prioritizing open areas in a municipality for preservation based on natural, scenic, and cultural values. A natural resources inventory provides the basis for prioritization in the open space inventory process. Upon adoption, the open space inventory becomes the munic-

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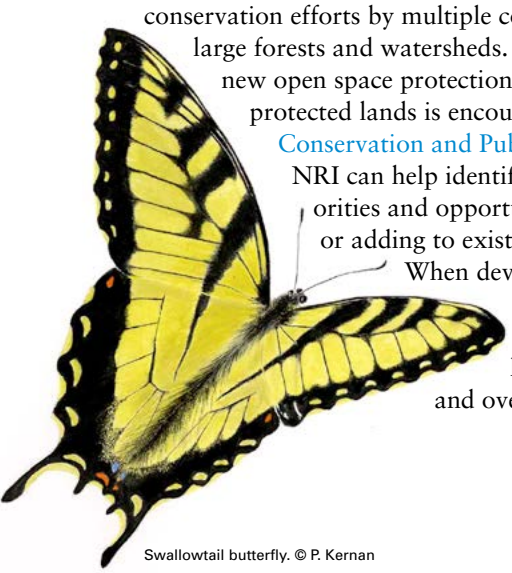
ipality's official open space index, and the council may advance to conservation board status. A conservation board remains advisory in nature; however, it becomes more formally involved in the environmental review process for any proposed actions on properties listed in the index.

An open space inventory is often developed within the context of a broader open space plan, which categorizes open space resources, identifies the community's priorities, outlines the best options for use and protection of priority lands, and lays out a plan for action. The NRI, combined with analysis and input from community members, provides a foundation for setting open space priorities. Sites that have overlapping resources and meet multiple objectives, such as aquifer recharge, scenic beauty, and wetland habitat, may rise to the top as a community's highest priorities.

The value of open spaces is greater when they are considered in the context of the overall environment, rather than viewed in isolation. For example, the open space plan provides opportunity to devise intermunicipal strategies for prominent features that require coordinated conservation efforts by multiple communities, such as large forests and watersheds. In addition, relating new open space protection priorities to existing protected lands is encouraged. A review of the Conservation and Public Lands map in the NRI can help identify land protection priorities and opportunities for connecting or adding to existing protected parcels. When devising natural resource protection strategies, communities should keep the "big picture" and overall context in mind.



Swallowtail butterfly. © P. Kernan

Open Space Plan Implementation

An important step in implementing an open space plan is to establish an adequate and stable land protection fund. Grants are available from various agencies, including the DEC and Hudson River Valley Greenway, and municipalities can use their local taxing and bonding authority for the matching funds often required by public and private foundations (Strong 2008). In New York, over 80% of local conservation finance measures successfully passed between 1998 and 2010. See New York State's *Local Open Space Planning Guide* for more information on sources and methods of financing open space planning and implementation. A combination of options may be the best approach for establishing a conservation fund that adequately addresses a given community's needs.

Voluntary land protection is another approach to implementing the open space plan. Throughout the process of public discussion and evaluation of natural resources, the work group can emphasize the opportunities that exist for voluntary land protection. An education and outreach component is recommended for any land protection program. Developing a working knowledge of land protection techniques will help the work group with its outreach to landowners. Local land trusts can be a valuable partner in this effort, as they have expertise in the various options for permanent land protection, including acquisition and conservation easements, as well as relationships with landowners. Education and outreach approaches could include public meetings to teach the concepts of land stewardship for natural resources protection, and to discuss what is involved in land protection; publications that encourage awareness of the value of the natural resource; and public workshops, such as the role of land protection in estate planning. Start a small reference library of land conservation publications that could be available through the public library or the town hall. Appendix A provides a listing of local land trusts in the Hudson Valley that may be available to assist with outreach efforts or to partner on open space conservation efforts.

Zoning and Subdivision Regulations

Whereas an open space plan focuses on protection of important natural resources on primarily undeveloped land, land-use regulations give the planning board, landowners, and developers the ability to do the best possible job of protecting important natural resources on developed properties. Land-use regulations are widely used in New York communities. About 70% of the state's municipalities have adopted comprehensive plans and about 78% have zoning regulations. Similarly, about 73% have adopted subdivision regulations and 70% have site plan regulations (New York State Legislative Commission on Rural Resources 2008). Municipal zoning and subdivision regulations often don't adequately protect natural

resources and there is frequently a disconnect between a community's plan and its land-use controls. For example, a comprehensive plan might have an overall goal to protect natural resources and open space but the zoning regulations assign every parcel of land to development of buildings and structures. Or a community may plan for large-lot subdivision as a method for protecting natural resources and controlling growth, but in many cases this strategy works against natural resource protection by spreading development over a much larger area than necessary and leaving important resources without any real protection. This can result in the loss of important farm and forest lands as they are converted into large house lots, often with expansive lawns and long driveways.

Before it is possible to establish more effective land-use regulations in a community, it may be necessary to make residents and public officials aware of the long-term impacts of existing land-use regulations. Build-out scenarios can be an effective tool for this purpose. These combine tax maps, resource inventory overlays, and existing land-use regulations to create maps that depict what the community's land use pattern might be if all possible properties were developed to their maximum, as allowed by local regulations. Guidance on effective land-use regulations and information on model ordinances (e.g., aquifer protection, watercourse protection, etc.) is available from a number of agencies and organizations, including county planning departments, the New York State Department of State, the New York Planning Federation, and the American Planning Association. Examples of how other NY communities have effectively protected their natural resources are presented in *Conserving Natural Areas and Wildlife in Your Community: Smart Growth Strategies for Protecting the Biological Diversity of New York's Hudson River Valley* (Strong 2008), in the Pace University Land Use Law Center's *Gaining Ground Information Database,* and on a number of planning organization websites (see Appendices A and B). Many planning consultants are willing to talk about how they have helped other communities craft new land-use controls, and often do so without charge.

Build-out scenarios combine tax maps, resource inventory overlays, and existing land-use regulations to create maps that depict what the community's land use pattern might be if all possible properties were developed to their maximum, as allowed by local regulations.

Local laws, ordinances, and regulations should be reviewed to determine their adequacy for natural resource protection. Guidance for conducting in-depth code and ordinance review is available from a number of organizations, including the DEC Hudson River Estuary Program (see Appendix B). Municipalities can update local land use laws or ordinances to more effectively protect small wetlands, watercourses, floodplains, or forests, for example, or develop overlay zoning to protect certain areas like habitat, aquifers, and scenic or historic resources in the municipality. An NRI can provide much of the information needed to determine the location of such districts.

Using the inventory data and GIS maps, proposed land-use or zoning changes can be evaluated to determine potential effects on natural resources. The tax map overlay can also be consulted to determine how and in what way landowners might be affected. "What if" scenarios can be run to summarize the total area impacted, and display the locations of impact. For example, a "what if" scenario of new buffer width requirements around wetlands would allow a municipality to see which additional lands would be impacted by a range of increasing widths.

A community's NRI can be referenced in municipal zoning and subdivision regulations, and use of the NRI for site plan or subdivision review can be required. See Appendix G for a model local law for adopting a municipal NRI.

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Prioritizing Resources at the Site Level

While all natural and cultural resources have some level of importance, the review of proposed development should be undertaken considering the relative importance of resources on a site. This can typically be done so that natural resources are ranked in terms of their highest to least suitability for protection. Resource prioritization should be carried out in consultation with the planning board and conservation advisory council or conservation board (if there is one) using the NRI as a basis, with additional fieldwork as appropriate. A site inspection by the applicant, the planning board, and conservation advisory council or board is a very important step in identifying and prioritizing resources to be conserved.

A site-level conservation analysis should identify the natural resources present, their configuration, and the site's context in relation to resource areas on adjoining and nearby properties. On the basis of these findings, along with local conservation priorities, practical considerations, and an applicant's development objectives, conservation areas should be delineated in a manner clearly indicating their boundaries, the types of resources present, and goals for protection. For example, if protecting prime farmland soils is a municipal goal, these areas should be preserved in their natural state with areas of poorer soils used for development purposes. In another example, if habitats for a species of greatest conservation need are present on a site, the habitats and sufficient buffer areas surrounding them may warrant conservation to protect the species. In either case, decisions are made on a case by case basis in an open dialogue between the community and applicant, with natural resource protection accorded early priority and development areas delineated around them during the design of the project.

Contributed by Ted Fink, AICP

Development Review

Information from the natural resources inventory can be used for reviewing development proposals in general terms (but note that NRI data aren't suitable for site specific analysis and are not a substitute for site visits). For this purpose, it is important that the information is applied consistently by municipal boards. One way of accomplishing this is through the use of checklists by planning and zoning boards to review subdivision and other land-use proposals. Appendix H provides a case study on the Town of Rhinebeck Planning Board's use of a site resource assessment checklist for subdivision review. Both the inventory maps and accompanying NRI report and source documents can be consulted for details about affected resources and their value to the community, and can be used as a reference tool in preparing maps of existing features for project applications. In addition, they can provide the planning board with context for site proposals. Whereas site plans typically only provide a parcel-scale view, the NRI enables planners to see how the parcel relates to its surroundings; for example, if the project is situated in a regionally-important forest or contains the headwaters of an ecologically-significant wetland.

Whereas site plans typically only provide a parcel-scale view, the NRI enables planners to see how the parcel relates to its surroundings.

Conclusion

Municipal planning is intended to protect the health, safety, and welfare of community residents. This cannot be achieved without information on the natural resources that deliver benefits like clean air and water, create opportunities such as agriculture and outdoor recreation, provide habitat for wildlife, and build climate change and economic resiliency in growing communities. Municipalities are encouraged to create a natural resources inventory, update it regularly, and use it to identify community priorities and inform land-use decisions. The foundation of information contained in an NRI can be a springboard for plans and policies that are designed to conserve important natural resources, and an insurance policy that protects the community's natural assets for current residents and future generations.

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Note: Documents and websites that are suggested as sources for additional information throughout the guidebook are listed in Appendix B.

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