A municipality’s comprehensive plan is merely a guide to land use, and—for its vision to be realized—needs to be implemented with zoning and other tools. Zoning provides for specific and detailed control of the type and intensity of land use within carefully defined districts or zones. It is a flexible technique and can be applied to regulate density, use, and other factors that protect the health, safety, and welfare of the town’s residents. Many communities choose to establish subdivision regulations and site-plan review to ensure that community standards for health, safety, and appearance are met. Impacts to the environment are assessed and mitigated through State Environmental Quality Review.

**How Can Zoning and Project Review Be Used to Conserve Natural Areas?**

Modifying zoning ordinances to conserve natural areas and wildlife will be most effective in areas known to have significant biological resources. These areas can be identified in a comprehensive plan (Chapter 8) as a result of a natural area and wildlife inventory (Chapter 4).

**Note:** Zoning can help direct higher density and certain kinds of development away from sensitive habitats. But it cannot remove all development potential from a property nor create a park. That can only be accomplished through open space conservation, where a landowner will voluntarily sell or donate his or her property or its development rights.

Project-review tools, such as site plans, subdivision regulations, and environmental review can be modified to better protect natural areas. For example, towns could require that subdivision plats and site plans identify important natural areas and connections to other habitats offsite, and projects could be designed to avoid sensitive environmental features and maintain connections across property boundaries.

### Smart Growth Strategies

**Zoning**

Effective zoning can provide valuable and effective tools for environmental protection within a community. Under zoning, the entire municipality is divided into districts, and the zoning ordinance identifies what kinds of land uses are allowed in each district. Zoning ordinances can be designed or modified to direct construction away from natural areas. Zoning also can be used simply to prohibit incompatible land uses. For example, certain industrial uses may not be compatible with the known habitat of rare species, whereas low-density residential use may be, particularly if the development is clustered away from sensitive areas and adequate buffers and setbacks are used. Several types of zoning are described below.

Examples of most of the strategies described below can be found in Local Environmental Strategies (Van Tine 2003) and Local Environmental Ordinances (Kelley 2003). An excellent guide to the application of these planning tools to conserve biodiversity is *Nature-Friendly Ordinances* (McElfish 2004). In that book, several of the following techniques are described in more detail, with local examples from around the United States.

**Incentives**

Regulation is not the only way that communities can control land use. Some may consider adopting incentive measures to encourage developers and landowners to voluntarily take specific actions.

**Density Bonuses:** In these programs, local governments allow landowners to construct more units on their land than are allowed by the zoning regulations. In exchange, the developer agrees to set aside open space; protect habitat, buffer streams, and wetlands; or contribute a per-lot fee to an open space fund. Alternatively, a density penalty can be applied if clustering is not part of the site plan.

**Transfer of Development Rights:** This technique moves development from an inappropriate or sensitive area to a more appropriate one by compensating willing landowners, and is described in Chapter 11.

**Preferential Tax Treatment:** Economic incentives are another important approach to motivating landowner behavior. One technique, use assessments, allows land to be taxed for its current use rather than the “highest and best use” that is typically used. The New York Agricultural Assessment Program and the Forest Tax Law are two examples of preferential tax treatment in New York.
Conservation Overlay Zoning

Overlay zones build on the underlying zoning by adding new standards to the density and uses allowed under the base zoning district. One of the advantages of an overlay zone is that the entire community need not be rezoned to accomplish conservation objectives.

Overlay zones are commonly used for environmental protection and could be very effective at protecting habitats such as stream corridors, ridges, wetland complexes, wildlife corridors, or rare landscape elements. The Wildlife Conservation Society’s Metropolitan Conservation Alliance published a model conservation overlay zone ordinance that outlines finding of fact, legislative intent, designation criteria, and performance standards for stream corridors, wetlands, woodlands, and steep slopes, and may be used in whole or in part (Metropolitan Conservation Alliance 2002). Supplemental standards in the model ordinance include erosion and sedimentation control, filling and grading, mining and excavation, stormwater management, timber management, and required information for project review.

Performance Zoning

This alternative to traditional zoning regulates development impacts by establishing environmental protection standards that must be met if development is to proceed. Performance standards can be applied townwide, restricted to specific zones (including an overlay zone), or included in subdivision regulations and site plans. Standards that might be required include use of an open space ratio in intensity guidelines, habitat restoration requirements, maintaining wildlife corridors, limits on tree and vegetation removal, use of natural landscaping, and wetland buffer requirements. This technique allows for flexibility in design and layout, as long as environmental conservation standards are met. For example, the standards may require that 80 percent of a floodplain be protected, but leaves it up to an applicant as to where and how. It is important to have clear conservation objectives for resource protection.

Performance standards can include monitoring to ensure that indicator species are still present, which may be desirable for very rare species or habitats. Biologists can help develop conservation objectives to ensure they will provide meaningful protection. This type of zoning may be easier to implement in towns that have a professional planning staff that can evaluate environmental standards. A more thorough discussion of performance standards can be found in McElfish 2004.

Zoning Is Flexible

One of the benefits of zoning is that it is flexible. Several zoning tools can be used to reach the same goals. For example, to protect forests, a community could:

- adopt a new subsection in the existing zoning ordinance addressing woodland and forest protection and make those requirements applicable to all zones;
- draft similar protection language but add the new requirements only to specific zone districts through amendments to those chapters of the code;
- create a new chapter or subsection creating a “forest protection zone” and then amend the zoning map to apply that zone where it is appropriate; or
- draft the protections into the text of an overlay zone and then amend the zoning maps to add the overlay district on the existing zoning districts.

Density and Lot Sizes

Some Hudson Valley towns are using larger lot sizes of five to seven acres in the hope of controlling sprawl and protecting open space in rural areas. However, requiring lots of that size can further fragment habitat and can result in more sprawl-type development. A reduction in density (also known as upzoning) won’t be adequate to conserve natural areas and wildlife unless it is combined with clustering or conservation subdivisions.

Subdivision Regulations and Site Plan Review

Tools that municipalities can establish to protect nature during project review include: open space standards, stream setbacks, habitat assessments, and cluster development. Specific guidelines can be built into subdivision regulations and site-plan review to protect natural areas. The following techniques can be used with either tool.

Setbacks, Buffers, and Open Space Requirements

Building or development setbacks, sometimes used to provide for the future widening of streets in residential areas, may be used to protect specific development site features such as floodplains, natural habitats, or steep slopes. Setbacks require new development to be built beyond a specified distance from lot lines as stated in the zoning ordinance. Setbacks can also be used to keep disturbance away from streams, wetlands, and sensitive habitats identified by the town.

Open space requirements are a form of setback that requires developers to leave a specific percentage of a site undeveloped. The law in New York permits planning boards to require that developers of residential subdivisions include land for recreational purposes in their plats, or pay per-lot fees used for recreation elsewhere (Morgiewicz 2004). On sites with high habitat value, this provision can be used to promote conservation of sensitive land and its associated recreational values.
Buffers help to separate incompatible land uses. Like setbacks, buffers can require a minimum amount of preserved land to protect natural areas from disturbances such as buildings or parking lots. To protect habitats, buffers should remain as naturally vegetated as possible. For example, a community could require a stream buffer to be planted with native trees and shrubs rather than turf grass.

Cluster Development
Cluster development is a very important tool for conserving natural areas and wildlife at the site scale because it allows buildings to be concentrated away from sensitive natural features. Conventional residential zoning calls for minimum lot sizes and encourages maximal use of the lot for development. An alternative approach is to encourage cluster development, which maintains the number of lots but clusters the development onto a smaller, buildable portion of the site. The municipality could further offer an incentive for a developer to receive a density bonus (extra building lots) in exchange for environmental protection, open space conservation, or open space funds (McElfish 2004). This technique is particularly useful when the intent is to protect specific features on a development site while still allowing development to occur. Cluster development can be promoted in a municipality's subdivision ordinance or required in a certain zone. This technique is most effective in protecting resources when neighboring lots are clustered so that an open space network is created. Clustering the lots on a smaller area of land will not inherently protect nature. First, communities need to identify key resources and how they are connected to offsite resources. Then clustering can be designed to conserve the resources and maintain connections.

An important consideration in allowing clustering is provision for removing and treating wastewater. Density in areas not served by sewer is often limited by site requirements for septic systems. See Chapter 10 for a discussion on wastewater options.

Conservation Subdivisions*
Like cluster development, conservation subdivisions are a powerful tool for conserving sensitive natural features. Conservation subdivisions are unique because they are tailored to the characteristics of a site and are intended to achieve several basic environmental objectives:

- minimize the overall disturbance of the site to prevent soil erosion and compaction during construction;
- facilitate the protection of sensitive habitats, including stream corridors, wetlands, and woodlands;
- allow for the protection of open space and for linkages to adjacent sites; and

• facilitate the use of natural drainage and landscaping approaches, and reduce the effective impervious area of a development, thereby minimizing offsite stormwater impacts.

In establishing requirements for clustering or conservation subdivisions, it is important to provide clear guidance to applicants. This may be accomplished by (1) clearly stating conservation objectives and priorities in the ordinance so the applicant knows which areas are to be preserved, and then (2) establishing specific cluster design guidelines. Communities also may provide direction on the amount of open space to be preserved.

* See www.greenerprospects.com for more detailed information on conservation subdivisions.
on a site. For example, a community may wish to specify a maximum, rather than minimum, lot size within each residential zoning class. Another approach for enabling conservation development is through planned unit developments. Planned unit development (PUD) ordinances allow developers the flexibility to design cluster or mixed-use developments that may otherwise conflict with standard zoning requirements. Conservation and development objectives should be clearly outlined so that proposed projects can achieve both. Some of the conservation objectives could be low-impact development and stormwater management, setbacks, open space requirements, and avoiding high-quality or sensitive natural areas and wildlife.

A final consideration of cluster and conservation developments is the need to ensure long-term management and maintenance of sensitive areas. Applicants should identify the entity responsible for management. Municipalities may require that the land be protected via dedication to the municipality or a local conservation organization through a conservation easement or other means. In some cases when an easement or property is donated to a local conservation organization, the applicant donates funds for long-term management and monitoring of the land.

Site-based State Environmental Quality Review

State Environmental Quality Review (SEQR) needs to be applied for every action taken by a municipality, including comprehensive and open space plans. Every time SEQR is applied, it is an opportunity to consider natural areas and wildlife. When SEQR is used as part of the site-review process, it requires state and local agencies to balance approval and decisions they make with a consideration of potential impacts that may result from development proposed on a site. If the project is deemed to have a significant negative effect on one of more aspects of the environment, an environmental impact statement must be prepared in order to identify ways to reduce, avoid, and/or mitigate the impact. SEQR is often used to protect environmental features such as wetlands, streams, water quality, and threatened or endangered species. It can also be very useful to protect other natural areas and wildlife using tools that enhance local planning authority, such as biological site assessments and the designation of Critical Environmental Areas.

Biological Site Assessments

Towns can identify the environmental impacts to natural areas and wildlife by requiring biological surveys or assessments for projects that come before the planning board. A check of threatened and endangered species through the New York Natural Heritage Program is an excellent first step, but it does not address a host of other sensitive wildlife and habitat issues and it cannot replace site specific surveys. Currently, if wildlife surveys are required, it is usually because the presence of an endangered species is suspected. If there are no such suspicions, often applicants list only deer, raccoon, and other ubiquitous species in the environmental impact statement. As part of their SEQR authority, municipalities can require more in-depth, yet locally appropriate, surveys or assessments to identify the sensitive habitats and wildlife that might be lost or displaced by the new construction. The results can be used to create development that avoids impact on sensitive wildlife or identifies the impacts that can be mitigated.

If a municipality decides to require biological assessments, it should set standards so the same information is collected for every project. By creating standards, the planning board knows they have the information they need to determine impacts, that the information is collected properly, and that the results are comparable between studies. This also gradually builds up a database that can be used as part of an ongoing natural-resource inventory.

This technique can be applied as a local law, as part of the site plan, or using SEQR authority. Having consistent guidelines create a fair process, where all applicants are treated the same and they know what to expect. Try to find ways to require assessments that make it easy for applicants to comply. The Town of Milan has done so by creating guidelines that are used early in the approval process, which minimizes project review delays and expenses. More detail on Milan’s habitat-assessment guidelines can be found on page 60.

Critical Environmental Areas

A Critical Environmental Area (CEA) is a specific geographic area designated by a state or local agency as having exceptional or unique environmental or cultural characteristics, thus raising awareness of resource values. CEAs may be developed following an inventory and assessment of resources. In establishing a CEA, the fragile or threatened environmental conditions in an area are identified by the municipality so that they will be taken into consideration in the site-specific environmental review under the State Environmental Quality Review Act. CEAs can be used in conjunction with conservation overlay zones and performance standards to ensure that the impacts to critical resources will be minimized.

Determining Significance

Once a town has identified the natural areas and wildlife that are impacted by a given project, it is in a better...
position to determine if there is a significant impact as a result of the project. One way that planning boards and applicants currently determine significance is to answer the questions under “impact on plants and animals” on Part 2 of the Full Environmental Assessment Form (EAF). Several questions on the Full EAF ask about impacts on both threatened and endangered and nontreated plants and animals. A community can require documentation for the answers given and devise additional questions based on local ecology and information needs.

A list of species known to be important in the community and made publicly available will be helpful in answering the questions on the Full EAF, as will the Environmental Law Institute report, Conservation Thresholds for Land Use Planners (Kennedy et al. 2003). Developing consistent thresholds for applicants is another way to ensure fairness and predictability in the project-review process.

Generic Environmental Impact Statements
A Generic Environmental Impact Statement (GEIS) is broader and more general than a project-specific EIS and can be used to look at all or a portion of a municipality to determine what development is appropriate, and what is not, in various areas of a community. The GEIS is a useful vehicle for conducting comprehensive environmental and development planning for a geographic area that a municipality wishes to protect or develop or redevelop carefully. Instead of looking at one project in one place, a GEIS can be used to understand the collective impacts of development on the community including effects on natural resources, traffic, and town services.

Cumulative Impact Analysis
New York State law allows the environmental impact of more than one project to be considered at the same time. A small project may not have a negative impact on habitat alone, but when considered in the context of nearby or related projects, the negative impact may be significant. If the lead agency (which is often the municipality) finds that there are cumulative adverse impacts from related projects and those projects have similar impacts on the local environment, that agency may decide to require a cumulative impact analysis. The municipality may also require each applicant to complete a separate environmental impact statement.

Summary of Benefits
Minor changes in zoning and project review can protect natural areas and wildlife with low initial administrative and management costs. These approaches are familiar to many Hudson Valley communities, yet flexible enough to conserve sensitive resources.

Zoning can be used to accomplish a number of community objectives at the same time. For example, in addition to protecting habitat, a floodplain overlay zone could be used to protect water quality, minimize flood damage to residents’ property, or to create a system of hiking, biking, or walking trails for recreation.

Cluster and conservation developments can provide substantial savings to developers and the town on infrastructure costs on a per-unit basis because shorter roads and utility lines are needed, and because the developments result in more concentrated service areas for police protection, fire protection, and school buses.

Local Examples
Zoning to Protect Sensitive Resources
The Town of Gardiner has long recognized the significance of the Shawangunk Ridge in its comprehensive plans. So when the town updated its zoning ordinance following the adoption of a 2005 comprehensive plan, it created several provisions to protect the unique ecological and scenic resources of the Shawangunk Ridge. The ridge is divided into three zones, in which land is less stringently regulated at lower elevations and more regulated at higher elevations, in order to protect the steepest slopes and the large blocks of unfragmented forest.

Development standards in the ridge zone require applicants to identify the location of habitats and important forest resources on the property and minimize fragmentation of forest and other ecologically significant areas. Conservation subdivisions are highly encouraged, where 80 percent of the property must be set aside. Conserved lands must have conservation value as determined by a conservation analysis, which
is required for all applications on the ridge. The town’s Environmental Conservation Commission reviews all of the proposals in this zone. For more information, visit www.townofgardiner.org.

**Biological Site Assessments: Habitat Assessment Guidelines**
The Town of Milan Planning board adopted habitat assessment guidelines to help the planning board, town board and applicants work together to conserve the town’s natural assets. The guideline text states that “Milan is committed to maintaining its rural character, protecting its environment, and preserving its natural resources.” The guidelines are used early in the development review process to establish environmental constraints and guide the plan before the applicant invests significant time and money in design and engineering. “Habitat assessments must be completed before sketch-plan endorsement or initiation of the SEQR process, and before the site’s Erosion and Sediment Control Plan and Stormwater Pollution Prevention Plan are developed. This approach minimizes project review delays and expenses.”

Milan’s guidelines clearly define how the applicant should complete the assessment. First, applicants must identify significant habitats onsite, using either the Biodiversity Assessment Manual for the Hudson River Estuary Corridor (Kiviat and Stevens 2001) or Ecological Communities of New York State (Edinger at al. 2002). Second, habitat quality must be evaluated. Again, the guidelines describe how, by listing criteria, requiring identification of species of concern, and suggesting references. Finally, the Milan planning board has standardized reporting, outlining the necessary components for an acceptable habitat report. Similar guidelines are in use by planning boards in the towns of in New Paltz, Shawangunk, and Rosendale.

For more information, contact the Town of Milan Planning Board: www.milan-ny.gov

**Biodiversity Review Standards**
In 2002, the Town of Cortlandt Planning Board adopted biodiversity review standards. Initially, the standards applied along certain areas: river and stream corridors; near lakes, ponds, and wetlands; and near open space corridors and existing preserves. The guidelines define the species to be assessed and focus on those species that are likely to identify high-quality habitat vs. those that may identify areas more appropriate for development. The standards outline detailed methods: the survey must be conducted by a qualified biologist and must occur during a season appropriate for finding the target species. For example, breeding birds must be assessed during the breeding season (from mid-May to early July), when they are most likely to be observed (in the early morning). The standards also require that surveys are conducted in all habitats on the property. Applicants must prepare a report for the town that includes methods, location-specific wildlife observations, and recommended development alternatives to minimize disturbance. Finally, the data need to be delivered in a way that can be incorporated into the town’s GIS. For more information, contact the Town of Cortlandt Planning Department (www.townofcortlandt.com).

**Resources**


