

Chapter 2:

How To Use This Handbook



Which natural areas and wildlife are important in my community? Where are they? What does it mean to conserve a natural area or wildlife species? What smart growth strategies can be used and how have those been applied in the Hudson Valley? This chapter explains how to answer these questions for your community by using this handbook. It includes what municipalities need to know to conserve nature locally

and where it is covered in the book.

This handbook is not intended to replace the many other available publications that deal with local environmental protection. Instead, it covers a range of tools that might be used to protect natural areas and wildlife, from which your community may choose. Reading lists in each chapter guide you to other helpful publications that provide more detail on how to implement the tools. The three appendices include a glossary, detailed information on Hudson Valley habitats, and contact information for the organizations listed throughout this handbook.

Chapter Previews

Chapters 3 through 13 cover three broad areas: Natural Area and Wildlife Conservation in the Hudson Valley (Chapters 3 through 5), Engaging the Public (Chapters 6 and 7), and Local Smart Growth Strategies (Chapters 8 through 13).

Because natural areas and wildlife in the Hudson Valley encompass hundreds of habitat types and thousands of species, it can be a little overwhelming to try to plan for them as well as human needs. Furthermore, habitat protection is essential in any plan to conserve natural areas in your municipality and region because each habitat is home to hundreds of species, both common and rare. Therefore, this handbook recommends focusing on the broad habitat types described in the Hudson River Estuary Wildlife and Habitat Conservation Framework (Penhollow et al. 2006).

Chapter 3 outlines six of these habitat types.

Highlights of Chapter 3

- General overview of habitats in the Hudson Valley, including threats and representative plant and animal species;
- The human benefits of conserving those habitat types

Conserving natural areas and wildlife involves identifying resources at least two levels. First, identify and assess resources town-wide to give an overall view of your community's natural assets. An intermunicipal inventory is even better because natural areas and wildlife do not follow municipal boundaries. A completed inventory can help your community direct development away from the most sensitive and valuable natural assets, determine where conservation action will be most beneficial, as well as help create priorities for open space acquisition. The result can be used in a comprehensive plan, open space plan, watershed plan, or other local conservation program. Second, inventory and assess resources at a site-specific scale where new development is proposed, so that valuable natural areas can be protected and connected across property boundaries while growth continues.

Chapter 4 will help communities include natural areas and wildlife in a natural resources inventory. This inventory is the foundation for conserving nature in your community.

Highlights of Chapter 4

- How to find existing information on natural areas and wildlife in your community
- How to get new information on natural areas and wildlife in your community and what is most useful
- How to prioritize natural areas for conservation
- Examples from the Hudson Valley

Identifying important habitats at both townwide and site-specific scales helps you choose the conservation practices that are appropriate for your community. For example, when important forests are identified, towns will know where to maintain or restore forest connections.

Once a municipality has identified its important natural areas and wildlife, its decision-makers need to understand how to conserve those resources.

Chapter 5 will help communities understand the conservation needs of Hudson Valley habitats and the wildlife that use them.

Highlights of Chapter 5

- General conservation principles
- Conservation principles for each major habitat type in the Hudson Valley
- Requirements for habitat conservation, for example, minimum size, buffers from incompatible uses, management needs
- Which habitats are conserved by state or federal programs
- What local governments can do in their land-use decision-making to conserve habitats
- Resource-specific smart growth strategies
- Examples from the Hudson Valley

Public input and support are very important for a successful conservation program. The next two chapters will help municipalities engage the public.

Chapter 6 describes ways that communities can educate residents and visitors about their unique plants, animals, and habitats. Public outreach and education is essential in all conservation efforts because it helps build support for conservation in your community. Any conservation action taken by the community should include some kind of outreach and education.

Highlights of Chapter 6

- How municipalities can develop education programs to reach their goals
- Local resources that can help your municipality educate its citizens

Municipalities can use Chapter 7 to help get public input during planning and update the public on progress during implementation. Public participation is important in any planning process. People need to feel heard and sometimes the process of planning (with public input) is as important as the substance.

Highlights of Chapter 7

- Why municipalities should invite public participation
- How municipalities can hold a meeting to encourage public attendance and input
- Examples from the Hudson Valley

There are 250 towns, cities, and villages in the Hudson Valley, and among them one can find communities as different as any in the United States. What will work for a community in Westchester County may not work for one in Greene County. With the valley's diversity in mind, this handbook suggests a variety of strategies to protect resources that span the realm of local planning, regulation, acquisition, and education. Communities may choose the actions that will work best for their resources and communities.



Some of the conservation actions described in this book modify tools that towns already use, like zoning, storm- and wastewater management, and open space planning. Other actions will include new activities. Not all strategies need to be used together to conserve biodiversity, but all tools should address public outreach and education in some way.

Chapters 8–13 describe tools and techniques that municipalities can use to conserve natural areas and wildlife that its citizens value. To determine what habitats and wildlife occur in your community, use Chapter 4.

Chapter 8 discusses ways to include nature in comprehensive plans, and address natural areas and wildlife issues across the entire municipality.

Highlights of Chapter 8

- How to include nature in your comprehensive land-use plan
- How to relate nature to other elements of your plan
- Examples from the Hudson Valley

Chapter 9 describes how zoning, site plans, subdivision regulations, and environmental review can be used to protect natural areas and wildlife. Like the comprehensive plan, these tools are commonly used by Hudson Valley municipalities. They help translate the comprehensive plan from vision to action and define land use in your community. Zoning can be used to think about conserving nature across a municipality, while project review is site-specific. Planning Board members may be particularly interested in the environmental review section, as it describes how planning boards can use their existing State Environmental Quality Review (SEQR) authority to better conserve natural areas and wildlife.

Highlights of Chapter 9

- How setbacks and buffers, cluster development, conservation subdivisions, and biological site assessments can be used to conserve natural areas and wildlife

- Tools that inventory and assess resources at a site scale where new development is proposed
- Examples from the Hudson Valley

Chapter 10 describes low-impact development and stormwater management techniques that can be used to meet the new Phase II standards and have minimal impact on native wildlife.

Highlights of Chapter 10

- The impact of stormwater on natural areas and wildlife
- Stormwater management strategies that have the least impact on habitats and wildlife
- A section on improved wastewater management for people and wildlife
- Examples from the Hudson Valley

Chapter 11 focuses on a commonly used tool—open space planning and conservation—to protect nature.

Highlights of Chapter 11

- How to include natural areas and wildlife in your community's open space plan
- Municipal tools for land conservation
- Examples from the Hudson Valley

Chapter 12 describes how local governments can work together to conserve nature. Intermunicipal approaches are critical for conserving nature in the Hudson Valley because natural areas and wildlife do not follow municipal boundaries.

Highlights of Chapter 12

- Formal and informal ways that municipalities can work together
- How watershed planning can incorporate natural area and wildlife conservation
- Examples from the Hudson Valley

Chapter 13 details how towns can practice natural landscaping on municipally owned lands and encourage it on private lands.

Highlights of Chapter 13

- Natural landscaping as a complement to the other tools described in this handbook.
- Ways that municipalities can promote the use of natural landscaping in their communities
- Problems of invasive plants, including a list of native alternatives
- Local natural landscaping resources

Smart Growth and Ecological Integrity

In the United States, more than two million acres of land are converted to urban use each year, mostly in the form of sprawling and fragmented auto-dependent development on the fringes of cities. During the sixty years since this style of development emerged, researchers have documented associated losses of ecosystem function and environmental quality. There remains a question about whether all types of human development are equally degrading to ecosystems. Might some forms of development have less impact on the environment? Research from South Carolina reveals that traditional neighborhood centers have less of an impact on the diversity of small invertebrates that live in estuaries than sprawl-type development. Studies in the Hudson Valley indicate that watersheds with sprawling suburban development have more impervious surface and less wetland buffer than watersheds with traditional neighborhood centers. Marshes in suburbanized watersheds are more prone to polluted runoff, have more invasive plants, and have less efficient food chains than watersheds with hamlets or villages in them. Smart growth is an attractive option for people because it provides housing options and walkable communities, but this research shows that it can also be better for streams and wetland wildlife.

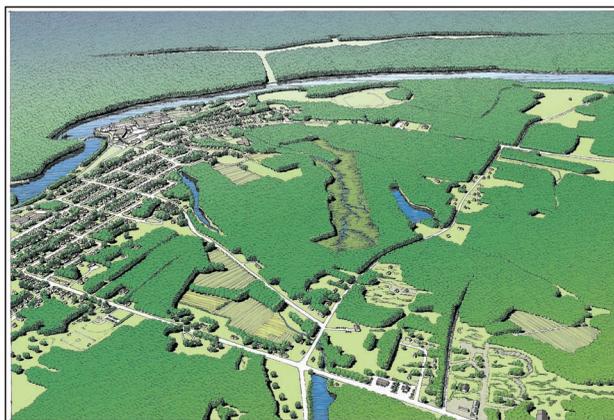
G. S. Kleppel, Biodiversity, Conservation and Policy Program, State University of New York at Albany, Albany, N.Y.

What Does a Growing Community That Conserves Nature Look Like?

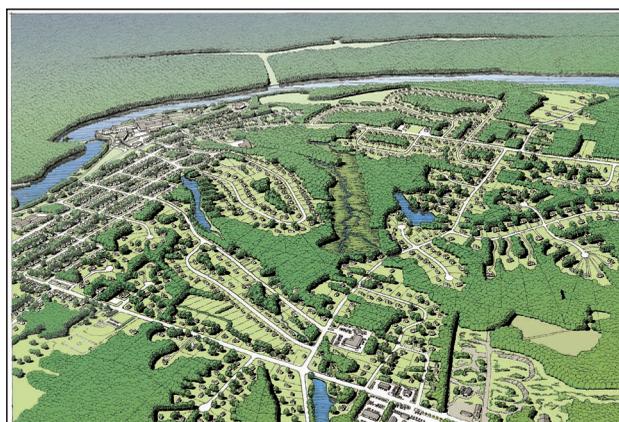
The Hudson Valley is growing and will continue to grow. One solution to conserving natural areas and wildlife while accommodating growth is to create traditional neighborhood centers and conserving open space in the surrounding areas. New development of this type is often not permitted under zoning ordinances. This type of development is often referred to as smart growth.

The first step to creating such a community that conserves nature is identifying key natural areas (see Chapter 4). Subsequently locate areas for focused growth away from those areas. In the core growth areas, mix residential and small commercial uses, with increasing lot sizes nearer to the countryside. To conserve natural areas and working lands outside of core growth areas, municipalities could purchase development rights, transfer development rights, use agricultural zoning, allow clustered residential development, and/or create standards for environmental review. Ideally, these strategies will be applied so that a network of conserved and working open space is created.

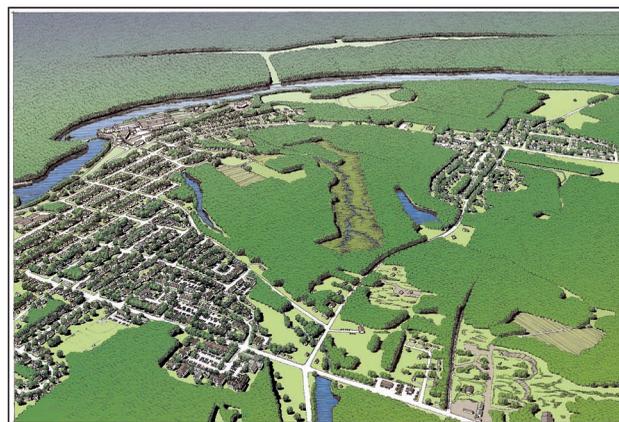
Many of these smart growth strategies are described in this handbook. Additional planning resources are available to help communities, including the American Planning Association, the New York Planning Federation, the New York State Department of State, the Hudson River Valley Greenway, the Pace Land Use Law Center, and the Government Law Center at Albany Law School. *Greenway Connections* is a Dutchess County resource guide that can help create smart growth in local communities (Dutchess County Department of Planning and Development 2000; see also Corbett and Corbett 2000; Benfield et al. 2000; Sobel 2002; Katz 1994).



A small village in upstate New York nestled on the shores of the upper Hudson River. Over time the village has expanded out from its core along the major roadways and in an extension of the historic grid pattern. Surrounding the village, we find a network of natural areas and historic farmsteads that helps make the village a thriving and livable community.



This is the same village after build out under existing zoning, which allows half-acre lots within the village boundary and one- to five-acre lots outside. This kind of development fragments the existing natural areas and compromises the open space network. This kind of zoning is common throughout the Hudson Valley.



An alternative development scenario shows the same number of units as in the previous image, but follows the principles of conservation development. The historic pattern of streets and lots in the village was extended, and new commercial growth has been concentrated into compact, walkable neighborhoods. To attain the same number of dwelling units allowed by current zoning, an existing small hamlet was expanded.

With this approach, a belt of protected natural areas is established around the perimeter of the village and hamlets, maintaining significant natural and cultural corridors. This open space network incorporates streams and forests and well as farmland protected through voluntary conservation agreements. Neighborhood pocket parks provide greenspace for village residents, which are linked to the open space network via sidewalks and trails.

From the Green Infrastructure Plan for Saratoga County by Behan Planning Associates, LLC, with American Farmland Trust, and Dodson Associates. Illustrations by Dodson Associates.