



Module 3: Trainer's Guide

Land-Use Planning and Policy



USING THIS MODULE

This module provides natural resource professionals with information about land-use decision-making tools and processes, describes their role in land-use decisions, and identifies opportunities for them to get involved. It can be used on its own, or in combination with other modules, and in any order that is appropriate for your needs. Exercises are included to engage your participants in using the information and discussing the material you present. Fact sheets and case studies provide more detailed information about each section. This trainer's guide covers the main ideas for a workshop presentation. Please take the time to review the accompanying fact sheets, case studies, exercises, and handouts; decide which skills and topics are most relevant to your area or agency; assess the skills and previous training of your participants; and adapt the exercises to meet your needs. This module also includes a glossary on page 26 to help trainers and participants become more familiar with language commonly used in policy and planning. The Trainer's CD includes Microsoft Word® and PowerPoint® files that can be adapted as needed. If you decide to cover all the material included in this module you can use **Presentation 3** in its entirety. You will also find this presentation divided into sections that correspond with sections of the module (3.1-3.5). Feel free to use the slides that meet your needs and recombine them to create your own presentations. **Presentation 5** contains slides to go with the case studies. You can also design a quiz to measure participants' learning by selecting or adopting questions provided behind the evaluation tab.



Three main sections are covered in this module:

1. Tools for land-use decision making
2. Opportunities for natural resource professionals
3. Becoming a community resource

Land-use policy and planning decisions have an immense influence on natural resource issues in the wildland-urban interface. How communities grow, what actions are regulated, and how regulations manage the risks and benefits of community expansion play a big role in the changing landscape of the interface and changes to natural resources. As the landscape changes, so does the role of natural resource professionals, and it is essential that these professionals know how land-use decisions are made in their communities and how they might facilitate more sustainable development. Understanding the policy development, planning, and zoning processes, and how these tools influence natural resources in the interface is important to effective program development, resource management, and landowner assistance. This module was reviewed by experts in natural resource policy and

land-use planning and zoning. The materials were pilot tested in Columbia, South Carolina with a group of interface forestry professionals. This module features some of the basic land-use tools and skills and strategies for resource professionals to get involved in land-use planning and policy development. The materials in this module can be organized for a two-hour introduction or for a much longer program, depending on which mix of materials you use. The following table lists the exercises and appropriate case studies for each section of this module, listed in the order they are mentioned in the text.

Section	Training Materials
<p>1. Tools for land-use decision making</p>	<ul style="list-style-type: none"> • Presentation 3.1 • Fact Sheet 3.1: Some Policies and Programs that Affect Natural Resources • Exercise 3.1: Making the Link—Policy in the Interface • Exercise 3.2: Tracking the Policy Process • Fact Sheet 3.2: Zoning Ordinances • Fact Sheet 3.7: Best Management Practices in the South • Exercise 3.7: Guiding Neighborhood Policy • Presentation 3.2 • Fact Sheet 3.3: Smart Growth Principles • Fact Sheet 3.4: Some Negative Effects of Urban Sprawl • Fact Sheet 3.6: Land Conservation Tools • Exercise 3.4: Practicing Land-Use Planning • Case Study 17: Smart Growth Blossoms in Flower Mound, Texas • Exercise 3.6: Using Case Studies • Presentation 5 • Presentation 3.3 • Fact Sheet 3.5: Subdivision Design • Exercise 3.5: Understanding Conservation Development • Case Study 2: Conservation Development in South Carolina • Case Study 14: New Urbanism in South Carolina
<p>2. Opportunities for natural resource professionals</p>	<ul style="list-style-type: none"> • Presentation 3.4 • Exercise 3.2: Tracking the Policy Process • Exercise 3.3: Creating a Statement • Exercise 3.7: Guiding Neighborhood Policy • Exercise 3.8: Role-Playing Development Decisions • Case Study 6: Improving the Urban Forest in Roanoke, Virginia • Exercise 3.6: Using Case Studies • Presentation 5 • Fact Sheet 3.2: Zoning Ordinances • Exercise 3.5: Understanding Conservation Development

Section	Training Materials
2. Opportunities for natural resource professionals (cont.)	<ul style="list-style-type: none"> • Case Study 17: Smart Growth Blossoms in Flower Mound, Texas • Exercise 3.4: Practicing Land-Use Planning Design • Exercise 3.5: Understanding Conservation Development • Fact Sheet 3.3: Smart Growth Principles • Case Study 14: New Urbanism in South Carolina • Case Study 23: Zoning to Conserve Greenspace in Davidson, North Carolina • Fact Sheet 3.6: Land Conservation Tools • Case Study 10: Land Conservation along the Suwannee River • Case Study 20: Where Rural Reigns: Purchase of Development Rights Program in Kentucky
3. Becoming a community resource	<ul style="list-style-type: none"> • Presentation 3.5 • Exercise 3.3: Creating a Statement • Exercise 3.8: Role-Playing Development Decisions • Case Study 12: Mediating for Change in Martin County, Florida • Exercise 3.6: Using Case Studies • Presentation 5 • Case Study 18: Stakeholders in the Planning and Zoning Process in Georgia • Exercise 3.9: Background and Discussion Questions for Case Study 18

BACKGROUND

Introduction

The South's population is growing at a rate of nearly 1.5 million people per year, excluding illegal immigration (U.S. Department of Commerce, Bureau of the Census 2000). Land use per person rose by 16 percent between 1982 and 1997 (Beck, Kolankiewicz, and Camarota 2003). In addition to more people, each person is taking up more land, which translates to a rapid expansion of communities into the wildland-urban interface. Rapid growth in communities across the South is creating new challenges for natural resource professionals who work with wildland-urban interface issues. Many feel frustrated and even powerless dealing with the changes brought on by increasing development and varying landowner needs and objectives. The effects of unfettered urbanization greatly limit management options and the ability of ecosystems to function properly. Any one interface issue cannot be successfully addressed in isolation (**Module 1**). Planning, policy, economics, social factors, and demographics must be considered (Macie 2003).



Land-use decisions and policies that take natural resources into consideration can also work to enhance the quality of human life, economic development, and community character. Policies that are developed without sufficient information and foresight, however, often fail to protect natural resources, promote poorly planned and unsustainable growth, compromise quality of life, and exacerbate already challenging interface issues. Developing policy that balances economic development, social well-being, and natural resource conservation while responding to diverse stakeholders, interests, and needs is a huge challenge. This is why it is important for natural resource professionals to assist policymakers.

Land-use decision making can be contentious anywhere but is particularly so in the interface. People may move to less urbanized areas to try to escape what they perceive as strict land-use regulations and government control in urban areas. They may be opposed to any type of restrictions on their land. However, as wildland becomes interface and interface becomes suburbia, the number of regulations governing that land also increases. And because living near wildlands also increases people's interactions with natural resources, regulations related to resource issues such as endangered species and wildfire can restrict the ability of interface residents to use and manage their lands as they please. Some even argue that they deserve compensation for government regulations that reduce the value of their land (Daniels 1999).

Many interface challenges arise due to the nature and pace of new development. Most current community development practices make it cheaper and easier for developers to build on undeveloped land, often on the outskirts of a town. Developers usually choose to build in the most profitable area, not according to geographic logic, convenience, or environmental sensitivity (Duany, Plater-Zyberk, and Speck 2000). Local governments across the United States are becoming involved in regulating developers and creating incentives for conservation development and Smart Growth.

Land-use decisions that influence natural resources are made at the federal, state, local, and neighborhood levels. In order to make informed and effective decisions, political leaders and decision makers at all of these levels need current information regarding the issues and potential consequences of land-use decisions and policies. Natural resource professionals can provide reliable, science-based information to facilitate the conservation of natural resources and reduce environmental problems and management challenges in the interface. It may take some initiative on the part of the resource professional to be able to play a meaningful role in the decision-making process. This module outlines the skills and information that can help natural resource professionals embrace this new role as advisors to land-use decision makers.

1. Tools for Land-Use Decision Making

There are a variety of tools that governments and communities can use to guide and regulate development, natural resource use, and resource management. It is important for natural resource professionals to be familiar with these tools, their development processes, and how they affect natural resources in the wildland-urban interface. Following are some of the tools that influence natural resources, resource management, quality of life, and public safety in the interface. **Presentation 3.1** covers the material in this section.



Land-use policy

One tool used for regulating land use and natural resources is public policy.

Fact Sheet 3.1: Some Policies and Programs that Affect Natural Resources lists and describes some *federal*, *state*, and *local* policies that affect natural resources in the wildland-urban interface. The term policy may represent specific laws or can be used more generally to include a variety of local land-use control mechanisms, such as planning and growth management. Policy is defined as “a purposive course of action or inaction that an actor or set of actors takes to deal with a problem” (Anderson 1984; Heidenheimer, Hecl, and Adams 1983). **Exercise 3.1: Making the Link—Policy in the Interface** will help your participants begin thinking about policies and how they influence natural resources and resource management in the interface.



Some policies are specifically meant to protect or enhance natural resources, such as air quality standards and wetland protection ordinances. These policies may also provide solutions for community problems that at first glance seem unrelated. For instance, researchers have found that the loss of tree canopy can be related to the incidence of skin cancer (Steeves 2002). Policies or ordinances protecting tree canopy, therefore, may also help improve human health and longevity. There are also policies that unintentionally foster natural resource degradation or protection (Macie 2003). For example, the by-laws of some homeowners' associations forbid the use of clotheslines in an effort to protect community aesthetics. This type of regulation forces residents to use less energy-efficient methods to dry their clothes and consequently consume more natural resources. Policies also define the regulatory methods, such as best management practices, permitting, and fines that will be used for enforcement. Policies such as noxious weed bans or water quality regulations can facilitate effective conservation and management efforts while allowing the community, agencies, and individual landowners to meet various objectives. *Section 2* (page 9) explains the process of developing policies such as these, which is important information for resource professionals to review. **Exercise 3.2: Tracking the Policy Process** will help your participants apply that information to a locally developed policy.



Within policy, there are a variety of regulatory tools such as zoning ordinances and subdivision standards, typically at the local and neighborhood levels, that help shape land use and aim to manage development. Zoning, in particular, determines the type and density of land uses on specific properties and is intended to foster orderly



development by separating conflicting land uses (Myszewski and Kundell 2005). It is important to be aware that zoning can contribute to issues of social equity by creating districts that are more or less desirable or safe and consequently more or less expensive. For example, residential areas that are next to districts zoned for heavy industry tend to be less desirable, and therefore more affordable. They consequently attract the economically disadvantaged. **Fact Sheet 3.2: Zoning Ordinances** lists and describes several types of zoning.

Multiple levels of decision making



All levels of government can utilize the aforementioned land-use tools. The federal government enforces federal policies such as the Endangered Species Act, the Clean Water Act, and the Clean Air Act (see **Fact Sheet 3.1**). These regulations, while helping conserve and protect natural resources, can affect the range of land-use options available to landowners and may also limit management options for public lands. In many cases, responsibility for implementing federal policies is passed on to state agencies. For example, states may be responsible for monitoring resources, managing lands, and conducting outreach programs that support federal policy objectives. To supplement federal policy, states may also have their own policies that regulate natural resource use and management. Many state governments require local governments to develop comprehensive plans for growth management. States may also have nonregulatory guidelines for land use such as best management practices (BMPs). See **Fact Sheet 3.7: Best Management Practices in the South** for an introduction to BMPs and trends across the South. It is important for your participants to be aware of the variety and scope of land-use regulations in their own state and locality.

Most states delegate their land-use authority to local-level governments such as cities, counties, or parishes (Kundell, Myszewski, and DeMeo 2003). Local land-use regulations may consist of tree preservation ordinances, wetland protection ordinances, and storm water regulations, or other issues specific to that area. The scope and purpose of local land-use policies vary; some regulations, such as wetlands protection ordinances, require the conservation of environmentally sensitive areas, while others, such as standard commercial zoning are strictly intended to promote economic growth and may allow developers to completely clear and grade forested lots.

On a smaller scale, neighborhood-level land-use decisions and regulations influence natural resource management and provide a valuable opportunity for stakeholder input. Neighborhood groups can specify the type, amount, or size of vegetation residents can plant or remove, whether they can have outdoor cats, and where they can park. Homeowners or property owners associations may be incorporated, giving them the authority to create and enforce by-laws. Non-incorporated neighborhood associations may make recommendations, but cannot force residents to adopt them. These local and neighborhood-level regulations can be designed to respond to the specific needs and concerns of a particular area such as wildfire, human-bear conflicts, or flooding. In new subdivisions, developers craft the covenants before they complete build-out. Once in effect, these covenants are very

difficult to amend. Resource professionals can assist developers in creating neighborhood covenants that will help conserve the beauty and health of surrounding natural resources for years to come. **Exercise 3.7: Guiding Neighborhood Policy** allows participants to practice assisting with neighborhood-level policy development.



In many cases, a collaborative effort, combining the experience, authority, and resources of multiple agencies or levels of government, is ideal. To increase collaboration and improve decision making, the National Governor's Association officially adopted the Enlibra Doctrine, a philosophical framework that emphasizes collaboration, for evaluating environmental issues. *Table 1* outlines the Enlibra principles. Differing perspectives and objectives between and sometimes within agencies can make collaborative work difficult. However, especially with interface issues, a multi-disciplinary, multi-agency approach can increase effectiveness and credibility of programs, decisions, and other efforts. *Box 1* illustrates how some agencies are collaborating.

Table 1: Principles of the Enlibra Doctrine

National Standards, Neighborhood Solutions	Assign responsibilities at the appropriate level.
Collaboration, Not Polarization	Use collaborative processes to reduce barriers and find solutions.
Reward Results, Not Programs	Move to a performance-based system.
Science for Facts, Process for Priorities	Separate subjective choices from objective data gathering.
Markets before Mandates	Pursue economic incentives whenever appropriate.
Change a Heart, Change a Nation	Environmental understanding is essential.
Recognition of Costs and Benefits	Make sure all decisions affecting infrastructure, development, and environment are as informed as possible.
Solutions Transcend Political Boundaries	Use appropriate geographic boundaries for environmental problems.

Source: *Western Governors Association 2003.*

Box 1: Multi-level Collaboration for Conservation

The U.S. Fish and Wildlife Service is using a “Cooperative Conservation Effort” to protect habitat for fish and wildlife species on private land in Montana. The agency is working with the State of Montana, area county commissions, private

Continue Box 1

conservation organizations, and landowners to collect information about the area, wildlife, and wildlife habitat. The collaborative effort will help determine the effectiveness of the FWS conservation easement program in the region.

Source: U.S. FWS 2004.

Land-use planning



Also under the umbrella of policy, land-use planning (also called growth management or comprehensive planning) is a means to guide community development. The way in which communities develop as populations grow plays an important role in the conservation and management of natural resources. **Presentation 3.2** includes the basic information covered in this section.

Planning enables people to understand how the community meets current needs and to create a vision of how to provide resources for the future. It helps communities determine where they are now, where they want to end up, and how they might get there. Many states have planning guidelines and recommend or require that local government create comprehensive plans. In some cases, planning is done at a regional or landscape-level, allowing for greater collaboration and consideration for things like infrastructure, transportation, and natural resource conservation. Once a community's land-use plan is implemented, subsequent land-use regulations should reflect and support the community vision. Unfortunately it is quite common for variances and zoning changes to alter the plan, eroding people's faith in the value of the land-use plan and planning process in general.



Effective planning can help minimize the negative social, economic, and ecological effects of development in the interface. Planning principles such as Smart Growth, aim to promote more sustainable development. **Fact Sheet 3.3: Smart Growth Principles** introduces the basic characteristics of Smart Growth. Poor land-use planning, in contrast, leads to sporadic development and urban sprawl. **Fact Sheet 3.4: Some Negative Effects of Sprawl** describes some of the ways urban sprawl can negatively affect social and ecological conditions. **Fact Sheet 3.6: Land Conservation Tools** describes different mechanisms for conserving land. **Exercise 3.4: Practicing Land-Use Planning Design** enables participants to think about where these tools could be used locally and how different land-use regulations affect development. **Case Study 17: Smart Growth Blossoms in Flower Mound, Texas** describes one southern community that has implemented some Smart Growth principles (see note page 9).



Conservation design



On a smaller scale, subdivision design principles can also influence the sustainability, quality of life, and health of communities. **Presentation 3.3** covers the information relevant to this section. **Fact Sheet 3.5: Subdivision Design** describes and provides examples of subdivision design principles that promote conservation and improve quality of life. Planners, developers, and community leaders are beginning to implement conservation development, which uses the design and placement of

new housing developments to achieve community development goals, including conservation of natural resources and rural character. Conservation design, Smart Growth, neo-traditional development, and new-urbanism are all alternative approaches to community design that are intended to be more sustainable than standard approaches. They have different strengths and limitations but all can help foster cultural preservation; enhance sense of community; encourage pedestrian traffic; and protect floodplains, greenspace, wildlife habitat, and agricultural and forestry lands. A recent study in Iowa indicates that living in a conservation development can increase quality of life and sense of community (Bowman et al. 2005).

Exercise 3.5: Understanding Conservation Development allows them to compare different conservation development strategies and discuss which ones work best for specific needs and conditions. **Case Study 2: Conservation Development in South Carolina** and **Case Study 14: New Urbanism in South Carolina** illustrate how some southern communities are making conservation a key component of development (see note below).



2. Opportunities for Natural Resource Professionals

Land-use decisions in the wildland-urban interface influence social, environmental, and economic conditions. In order to be sustainable, communities must consider each of these factors when land-use decisions are made. Decision makers determine how specific lands may be used and develop regulations that define how resources are used and managed. Ideally, these regulations are formed based on balancing the values, interests, and needs of stakeholders in the community (Farnum and Dean 2001). Without someone to articulate the natural resource consequences of decisions and policies, resources may be left out of the equation. Resource professionals have a responsibility to ensure that decision makers have the most useful and reliable natural resource information.

Natural resource professionals have much of the experience and knowledge necessary to understand and explain the risks and benefits associated with changing landscapes in the interface. They can provide science-based information for decision makers and articulate the natural resource consequences of various land-use options. They are not, however, responsible for making regulatory decisions or getting involved in decision-related politics. Nor are they expected to determine what the right decision is or to align themselves with an interest group. Professional opinions should be based on fact and experience while personal opinions often include personal values. Resource professionals simply need to provide their professional opinions to the stakeholders and decision makers involved in the decision-making process. If they have not worked with decision makers before, your participants first need to find out how they can get involved and make themselves



Note: For each of the case studies mentioned in this Trainer's Guide, discussion questions can be found in **Exercise 3.6: Using Case Studies** and slides can be found in **Presentation 5**.





available. **Presentation 3.4** includes all the background information for this section. There can be a fine line between responsible involvement and advocacy, and it may be critical in your workshop to explore how training participants feel about this role, how they can avoid being perceived as biased, and how they can establish themselves as a useful resource. **Exercise 3.2: Tracking the Policy Process**, **Exercise 3.3: Creating a Statement**, **Exercise 3.7: Guiding Neighborhood Policy**, and **Exercise 3.8: Role-Playing Development Decisions** may help that process.

Participating in policy development

Especially in the wildland-urban interface, policy development must emphasize collaborative and consensus-building processes. Consensus can be achieved by creating an atmosphere where decision makers, residents, industries, and resource professionals come together and share concerns and ideas (Alavalapati 2005). Resource professionals can facilitate this process by helping decision makers and stakeholders understand the connections between natural resources, community problems, and various policy proposals. They can also provide the information necessary to develop effective policies. In order to get involved in policy development, natural resource professionals must first understand the basic steps in the policy-making process outlined in the steps in *Table 2*.

Table 2: Steps in the Policy-Making Process

1. Problem Identification	A problem or issue is identified and demands for action are made.
2. Policy Agenda Setting	Demands are recognized and the problem is placed on an agenda for a potential vote (by a commission or other decision-making body).
3. Policy Formulation	Potential courses of action are developed to deal with the problem.
4. Public Input	The problem and potential solutions are publicized and public feedback is provided.
5. Policy Adoption	A policy is selected to address the problem and a policy statement is created.
6. Policy Implementation	The policy statement is implemented by the appropriate government agency. This step may include legislative oversight or judicial review.
7. Policy Evaluation	After some time, an informal or formal determination of policy effectiveness is made and improvements are suggested.

Source: Adapted from Anderson et al. 1984.

While natural resource professionals can contribute their expertise at any stage of the policy-making process, their input is especially important during steps 1, 2, 3, and 7. **Exercise 3.2** will help your participants learn about how policies are developed in their communities.

Step 1. Natural resource professionals' participation in Step 1, *problem identification*, is especially important. Before policy can be developed, problems that require action must be identified and brought before decision makers. Resource professionals are aware of important resource issues in their area and can provide decision makers with information about issues and the short- and long-term consequences of different policy options. They can even use technology to help demonstrate how land-use change is affecting natural resources. For instance, GIS mapping can be used to illustrate declines in forest cover over time or how development is encroaching along a ridge. Resource professionals may also be aware of approaches that have worked for other communities and can share a variety of ideas without endorsing a specific approach. Consistently providing reliable information to policy makers and the public will increase resource agency credibility and may improve the likelihood that policymakers will request input for future decision making. **Exercise 1.3: Prioritizing Interface Issues** will help your participants practice identifying and prioritizing issues in their area.



Step 2. The second step in the policy-making process, *agenda setting*, may also provide opportunities for resource professionals to assist local policy makers. If possible, resource professionals should work to increase public awareness about the issue at hand and encourage public involvement. For instance, they can distribute flyers and brochures and speak at community meetings about natural resource issues. They can rally support by connecting natural resource issues with current community priorities. For example, if there's been a recent flood, community members and decision makers are probably very concerned about water quantity and quality, public health, and lost revenue. They could also be concerned with loss of forest cover, upstream controls, and storm-water management. By linking natural resource issues to community hot topics, natural resource professionals can increase the community's awareness of how resources affect overall quality of life, reinforcing the notion that they warrant attention. **Exercise 1.1: Piecing Connections Together** and **Exercise 1.5: Weaving Connections** will help your participants begin thinking about how issues in the interface are interconnected. Gaining public support also helps get the natural resource issue on the policy agenda. When working to increase public awareness and gain support, it is important to use effective communication strategies. **Module 4** materials can help prepare your participants to communicate more effectively.



Step 3. *Policy formulation* also provides opportunities for involvement. Using the best available science, resource professionals can articulate how each particular course of action might affect natural resources. **Exercise 3.3** enables participants to practice this skill.

Step 7. Resource professionals can help decision makers determine how effectively a policy is serving its purpose through *policy evaluation*. For example, if a policy aims

to protect gopher tortoise habitat, resource professionals can help determine what its effects might be, and once implemented, how effective it actually is by establishing a monitoring program to analyze tortoise populations and movement. While local governments will sometimes hire private consultants to fulfill these roles, employees of government agencies can also be an important resource.



Box 2 gives an example of natural resource professionals getting involved in policy development. **Exercise 3.2: Tracking the Policy Process**, and **Case Study 6: Improving the Urban Forest in Roanoke, Virginia** will help your participants think about the process and how they can contribute (*see note on page 9*).

Box 2: Resource Professionals Getting Involved in Fairfax County, Virginia

The Dillon rule, which mandates that local jurisdictions can only exercise authority if specifically granted by the state legislature, is used in Virginia. This rule affects local policy and implementation. In one example, decision makers in Fairfax County, Virginia, wanted to implement ordinances to protect trees during new construction, but there was no state legislation granting them the authority to do so. In order to implement the new policy, local natural resource agency staff helped local officials use tree-related legislation scattered throughout a variety of state documents including zoning ordinances, the Public Facilities Manual, and the Erosion and Sediment Control Ordinance. The county's urban foresters used these state policies to amend the Public Facilities Manual to develop and implement tree preservation ordinances. By working with the community's urban foresters, decision makers successfully facilitated the protection of natural resources despite seemingly inflexible legislation. The county also provides incentives by annually awarding developers, designers, site superintendents, and contractors whose projects demonstrate excellence in tree preservation.

Source: Cline 2004.

Participating in the zoning process

Typically, local zoning ordinances divide communities into agricultural, commercial, industrial, and residential uses. Regulations defining acceptable building height and setback, and minimum lot size help control density and set a visual tone for the community. Zoning ordinances have historically led to development that exacerbated wildland-urban interface issues (Myszewski and Kundell 2005). Since property and sales taxes fund most local governments, there is incentive to encourage rather than restrict growth. As a result, communities compete with one another to attract new development and increase their tax base, often giving up controls and fees in their bid to enhance incentives. Zoning decisions can also result in unequal distribution of costs and benefits across communities. Despite the possible negative effects that poor zoning practices can have, zoning can be a tool for successful land-use regulation and resource protection in the interface (Myszewski and Kundell 2005). Zoning ordinances should promote the goals of the local comprehensive plan.

It is important to arrive at a zoning decision that is satisfactory to all or most of the individuals concerned. Consensus building utilizes the experiences and knowledge of the stakeholders, builds relationships, and often results in decisions that require less enforcement (Sandelin 2002). Resource professionals can facilitate informed discussions and aid the development of effective zoning by providing decision makers and stakeholders with reliable resource-related information. Resource professionals need to understand their audiences, and **Exercise 4.5: Connecting Prose to People** and **Exercise 4.8: Knowing the Community** give them practice. As with the policy-making process, participants in your workshop should become familiar with how zoning ordinances are developed and where they can play a role in that development. *Table 3* provides a brief overview of the zoning process.



Table 3: The Zoning Process

<p>1. Data Gathering Staff or consultants are asked to gather information, conduct studies, and prepare an initial draft of zoning text and a zoning district map. The local government usually appoints a planning commission or zoning commission.</p>
<p>2. Public Notification The findings are publicized and a public hearing is typically held in front of the zoning or planning commission (or in some cases the city or county commission).</p>
<p>3. Commission Review The presiding commission reviews comments and suggestions and revises the zoning text and district map to be submitted to the local government.</p>
<p>4. Commission Vote The local government discusses the proposal and votes on the zoning ordinance.</p>
<p>5. Public Comment The ordinance is published in the local newspaper and public comment is invited.</p>
<p>6. Review for Compatibility with Plan Before approval, zoning may be analyzed to ensure it is compatible with the local land-use plan. If it is voted on favorably by the local government, it becomes law.</p>

Source: Myszewski and Kundell 2005.



There are a variety of different types of zoning ordinances ranging from those that limit development on environmentally sensitive lands to those that encourage mixed-use (usually commercial and residential) development (Myszewski and Kundell 2005). **Fact Sheet 3.2: Zoning Ordinances** lists and describes several types of zoning ordinances that your participants may want to become familiar with. Invite your participants to imagine and discuss which steps would provide them with the most likely opportunity to interact with the zoning process. Following are some examples.

Step 1. Resource professionals can help with Step 1 by providing data, reviewing maps, and identifying environmentally critical areas.

Step 2. At the public hearing they can provide their professional opinion about the natural resource implications of the proposed decision and discuss the advantages and disadvantages of alternatives.

Step 5. They can provide feedback on the language in the ordinance and ensure that it is inclusive and appropriate.



Some ordinances define requirements for subdividing land and contain standards for the installation of street signs, sidewalks, gutters, curbs, and street trees. **Exercise 3.5: Understanding Conservation Development** helps participants see how land could be developed differently with slightly different zoning ordinances. By advising or serving on a local planning commission, resource professionals can provide information regarding the potential effects these controls may have on natural resources.

It is not essential that resource professionals know all the different types of zoning; it is more important that they understand what a versatile and helpful tool zoning can be when developed by informed decision makers. Becoming part of the zoning development process by serving on zoning commissions and providing data for local decision makers is a powerful way for natural resource professionals to help shape development and reduce problematic interface issues.

Landscape codes or ordinances are another type of land development regulation. They define minimum standards for designing, planting, and maintaining natural features within a community. They may be implemented through permitting requirements or BMPs. *Box 3* gives some examples of landscape codes that are used by some communities in the South. Increasingly, landscape codes are created to encourage preservation, management, and replanting of trees to protect tree canopy, improve stormwater management, and conserve vulnerable habitat (Abbey et al. 2003). **Case Study 17: Smart Growth Blossoms in Flower Mound, Texas** demonstrates the effective use of a tree protection ordinance and voluntary zoning options for conservation (see note on page 9).



Box 3: Community Landscape Ordinances

The following are some examples of landscape ordinances that communities have implemented.

- Habitat preservation zones
- Parking lot tree standards
- Buffer strips
- Stream bank buffers
- Appropriate trees and shrubs
- Tree removal permits required
- Shopping center green space
- Waterfront yards
- Interior pedestrian walks
- Tax credits for preserved trees
- Tree protection areas

Three southern communities are using landscape ordinances to protect natural resources in their communities.

Mandeville, Louisiana's landscape ordinance has been incorporated into its Comprehensive Land Use Regulation Ordinance. The landscape ordinance aims to preserve forest character and protect plant communities by regulating land clearing, requiring parking lot plantings, and protecting large trees and all live oaks from removal.

Collier County, Florida's landscape code aims to improve community aesthetics and promote harmony between the natural and built environments. The county has one of the most progressive codes in the country, encouraging developers to create micro-retention areas within open space of a development. These areas are planted with trees, shrubs, and ground cover and serve as on-site stormwater retention, helping developers fulfill stormwater discharge requirements.

Southlake, Texas implemented both a Landscape Ordinance and a Tree Preservation Ordinance. When the city reviews construction plans for permitting, proposed landscape plans must also be reviewed. During construction, city inspectors visit the site to ensure that trees are being preserved and protected properly. Once construction is completed a final inspection is made to evaluate the landscaping and verify preserved trees are in good condition.

Source: Abbey et al. 2003.

Participating in the land-use planning process

Land-use planning is a process that enables community members to envision a future and to design and implement a strategy to realize that vision. Most people want clean air, clean water, trees, and greenspace as well as economic prosperity and good quality of life. Development decisions usually revolve around what kind, how much, and where development should happen. Natural resource professionals can help communities develop land-use plans that will guide development decisions in ways that protect natural resources and community character while promoting a healthy economy. Despite the temptation to want to deny all new development, ask participants to imagine locations in their communities where future

development could be appropriate. Land use planning plays a vital role in community development. It is important for resource professionals involved with planning to keep the principles of effective planning in mind (Boles 2005).

- Listen to public issues and concerns; foster public involvement and empowerment; gain stakeholder buy-in.
- Create a clear community vision with defined goals; form strategies for each goal.
- Evaluate and improve the plan constantly.
- Be thorough and consistent; consider community vision and goals when making decisions; use accurate information and thorough analysis.
- Incorporate incentives that will make it easier for people to do the right thing.



Regional and landscape-level planning are becoming more common, allowing for greater collaboration and consideration for things like infrastructure, transportation, and natural resource conservation. Comprehensive plans are ineffective documents if communities lack the political will, resources, incentives, or know-how to implement them. Use **Exercise 3.4: Practicing Land-Use Planning** and **Exercises 3.5: Understanding Conservation Development** to help your participants think about various land conservation strategies and their advantages and disadvantages. It is important for participants in the planning process to keep the principles of effective planning in mind. The basic elements of the planning process are similar to the policy-making and zoning processes. *Table 4* outlines the elements of the planning process.

Table 4: Elements of the Planning Process

<p>1. Data Gathering Data are gathered assessing the existing conditions, population trends, and capacity of built and natural systems.</p>
<p>2. Goal Formation Data are interpreted; predictions of future trends and changes are made. Costs of the proposed plan are considered and compared to the available budget. These analyses are used to form goals.</p>
<p>3. Land-Use Decision Land-use alternatives are compared and one is selected.</p>
<p>4. Public Input The proposed plan is publicized and feedback is gathered.</p>
<p>5. Action Plan Goals are considered; strategies are formed and put into action. The plan is implemented.</p>
<p>6. Evaluation The plan's effectiveness is monitored and evaluated; this step may coincide with plan implementation (e.g. enforcement officers inspecting for compliance during construction).</p>

Source: Kelly and Becker 2000.

Like the policy-making process, the planning process provides opportunities for natural resource professionals to become involved. While they can contribute throughout the process, they can be most helpful in Steps 1, 2, 3, 4, and 5.

Step 1. Resource professionals can help with data gathering by providing information about natural resource conditions and processes that may affect or be affected by land-use activities. For example, resource professionals can advise decision makers about areas at extreme risk of wildfire due to vegetation or topography and the need either to reduce development density or to add fire protection services.

Step 2. Here resource professionals can help interpret resource-related data and predict future trends, helping planners form goals. For instance, they can identify ecologically significant lands that should be conserved to connect with future greenway projects.

Step 3. At this stage resource professionals can suggest planning tools and strategies that have worked for other communities, even sponsoring visits to other communities to learn from their experiences. If they know of communities that have successfully created walkable neighborhoods or greenspace for recreation, they can share this knowledge or even help arrange a field trip to the community for decision makers.

Step 4. It is important to recognize the rights of all citizens to participate in decisions (Boles 2005). The public may be involved in a community meeting or charette. Residents, decision makers, and leaders need clear, accurate information about factors and issues under consideration. Resource professionals can help ensure that community members consider natural resource issues when creating the community vision and defining goals and that the implications of planning decisions on natural resources are understood. All planning participants should consider the interrelatedness of the long-term consequences of their decisions (Boles 2005).

Step 5. Resource professionals can help determine whether natural resource goals have been achieved and whether there are problems that need to be addressed. For example, if a community's land-use plan aims to protect forest cover, natural resource professionals can provide data to help determine whether it is successful.

Smart Growth

Smart Growth is a popular term in community planning and neighborhood design that refers to development that benefits the environment, community, and economy. By understanding the Smart Growth principles, natural resource professionals can show decision makers and other stakeholders how land-use planning can benefit many aspects of community life. Stakeholders need to know that protecting natural resources does not have to threaten economic growth and community well-being, in fact, Smart Growth and sustainable development principles help promote all three: economic development, equity, and environment to improve overall quality of life.

Fact Sheet 3.3: Smart Growth Principles provides more information about the characteristics of Smart Growth. **Case Study 14: New Urbanism in South Carolina**, **Case Study 17: Smart Growth Blossoms in Flower Mound, Texas**, and **Case Study 23: Zoning**



to Conserve Greenspace in Davidson, North Carolina, provide examples of communities that utilize Smart Growth principles (*see note on page 9*).

Land conservation

One way communities can plan for resource conservation and enhance forest and habitat connectivity is by setting aside high quality natural areas (greenspace) (Hess et al. 2004). Natural areas can also provide recreational opportunities, reduce runoff pollution, and preserve wetlands and floodplain areas (Kelly and Becker 2000). Research shows that providing greenspace for exercise and recreation can help improve community health (Frumkin, Frank, and Jackson 2004) (*Box 4*).

Box 4: Promoting Health through Increased Access to Places for Physical Activity

It is well known that physical activity is important for maintaining good health. Greenspace may play an important role. Recent research shows that providing access to trails and other areas for exercise can increase the number of regular exercisers by 25 percent. The U.S. Centers for Disease Control and Prevention found that people tend to exercise more as they approach middle age, and for many, walking is the preferred form of physical activity. With health care costs of inactivity estimated to be as much as \$75 billion per year, the Task Force on Community Preventive Services strongly recommends creation of, or enhanced access to parks, trails, greenspace, and other places for physical activity. They also recommend communication strategies and outreach activities that promote use of trails and facilities.

Source: Gordon, Zizzi, and Pauline 2004.

Greenspace strips that are designed to provide linear parks for recreation are often called greenways. There are greenways in more than 500 U.S. cities (Nickens 2003). The city of Leesburg, Florida, is creating a network of greenways to connect the town's downtown business district with neighboring parks and neighborhoods. Much of the greenway system has been developed on abandoned railroad right-of-ways, providing a renewed use for the land, recreational opportunities, and community connectivity. "These trails are a great opportunity for Florida residents," said the project manager. "All over the state, former railway corridors are ideal for scenic trails that can connect neighborhoods, parks, and recreation, commercial areas, and historical and cultural sites." (Shapiro 2005).

Virginia also has an extensive greenway system. According to the Virginia Department of Conservation and Recreation 2005 greenways can do the following:

- Connect people, communities, and countryside.
- Provide recreational opportunities such as hiking, strolling, biking, picnicking, and fishing.
- Increase public access to cultural and historic sites, fostering greater awareness and appreciation for them.

- Provide refuge and migration routes for wildlife.
- Provide alternative transportation routes with bicycle and pedestrian facilities.
- Enhance water quality by buffering streams and trapping pollutants.
- Reduce flood damage.
- Increase property values.
- Enhance economic development and tourism.
- Provide close-to-home access to greenspace for greater proportions of the population than larger and more remote state and national parks.
- Improve overall quality of life.

Although there is still a lot to learn about the effectiveness of corridors for wildlife conservation, generally the balance of evidence thus far suggests they are beneficial (Levey 2004). Ample corridors that replicate nature as much as possible tend to be helpful for birds and small mammals (Nickens 2003).

Many tools may be used by state or local government, or private organizations and individuals to protect rural lands and natural areas from being developed. Land conservation tools are often used to protect ecologically significant lands that contain rare or diverse species and scarce habitat, or that provide connectivity to other natural areas. *Box 5* provides an example of a land acquisition program. **Fact Sheet 3.6: Land Conservation Tools** outlines land conservation tools that your participants should become familiar with. **Case Study 10: Land Conservation along the Suwannee River** and **Case Study 20: Where Rural Reigns: Purchase of Development Rights Program in Kentucky** illustrate examples of land conservation strategies (see note on page 9). Training participants should become acquainted with these land conservation tools. They may be asked to identify critical land for acquisition programs, or landowners who are considering participating in a land acquisition program may want more information. **Exercise 3.4: Practicing Land-Use Planning** enables participants to apply these tools to scenarios in their own regions.



Box 5: Florida Land Acquisition Program

Florida's statewide land acquisition program has preserved over one million acres of land in the last five years. The Florida Forever Program, which is run by the Division of State Lands of the Department of Environmental Protection, receives \$300 million annually from state funds to purchase environmentally sensitive lands. Program goals include: restoration of damaged environmental systems, protection of water resources, increased public access, management and maintenance, and increased protection of land by acquisition of conservation easements (land preservation agreements). Acquisition projects are selected and implemented by the Acquisition and Restoration Council which consists of nine members including representatives from the scientific community. Potential property can be nominated for evaluation by anyone in the state.

Source: Florida DEP 2005.

Growth boundaries

Another planning tool for conserving natural areas and managing development is the urban growth boundary. Urban growth boundaries are lines designated on planning and zoning maps that predict the limit of city services. They define land that can be urbanized outside of the current city limits and identify rural land where development will be discouraged. Oregon, Washington, and Tennessee require metropolitan areas to have urban-growth boundaries. Several other states have explicitly permitted and created incentives for growth boundaries and other urban containment policies (Pendell and Martin 2002). Oregon's growth boundary policy, the first and most progressive in the nation, is discussed in *Box 6*.

Box 6: Oregon's Urban Growth Boundary Policy

In 1973 the state of Oregon implemented a policy requiring all cities to develop affordable housing within urban growth boundaries and create protective zones outside the boundaries. The boundaries were designed to allow for 20 years of growth and aimed to protect 25 million acres of farms and forestlands. The policy stipulated that families who build homes outside the growth boundary were responsible for providing their own services, such as water treatment. Growth boundaries have proven to be effective tools for limiting development. For instance, while Portland's population increased by 50 percent in about 30 years, its land area increased by only 2 percent (Bullard, Johnson, and Torres 2000). There are some indications, however, that the social costs and benefits of growth boundaries are not distributed evenly across society. Growth boundaries may lead to increased rental prices, increased costs to businesses, and in turn, lower wages. These factors can negatively impact the quality of life for some people living within the growth boundary. Despite some limitations, growth boundary policy is easy to enforce and has immediate effects on urban sprawl.

Source: Alavalapati 2005.

Technology

Technology provides many tools to help reduce some of the negative effects of development. For instance, CuSoil, an innovative structural soil that can be used beneath pavement, provides greater permeability for street tree root systems, making trees more vigorous and preventing sidewalk failure (Amereq Inc. 2003). Permeable pavement systems are another cutting-edge innovation. Permeable pavers allow water to seep through roadway surfaces, enabling natural filtration to occur. This helps reduce run-off and prevents flooding. Technology is responding to a growing demand for innovations that will help communities develop more sustainably. Some communities are incorporating the use of such technologies into their local policy and planning legislature.

3. Becoming a Community Resource

So far, this guide has outlined a number of ways natural resource professionals can assist with land-use decision making. This section offers suggestions for beginning that process. It may be helpful to invite a guest speaker to describe how he or she became a resource for community decision makers. This section of your workshop is also an opportunity for your participants to describe their own forays into the land-use decision-making arena. **Presentation 3.5** covers the information in this section of the module. Some of the various ways for resource professionals to get involved in the procedures of policy, zoning, and planning are described in the following list. (In your workshop you should discuss which activities might require their supervisor's approval.)



- Contact local decision makers and offer to provide relevant resource information.
- Attend public meetings that relate to natural resource issues or join a planning committee and offer to review the resource implications of the plans being considered.
- Join the Chamber of Commerce and local civic clubs.
- Speak to local environmental groups.
- Write letters to the editor of the local newspaper.
- Spearhead a community festival to celebrate cultural or environmental resources.

Resource professionals should work to establish positive relationships with local decision makers and planners. Like most people, decision makers do not like surprises. Providing them with valued, timely information can open doors and quickly establishes a positive relationship. Opportunities will differ depending on the community, but resource professionals should be diligent and creative in their efforts to contribute to local land-use decisions.

Creating a statement

Decision makers may request a written or spoken statement summarizing current natural resource conditions or the implications of their land-use decisions on the natural resources of a given area. Whether written or verbal, statements should be simple and easy to read or understand, yet professional. Resource professionals should make sure they have all the relevant information from all perspectives about the issue. Often background research is necessary. They should begin by stating the issue at hand, then list conditions and the potential consequences to natural resources of the land-use decision under consideration. It is important to include both the potential positive and negative effects of any land-use decision. **Exercise 3.3: Creating a Statement** will help your participants practice creating fact-based statements for decision makers. If decision makers request advice or “answers,” the



natural resource professionals should remind them that policy necessarily reflects a balance of science, economics, and cultural values. It is not the role of resource professionals to make value judgments, but rather to distill scientific information and present potential consequences of different land-use changes to decision makers (Farnum and Dean 2001). Resource professionals are offering professional opinions about one of the many considerations the decision makers must consider.

Participating in community meetings

Many agencies expect their employees to keep track of local meeting agendas and attend meetings that are relevant to resource management. This allows resource professionals to keep up-to-date with local events and issues and identify opportunities for involvement. When participating in community meetings, resource professionals should represent their agency appropriately. Wearing an official uniform will help people know who they are. They should be friendly and introduce themselves; the more comfortable people feel around them, the more credibility they will have. When presenting resource information, professionals need to remember that there are multiple perspectives, needs, objectives, and values involved in the decision. They must be careful to present a variety of potential solutions that have worked for other communities, without advocating a particular approach or telling the group what they should do. **Exercises 3.3** and **Exercise 3.8: Role-Playing Development Decisions** will help your participants practice making nonbiased statements. **Module 4** provides more information about how to effectively communicate with others. **Case Study 12: Mediating for Change in Martin County, Florida** (see note on page 9) and **Case Study 18: Stakeholders in the Planning and Zoning Process in Georgia** along with discussion questions from **Exercise 3.9: Background and Discussion Questions for Case Study 18** will engage your participants in thinking about public participation in community land-use decisions.



Some issues are extremely controversial and can result in difficult or unproductive meetings. Encouraging public collaboration can help reduce conflicts, but in some cases more sophisticated alternative dispute resolution (ADR) methods, such as negotiation or mediation are required (Randolph 2004). These approaches involve structured, voluntary meetings of individuals or groups with different interests. A mediator or facilitator helps participants define problems, suggest solutions, identify decision criteria, and progress toward a policy consensus acceptable to most people (Cubbage 1991). Resource professionals may want to recommend using a mediator if conflicting perspectives are impeding progress or creating problems. **Fact Sheet 4.9: Reducing Conflict** and **Exercise 4.9: Working with Conflicts** will help your participants practice working with controversial issues.



Gaining public participation

Encouraging the public to get involved in local land-use decision making helps ensure that multiple needs, perspectives, and interests are taken into consideration. Public participation also helps create a sense of ownership, which can lead to greater acceptance of projects and decisions (Randolph 2004). In order for public

participation to occur, the public must have access to clear and accurate technical and policy information that they can understand and use (Weeks and Gonzalez 2000, Kaplan 2000). Resource professionals can help translate technical information so citizens can understand it. **Exercise 4.4: An Edict to Edit** and **Exercise 4.5: Connecting Prose to People** will help them practice this.



There are several ways to encourage public participation, and while local decision makers need to actively foster public involvement, resource professionals can also help. The first step in encouraging public communication is to get to know the community. By understanding who lives in the community and what they care about, efforts to communicate information and receive feedback will be more effective (Department of Toxic Substances Control 2003). **Exercise 4.10: Understanding Social Marketing** and **Fact Sheets 4.5: Tools for Understanding Audiences**, **4.6: Working with African American and Hispanic Communities**, and **4.8: Communication Challenges – When People Will Not Agree** will help your participants practice communicating with a variety of audiences. Resource professionals must work to keep the community informed about important natural resource issues and decisions. For effective participation, all viewpoints must be welcomed and respected and everyone involved should work to communicate as effectively as possible (Department of Toxic Substances Control 2003). **Module 4** also provides strategies for identifying the target audience.



Summary

Natural resource professionals who work with wildland-urban interface issues are significantly affected by local land-use decisions and the regulations that guide them. From resource managers in the field to outreach specialists working in offices, these professionals realize that their jobs include understanding how policy and other regulatory tools guide land-use change. By grasping how policy, planning, and other tools are developed and implemented, natural resource professionals will be better prepared to respond to resource changes in their area. At the same time, developing knowledge and skills in this arena will enable resource professionals to become a valuable source of information at the decision-making table. They can help ensure that decision makers have the appropriate background knowledge and awareness of how their decisions will affect natural resources. They can also provide technical expertise concerning the current conditions of natural resources in the area and help prioritize issues. The roles of natural resource professionals are rapidly changing as development continues to change natural areas. The skills and tools introduced in this module will help resource professionals become engaged with communities as they work to maximize benefits and reduce risks in the wildland-urban interface.

Suggested Readings

When City and County Collide: Managing Growth in the Metropolitan Fringe by Thomas Daniels, 1999. Washington, DC: Island Press.

Community Planning: An Introduction to the Comprehensive Plan by Eric Kelly and Barbara Becker, 2000. Washington DC: Island Press.

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Glossary

charettes: Short, intensive design exercise in which designers address focused issues or small areas in planning.

comprehensive plan: A statement of long-term goals, objectives, and policies providing both a broad perspective and a guide to short-term community decisions; sometimes called "comp plan."

conservation easement (land-preservation agreement): a legally binding contract between a landowner and an agency or organization in which the landowner agrees to permanently eliminate specified uses of the land while retaining ownership and general control.

density: A measurement of the number of people or residential units per unit of land, such as residents or employees per acre.

developer: Any person, including a governmental agency, undertaking any new development.

development: Carrying out any land-use change such as building activity or mining operation, making any material change in the use or appearance of any structure or land, or dividing land into three or more parcels.

greenspace: Natural features set aside in urban and rural areas, designated for leisure, recreation, agricultural, forestry, or resource conservation. Greenspace may be referred to as open space and generally implies the presence of vegetation.

greenway: Linear forms of greenspace that provide recreational opportunities and meet ecological objectives such as forest connectivity or wildlife habitat. In many places abandoned railways are being converted to greenways, providing walking and biking trails.

land development regulations (LDR): Local zoning, subdivision, building, and other regulations controlling the development of land.

land use: The development that has occurred on the land; the development that is proposed by a developer on the land; or the use that is permitted or permissible on the land under an adopted comprehensive plan or land development code.

local comprehensive plan: Local comprehensive plans or elements prepared or adopted.

new urbanism: New developments that are designed for pedestrian traffic and that contain a diverse range of housing and jobs, support regional planning for open space, and incorporate the appropriate architecture and planning to accomplish these goals.

policy: The way in which programs and activities are conducted to achieve an identified goal.

purchase of development rights: The acquisition of a governmentally recognized right to develop land, which is severed from the real estate and held or further conveyed by the purchaser. A tool to promote conservation.

regulatory taking: A regulation that denies all economic value, deprives the landowner of the expectations of ownership, and fails to substantially advance a legitimate state interest without just compensation to the landowner is considered a taking under the federal and state constitutions.

Smart Growth: Well-planned development that channels growth into existing areas by investing in cities and older suburbs while preserving greenspace and protecting the environment.

subdivision: The division of land into three or more lots, parcels, tracts, tiers, blocks, sites, units, or any other division of land; includes establishment of new streets and alleys, additions, and re-subdivisions.

transfer of development rights: A governmentally recognized right to use or develop land at a certain density or intensity, or for a particular purpose, which is severed from the realty and placed on some other property.