

## **An Ecosystem Approach to Community Planning**

It's a familiar story. An area has high quality natural resources with beautiful vistas, pristine waterways, mature woodlands, and abundant wildlife. The impacts of growth are virtually non-existent, and undeveloped land is plentiful. To many people this is an idyllic setting in which to live, and dependent upon the location development is drawn to the area. But this is where the problems arise: the natural resource characteristics which attract growth are severely degraded or destroyed by ineffective or inappropriate planning.

Forward-thinking communities are actively developing policies and regulations which are intended to protect and preserve their natural resources while still allowing for the economic benefits from appropriately designed and located growth. These communities are finding that development and natural resource protection are not necessarily mutually exclusive. The development community has also discovered the financial benefits of preserving the existing natural environment. The importance of taking an ecosystem approach to this balanced form of resource management has become apparent.

The ecosystem approach recognizes that the natural environment is an interdependent system. This approach focuses on the integrity and health of the entire ecosystem rather than focusing on a single species, stand of trees, or specific wetland. In other words, what happens upstream, on adjacent farmland, or in the neighboring community is just as important as what happens within the natural area. For example, in order to preserve the health and functioning of wetlands in a certain area, the ecosystem approach would recognize that the nearby uplands which direct drainage into the wetlands directly impact the health of these wetlands.

The typical physical form of the landscape in southeastern Michigan is divided into the following general categories: non-forested wetlands, forested wetlands, forested uplands, and non-forested uplands. Each land form component interacts with the others affecting the health and well being of the entire landscape.

Each of these components, however, has varying sensitivity to development. Those areas associated with riparian corridors and groundwater recharge areas are most sensitive, and therefore require more protective policies and regulations. Uplands, while directly affecting those areas to which water from their area will flow, are less directly sensitive to development, and can therefore support more growth. Different types of land forms therefore require different types of tools and techniques to protect the general health of the entire ecosystem.

Carlisle/Wortman Associates has developed several applicable tools and techniques for the preservation and protection of specific natural land forms. One example can be taken from the Shiawassee and Huron Headwaters Resource Preservation Project, a multi-jurisdiction study conducted in northwestern Oakland County. A matrix was developed that provides a quick reference of which tools and techniques may be more appropriate given the natural resource conditions and the land form types.

The planning tools and techniques shown in the matrix are divided into three central categories:

*Planning Support* are those tools which are implemented at the local or regional level, and are tailored to address the specific issues and concerns of a defined area. An example of a planning support tool includes the master plan which establishes a framework of community planning and seeks to consider all relevant factors that currently or in the future may influence community growth or decline.

*Regulatory Measures and Site Design Techniques* are tools and techniques that local government can implement through their planning policies and zoning ordinances. These tools and techniques direct the design of new development in a way that is least disruptive to the natural environment, optimize preservation of natural features, and create an aesthetically pleasing landscape. An example includes the overlay zone which is a special district that supplements but does not replace the existing applicable regulations.

*Acquisition and Preservation Incentives* are those tools and techniques intended to permanently protect open space. An example is the Transfer of Development Rights (TDR). This regulation permits the transfer of the development potential from certain types of land, such as valuable resource lands and historic sites (sending zone) to areas designated for growth (receiving zone.)

There are multiple planning tools and techniques available to communities which will enable the protection of unique characteristics and natural resources, those features which attracted many residents in the first place. By recognizing the interrelatedness and unique character of different components of the landscape, communities can promote sound growth, healthy wildlife habitats, and attractive natural scenery... all at the same time.

### **More Available Through Phase II**

The Phase II Storm Water Permit regulations have also given communities the opportunity to identify tools and techniques for effective environmental planning. The Phase II process requires communities to identify and map their natural resources, and identify Best Management Practices (BMPs) to manage storm water runoff. The Phase II “watershed” approach creates cooperative relationships between communities in the same watershed, allowing them to share costs of planning and implementation of storm water BMPs. For more information about potential tools and techniques, please see the accompanying article “Benefiting from Phase II and Watershed Planning” on this website.