

## **Current Landscape Planning Work at EDAW**

Richard Dorrier, Vice President/Principal  
EDAW, Inc.  
Alexandria, VA  
(703)836-1414  
dorrierr@edaw.com

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### **Introduction**

As the largest landscape architecture and planning firm in the world, EDAW is currently involved in numerous projects with both public and private sector clientele involving open space, trails and greenways as a defining element in the landscape. Our approach to these projects is multi-disciplinary attempting to blend sustainable ecological practices with economic development and social enhancement. We work at all scales from detailed site planning for children gardens and memorials to large regional plans providing recommendations for open space preservation and land conservation at the county, state and federal level. This paper provides an example of the methodology used for a large regional open space and greenways in northeastern Pennsylvania, which is typical of the resource planning work done by the firm for other public agencies throughout the U.S. This project established a GIS-based natural resource mapping and ranking methodology that can be applied to future open space projects for other jurisdictions involved in protecting sensitive resources such as valuable ecological habitat, wetlands and floodplains, mountain tops and ridges, farmland and other valuable and aesthetic land areas being threatened from sprawl or urban development. Examples of other similar projects and GIS practices are available on request at any time and by visiting our web site at [www.edaw.com](http://www.edaw.com).

### **Luzerne-Lackawanna Counties Open Space, Greenways & Outdoor Recreation Master Plan**

Together, Lackawanna and Luzerne Counties in northeastern Pennsylvania encompass almost 1,400 square miles of mountain ridges, forests, valleys and meandering waterways about 100 miles northwest of New York City. Originally settled to take advantage of the area's former abundant anthracite coal resource, the region is adapting to a diverse and multi-faceted economy. The effects of growth and development have been both positive and negative. Residents now place an increased value on the outstanding natural features and attractiveness of the area and want to protect these resources for future generations and attract new businesses, residents and visitors.

Lackawanna and Luzerne Counties are facing new challenges. As development continues to extend westward from the Poconos, development pressure will be placed on existing open spaces in the bi-County area. Already, access to the many streams, lakes and other important natural areas once enjoyed by the public is being limited. Areas regarded for their ecological importance in providing critical habitat for both plant and animal species are being subjected to fragmentation from development. As reflected in US Census data, demand for housing is strong and municipalities are struggling with how to achieve a balance between growth and protecting valued ecological and natural resources. This Open Space, Greenways and Outdoor Recreation Master Plan is a proactive effort that sets forth recommendations for achieving a balance between natural resources and the built environment so that the region may continue to thrive and benefit from its rich natural, recreational and cultural resources.

### **The GIS Evaluation Process**

A four-step resource-based evaluation method was used to identify Proposed Conservation Areas in the bi-county study area. A major accomplishment of this Plan involved the creation of a Geographic Information System (GIS) of data that will be available to both counties and local jurisdictions for long-term planning efforts. Existing mapped data was obtained and compiled, including urban areas, already protected parks, forests, gamelands, easements, and various other natural features from several sources. Key data layers were identified based on input from the OSRAC, public meetings and stakeholder interviews and assigned an ecological value of high, medium, or low. High value was placed on resource areas that related to protecting water quality, specifically drinking water supplies, or critical habitat areas. Critical subwatersheds (those watersheds that drain into surface water drinking supplies), wetlands, and natural area inventory sites – sites identified by the Nature Conservancy as having global,

federal, state, or local significance due to plant or wildlife habitat, received a high ecological assignment. Medium ecological value was assigned to slopes above 30%, ridgetop corridors, floodplains and high quality stream corridors, and mining related lands and prime agricultural soils were assigned a low ecological value.

Using the ecological index of each key data layer as a starting point, key data features were classified by size as large (500 acres or greater), medium (100-499 acres) or small (less than 100 acres). Protecting large land areas will lead to a more contiguous system and larger land areas are typically more effective in preserving and maintaining habitat and ecological functions. Those features that were medium and large in size and medium and high in ecological index, moved up in importance. Areas with low ecological value and less than 100 acres were excluded.

Next, key resources were reviewed for connectivity to each other and to already protected resources, such as forests, rivers or gamelands. In addition, an emphasis was placed on creating an interconnected system of open spaces by considering linear features like abandoned and active railroads, stream and river corridors, and existing and proposed trails as potential connectors or greenways.

### **Proposed Conservation Areas**

The Proposed Conservation Areas Map incorporates existing protected resources and trails, and proposed trails and conservation areas identified during the four-step GIS analysis. Proposed conservation areas have a mix of high, medium and low ecological values, vary in size and have been named and classified as highlands, natural areas, agrarian lands or greenways. Proposed conservation areas were evaluated for appropriate outdoor recreation activities based on the types of resources present, proximity to protected resources, and input from stakeholders and the public.

The proposed conservation areas account for almost 267,000 acres of land in the bi-county area, excluding trails. When combined with resources that are already protected, the proposed open space network encompasses about 366,000 acres in the bi-county area. This represents over 35% of the total land in the bi-county area.

### **Priorities**

The planning horizon for the Plan is 20 years; therefore it was necessary to prioritize plan recommendations as short term, mid term or long term so the Counties and local jurisdictions could focus efforts and resources. County priority areas were determined based on conservation area attributes and the ability to create a connected network of open spaces and greenways. Trails received priority for being regional connectors.

Approximately 102,000 acres of proposed conservation areas and 140 miles of trails were identified as short term priorities to be pursued in the first five years after plan adoption.

### **Implementation**

Achieving the recommendations in the Plan will require an aggressive and targeted approach at both the County and local levels. Each County is vested with the responsibility for implementing the plan through partnerships with local governments, the private sector, and the public. Local governments within each County play a very valuable role in the future open space, greenways and outdoor recreation program. As partners with the counties, each municipal government should assist in the protection, acquisition and management of land for the open space system and the physical development and maintenance of facilities.

In the short term, Luzerne and Lackawanna Counties should work cooperatively with each other and with local governments to implement the recommendations of this plan. In the long-term, the Plan recommends establishing a Luzerne-Lackawanna Regional Open Space, Greenways and Outdoor Recreation Authority (OSRA). The authority would be governed by a Board of Directors appointed from each County and the OSRAC would be transformed into a Friends of Open Space and Greenways organization supporting the implementation efforts of one authority.

## Land Conservation Tools

A number of methods to encourage open space protection and preservation are available to local communities. The Plan recommends a number of different approaches for each conservation area that should be pursued by county and local governments, landowners, conservation groups, not-for-profit organizations and other interested parties, to protect, conserve or acquire the recommended conservation lands. Successful implementation will require a combination of conservation tools including land management plans and easements; regulatory methods like density transfers, zoning overlays, buffer zones, subdivision exactions; and land acquisition made possible through donation and purchase, and made more attractive to developers and landowners through incentives and purchase of development rights, among others.

## Funding Sources

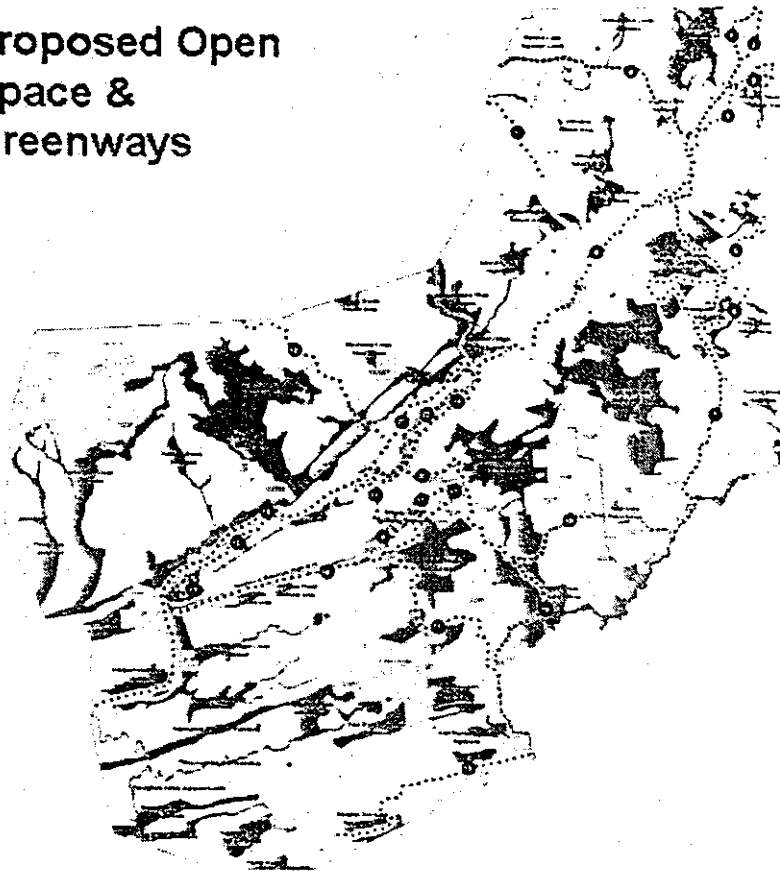
Achieving the vision that is defined within this Plan will require, among other things, a stable and recurring source of funding. No single source of funding will meet the goals and objectives defined in the Plan; instead, the counties will need to work cooperatively with each other and with many other private, local, state and federal partners to generate funds sufficient to implement the program. The Plan recommends the Counties immediately pursue a bond referendum, explore and establish a recurring source of revenue in partnership with local governments (such as sales tax, property tax or excise tax), and explore instituting a utility fee program.

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## Proposed Open Space & Greenways



### LEGEND

#### Categories

- ▬ Existing Infrastructure
- ▬ Greenway
- ▬ Program
- ▬ Suburban
- ▬ Urban
- ▬ Water
- ▬ Wetland
- ▬ Wetland

- Distribute Conservancy Greenway Trail
- D & H Greenway Trail
- Delaware River Heritage Trail
- Pennsylvania State Co. Greenway Trail
- Roaring Brook Corridor
- Route 6 Trail
- Route 7 Trail
- Ashley/Haines Trail
- Lehigh Mountain Trail
- Rock Chimney Trail
- Excerpt Trail
- Delaware Heritage Rail Trail
- Luzerne County Rail with Trail
- Schuylkill Loop Trail
- Pennsylvania State Park Mountain Trail
- Greenway Trail
- Schuylkill County Greenway Trail
- Route 6 Trail
- Route 7 Trail
- New York Trail
- Mountain Valley Greenway Trail
- Schuylkill County Greenway Trail