

PLAN FOR GREEN INFRASTRUCTURE - LINKING ARKANSAS COMMUNITIES 2008-09



Fayetteville's proposed and existing trails in the I-540/ Hwy 71B/ Joyce Boulevard area of the city overlaid on an early 2000's vintage west-looking aerial photograph. Notice the potential Green Infrastructure elements: forests, trails, and riparian zones among the developed areas. Image credit: Terry Collier

**Healthy green infrastructure promotes thoughtful growth
and creates economic, social, and environmental benefits**

A grant given by the USDA Forest Service to
Arkansas Forestry Commission Urban Forestry Program
In partnership with Fayetteville Natural Heritage Association and
Beaver Water District

Executive Summary:

What is Green Infrastructure?

Elements of a Green Infrastructure Network

Project overview

Economic, Social, and Environmental benefits

Summary

Contacts

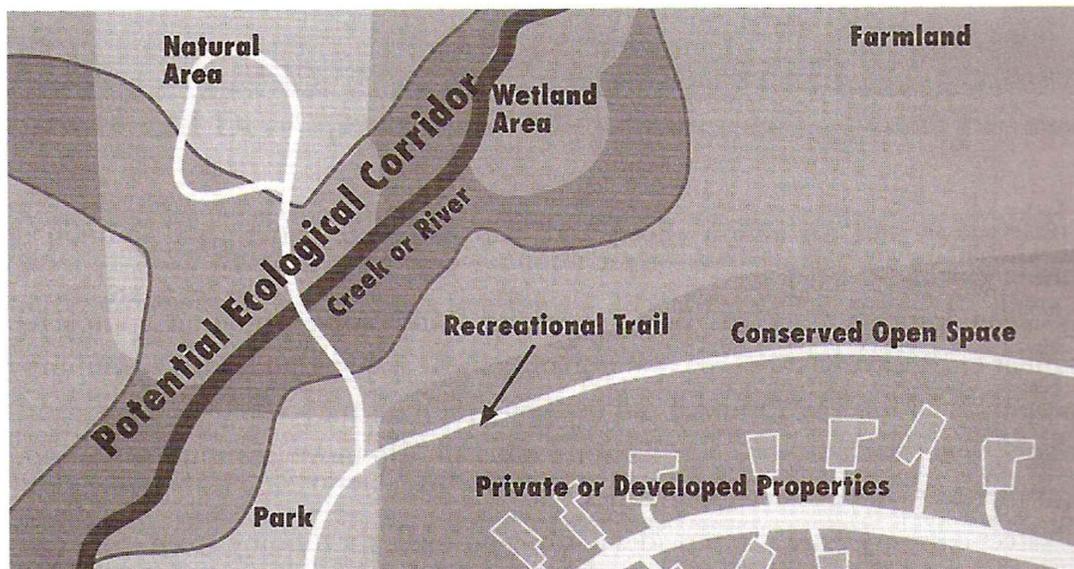
Project Study Area map

What is Green Infrastructure?

The ecological framework necessary for environmental, social, and economic health consisting of public and private lands such as: parks, trails, open spaces, forests, farms, and ranches

A conservation planning strategy that focuses on the interaction of lands to be developed and conserved and optimizes land use to meet the needs of both people and nature

Elements of a Green Infrastructure Network



A Green Infrastructure network can consist of natural areas, wetlands, farmlands, conserved open space, trails, parks, private or developed properties, rivers, streams, and ecological corridors. Image credit: Conservation Resource Alliance, Michigan

Project Overview

A grant in the amount of \$25,000 has been given by the USDA Forest Service to the Arkansas Forestry Commission Urban and Community Forestry Program to develop a **Plan for Green Infrastructure-Linking Arkansas Communities, 2008-09**. Fayetteville Natural Heritage Association and the Beaver Water District are partners. We will collaborate with elected officials, planners, businesses, economic development groups, landowners and other stakeholders in Farmington, Johnson, Greenland, Fayetteville and surrounding areas of Washington County. The plan is one of four Green Infrastructure pilot studies supported by the Southeast Region of the National Forest Service.

Green Infrastructure Planning identifies a network of working landscapes, trails, watersheds and natural and historic areas. These areas support the health of our communities.

1 in 8 people in Arkansas drinks water from the watershed of Beaver Lake. We have an opportunity to insure the availability of abundant clean water.

Our children will thank us for our effort to plan for the future. Active children, connected to nature, will be healthier and less obese.

The **planning effort** will:

- Respect the needs of communities for economic development and growth
- Encourage social benefits such as recreation and health
- Increase property values, support local businesses and attract tourism
- Increase corporate retention and relocation
- Reduce long term costs for services

The result will be a **comprehensive map** of our most valuable natural and cultural resources, using GIS mapping with science based goals and objectives.

ECONOMIC BENEFITS

A healthy Green infrastructure pays for itself

Economic value of trails, parks, conservation of watersheds and farmland:

- Attracts employment that comes with relatively high wages
- Develops a larger tax base and lowers taxes
- Enhances local economic development
- Provides less expensive basic utilities
- Raises land values

Hiking and biking is a top amenity to home buyers

according to a National Association of Realtors' Survey

Homesites near parks and recreation areas sell for 15-20% more

If we sustain our regional ecosystem, we will:

- Continue to be one of the **fastest growing regions** in the U.S.
- Better **attract and retain**:
 - National firms** like **Procter & Gamble**, well known for its positive leadership in communities
 - Entrepreneurial companies** like **CaseStack**
 - Local start-ups** like **Bio-Based Technologies**Afford direct and indirect employment opportunities and revenue streams to local governments
- Have a **leisure and hospitality economic sector** that continues to lead employment growth past 2008 (NWA Business Journal)
- Continue to base much of our **leisure and tourism on the Beaver Lake ecosystem**, including 30,000 acres of water and 500 miles of lakeshore for boating, fishing, water skiing, scuba diving, swimming, and camping. Visitation to Beaver Lake has **increased 500%** in the last ten years (Corps of Engineers' records)
- Support our "**Green Valley**" concept: "What we need to realize is that the "Green Valley" concept is and must be **more than a marketing slogan**. It has to be a **commitment to a regional development strategy** that acknowledges and embraces the fact that the folks we want to attract place a **high value on the quality of life investments** embedded in the Green Valley concept."
(Jeff Collins, Arkansasbusiness.com)

SOCIAL BENEFITS

A healthy natural environment leads to healthier people

Our trails, parks and natural and cultural landscapes can give our population a healthier life style through

- Opportunities for **physical exercise and activity**
- One of the most important but least recognized benefits of the natural landscape is its power to **improve physical and mental health.**
- Leisure activities in natural areas promote **family enjoyment and relieve stress.**

Poor health and the effects of obesity

- The nation's **2nd leading cause of death** is physical inactivity along with unhealthy eating (US Dept. of Health and Human Services)
- In Arkansas, **33% of adults, 34% of those over 65, and 10.9% of 9th-12th graders** are obese (1999)
- “Because treating everyone affected by obesity will **bankrupt the health care system**, our only realistic option is to invest in **obesity prevention.**” (William H. Dietz MD, PhD, Director of Nutrition and Physical Activity, Centers for Disease Control and Prevention)
- **Recommendations** for enhancing opportunities for physical activity are to **create walking trails** or tracks and **accessible bicycling** as part of a comprehensive program
(“The Impact of Obesity”, 2000 Report, State of Arkansas)

Support of Green Infrastructure planning with networks of trails, watersheds and natural and cultural landscapes will result in opportunities for

- Youth and adults to prevent obesity by being **active, healthy and connected with nature**
- **‘Free ranging’ childhood experiences of exploration**, leading to enjoyment of the out of doors and release of stress (from comments by John Rosenow, Chief Executive, The Arbor Day Foundation)
- Understanding and support for the **need for conservation of our natural and cultural heritage**
- **Educational programs** leading to a conservation ethic

ENVIRONMENTAL BENEFITS

Preservation of our natural resources of land, water and air

Green Infrastructure planning creates an **interconnected network** of natural lands, working landscapes and other open spaces that will **conserve ecosystem values and functions**

The challenge of maintaining water quality

- Our **Karst topography** brings polluted water quickly into groundwater systems with sensitive habitats
- **Federal laws now require improvement of stormwater discharge**
Green Infrastructure planning identifies forested areas that can contribute to decreasing stormwater discharge helping to satisfy these laws

Increasing tree canopy in Fayetteville from 27% to 40% would save \$135 million in stormwater containment

according to American Forests Urban Ecosystem Analysis of Northwest Arkansas, 2002

- **The Beaver Lake and Illinois River watersheds can be protected through conservation of critical natural areas**

Loss of Open Land

- **We lose approximately 6,000 acres of open space each day in the US**
- **Cropland and pasturage in Washington County has decreased by 11,955 acres or 6.5% from 1992 to 2002.** If trend persists, expect loss of another 8% or 13,650 acres in stats for 2002 to 2007.

Addressing the problems

The US Forest Service has decided to support conservation of open space by:

- 1) Convening **partners** to identify and protect priority open space
- 2) **Helping private landowners conserve open space**
- 3) **Helping communities expand and connect open spaces**
- 4) Participating in **community growth planning to reduce ecological impacts and wildfire risks**
- 5) Funding pilot studies such as this one, **Arkansas Green Infrastructure Planning – Linking Arkansas Communities**, which will suggest local solutions to creating a network of natural and working landscapes

SUMMARY

The Green Infrastructure Plan will take a strategic approach to provide a rational, scientific, and predictable planning tool for coordinating both conservation of natural resources and encouragement of growth

Steps

- **Gain support and cooperation**
- **Get data and input from specialized stakeholders and general public**
- **Make decisions about goals and objectives**
- **Map plan for our Green Infrastructure Network**

The final Green Infrastructure Plan will be a blueprint for our future that combines economic, social, and environmental concerns to link protection of our land and water resources with our future growth

For project information please visit our website at:

<http://www.fayettevillenatural.org/whats-happening.php>

To learn more about applications of the Green Infrastructure concept:

<http://www.greeninfrastructure.net>

<http://www.dnr.state.md.us/greenways/gi/gi.html>

<http://www.greenmapping.org/>

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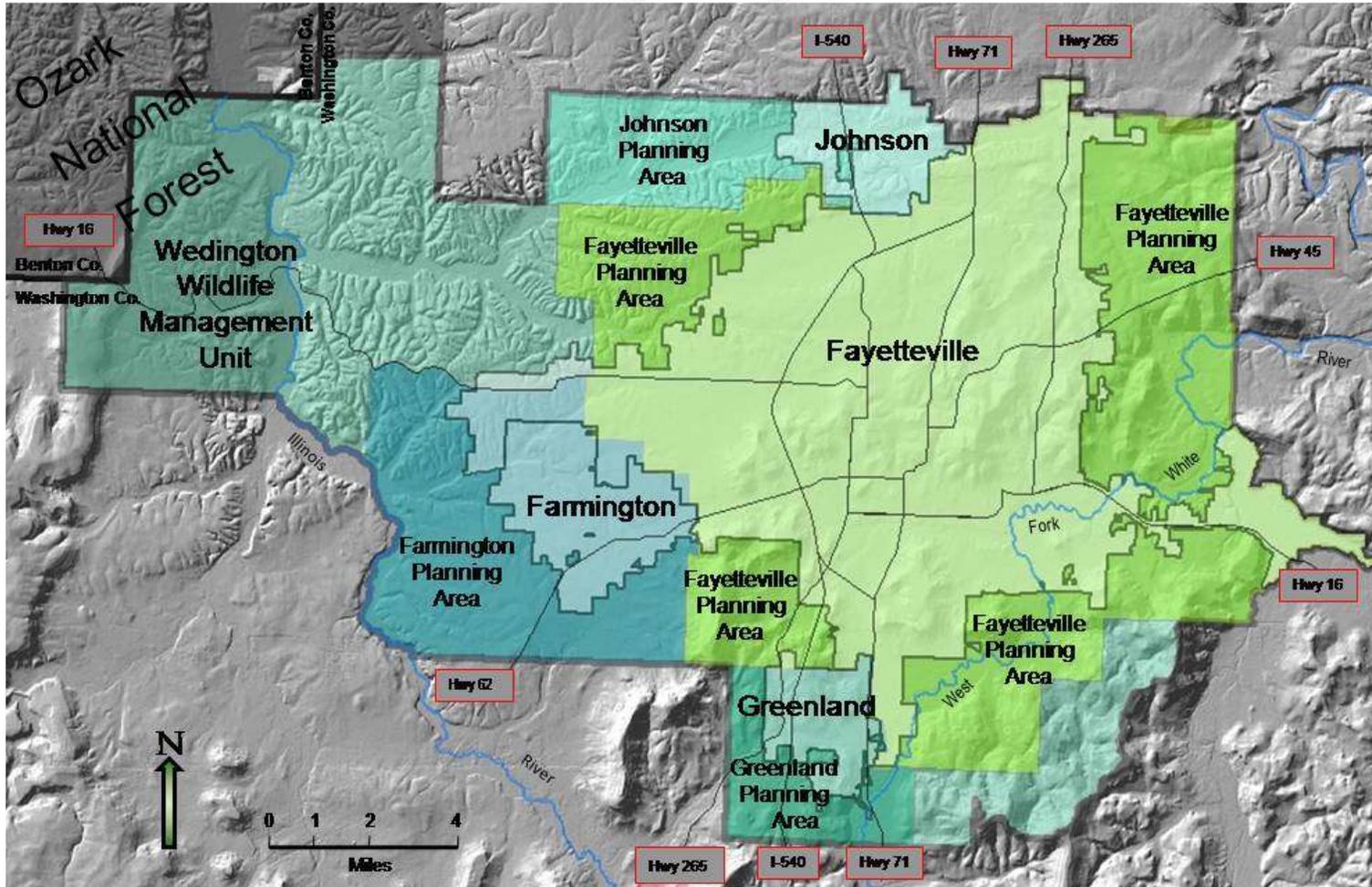
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Project Study Area



The project study area is confined to Washington County and focuses on the city limits and planning areas of the municipalities of Fayetteville, Farmington, Greenland, and Johnson and the Wedington Wildlife Management Unit of the Ozark National Forest. Somewhat arbitrary boundary lines enclose the intervening lands northward to the Tontitown planning area, southwestward to the Illinois River, and southeastward to the watershed boundary of the West Fork of the White River.