



CHAPTER 6. ENVIRONMENT

The natural environment has become increasingly important in the transportation planning process. Environmental assessment studies are often required for transportation projects in order to ensure that impacts on wildlife habitats and natural resources would be mitigated as much as possible. The Northwest Arkansas region faces typical environmental challenges such as soil erosion during road construction or impact on water quality and, as a result, there is an increasing need to protect the habitats of unique species such as the threatened Ozark Cavefish (*Amblyopsis rosae*) and to protect ground-water recharge areas as the region continues to grow. Important environmental factors to consider for transportation planning purposes include expanding urban land area, the widening and building of new roadways, and the choice of travel modes.

Northwest Arkansas has a rich cultural history. Transportation plans must also take historic and cultural factors into consideration as roadways are aligned or widened. Historic and cultural environmental factors of Northwest Arkansas include the Cherokee Trail of Tears, the Civil War trails and the Old Missouri Road/Old Wire Road/Butterfield Coach Trail. Historic buildings, battlefield sites, archeological sites, and cemeteries are additional examples of historic and cultural factors. It is important that these factors be considered when road alignments, the type of roadways, and the scale of roadways are chosen. For example, a limited access boulevard with a greenway median may be more appropriate than a five-lane highway through a historic-scenic area.

A series of studies and initiatives have been undertaken to address the environmental and cultural factors for preservation or mitigation in the region.

THE CAVE SPRINGS KARST RESOURCE CONSERVATION STUDY

Northwest Arkansas is an area of the State that has experienced unprecedented periods of growth over the last decade, most notably from 2003 to 2007. The location of the corporate headquarters of Wal-Mart, Tyson Foods, J.B. Hunt, and other companies in Northwest Arkansas has been the primary factor in this growth. The rapid population growth has strained the local infrastructure. As a result, many new transportation infrastructure projects have been proposed to keep pace with the residential and commercial development.

Some of the major proposed transportation projects include the Hwy. 412 Northern Bypass, Northwest Arkansas Regional Airport Access Road, upgrade of I-49 to six lanes between Fayetteville and Bentonville, an improved north-south travel corridor along Hwy. 112, an improved eastern north-south travel corridor along Hwy. 265, Bellview Road improvements, Hwy. 264 Improvements, the Razorback Greenway Trail, and Hwy. 549 (Bella Vista Bypass). The existing development, the proposed transportation projects, and future development may affect local karst resources that support threatened and endangered species, as well as having potentially detrimental effects to groundwater and wildlife resources in general. This Study was undertaken to mitigate for any potentially adverse effects to sensitive resources resulting from possible secondary and cumulative development.

Cave Springs Cave is located in the northwest Arkansas community of Cave Springs, near the intersection of Highways 264 and 112 in southern Benton County. The Cave Springs Recharge Area encompasses lands that are included in the municipalities of Cave Springs, Rogers, Lowell, and Springdale and has a total recharge area of 12,515 acres (19.5 square miles).

Cave Springs Cave provides habitat for the largest known population of Ozark Cavefish, a Federally listed threatened species. In addition to providing habitat for Federally protected species, water quality in the cave is an indicator of regional water quality in the shallow aquifer.



Cave Springs Cave

NWARPC entered into a contract in early 2014 to begin the Cave Springs Area Karst Resource Conservation Study. The project is nearing completion with the four municipalities considering the Study recommendations. To date, the City of Rogers has amended their drainage criteria manual to incorporate the recommended Best Management Practices (BMPs).

The Study consisted of three primary objectives:

Objective One was to seek out, consolidate and analyze existing water quality data; species population data; and development data in and around the Study area, defined as the Cave Springs Recharge Area. This information was used to determine trends and needs for additional data.

Objective Two was to work with the scientific community to determine appropriate actions necessary to ensure adequate protection of local karst recharge zones that support threatened and endangered species, and builds on previous efforts for karst conservation.

Objective Three was to work with local, county and State officials/administrators and other relevant stakeholders to determine and implement the best mechanisms to ensure that conservation actions are used effectively in the appropriate areas.

As part of the study, the Nature Conservancy and Ozark Underground Laboratory (OUL) performed an extensive literature review of cave hydrology, biology and water quality. Based on this Study, primary water quality goals for the Cave Springs Recharge Area are to limit discharges of oxygen-depleting contaminants, turbidity/fine sediments, nutrients, and metals to the groundwater system through the use of best management practices (BMPs). Additional criteria and guidance for BMPs to protect the unique karst resources of the Cave Springs Recharge Area have been developed while allowing for future growth and development. In July 2015, the city of Rogers adopted the recommended BMP's as part of an amendment to the Rogers Drainage Criteria Manual. The other jurisdictions are in the process of considering the recommendations of the Study.

Map 6.1 shows the Cave Springs Recharge Area, which is comprised of two major areas:

The **Direct Recharge Area** includes 5,702 acres (8.9 square miles) and provides most of the recharge water for the Cave Springs cave system. This is an area where soils allow for relatively rapid recharge, and there is a direct hydrologic connection between infiltrating runoff and the karst system. The northeastern boundary of the Direct Recharge Area lies roughly parallel to, and west of, Interstate 49 (I- 49).

The **Indirect Recharge Area** encompasses 6,813 acres (10.6 square miles) and lies to the northeast of the Direct Re-

charge Area. Groundwater tracing has shown that very little of the water from losing streams in this area reaches the Cave Springs cave system. However, the dye tracing indicates that there is some groundwater movement from the Indirect Recharge Area into the Direct Recharge Area and ultimately to Cave Springs Cave. I-49 crosses the Indirect Recharge Area.

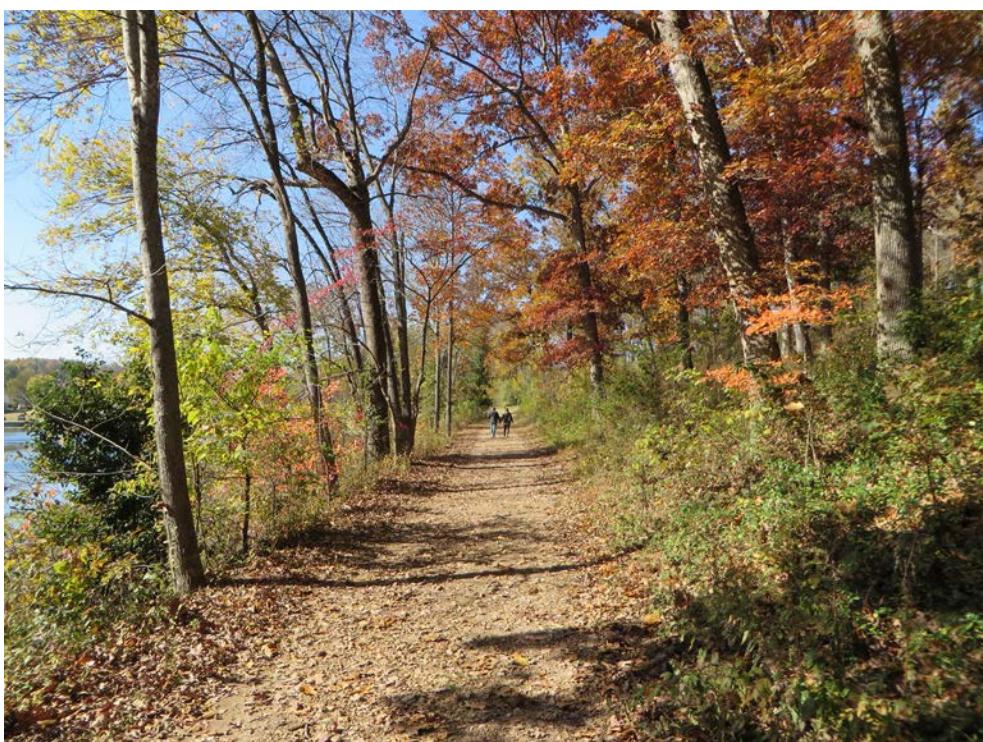
The Study also included a groundwater vulnerability assessment for the recharge area for Cave Springs Cave. The vulnerability assessment is based on the concept that not all lands pose equal risks of introducing contaminants into karst groundwater systems. Vulnerability mapping is based on physical and hydrogeologic conditions of the land being mapped. The approach permits planners and others to tailor the level of management attention to the likely severity of groundwater impacts from particular land uses.

The vulnerability of a karst groundwater system and its associated biological community is a function of the hydrobiological characteristics of its particular groundwater system and is intimately connected with land use within its recharge area.

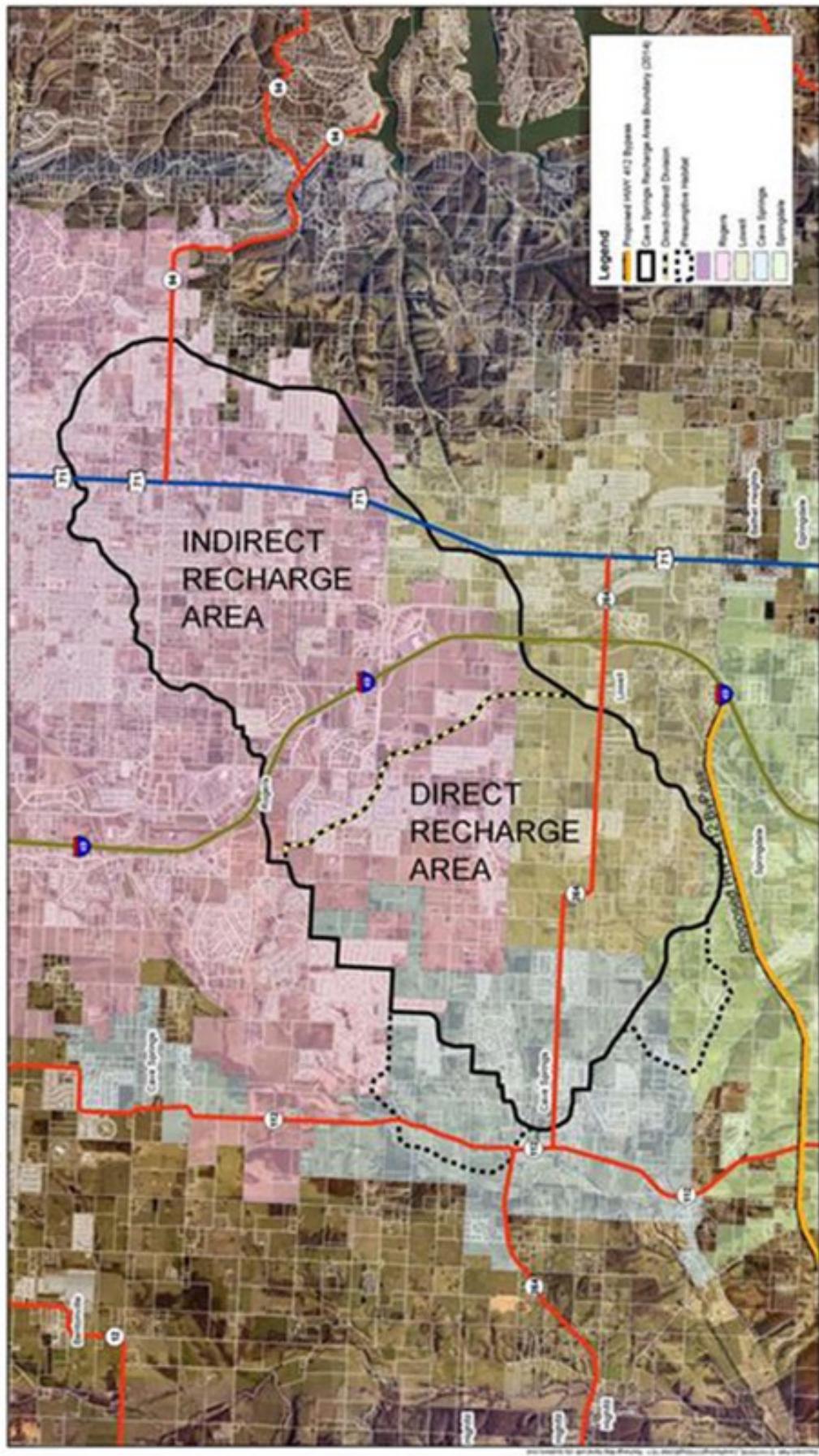
The vulnerability map (Map 6.2) qualitatively depicts risks posed to groundwater quality by various portions of the direct and indirect recharge area. The Cave Springs recharge area was mapped to show the following categories of relative risk:

- Low Vulnerability Lands including lands within the Indirect Recharge Area for Cave Springs, with additional scrutiny required along the I-49 corridor;
- Moderate Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having good natural soil treatment capability;
- High Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having fair natural soils treatment capability; and
- Extremely High Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having poor natural soils treatment capability. Locations within the groundwater trough and along losing stream corridors are also considered as extremely high vulnerability factors.

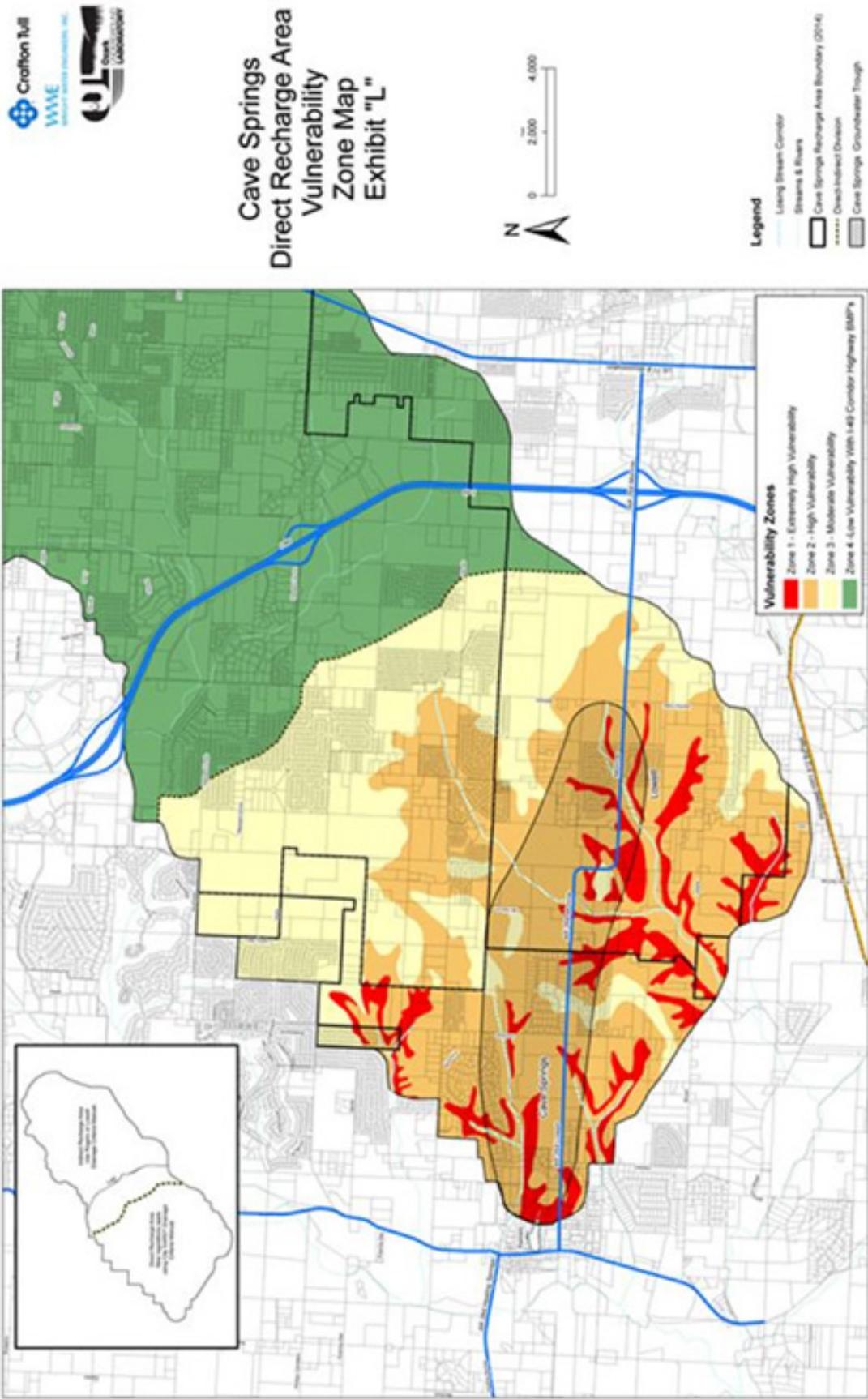
Potential hazards to groundwater quality were also identified within the Cave Springs recharge area. The major groundwater hazards identified include runoff and spills from highways; sewage conveyance, treatment and disposal facilities; and stormwater detention basins. The vulnerability mapping performed in this assessment helps to ensure that land development BMPs are only applied to necessary areas where they will do the most good in protecting water quality at Cave Springs.



Cave Springs Trail



Map 6.1 - Cave Springs Recharge Area



Map 6.2 - Cave Springs Vulnerability Assessment

PHASE II STORMWATER REGULATIONS

Over the past decade, the NWARPC has partnered with the University of Arkansas, Division of Agriculture Cooperative Extension Service (UACES) to assist communities, counties and the University of Arkansas in Washington and Benton Counties to meet EPA's Phase II stormwater regulations. In urbanized areas, stormwater picks up pollutants and flows, untreated, through Municipal Separate Storm Sewer Systems (MS4s), into local creeks, streams and lakes. To prevent harmful pollutants from being washed or dumped into a storm drain system, the U.S. EPA requires that jurisdictions obtain permits to properly manage and discharge stormwater.

On August 1, 2014 the Arkansas Department of Environmental Quality issued the third consecutive five-year MS4 Stormwater General Permit which mandates that each of 21 regulated jurisdictions in Northwest Arkansas develop and implement their own stormwater management program to reduce the contamination of stormwater runoff and prohibit illicit discharges. These jurisdictions include: Bella Vista, Benton County, Bentonville, Bethel Heights, Cave Springs, Centerton, Elkins, Elm Springs, Farmington, Fayetteville, Greenland, Johnson, Little Flock, Lowell, Pea Ridge, Prairie Grove, Rogers, Springdale, Tontitown, University of Arkansas, and Washington County.

Northwest Arkansas MS4 Stormwater Compliance Group

A key role of the NWARPC is coordinating regular meetings of the MS4 Stormwater Compliance Group. Composed of local MS4 representatives, NWARPC staff and the UACES, the group meets monthly to discuss permit compliance challenges, local stormwater education program needs and accomplishments, and regional coordination of stormwater protection efforts.

The MS4 Stormwater Compliance Group continues to be a model for other MS4s in Arkansas. NWARPC continues the work of assisting the Northwest Arkansas MS4s, as well as others, in the development of their stormwater management programs and meeting the EPA Phase II requirements.

Regional Stormwater Education Program

A Stormwater Education Steering Committee meets annually to guide and direct the UACES's regional urban stormwater education and involvement programs. UACES programming is increasing public awareness and understanding of stormwater runoff, through the development and distribution of print and electronic educational materials, displays, mass media promotion, youth and adult education programs, and public engagement events including creek and lake clean-ups. UACES staff provides Quarterly Reports and Annual Reports for the MS4s and conducts annual municipal employee trainings.



Stormwater Coordination Meeting

NORTHWEST ARKANSAS OPEN SPACE PLAN

Northwest Arkansas has abundant open space today, but the rapid growth of the region has already begun to replace forests, prairies, farmland and other valued natural lands with housing, shopping centers, highways, office parks and other forms of development. Between 2010 and 2030, Northwest Arkansas is projected to have the highest growth rate in the central United States. The projected population growth rate of 58 percent roughly translates to an increase in population from 500,000 today, to 800,000 in 2040. Without question, people need places to live, work, shop and be entertained. However, people also need places that support outdoor activities, protect water supply from pollution, conserve habitat for native plants and animals, and ensure the quality of life for all residents. People value the beauty and function of their natural lands and waters and open space conservation is important to the region.



Gentry Prairie (photo by Terry Stanfill)

The work on the Northwest Arkansas Regional Open Space Plan began in late 2014, with the public process to develop the Plan being carried out throughout 2015 and adopted in early 2016. The Plan identifies the natural landscapes and open spaces that make Northwest Arkansas an attractive place to live, and includes a comprehensive strategy for the conservation of these natural assets. Though focused on conservation, this Plan is consistent with the regional goal of continued growth and development. Landowner participation in conservation programs is welcome and encouraged, but strictly voluntary. To this end, the Plan features a detailed mapping inventory of regional resources, and a 'toolbox' of strategies that landowners, developers, and governments can draw upon to balance regionally important goals of land conservation and development.

The Plan identifies the natural landscapes and open spaces that make Northwest Arkansas an attractive place to live, and includes a comprehensive strategy for the conservation of these natural assets. The Plan was adopted by the NWAPRC on December 1, 2015. The complete Plan and Appendix are a part of the MTP and can be viewed at <http://www.nwarpc.org> or at <http://www.nwaopenspace.com>.

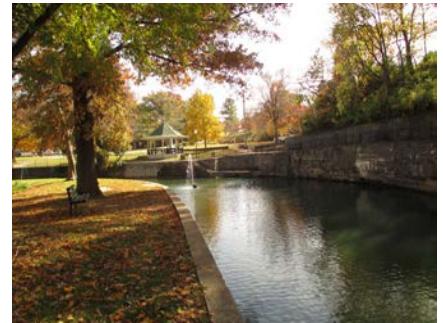
Background

Since its formation in 1966, the NWARPC has been working toward making Northwest Arkansas a more desirable place to live and work. Open space has been a subject of discussion in Northwest Arkansas for decades, beginning with NWARPC's first open space plan in the 1970s. Since then, many other local and regional studies have focused on open space, or included it as a key component. This new Plan build upon these previous and ongoing efforts and provide the rationale and strategies necessary to implement Plan recommendations. The Plan was financed through a grant by the Walton Family Foundation to the NWARPC.

BENEFITS OF OPEN SPACE

Creating Value & Generating Economic Activity

- Proximity to parks and open space enhances the value of residential properties.
- Parks and greenways attract non-resident visitors who put new dollars into local economies.
- Quality parks and scenic landscapes help attract and retain a high quality workforce.



Water Quality Benefits

- Open space provides protective natural buffers to critical water resources, such as Beaver Lake (the primary source of drinking water for Northwest Arkansas), the White River, the Illinois River, and their tributary creeks, streams, and wetlands.
- A 2008 survey of Arkansans found that “Nearly all respondents viewed water as an important issue for Arkansas’ long-term growth and prosperity.”



Natural Wildlife Habitats

- According to the Northwest Arkansas Land Trust, “While some cities are beginning to incorporate connective greenways into their planning process, natural areas are being rapidly consumed in Northwest Arkansas, resulting in the fragmentation of important ecosystems, scenic areas and wildlife habitats.”
- Northwest Arkansas’ karst topography (including caves, springs, and sink holes) supports clean water and native habitats unique to the region. These are areas highly sensitive to pollution and open space helps to protect them.



Recreation, Health and Safety Benefits

- Recreation areas help to increase physical activity, thereby preventing obesity and reducing chronic medical conditions, not to mention improving mental health and overall quality of life. Parks may also improve public health by increasing social interaction, reducing stress through exposure to nature, and more.
- The protection of natural floodplains along rivers and streams also protects people and property from flood damage.



Historic & Cultural Benefits

- Open space provides context for historic and cultural attractions. The quality of experience for visitors is critical to the success of tourism for such sites, and open space planning can help protect them and buffer them from nearby development.
- Example: Pea Ridge National Military Park is the most intact Civil War battlefield in the United States, and a key goal for management of the park is “preserving the character of the landscape”.



Farmland & Rural Landscapes

- Scenic landscapes, such as family farms, prairies, forested ridgelines and Ozark vistas help define Northwest Arkansas' very character.
- According to the Northwest Arkansas Council's 2014 Regional Food Assessment, "The continued viability of agriculture in Northwest Arkansas depends significantly on three interdependent factors: farms remaining economically viable, farmland staying in production (and out of development), and new farmers succeeding retirees"
- Working closely with landowners is a cornerstone of successful open space protection, whether it is a farmer who wants to keep their land in farming, or a property-owner who simply wants their children to recognize the land they grew up on.



PLANNING PROCESS

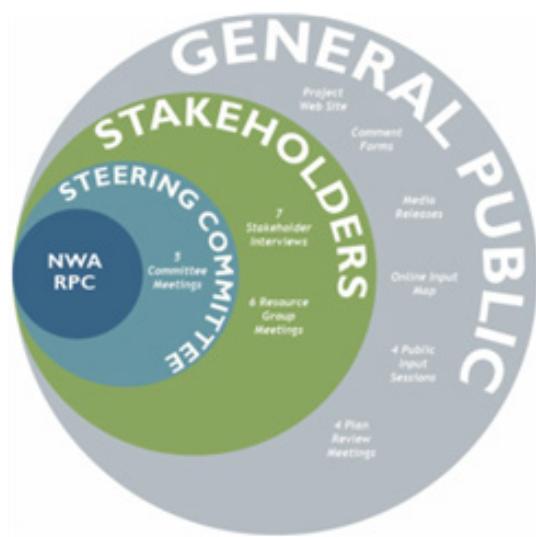
The main steps in the planning process are listed below.

- Project Initiation (Nov 2014 - Jan 2015)
- Inventory, Assessment, & Mapping (Nov 2014 - April 2015)
- Steering Committee Meetings
- Public Involvement
- Map Creation, Analysis, & Recommendations (Mar-Dec 2015)
- Implementation Strategy (Jul-Sept 2015)
- Draft Plan (April 2015 - January 2016)
- Final Plan (Oct 2015 - Mar 2016)

- 25 Steering Committee Members, with 5 official meetings
- 60+ participants in stakeholder interviews and meetings
- 7 Open house public workshops
- 350+ Participants at open house public workshops
- 392 unique visitors to the project website per month (avg)
- 260 Likes on the project Facebook page
- 5 Draft and Final Plan presentations
- 800+ Public Comment Forms

PUBLIC MEETINGS:

- 01/20/15 Fayetteville Public Library 81
- 01/21/15 Bentonville Public Library 76
- 06/08/15 Garfield Community Center 26
- 06/09/15 Springdale Jones Center 46
- 06/10/15 Prairie Grove Battlefield State Park 29
- 06/11/15 Gentry City Public Library 54
- 07/20/15 Siloam Springs Community Building 21
- 09/23/15 Rogers Public Library (Draft Plan) 29
- 09/24/15 Fayetteville Public Library (Draft Plan) 39
- 12/1/2015 Fayetteville Town Centre (Final Plan) 45
- 12/2/2015 Bentonville Public Library (Final Plan) 39
- 12/3/2015 Siloam Springs City Hall (Final Plan) 13



"A strategically planned and managed network of wilderness, parks, greenways, conservation easements, and working lands with conservation value that supports native species, maintains ecological processes, sustains air and water resources, and contributes to health and quality of life for America's communities and people" (Benedict, Mark A. and McMahon, Edward T. "Green Infrastructure: Linking Landscapes and Communities", 2006).

STAKEHOLDER INTERVIEWS & TECHNICAL RESOURCE GROUP MEETINGS

In March 2015, the NWARPC and project consultants led a series of stakeholder interviews and technical resource group meetings. Twenty-two people were interviewed, and more than 60 people representing a wide range of interests participated in resource group meetings.

SPECIAL OUTREACH PRESENTATIONS

Between January 2015 and September 2015, the NWARPC staff presented on 32 separate occasions to local and regional community groups and organizations in addition to the official project workshops.

ONLINE INPUT MAP: www.nwaopenspace.com/participate

There were 268 likes on the project page as of the draft plan in September 2015.

For the month of September 2015:

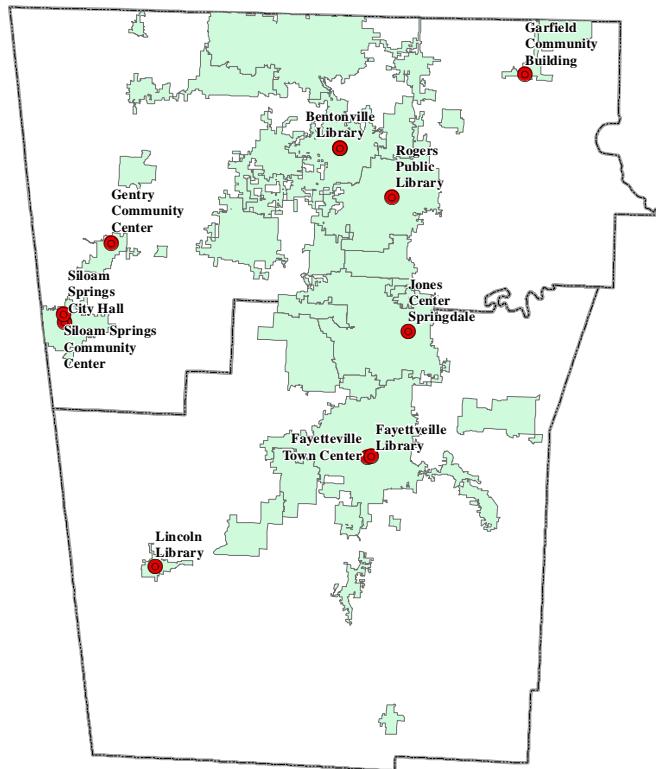
- Website (Unique Visitors): 534
- Website (Page Views): 1,576
- Online Input Map: Online map stats: 12 users, 9 points
- Facebook Total Reach in September: 957
- Facebook Likes (total): 277
- Online Comment Form (total): 793 (through 10/1/15)
- Draft Plan Comment Form: 42

HOW PRIORITIES WERE DEVELOPED: PUBLIC PROCESS + OPEN SPACE MAPPING

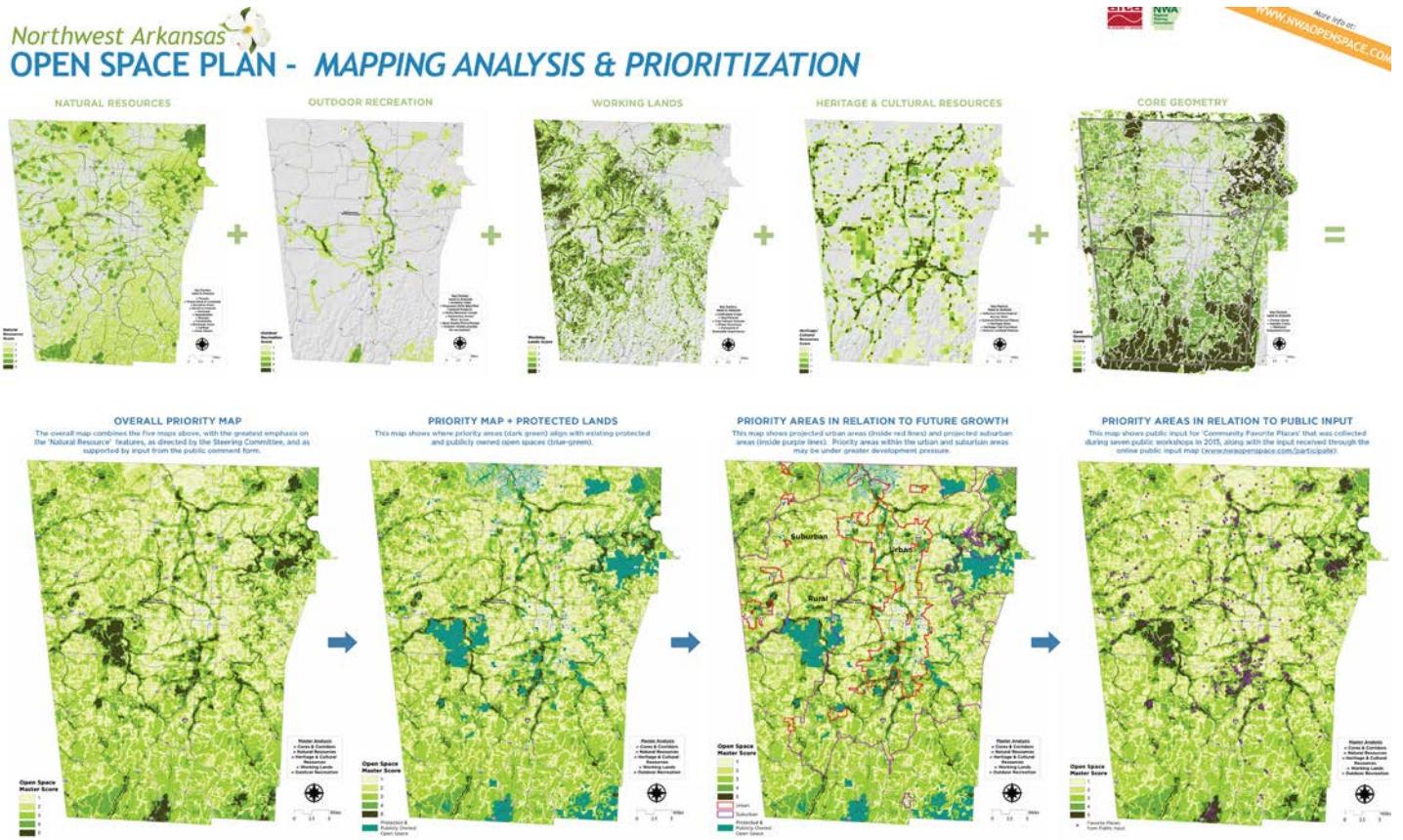
As a region, the communities in Northwest Arkansas can be strategic in protecting their most valued natural landscapes and heritage resources as they grow. This Plan identifies such landscapes by combining extensive public input and stakeholder involvement (Chapter 2) with state-of-the-art analysis of the region's natural, cultural, historic, agricultural, and recreation resources (Chapter 3). The result is a set of maps and data that show priority areas for conservation throughout the region. These main input maps cover:

- Natural Resources
- Outdoor Recreation
- Working Lands
- Heritage & Cultural Resources
- Cores & Corridors

These five resources maps, in the Open Space Plan, were overlaid and combined to create the Overall Open Space Priority Map, with the greatest emphasis on natural resource features, as directed by the Steering Committee, and



Map 6.3 -Open Space Public Input Meetings Locations

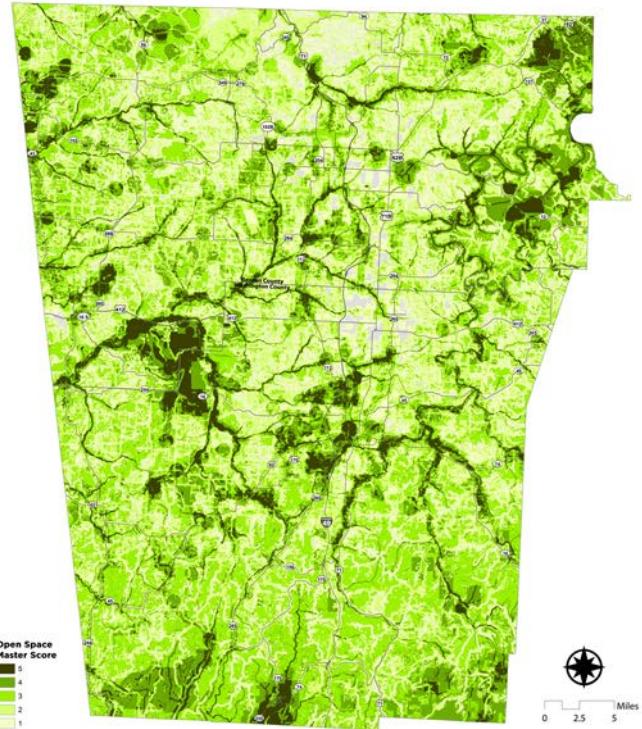


Map 6.4 -Open Space Mapping Analysis and Prioritization

OVERALL PRIORITY OPEN SPACE MAP

Open space resources are shown with a priority range of 1-5, with the higher values shown in darker shades of green. This map should be considered as a starting point for regional discussions about conservation priorities (Map 6.4). The goal is not to protect all priority areas, but rather to work with willing landowners who wish to conserve their land, using the maps as a tool in evaluating potential projects.

All landowners are welcome to submit ideas for land conservation, regardless of the priority ranking on these maps.

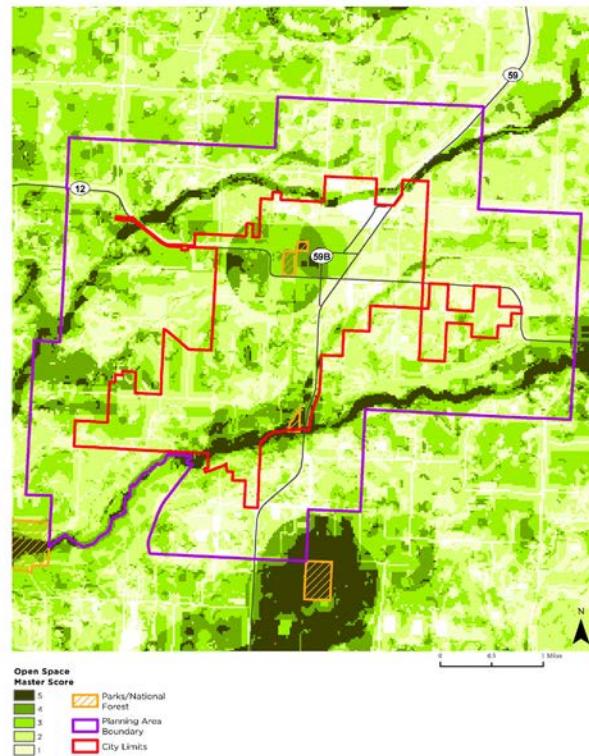


Map 6.5 - Overall Priority Open Space Map

LOCAL COMMUNITY OPEN SPACE PRIORITY MAPS

Community maps for 32 cities have been prepared and included in the Appendix. The Appendix provides a municipal-scale version of the overall priority map for each community in the region. GIS data will be available for creation of local maps for local purposes. The maps should be considered as starting points for local discussions about conservation priorities.

Open space resources are shown on the maps with a priority range of 1-5, with areas that have a higher potential for conservation value shown in darker shades of green. These areas were identified through an extensive analysis of existing conditions throughout the region. Map 6.5 illustrates an example of a community open space priority map.



Map 6.6 - Gentry Community Open Space Priority Map

HOW TO USE THE PRIORITY MAPS

The main approach taken in most open space planning projects is to analyze the physical characteristics of a region's environment to find priority areas that would be the most beneficial to protect, according to what the community values most in terms of open space. There are important aspects of this to highlight when considering how to use these priority maps:

1. Priority areas will be considered as candidates for protection only when there is a willing landowner that desires to conserve their land. Willing landowners can protect their land by selling or donating their land, or through conservation easements or other methods identified in this plan's conservation toolbox.
2. The intention is not to protect all lands identified as a high priority, nor is it to protect land only within the high priority areas. All landowners who wish to participate in the open space program should be considered, regardless of whether the land in question is identified as a priority in the mapping analysis.
3. Different sites will have different objectives for conservation. A balanced approach should be taken in selecting a range of site types that reflect what people value most in terms of open space in Northwest Arkansas. Refer to the results of this plan's public comment form, which focused on what people feel is most important in terms of open space.
4. The priority mapping in this appendix is data-driven and fact-based, but is still only a tool. The methodology used in this plan combines the best practices for geographic information system (GIS) analysis outlined by the U.S. Forest Service and the Arkansas Forestry Commission, as well as best practices for analysis from award-winning open space projects in other communities. This does not mean it is a perfect tool. Care should be taken when considering candidates for protection to be sure on-the-ground conditions reflect what is communicated by the analysis.
5. The priority mapping will need to be updated regularly to remain relevant. It is recommended that a comprehensive list of data updates and needs be kept on an ongoing basis, with the actual updates to the data and analysis occurring on a quarterly or semiannual basis. Adjustments and improvements to the methodology are also anticipated, as new tools for analysis and new data become available.
6. Not all aspects of this plan can be addressed by protecting priority areas identified in the mapping analysis. The best practices related to open space, along with this plan's conservation toolbox, represent the many other ways in which the goals of this plan could be addressed.



IMPLEMENTATION & EXPECTED OUTCOMES

A voluntary, regional approach to conservation is recommended, involving willing landowners and the region's existing conservation organizations. As recommended by the project Steering Committee and the project consultant, the recommended leader of this effort is NWARPC. This is due to the level of trust, transparency, and regional representation that the organization provides. A new Open Space Committee of the NWARPC would accept conservation projects nominations from landowners, community groups, municipalities, and others, with actions approved by the regional representatives of the NWARPC leadership.

The near-term next steps for this initiative are to continue education and outreach efforts throughout 2016, while also documenting the level of financial need for the program from interested landowners and conservation groups. Gauging public interest in funding a conservation program will be another important task for 2016, since some form of local funding is typically needed to leverage outside investment from State, Federal or private sources.

Expected outcomes of this Plan include:

1. An established regional vision for open space conservation priorities,
2. An established leadership structure, operation framework, and funding source for carrying out the open space program, and
3. The protection of open spaces, allowing us to "conserve some country as we grow".

The Northwest Arkansas Regional Open Space Plan is a plan to develop a coordinated, voluntary program to protect and promote the region's most valued natural landscapes and open spaces. The goal is to preserve these assets; thereby maintaining our high quality of life as the region continues to grow and prosper.

RECOMMENDATIONS

Compelling Vision

This Plan defines a compelling vision for open space conservation. The benefits of open space are clearly articulated in this Plan. Open space protects the water we drink, the air we breathe, and the landscapes we call home. Open space is important to everyone in Northwest Arkansas, as it shapes the lives and wellbeing of the people that reside in the region.

Leadership

Based on work in other communities in the U.S., project consultants recommended that the managing entity should be a group that has

- Public trust and a proven record of success
- Regional representation through an existing operating framework
- The ability to update and manage Geographic Information Systems (GIS) mapping
- An understanding of open space concepts
- An understanding of the regional political landscape

Given these parameters, the NWARPC is the most appropriate organization, and leadership entity, to guide the implementation of this Open Space Plan. An Open Space Committee can be established by the NWARPC. Committee membership number should be approximately 15 to 20 persons. Under the above proposal, the ultimate authority and decision maker for the implementation of the Open Space Plan would be the leadership (members) of the NWARPC. NWARPC staff and the Open Space Committee would provide technical support and advice to NWARPC. The NWARPC should adopt an annual work plan, at the beginning of each fiscal year that outlines the goals and objectives of the Northwest Arkansas Open Space program. This should include an annual budget that supports the actions and activities of the Program.

RECOMMENDED PROGRAM FRAMEWORK

As noted at the outset of this planning process, the purpose of this Plan is to develop a coordinated, voluntary program to protect and promote the region's most valued natural landscapes and open spaces. The goal of the program is to create opportunities for landowners, organizations, and local governments to have a place to go to nominate projects for conservation, and to provide a strategy for how those nominations are addressed.

Selecting Projects

This Plan's prioritization maps serve as a guide only. They show prioritized tracts of land throughout the region based on technical data. Rather than generating a listing of project based on mapping, the selection of projects should instead be based on a community-driven approach that uses the mapping as a starting point and a tool for analysis.

The size of the Open Space Committee can be established by the NWARPC with input from NWARPC staff. It is recommended that the Committee membership number approximately 15 to 20 persons.

The selection of projects should be based on a community-driven approach that uses the mapping as a starting point and a tool for analysis. Communities, organizations, and individual landowners will decide what they consider as priorities to submit as part of the program. Potential projects will be nominated to the open space committee through a periodic call for proposals. Nominations would come from individual land owners, non-profits, community groups, businesses, and municipalities.

Technical evaluation: How well does the project align with the priority mapping analysis? Community-driven evaluation: How well does the project compare given other key factors?

FUNDING THE OPEN SPACE PROGRAM

Every successful open space program in the United States shares one common trait – a local source of funding that is used to match and leverage other funding in support of open space conservation. A regional sales tax is a recommended funding method. Other local opportunities may include: city sales tax, bond referendum, or project-by-project basis.

PRIORITY ACTIVITIES AND PHASING

Upon adoption of this Open Space Plan, a variety of work activities will need to be undertaken by the NWARPC, NWARPC staff, project partners and the Open Space Committee. These activities are described in greater detail as:

PHASE ONE PROGRAM (2016)

- Education and Outreach
- Maintain Official Open Space map
- Land Conservation

PHASE TWO PROGRAM (2017-2018)

- Open Space Funding
- Education and Outreach
- Land Conservation

PHASE THREE PROGRAM (2019 AND BEYOND)

- Land Conservation
- Conservation Toolbox 25 ways to conserve. Examples include: fee simple acquisition, donation, conservation easement, right of first refusal, donation via bequest, intergovernmental partnership, etc.

SUMMARY

This Plan combines extensive public input and stakeholder involvement with state-of-the-art analysis of the region's natural, cultural, historic, agricultural, and recreation resources. The result is a set of maps and data that show priority areas for conservation throughout the region. The goal is not to protect all priority areas, but rather to work with willing landowners who wish to conserve their land, using the maps as a tool in evaluating potential projects.

A voluntary, regional approach to conservation is recommended, involving only willing landowners, and in coordination with the region's existing conservation organizations. As recommended by the project Steering Committee and the project consultant, the recommended leader of this effort is NWARPC. This is due to the level of trust, transparency, and regional representation that the organization provides. A new Open Space Committee of the NWARPC would accept nominations for conservation projects from landowners, community groups, municipalities, and others, with any actions being approved by the existing regional representatives of the NWARPC leadership.

The recommended next steps for this initiative are to continue education and outreach about the benefits of open space and about the needs, goals, and results of this study throughout 2016. Another aim of work in 2016 would be to begin documenting the level of financial need for the program from interested landowners and conservation groups, while also gauging public interest in funding the program to fulfill that need. Based on other successful open space programs in the U.S., a dedicated local funding stream is recommended, such as a quarter-penny sales tax, which could be leveraged against outside investment from State, Federal or private sources.

Table 6.1 represents a list of State and Federal grants related to this Study, some of which could be pursued in the 2016-2017 time-frame in order to initiate the program.



FEDERAL AGENCIES	OTHER ORGANIZATIONS (CONT.)
U.S. Forestry Service	Fayetteville Natural Heritage Association
Federal Highway Administration	Fayetteville Public Schools
National Park Service	Friends of Ark Single Track (FAST)
US Army Corps of Engineers	FTN and Assoc
USGS Water Science Center	Fugro Geospatial, Inc
USGS Cooperative Fish and Wildlife Research Center	Goddard Geographics
USDA - Natural Resource Conservation Service	Historic Cane Hill
U.S. Fish and Wildlife Service	Illinois River Watershed Partnership
STATE AGENCIES	Internation Mountain Bike Assoc
Arkansas Forestry Commission	Joe Neal Conservation
Arkansas Historic Preservation Program	Karen Rollet-Crocker
Arkansas Department of Health	KNWA and FOX 24 news
Arkansas Game and Fish Commission	KNWA News
Arkansas Highway and Transportation Dept	Kucera Inc.
Arkansas Natural Heritage Commission	Lewis and Clark Outfitters
Arkansas Natural Heritage Commission	McGoodwin Williams and Yates
Arkansas Parks and Tourism	Mt. Kessler Greenways
Arkansas State Parks	Nature Conservancy in Arkansas
Arkansas Department of Environmental Quality (ADEQ)	Northwest Arkansas Conservation Authority (NACA)
OTHER ORGANIZATIONS	Northwest Arkansas Council
AECOM	Northwest Arkansas Land Trust
AEP/SWEPCO	Northwest Arkansas Master Naturalists
Alta Planning + Design	NWA Economic Development District
Arkansas Archeological Survey	NWA Home Builders Assoc
Arkansas Association of Conservation Districts	NWA Tourism Association
Arkansas Canoe Club, NWA Chapter	Ozark Highland's Trail Association
Arkansas Climbers Coalition	Pack Rat Outdoor Center
Arkansas Natural Resources Commission	Parker Restoration
Arkansas SARE Program	Partnership for Southern Forestland Conservation
Arkansas Urban Forestry Council	Phat Tire
Arkansas Rec and Parks Assoc - SW Region	Pictometry Inc
Assoc General Contractors of Ark	Pure Fishing
Association for Beaver Lake Environment (ABLE)	Shiloh Museum
Aubrey Shepherd Conservation	Sierra Club - Arkansas Chapter
Audubon Arkansas (NWA Audubon Society)	Ozark Water Watch
Beaver Water District	Ozarks at Large
Beaver Watershed Alliance (Beaver Water District)	The Applied Sustainability Center
Beaver Watershed Alliance (Beaver Water District)	The Ozark Society
Benton County Beekeepers	University of Arkansas Extension Office - Benton County
Benton County Historical Preservation Commission	University of Arkansas Extension Office - Benton County 4-H
Benton County Historical Society	University of Arkansas Extension Office - Washington County
Bicycle Coalition of the Ozarks	University of Arkansas Landscape Department
Botanical Garden of the Ozarks Society	Universtiy of Arkansas Facilities Management Planning Group
Care Community Center (Community Garden)	USI Engineering
CEI Engineering	Washington County Historical Society
Chamber of Commerce - Regional Rep	Waste Management Sustainbility
CoPlan LLC	Watershed Conservation Resource Center
Crafton Tull	Wild Wilderness Drive-Thru Safari
Endeavor Foundation	Wright Water Engineers
Farm Bureau of Arkansas	WSP Parsons Brinckerhoff

Table 6.1 - State, Federal and Local Consultation List