

Conservation Easement
Baseline Documentation Report
& Acknowledgement of Property Condition

December 2006

Conservation Easement
from Sharpridge Trust u/d May 17, 1974,
as amended
to
City of Fayetteville, Arkansas
on approximately 20 acres





Conservation Easement
Baseline Documentation Report
& Acknowledgement of Property Condition

December 2006

**Conservation Easement from Sharpridge Trust u/d May 17, 1974, as amended to
City of Fayetteville, Arkansas on approximately 20 acres**

Vegetation Description (November 16, 2006) by John V. Crone, ASLA, Professor of
Landscape Architecture, University of Arkansas, Fayetteville, AR 72701 (Appendix E)

General Property Description: Topography, Soils, Timber, Recreation, Conclusion in
an Arkansas Forest Stewardship Management Plan (November 15, 2006) by Mr. Kevin
Hickie, County Forester, Arkansas Forestry Commission and Mr. Gene Leeds, Wildlife
Biologist contracted by the Arkansas Game and Fish Commission (Appendix B)

Ecological importance of the property: Urban Forest Conservation Assessment for
Fayetteville, Arkansas (October 2006) prepared by the Fayetteville Natural Heritage
Association, Karen Rollet-Crocker, ASLA Project Director, Ethan Inlander, Conservation
GIS Specialist, Ozarks Highlands Office, The Nature Conservancy (Appendix C)

Site Conservation Worksheet (July 2006) Assessors John V. Crone, Billy Kribbs, Lissa
Bell, Channon Toland and Shawn Shrum (Appendix D)

Fayetteville 2025 City Plan (February 2006)- Dover Kohl Partners (Appendix F)

Fayetteville Future Land Use Plan- Karen Minkle, Long Range Planner, City of
Fayetteville (See Appendix F)

Trails on Protected Property (as part of the Trails Master Plan for the City of
Fayetteville) Matt Mihalevich, Trail Coordinator, City of Fayetteville (See Appendix G)

Compiled (December 2006) by Frank Sharp, Trustee of the Sharpridge Trust u/d May
17, 1974, as amended, 2062 Smokehouse Trail, Fayetteville, AR 72701 Phone 479-267-
3205





List of Maps

Location of Property- Appendix A

Urban Forest Conservation Assessment for Fayetteville, Arkansas – Appendix C

Vegetative Description of Protected Property- Appendix E

Trail System Focal Areas- Appendix F

Proposed Nature Trail on 20 Acre Conservation Easement – Appendix G

City of Fayetteville- Trails Master Plan- Appendix G

Mount Kessler Trails, Existing Conservation Easements, Southpass- Appendix G





Name of Easement

Conservation Easement from Sharpridge Trust u/d May 17, 1974, as amended to City of Fayetteville, Arkansas on approximately 20 acres

Location

The West half (W1/2) of the Southwest Quarter (SW ¼) of the Southeast Quarter (SE1/4) of Section Twenty-four (24) in Township Sixteen (16) North of Range Thirty-one (31) West, Washington County, Arkansas containing 20 acres, more or less, less and except the right of way owned by the City of Fayetteville, Arkansas for Smokehouse Trail, a city Street. (See map Appendix A)
Deed to property (Appendix H)

Grantor

Frank Sharp, Trustee of The Sharpridge Trust, u/d May 17, 1974, as amended
Contact Information

Frank Sharp
2062 Smokehouse Trail
Fayetteville, AR 72701
Phone- 479-267-3205
Email- frank@ozarkmountainsmokehouse.com

Easement Grantee

City of Fayetteville
Attn: Mayor Dan Coody
113 West Mountain
Fayetteville, AR 72701

Purposes of the Conservation Easement
General

The Protected Property is a significant natural area that qualifies as a "relatively natural habitat of fish, wildlife, or plants, or similar ecosystem," as that phrase is used in P.L. 96-541, 26 USC 170(h)(4)(A)ii, as amended, and in regulations promulgated thereunder. More specifically the property is a naturally forested hillside with shagbark hickories, red and white oaks, ash trees and other aesthetically pleasing and beneficial vegetation as noted in a written report by John V. Crone, Professor of Landscape Architecture at the University of Arkansas in Fayetteville, and is in the area of the City of Fayetteville that is rapidly being transformed into commercial and residential developments.





Ephemeral Stream at Culvert Crossing Smokehouse Trail
near Northeast corner of 20 acre tract- December 2006



Junction of ephemeral streams south of Smokehouse Trail,
near center of 20 acre tract



View of Ozark Mountain Smokehouse looking east-Near northeast corner of 20
acre tract- November 2006





Location and Physical Setting

The Protected Property is located on twenty acres, which is part of about one hundred acres owned by The Sharpridge Trust. The acreage is wooded with the exception of a small fescue pasture (about ½ acre) on the south end of the property. The property is sloping with a limestone bluff on the southeast corner. The property is bisected diagonally from north to south by Smokehouse Trail, a city street of the City of Fayetteville. North of the property is West 6th Street, a major arterial street with commercial and residential construction. There is a small housing development on the south eastern edge with five houses. Smokehouse Trail additionally serves one business and eight houses.

To the west of the Protected Property is the City of Farmington Arkansas.

Existing Human Modifications

The land was purchased by the Sharp family in 1962 and was entirely wooded and remains so today. The primary human modification was the construction of Smokehouse Trail, which is now a city street. A small fescue pasture of about ½ acres was planted adjacent to the barns of the Sharp family. No structures, except for some old rail fences and modern fencing in the pasture area, exist on the property

Prior Land Use

See above

Existing Land Use and Management Plan

A Forest Stewardship Plan was prepared in November 2006 by the Arkansas Forestry Commission (see Appendix B)

Natural Features:

Aquatic resources- See attached Urban Forest Conservation Assessment for Fayetteville Arkansas (UFCA) by the Fayetteville Natural Heritage Association and The Nature Conservancy (October 2006) see Appendix C & D

Forest Types- see attached Forest Stewardship Plan, Ark. Forestry Commission Appendix B, John Crone Report (November 2006) & Site Conservation Worksheet (July 2006) see Appendix E

Wild Species Habitat- see attached Forest Stewardship Plan in Appendix B

Major Soil Types- see attached Forest Stewardship Plan in appendix B

Archeological and Historical Features- None





Decaying rail fence along Smokehouse Trail, looking north.
December 2006



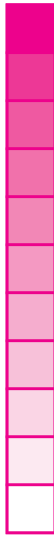
Mailboxes for some of the neighbors living on Smokehouse Trail.
Mailboxes are near the southwest corner of 20 acre tract.



Shag-bark hickory trees are one of the major species trees on the tracts. Bats
make their homes under the bark!



Smokehouse Trail is used by pedestrians, but it is primarily for use of motorized
traffic. A 0.6 mile hiking trail is proposed by the City.





The Protected Property is a high quality example of a terrestrial community and adjacent to a wilderness area

The whole of Mt. Kessler is primarily still in its natural state as are its neighboring mountains, Washington Mountain to the north and Miller Mountain to the south. One landowner on the top of Mt. Kessler (about 1/4 mile east of the Protected Property) has put 86 acres under a conservation easement with Ozark Regional Land Trust, an organization that also protects 176 acres on the southern slope of the mountain (see map in appendix.)

The Sharpridge Trust owns about one hundred acres on Mt. Kessler, most of which is wooded mountainside land. In November 2006, Mr. Kevin Hickie, County Forester and Mr. Gene Leeds, Wildlife Biologist contracted by the Arkansas Game and Fish Commission, toured the property and issued a Forest Stewardship Plan that gives a general property description, its topography, soils and timber and the property's recreation potential (see Appendix B)

Washington, Kessler, Miller and Stephenson Mountains are a chain that have retained their wildlife and natural character due primarily to their rugged terrain, as the flat valley land has been more economical for residential development. The rapid growth of northwest Arkansas is, however, endangering these mountains.

In July 2005, the Fayetteville Natural Heritage Association (FNHA) received Urban and Community Forestry Assistance Grant funds to identify high priority areas before they disappear due to rapid population growth. In conjunction with the Highlands office of the The Nature Conservancy, an Urban Forest Conservation Assessment for Fayetteville, Arkansas was released in October 2006. 5,500 parcels within the area were identified with 557 parcels within the City of Fayetteville and 797 sites in the City's planning area (FPA) all of which were evaluated and ranked for their environmental importance. The number one site in the FPA was the 800 acres on Mt. Kessler known as Southpass (Cummings property), which is immediately adjacent to the hundred acres owned by the Sharpridge Trust. The Sharpridge trust property was #3 in Ward 4 in terrestrial importance, #1 in Ward 4 in aquatic importance and #5 in overall importance within the City of Fayetteville.

The FNHA study validates the fact that the Protected Property, the balance of the Sharpridge Trust property and the whole of Mount Kessler are all important parts of the terrestrial community. The Urban Forest Conservation Assessment for Fayetteville Arkansas summary, introduction and site conservation worksheet for Kessler Mountain are attached in Appendix C & D.





North slope of Washington Mountain, which is mostly open land or wilderness and joins Mt. Kessler



Spur of Mt. Kessler. Photo taken from atop Mt. Kessler on Sharp property- December 2006



Miller Mountain is undeveloped wilderness and joins Mt. Kessler to the south. Photo taken from Sharp property- December 2006



Top of bluff on Mt. Kessler (near SE corner of Protected Property) This is typical of the bluff line that runs around most of Mt. Kessler.





The Protected Property is a part of the City of Fayetteville's goal of creating an "Enduring Green Network" within the City

In February 2006, the City of Fayetteville, under the direction of Dover Kohl, a nationally recognized planning and urban design firm, had numerous public meetings to develop the City Plan 2025- a guide for planning and developing the community for the next 20 years. Six major goals were established. Goal Number 5 was "We will assemble and **enduring green network**." This included "vigilantly nurture a continuum of green, including.....greenways and trails....large-scale preserves for stabilizing hillsides, protecting natural habitats & water quality, as scenic vistas, accelerate public acquisition of open space & parks....**promote widespread deployment of conservation easements**, transfer of development rights & cluster development....maximize City influence over development & preservation in outlying unincorporated areas". These goals were approved by the City Council on July 17, 2006 (see Appendix D.)

The City of Fayetteville is in the process of developing a Future Land Use Plan based on the goals of the City Plan 2025 (see Appendix E) and the Urban Forest Conservation Assessment Report performed by FNHA. The twenty acres (as well as the rest of the land owned by the Sharpridge Trust) is designated as open land and as part of this "enduring green network".

The guiding policies of the City Plan 2025 are in Appendix and more information about the plan may be obtained from Ms. Karen Minkel, Long Range Planner, City of Fayetteville, 113 West Mountain, Fayetteville, AR 72701 478-575-8267.

The Protected Property has given scenic enjoyment to the general public for the past 40 years

Smokehouse Trail, which goes diagonally through the twenty-acre Protected Property, was built in 1962 and dedicated to Washington County. A few years later it was annexed into the City of Fayetteville, became a city street and was paved. Smokehouse Trail serves twelve households and one business (the Ozark Mountain Smokehouse.) These neighbors (an many others in the general area) use the street for walking dogs, pushing baby buggies, watching wildlife, enjoying the wildflowers in the Spring and the leaves in the fall.





View to the west from top of Mt. Kessler at southeast corner of 20 acre tract. Note commercial and housing



Shopping center across from intersection of Smokehouse Trail and West 6th Street- December 2006



Another view from atop the bluff. Oklahoma may be seen in the distance.





The Protected Property will continue to give scenic enjoyment to the general public in the future

In addition to the city street two hiking trails are located on the property (see attached maps in Appendix G.) One trail that goes from the northern edge of the twenty acres to the southwest corner, running west of Smokehouse Trail, will at some point become part of the Mount Kessler Trail that goes from West 6th Street (where it joins the Ruppel Road Trail adjacent to the Boys and Girls Club and Owl Creek School) to the top of Mount Kessler on the Southpass property and then to the new multipurpose park on Cato Springs Road. Children would then be able to hike from the Boys and Girls Club or Owl Creek School to the ball fields off Cato Springs Road and learn about the fauna and flora of the Ozarks along the way.

The other trail runs from the northern edge of the 20 acres to the bluff line (with its magnificent rock formations) near the southeast corner of the Protected Property and then joins the Mount Kessler Trail (see map of trails in Appendix G)

Both of these trails are listed on the City of Fayetteville's Trails Master Plan (see Appendix G)

In November 2005, during the community input for the City Plan 2025, the FNHA prepared questionnaires based on the priority ranking model from the GIS study. One hundred and twenty questionnaires were returned and the top two characteristics were:

1. Potential for walking trails
2. Potential for links to existing or planned walking trails

(See appendix C)

More importantly, a year later, on November 7, 2006, the citizens of Fayetteville voted to tax themselves to build and improve trails with a one-quarter percent sales tax.

The Protected Property is a significant habitat for wildlife

The twenty acres is a wooded slope of Mt. Kessler and is a haven for wildlife-deer, fox, opossum, raccoon, squirrel (even one black bear has been seen) as well as a host of native wildflowers. A description of a Protected Property by Professor John V. Crone, ASLA, of the University of Arkansas Department of Landscape Architecture is attached in Appendix E. Although none of these are on the "endangered species list" the wildlife is indeed endangered by encroaching residential development.





Southwest Corner of 20 acres, Note stream and game trail.



View from Smokehouse Trail



Ephemeral Stream



View of agricultural area south portion of 20 acres.





Acknowledgement of Property Condition

In compliance with Section 1:170A-14(g)(5) of the federal tax regulations, the undersigned accept and acknowledge that this Baseline Documentation Report is an accurate representation of the property at the time the conservation easement was transferred to the grantee

Easement Grantor

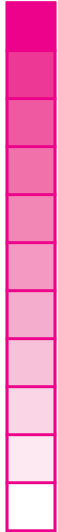
By: _____ Date _____
Frank Sharp, Trustee
Sharpridge Trust u/d May 17, 1974, as amended

Easement Grantee

By: _____ Date _____
Dan Coody, Mayor
City of Fayetteville, Arkansas

Attest:

By _____ Date _____
Sondra Smith, City Clerk
City of Fayetteville, Arkansas





Bob Caulk hiking along bluff near southeast corner of 20 acre tract August 2006

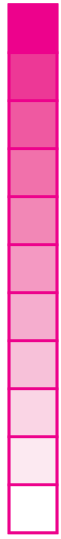


Bluff near SE corner of tract. One branch of the proposed City of Fayetteville trail will allow hikers to enjoy this view.



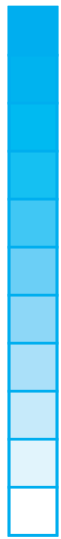
Bob Caulk and Frank Sharp walking tract in August of 2006.
The bluff line is typical of that which encircles Mt. Kessler.

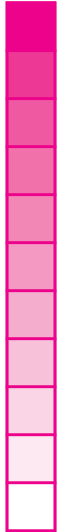




Appendix A

Location of Property Deeds







WARRANTY DEED ^{Publ. 549}

Single Person



KNOW ALL MEN BY THESE PRESENTS:
That I, Clyde Holland

for and in consideration of the sum of One (\$1.00) Dollar and other valuable considerations to me in hand paid by R. Frank Sharp and Sara E. Sharp

do hereby grant, bargain and sell unto the said R. Frank Sharp and Sara E. Sharp, husband and wife, and unto their heirs and assigns, the following described land, situate in Washington County, State of Arkansas, to-wit:

The West Half of the Southwest quarter (SW $\frac{1}{4}$) of the Southeast quarter (SE $\frac{1}{4}$) of Section Twenty-four (24) in Township Sixteen (16) North, of Range Thirty-one (31) West, containing twenty (20) Acres, More or Less.

TO HAVE AND TO HOLD the said lands and appurtenances thereunto belonging unto the said R. Frank Sharp and Sara E. Sharp, husband and wife, and unto heirs and assigns, forever. And I, the said Clyde Holland

hereby covenant that I am lawfully seized of said land and premises; that the same is unincumbered, and I will forever warrant and defend the title to the said lands against all legal claims whatever.

WITNESS my hand and seal on this 23rd day of January 1961
Clyde Holland [Seal]

ACKNOWLEDGMENT

STATE OF ARKANSAS }
County of Washington } ss.

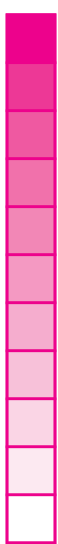
BE IT REMEMBERED, That on this day came before the undersigned, a Notary Public within and for the County aforesaid, duly commissioned and acting, Clyde Holland

to me well known as the Grantor in the foregoing Deed, and stated that he had executed the same for the consideration and purposes therein mentioned and set forth.

Witness my hand and seal as such Notary Public this 23rd day of January 1961.

My Commission expires Dec. 21 1961

J. King Mendenhall






Doc ID: 009688820002 Type: REL
Recorded: 02/23/2006 at 12:18:09 PM
Fee Amt: \$11.00 Page 1 of 2
Washington County, AR
Bette Stamps Circuit Clerk
File 2006-00007547

QUITCLAIM DEED

KNOW ALL MEN BY THESE PRESENTS:

That we, Frank Sharp and Sara Savage Sharp, husband and wife, for and in consideration of the sum of one dollar (\$1.00), in hand paid by R. Frank Sharp, Trustee of the R. Frank Sharp Trust u/t/d May 17, 1974, hereinafter called Grantee, the receipt of which is hereby acknowledged, do hereby grant, convey and quitclaim unto the said Grantee and unto its heirs, successors and assigns forever, all of our right, title, interest, equity and estate in and to the following lands lying in Washington County, Arkansas:

The West half of the Southwest quarter (SW ¼) of the Southeast quarter (SE ¼) of Section Twenty-four (24) in Township sixteen (16) North, of Range thirty-one (31) West, containing twenty (20) acres, more or less.

Subject to all easements, liens, protective covenants and other encumbrances of record, if any.


To have and to hold the same unto the said Grantee, and unto its heirs, successors and assigns forever, with all tenements, appurtenances and hereditaments thereunto belonging.

And we, Frank Sharp and Sara Savage Sharp, husband and wife, for and in consideration of the said sum of money, do hereby release and relinquish unto the said Grantee, all right of dower, curtesy and homestead in and to the said lands.

Witness our hands and seals this 22 day of February, 2006.



Frank Sharp



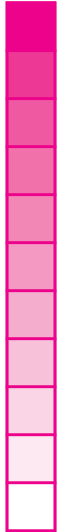
Sara Savage Sharp





Appendix B

Arkansas Forest Stewardship Management Plan





ARKANSAS FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For

Mr. Frank Sharp

By

Kevin Hickie
County Forester
Arkansas Forestry Commission

November 15, 2006





ARKANSAS FORESTRY COMMISSION
2780 N. Garland Ave., Fayetteville, AR 72704
(479) 442-8627

John T. Shannon
State Forester
November 15, 2006

Mr. Frank Sharp
2062 Smokehouse Trail
Fayetteville, AR 72701

Dear Mr. Sharp,

This is your Forest Stewardship Management Plan for your property in Washington County. You own approximately 100 acres located in the Mt. Kessler area of Fayetteville, and you have indicated a preference as Recreation as the primary management objective, with Wildlife as the secondary objective. In this plan I have presented my observations and suggestions while Gene Leeds has given his wildlife recommendations in a separate document.

General Property Description

The property is located south of Highway ⁶²~~62~~ and is behind the Ozark Smokehouse. It is an odd shape and stretches from Section 24, Township 16N, and Range 31 down into Section 25 of the same Township. It is just about all wooded, with very little open space. The west side borders urban development while the east side is still wooded with very few homes in that area. There is a small pond near the southern end of the tract.

Topography

As one enters the property from the north, the land rises on a north facing slope. The access road curves around the side of a ridge before coming out on top. Near the top of the ridge, there are rock outcrops and bluffs. Further south, the tract encompasses a west facing "bowl" that forms a drainage off the side of the same ridge. It is in this bowl that the pond is located. As the property continues to the west along the drain, the land flattens out somewhat. The elevation ranges from about 1260 feet on the southwest to a high of about 1560 feet on the east side. Except for the bluff line near the top of the ridge, the general topography has some slope to it, but is not too steep for most uses.





Mr. Sharp
Page 2

Soils

The soil type on most of the property is called the Enders-Allegheny Complex. This mix of the Enders stony loam and the Allegheny stony loam is quite common throughout the county. The Enders soil is moderately well drained, acidic, and low in natural fertility. The available water capacity is considered to be moderate. The rooting zone is more than 3 feet deep, but root penetration is slow in the subsoil because of the high clay content.

The Allegheny portion of the Complex is a little better suited for growing hardwood timber. It is typically found in coves and in small pockets on foot slopes and on narrow benches. Although the Allegheny is well-drained, it is still acidic with low natural fertility. The available water capacity is considered to be moderate. For both soils, water runoff is rapid and the erosion hazard is severe. Obviously, the general description provided does not apply to all areas on the property. There are places identified as having the Enders-Allegheny Complex that do not have the same soil characteristics because of large rocks, or rock outcrops.

Timber

The timber on the property is a mixed stand of upland hardwood. The predominate species include black oak, green ash, mockernut hickory, white oak, and several others. There are some eastern redcedars on the place as well. We saw most of them growing in areas that had been cleared at one time and been left to revert back to woods.

The stocking level, or the number of trees per acre, appears to be very good. The distribution of sizes and ages across the property also appears to be fairly even. The overall quality of the timber seems fair to good, considering the soil types and the growing conditions. The timber is not overstocked, so I do not think a harvest or thinning is warranted at this time. If the trees were much older and more crowded, I would suggest a thinning to promote a healthier forest. Fortunately, this is not necessary.

The current condition of the land and the forest does not warrant any action, at least from a timber management perspective. The forest is healthy and growing well. I saw no signs of either an insect or disease problem in the current stand of timber.

Recreation

Recreation can mean widely different activities to many different people. We saw an example of recreational use of your property when we came upon some local children's campsite next to the pond. However, you have expressed an interest in developing a trail system that will allow access to and from your land to adjoining areas. The idea is to make your land a part of a green space around Fayetteville and incorporate the property into a Conservation Easement.





Mr. Sharp
Page 3

Regarding trail placement and construction, the first thing to do is identify who will be using the trail. Or, how will the trail be used? Is this going to be a walking trail, biking trail, 4-wheeler trail, or a mix of all kinds of transportation? Once the mode of transportation has been identified, then that will determine how best to layout and construct the trail. If certain uses are to be prohibited, such as 4-wheelers, then trail construction should include barriers to the undesirable use.

The trail layout will also be affected by the potential users. A trail used strictly by hikers should have only short lengths of straight runs. Because walkers move relatively slowly through the woods, they do not need long clear lines of sight. The enjoyment of the trail is enhanced by multiple twists and turns in the walk that hide the upcoming views for longer periods of time.

A trail to be used by bikers should have slightly longer straight runs because the bikers move more quickly and will not be looking at the sights for as long a period of time as walkers. Bike riders will need an easier grade, or slope, when gaining or losing elevation. A bike trail should not have the tight turns or switchbacks on a slope that a hiking trail can utilize.

To lay out a trail, you first identify the beginning and ending points. You identify any points of interest you want to be sure to include as destination points along the trail. Then, you begin mapping out a line that connects all the points, but within acceptable up and down grades for the expected users. This can be something of a trial and error process. Once the initial line has been laid out on a map, it needs to be walked to see if the trail can actually be constructed. Barriers on the ground may require a redrawing of the trail.

There are standard recommended widths and cleared heights for the various types of trails mentioned. I can locate these guidelines if you wish. Trail construction is definitely easier if you can incorporate existing travel lanes. However, for the long term, it might be better to discourage the use of existing paths if they can be used by vehicles that you do not want to encourage on your property. It might be better to close off those access points and start from scratch with the proper trail location and size. When your property is developed as a Conservation Easement, I am sure the City of Fayetteville can provide assistance with trail layout, construction, maintenance, and management.

Conclusion

The timber on this property is in generally good condition and I do not see the need for any immediate action to improve the growth or the quality of the forest. Gene Leeds has made several recommendations with respect to wildlife management and none of these conflicts with my statements concerning the forest. Since I am much closer to the property than Mr. Leeds, I would be more than happy to be your contact person for additional information as to how to implement any of Mr. Leeds' recommendations.





Mr. Sharp
Page 4

I am not aware of any rare, endangered, or threatened plants or animals on the property that would require special management consideration. The soil and water quality of the property seems to be good and no action is necessary for improving either of them. The aesthetics and recreational opportunities of the property are also very good, and will be enhanced by the recommendations of Mr. Leeds.

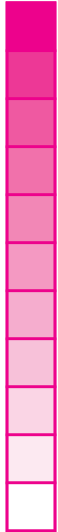
You already have a much better photo of the property than I can provide, plus Mr. Leeds' maps include the topography of the property as well. If I can provide any additional information from any maps or aerial photos that I may have, please do not hesitate to ask.

If you would like any additional information regarding anything I have mentioned in this report, or even something else entirely regarding your property, please let me know.

Sincerely,

Kevin Hickie, R.F. 636
County Forester





Appendix C

Urban Forest Conservation Assessment for Fayetteville, Arkansas





URBAN FOREST CONSERVATION ASSESSMENT
FOR FAYETTEVILLE, ARKANSAS

OCTOBER 2006

Fayetteville Natural Heritage Association

Project Director
Karen Rollet-Crocker, ASLA, Board Member of FNHA

GIS Component
Ethan Inlander, Conservation GIS Specialist, Ozark Highlands Office,
The Nature Conservancy

With Assistance from
Bob Caulk, Board Member of FNHA, Duane Woltjen, Member of FNHA, John Crone,
Professor of Landscape Architecture, U of Arkansas, and Patty Erwin, Urban Forestry
Coordinator, Arkansas Forestry Commission

Funds were provided in part by the Arkansas Forestry Commission's Urban Forestry
Program and the U.S. Forest Service. Matching in kind labor was provided by FNHA
board members, members of the Science Advisory Council, staff of The Nature
Conservancy, and faculty of the Landscape Architecture Department





TABLE OF CONTENTS

Section 1

- Summary
- Introduction
- Acknowledgements

Section 2

- Project Purpose
- Strategies

Section 3

- Involvement of the Community

Section 4

- GIS Methodology and Results

Section 5

- Results of Site Assessments from GIS Rankings

Section 6

- Proposed Actions

Section 7

- Appendix I Grant Announcement
- Appendix II Science Advisory Council

Section 8

- Appendix III Questionnaire
- Appendix IV Public Meeting

Section 9

- Appendix V Site Conservation Worksheets
- Appendix VI News Articles





ACKNOWLEDGEMENTS

GIS Component

Ethan Inlander, Conservation GIS Specialist, Ozark Highlands Office, The Nature Conservancy

Cooperating Organizations

Fayetteville Natural Heritage Association, P.O. Box 3635, Fayetteville, AR 72702-3635

The Nature Conservancy, Ozark Highlands Office, 675 Lollar Lane, Fayetteville, AR 72701 (479) 973-9110

Fayetteville Parks and Recreation Department, 1455 S. Happy Hollow Road, Fayetteville, Arkansas 72701

Fayetteville Long Range Planning Department, 113 West Mountain Street, Fayetteville, Arkansas 72701

Landscape Architecture Department, 230 Memorial Hall, University of Arkansas, Fayetteville, Arkansas 72701

Individuals

Science Advisory Council

Robin Buff, AP Environmental Science/Botany/Zoology teacher, Fayetteville High School

Bob Caulk, FNHA Board Member

Doyle Crosswhite, Ozark Rivers Project Manager, The Nature Conservancy

Malcolm Cleaveland, Professor, Geology Department, University of Arkansas

Karen Rollet-Crocker, Associate Professor Emeritus, Landscape Architecture, University of Arkansas, Board Member FNHA

John V. Crone, Professor, Landscape Architecture, University of Arkansas

Patty Erwin, Urban Forestry Coordinator, Arkansas Forestry Commission
Steve Hatfield, Landscape Architect, Howell and VanCuren

Pete Heinzelmann, FNHA Board

Alison Jumper, Park Planner, Fayetteville Parks and Recreation Department, City of Fayetteville

Ethan Inlander, Conservation GIS Specialist, The Nature Conservancy

Doug James, University Professor, Biological Sciences, University of Arkansas

Karen Minkel, Long Range Planner, City of Fayetteville

Lief Olson, Long Range Planner, City of Fayetteville

Sara Patterson, Urban Forester, City of Fayetteville

Mike Slay, Conservation Ecologist, The Nature Conservancy

Tim Snell, Director of Ozark Conservation, The Nature Conservancy

Duane Woltjen, Member, FNHA





Other

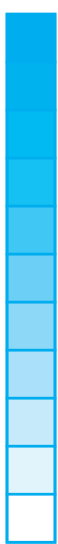
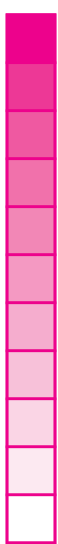
Sara Caulk
Jamie Fugitt
Colleen Gaston, Environmental Lawyer
Bob Moore, Beaver Water District

Project Management

Karen Rollet-Crocker

Funding

Funds were provided in part by the Arkansas Forestry Commission's Urban Forestry Program and the U.S. Forest Service. Matching in kind labor was provided by FNHA board members, members of the Science Advisory Council, staff of The Nature Conservancy, and faculty of the Landscape Architecture Department





PROJECT PURPOSE

The goal of this project is to develop an inventory of forested natural parcels of land in and around Fayetteville, Arkansas, and prioritize them by using conservation values such as ecological characteristics, parcel size, and development threat. The prioritized list will be used by FNHA and others to assist in working toward protection a number of high quality sites. This parallels FNHA's mission to "conserve natural areas of Fayetteville and its environs for the benefit of present and future generations."

Project objectives are to:

- Maintain Fayetteville's historic natural character and key distinguishing landscape features
- Provide opportunities for current and future residents to use and enjoy natural areas close to their homes
- Use Fayetteville watershed boundaries as study boundaries, thus reducing the impact of development on the watersheds of the White and Illinois rivers
- Create a mapping and site analysis process and product that will direct the efforts of FNHA for the foreseeable future
- Assist and partner with community organizations, the City of Fayetteville, surrounding towns, state and regional commissions, educational institutions, and individuals in developing land use plans that promote conservation of valuable natural areas in the watershed area of Fayetteville.
- Include communities near Fayetteville in the study, enabling them to use the information for their own conservation efforts.

The effects of urban growth

Fayetteville has experienced a high growth rate over the past fifteen years that has resulted in expansion of its boundaries and designated growth areas with increased suburban sprawl. It is estimated that the current population is now about 70,000. The new City Plan 2025 is recommending that sprawl be discouraged, since the addition of 40,000 more people will continue to impact the natural landscape and increase auto traffic. Support of growth in the city center while limiting growth on the edges will improve the situation. At the same time, a major goal of the Plan is to "assemble an enduring green network" (Draft of City Plan 2025, p. 88). This needs to be accomplished as quickly as possible by identifying diverse new funding sources and partnership methods with regional not-for-profit organizations and individual property owners. The plan gives reality to this suggestion by mapping an extensive outer greenbelt of trail systems that provides access to natural areas around Fayetteville.

At the same time that Fayetteville has been expanding, the ring of towns around the city also have had explosive growth. Each town has a developed a designated growth area, including Elkins, Goshen, Springdale, Johnson, Wedington, Farmington, Prairie Grove and West Fork.





Conservation possibilities for the Fayetteville area

The Fayetteville area land conservation characteristics differ depending on which direction one looks.

South and east of the city are the Boston Mountains. These are formed from sinuous ridge tops, $\frac{1}{4}$ to $\frac{1}{2}$ miles wide, that look down into long winding valleys centered on creeks and forks of the White River. Steep stony slopes with 'benches' and vertical bluffs link the ridges and valleys. In many places, hardwood forests have been cleared away on the ridgetops, benches and valleys. Steep slopes, however, have often remained clothed in forests. Thus, parts of the southern side of Fayetteville are less susceptible to sprawl development. Suitability for building is limited on valley floodplains and steep slopes while ridgetops and gentle slopes present opportunities for construction. Farther to the south, the Ozark National Forest creates a patchwork of public land beyond the immediate growth area of the city, serving as a regional large scale forest within an hour's drive. This resource, however, does not offer protection to natural areas within and next to Fayetteville.

To the north and east, on the Springfield Plateau, the land levels out into broad areas of sloping hills. Here, many farmland acres have been cleared of forests, while existing prairies have been plowed up for ranching and farming purposes. At the intersection of the Boston Mountains and the Springfield Plateau, to the south east of Fayetteville, a line of mountains stands out from the flatter land that includes Kessler Mountain, Miller Mountain, and Stevenson Mountain.

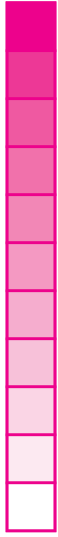
The Fayetteville area's natural forested landscape will only be worth conserving if it has been managed well. In many places, poor management practices have negatively affected water quality and quantity, caused erosion of soils, eliminated wildlife habitat, and removed valuable species of trees. Crucial requirements for conservation include sites that have the least disturbed character and a fully functioning ecosystem. The best candidates are likely to be (1) hillsides and hilltops of oak hickory forests interspersed with geologic forms such as rock outcroppings and bluffs and (2) river and stream corridors with rich soil deposits that support bottomland forests and aquatic habitats. Finding relatively large and undisturbed sites with these key characteristics is the goal of the GIS mapping process and on the ground site analysis described in this report.

As each highly ranked parcel deserving of conservation emerged from the mapping process, it became apparent that some sites were already lost to conservation because they are in the planning stages for development or are actually under construction. This discovery has strengthened FNHA's desire to conserve valuable natural sites that are still available. It has also given FNHA a new goal: working with developers and landowners to find methods to preserve important natural features of soon to be developed sites. Such negotiation may include buffer zones along streams and drainage ways, viewsheds from mountainsides and ridge tops, and conservation of unique habitats. In addition, FNHA needs to look beyond the city boundary to conserve valuable natural sites that are





under threat of sale for development and whose owners may wish to preserve property for future generations.





STRATEGIES

The study is based on four major strategies.

Strategy 1: to involve the public through meetings, questionnaires, and presentations to city agencies, the City Council members, and the Environmental Concerns committee in order to receive feedback on the goals of the project and support for its final recommendations.

Strategy 2: to direct the project through a Science Advisory Council consisting of knowledgeable individuals in the areas of conservation, planning, education and geographic information systems.

Strategy 3: to develop a GIS model that analyzes parcels of land through a scoring process. Major concerns include the ecological characteristics and values of the land (i.e. forest cover, streams and ponds, wildlife, etc.), parcel size (under the assumption that larger parcels have more potential for natural habitat and functioning ecosystems), and negative impacts of human use (i.e. roads, buildings, and open pasture).

Strategy 4: to test the mapping process through ground analysis of at least 25 sites and assess how the project information can be used most effectively in the future.





INVOLVEMENT OF THE COMMUNITY

An initial presentation and discussion was made with the City Council at their Agenda Session in September 2005. At this meeting, it was suggested that the Environmental Concerns Committee be asked for their input. The Environmental Concerns Committee suggested that a questionnaire be developed to gather public input about priorities for land conservation.

A public meeting was held on November 2, 2005 that described the need for the conservation effort and listed the granting agency, the project partners, project boundaries, the analysis process and the potential use of project results.

Next, a questionnaire was prepared based on the priority ranking model from the GIS study (see the GIS Methodology section below). This contained 29 questions divided into four sections: natural land based characteristics, natural water based characteristics, potential for recreational use, and landscape settings. The respondents were asked to rank priority characteristics on a scale of 5 (most important) to 0 (least important). The questionnaire was made available on the Fayetteville web site, by e-mail to the FNHA member list, at the public meeting, and during public workshops for the Fayetteville 2025 Plan. A total of 120 questionnaires were filled out. It is important to recognize that the results are from interested individuals, not from a random sampling process.

Each questionnaire had space for additional comments and e-mail addresses. Forty-one respondents had comments. Response categories were:

- Specific conservation sites.
 - a. Many suggestions of specific sites were offered. These were compared to the GIS study. Only three suggested sites were not listed on the GIS map. They were added to the list.
 - b. Several questionnaires had comments from individuals that had an interest in conserving their land. These individuals were contacted by phone. Their comments were:
 1. "Things have been happening here at a dizzying pace. I really fear we are bordering on too late. Developments are going up both west and north of my borders at 4 houses to the acre minimum. This land has been farmed off and on for 160 years, so it would be a chore beyond my means to really restore it. I will, however, continue to preserve it for dwindling populations of birds and other wildlife. I have a National Wildlife Federation certification as a Backyard Habitat which I hope will save our little wildlife refuge when, not if, we are annexed by Fayetteville. My most devout hope is that we are, in fact, annexed by Fayetteville rather than Farmington. Their philosophies regarding development are at considerable variance. I also intend to tie it up in a conservation easement in perpetuity, but I haven't worked out the details yet. Didn't think I had to so soon. I was wrong, obviously.





Again, thanks for your interest, and if you have any helpful suggestions, I need all the help I can get.”

2. Another individual lives along County Road 69 south of the Fayetteville airport. She says many people already use that road for jogging, walking and wildflower viewing. She would like to cooperate with neighbors to see if they could among them preserve a strip of land along the road as a conservation area. She said she plans to meet with other landowners.
 3. A third individual wants to see her family land (more than 100 acres) preserved, but doesn't want to spend the upfront expenses involved with leaving it to the Ozark Regional Land Trust. She mentioned a couple of other public entities that she wouldn't mind leaving it to.
- Generalized site types suggested for conservation. Many respondents had concepts about which site types would be worth saving.
 - a. In town sites: “forested hillsides”, “small parcels in the urban area”, and “pockets of nature in residential areas”.
 - b. Tracts outside town: “large undeveloped tracts close to town to prevent sprawl”, “land outside Fayetteville before sprawl engulfs NWA”, “Stop urban sprawl that lowers property values by destroying green space”.
 - c. Riparian sites: “springs and headwater streams”, “watershed protection”, “no wetland development”, “natural seeps and wetlands”
 - d. Public use: “non-motorized access trails to undeveloped areas”, “more areas for unpaved walking and running trails”, “bike friendly”, “connect neighborhoods”, “save linked areas for recreation such as long runs or bike rides”, “create a ‘Green Necklace’ of linear parks with walking/bikeways, easy access from many points, and connection to larger parks”.
 - e. Wildlife: “songbird habitat”, “quail or pileated woodpecker”, “make sure parcels are large enough and connected enough to support wildlife”, “high species diversity”.
 - f. Viewsheds entering Fayetteville
 - g. Sites with education: “identification plates on trees”
 - Disagreement with the goals of the project
 - a. “I oppose the Heritage Foundation philosophy because it takes property out of private ownership---forever”
 - b. “I disagree with the perspective that something only has value if it is used by humans”

The 29 questions identified which characteristics had the highest priority. The top two were:

1. Potential for walking trails
2. Potential for links to existing or planned walking trails





The next 9 highest priorities were related to natural aquatic and terrestrial characteristics such as

3. A high number of animals that might live in the aquatic habitat
4. Habitat corridors that connect larger habitat areas
5. A high number of native plant types
6. Riparian area in the parcel
7. A lot of forest cover in aquatic areas
8. A large amount of forest cover in terrestrial areas
9. A high number of native plant types in aquatic areas
10. Stream frontage on parcels
11. A high number of animals that might live in the terrestrial habitat

The mid-range of priorities included recreational concerns such as “proximity to urban areas, links to biking trails and potential for biking trails”. In addition, a variety of natural site characteristics were added such as “seeps, springs and wetlands, a variety of topographic features, and rare animals and plants”.

Lowest on the list were “adjacency and proximity to existing preserves, parks or schools”. Other low priorities were “water related recreation and visibility”.

The category “caves” had, surprisingly, the lowest ranking. A test was made in the last few questionnaires, changing the category to “caves with unique animal species”. This gave the attribute higher rankings. This question was judged invalid.

The results of the questionnaires were used by the Science Advisory Council as input in their decision making concerning rankings of site attributes.





Summary

This report describes development of a Conservation Priority Ranking Model (CPRM) and its application to areas in and around Fayetteville. The area is renowned for its natural beauty and tree-covered hillsides which most certainly have contributed to population growth that inevitably threatens natural areas. Fayetteville Natural Heritage Association (FNHA) began this project in 2005 with a grant from the Arkansas Forestry Commission's Urban Forestry Program and the U.S. Forest Service. The project's purpose was to identify the highest priority natural areas for conservation in and around Fayetteville before they disappeared. FNHA's partners in this project are The Nature Conservancy's Ozark Highlands Office and the Landscape Architecture Department at the University of Arkansas.

The idea for a study began when the FNHA Board commissioned a student intern at the U of A to look at conservation strategies. He interviewed local officials, planners, conservationists, scientists and developers, and he visited many nearby natural areas. His report strongly recommended development of a Conservation Priority Ranking as an essential tool to evaluate urgent conservation needs and to advance improvements in land use policy.

Public input was solicited, asking what criteria should be used to rank areas for conservation. This was done through a questionnaire that was made available at five public meetings and also on the City website. Over 120 were returned. Results indicated that natural areas with the potential for trails held the highest priority for the participants. Connecting trails linking large natural areas was the next highest priority. Participants also identified 30 specific areas as conservation candidates. (Ninety percent of these areas were also identified in the CPRM analysis.)

Project guidance was provided by a Science Advisory Committee (SAC) that consisted of FNHA members, U of A faculty, City of Fayetteville staff (a forester and individuals from the planning and parks departments), State Forestry staff, Beaver Water District staff, and TNC staff. Members of the SAC also analyzed 34 of the top sites identified by the CPRM analysis. The site visits identified vegetation types, soil characteristics, a diversity of natural features that allowed a glimpse of the unique qualities of the region, and recreational possibilities of walking and hiking on the site.

The study area goes beyond Fayetteville's planning area and includes the Illinois and White River sub-watersheds and nearby communities. Washington County Assessors Office data allowed analysis of each parcel of property in the study area. About 5,500 parcels were identified that were larger than 5 acres and had less than 50% development. 557 parcels are in the city and 797 are in the planning area. The project methodology insured that top sites in the study area, the City planning area, the City and each ward were identified. A high proportion of the ranked parcels that were visited had locations with features worthy of consideration for conservation.

An interesting result of the GIS analysis was that most of the top ranked parcels were part of





larger clusters of other highly ranked parcels. In one example, there are five ranked parcels are near Lake Wilson (the highest is #3). Stream valleys to the south that feed this lake have major bluffs and old logging roads that could be used as trail corridors. In another example, there are three ranked parcels on Puddin Hill (the highest is #5). The City of Fayetteville master trail plan has suggested a loop trail around the top of this hill and a trail up the southern slope (now a utility easement) that allows access to a truly impressive bluff. A third example is the Washington Mountain/Kessler Mountain cluster with five ranked parcels (highest are #'s 4 and 8). This cluster could be part of a trail corridor linking the Boys and Girls Club to the proposed new soccer fields. Additional clusters are within the watershed, but outside the Fayetteville city planning area.

The highest ranked parcel within the city (#7) is on Markham Hill and it is worth noting that the owner is working to conserve the property by pursuing limited development. A considerable number of the ranked parcels visited were either under development or for sale. One has the infrastructure completed (Happy Hollow area, #60), one has clearing in progress (Township Street east of College Avenue, #11), two were in various stages of planning (DePalma property, #66 and a parcel at the east end of Whillock Street, #72), and the parcel north of Lake Lucille (Rank #10) is up for sale. One of these has been conserved: the developer and the DePalma family have given 30 acres of the DePalma property contiguous to Mt. Sequoyah Woods to the City. Another is on the way to a conservation effort by neighbors with FNHA's help: a parcel north of Lake Lucille.

Overall results of this study have been included in the development of the Fayetteville City Plan 2025, and the Beaver Water District has begun a GIS based survey on the Beaver Lake watershed using criteria specific to their charter based on the success of this study.

History has shown that communities often operate by crisis management, particularly in regard to land use. Recognizing this and observing the rapid pace of development in this area, FNHA has created a Conservation Priority Ranking Model that blends ecology, aesthetics, human use, and threat of development to rank widely diverse land parcels. This "short list" will provide focus to future conservation efforts, e.g., working with specific landowners to develop conservation opportunities, and working with city leaders to guide land use policy.





INTRODUCTION

Today, our city is on the verge of losing the natural areas that have been a constant partner over the years. Fayetteville's relationship to the landscape is due to the fact that it is on the dividing line between the Boston Mountains to the south and east and the Springfield Plateau to the north and west. These two landscapes provide dramatic contrast and create a community that is known for its outstanding beauty and outdoor living.

The initial founding of the Fayetteville Natural Heritage Association (FNHA) in 2003 was due to the threat of development to Mt. Sequoyah Woods. From the beginning, it was clear that natural areas within the city and its surroundings will increasingly become covered with roadways, parking lots, and development. To promote the conservation of our historic natural landscape, the members of FNHA joined together to educate the public and raise funds. Since 2003, the disappearance of our valuable natural areas has only accelerated. The recent 2025 Fayetteville City Plan has pointed out that our citizens must accelerate public acquisition of open space and parks. The importance of this goal is apparent to all of us who have worked toward preservation of places such as Mt. Sequoyah Woods.

For several years, FNHA has been collecting suggestions for parcels of land that should be conserved. This past year, an unparalleled opportunity arose. The Ozark Highlands office of The Nature Conservancy had recently hired a Conservation Geographic Information System specialist. GIS, a computerized system of mapping, can use available natural resource maps along with aerial photographs and county ownership parcel maps to create a series of layers that identify the most valuable natural areas in and around Fayetteville. The Fayetteville Natural Heritage Association received a \$20,000 grant from the Urban and Community Forestry Assistance Grant Funds as of July 2005 to identify high priority areas before they disappear due to rapid population growth. In his award letter, Governor Mike Huckabee noted that 80% of Arkansans live in urban areas where planning and management of community forests adds to the quality of the state's natural resources. Mayor Dan Coody has said that this project will provide input for city plans. FNHA will use this information to begin a dialogue with individual landowners and community groups about conservation options. We also expect that this project will show other communities across Arkansas how such an analytical tool can help in land use, planning, and conservation efforts.

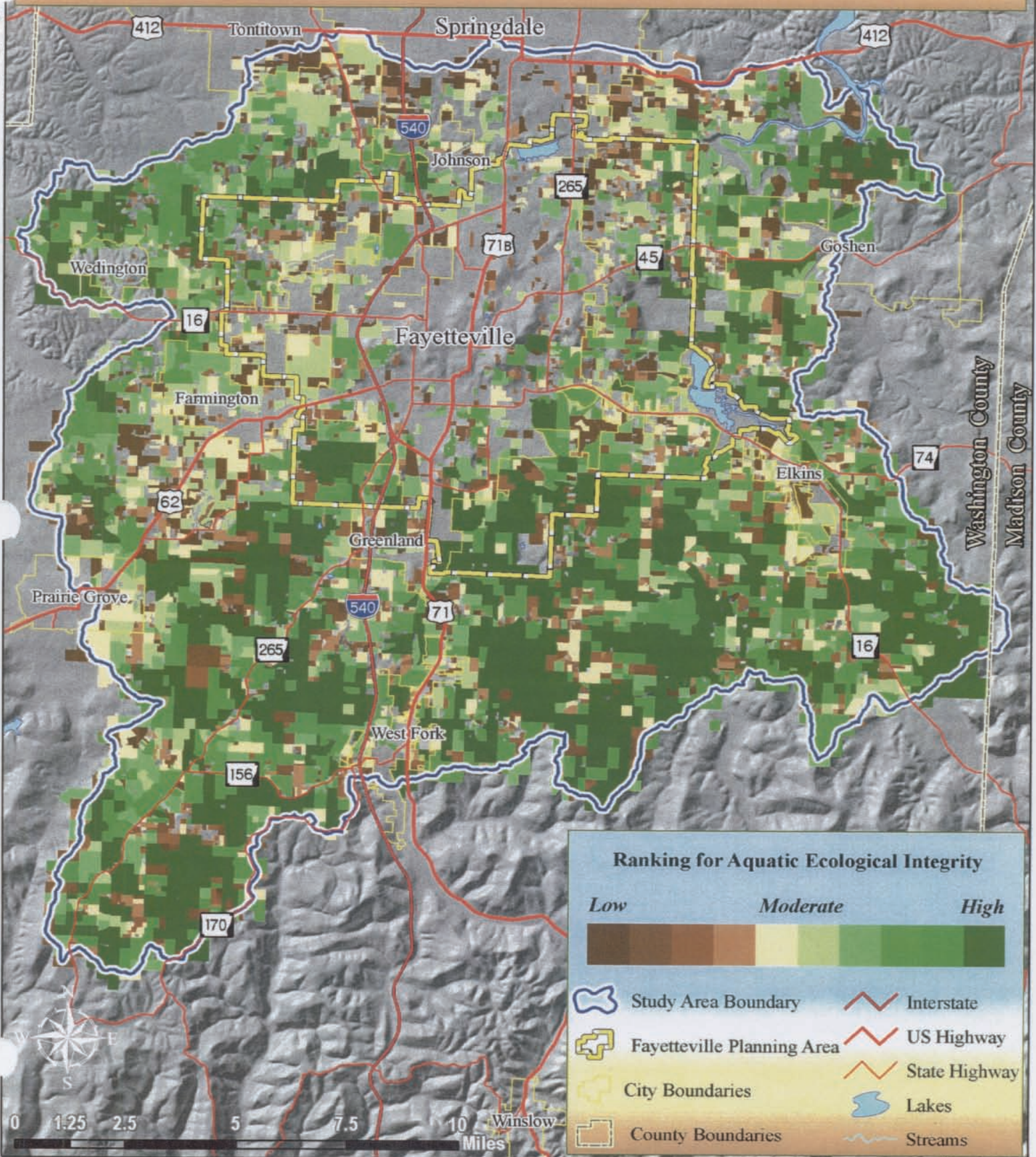
The GIS mapping study is the beginning of a process that also requires on the ground site analysis and input from citizens on what features are important to them. The beginning of these efforts is included in this report.





Urban Forest Conservation Assessment for Fayetteville, Arkansas

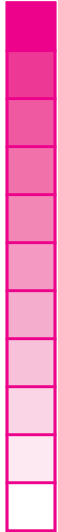
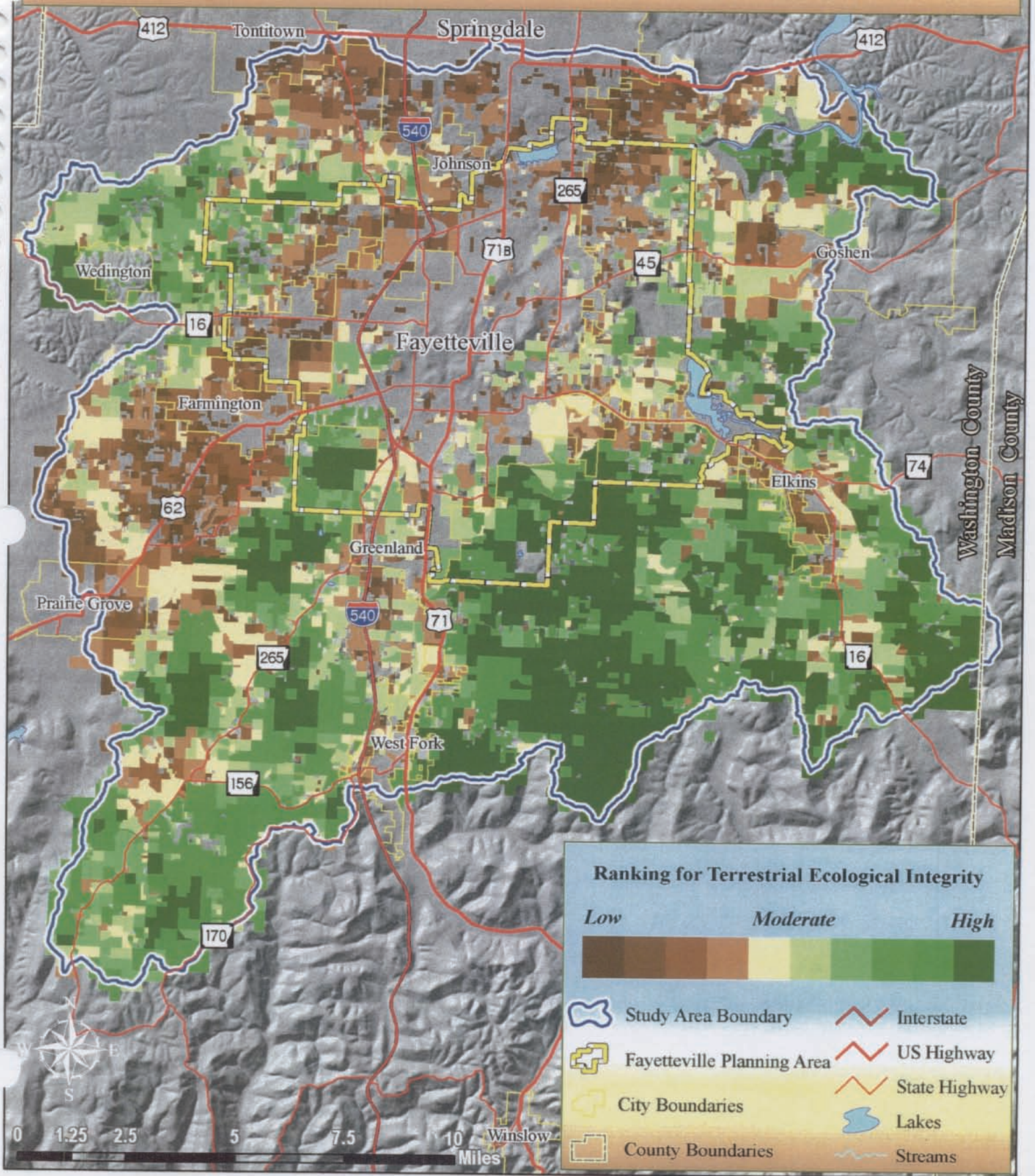
Project Study Area: Parcel Ranking for Aquatic Ecological Integrity

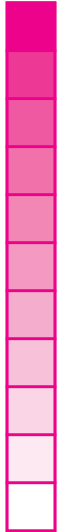




Urban Forest Conservation Assessment for Fayetteville, Arkansas

Project Study Area: Parcel Ranking for Terrestrial Ecological Integrity





Appendix D
Site Conservation Worksheet
For Mt. Kessler Property





Site conservation worksheet

Site V Kessler Mountain

Ward 4 Rank: Aquatic #1, 3 Terrestrial #2, 3 Fayetteville Rank #1 (Cummings Property), and #5 (Site V)

Note: assessment was on Site V

This worksheet is to be used for 'on the ground' assessment of ranked parcels in the GIS study produced by The Nature Conservancy Highlands Office and the Fayetteville Natural Heritage Association. This project is supported in part by the Arkansas Forestry Commission's Urban Forestry Program and the U.S. Forest Service.

Date 07/04/06 Crew hours and minutes 7 adults 4 students 1-5 pm

Site type (terrestrial or aquatic) location and/or name and aspect

Two vegetation types dominate this site. Subsite A Part of the site is rather dry mixed Cedar and Oak vegetation in transition from agriculture over 50 years ago. Subsite B The other part is primarily more mesic oak hickory primarily below large bluffs with a few ephemeral streams

Assessor(s) John Crone, Billy Kribbs, Lissa Bell, Channon Toland and Shawn Shrum

Forest types Cedar Oak grading into Oak Hickory and Oak Hickory/Shagbark Hickory

Forest stage: Old growth _____, Secondary Growth x Relative size of majority of Sub-site A canopy trees Stunted and stressed oaks up to 10 inches
Sub-site B canopy trees up to 24 inch oaks and hickory
Size and species of specimen trees – mainly on site B Oaks and Shagbark Hickory to 24"

Stratification (Primary, secondary, herb/shrub layers)

Subsite A Well defined _____ Somewhat defined x Poorly defined
Subsite B Well defined

Primary canopy density: somewhat open _____ somewhat closed _____ closed _____
Subsite A somewhat open Subsite B closed

Major primary canopy species Subsite A White Oak Cedar Subsite B Oak-Hickory

Major secondary canopy species Subsite A Cedar and many 1-2" mixed saplings
Subsite B. Rather open with a few redbuds and saplings from primary species

Major herb/shrub species Subsite A Primarily a few grasses Subsite B – A number of forbs and wildflowers with a dominance of mayapple over much of the site.

The **diversity of natural features** on the parcel allows a glimpse of the varied ecosystems of the region. Yes x No _____ or has some other notable attributes





Unique site features - High site diversity from xeric site in transitional stunted cedar-hardwood phase with a rather sharp ecotone leading to a rich mesic oak/hickory/shagbark hickory habitat with a rich understory of wildflowers and mayapple with specimen trees up to 24" especially along the base of a visually pleasing bluff.

Ease of **access for walking** and hiking are described as: good _____

Visual quality of vegetation setting : low _____ medium x high

x
(Mature primary canopy trees of one or two major species with open under-story providing strong visual penetration or savannah type)

Additional notes and pictures:



Subsite A Dry Oak Hickory/Cedar Forest



Subsite A – view to pond



Subsite A Pond with Sycamore and Willow



Subsite B View to bluffs

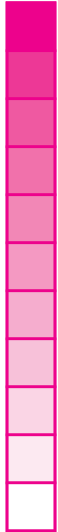


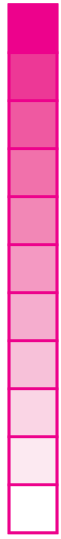


Subsite B Ephemeral Streams with Mayapple

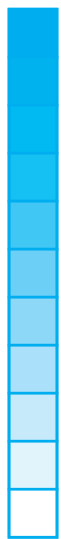


Subsite B Herb layer





Appendix E
Vegetation Description
by John V. Crone





Vegetation Description for Frank Sharp Property

November 16, 2006

This 20 acre property is bisected by South Smokehouse Trail that runs south off Hiway 62 just west of Fayetteville, Arkansas. The site has a north west slope orientation and is well wooded with vegetation typical to the upland oak-hickory hardwood forest association of northwest Arkansas. The site slopes generally from 10-15 percent with the exception of some spectacular bluffs in the southeastern corner and is traversed by several ephemeral drainages that create fairly moist habitats for several species that will be discussed. The property is one of several in the area that is being considered for inclusion into the Ozark Regional Land Trust that will provide future recreation opportunities such as hiking, biking, and linking several important pieces of property slated for development with area parks. This will be done with cooperation from the City of Fayetteville that is strongly supportive of efforts to maintain unique natural sites.

The site may be divided into several zones noted on the attached aerial map, each of which will be discussed for their vegetation by stratification, i.e. primary canopy, formed by the tallest trees, that is relatively continuous throughout the site, secondary canopy consisting of smaller trees that typically form a lower tree canopy layer, and an herb/shrub layer of lower growing vegetation. The attached map indicates the major zones labeled by the dominant canopy tree species, approximate property boundaries and the ephemeral drainages.

Oak/Shagbark hickory type – This forest type dominates the northeastern part of the site with a number of canopy trees in the two foot DBH range and several specimens up to 32" DBH. White oaks far outnumber the red oaks and the secondary canopy is relatively light affording good visual penetration of the site and the ephemeral drainage channels. Trout lilies are frequent to the moister areas in the spring and shrub honeysuckle tends to grow immediately adjacent the road and next to open properties adjacent to the site. The mature shagbark hickory provide visual interest in this area.

Oak/Maple forest type – As one climbs toward the south along the eastern edge of the site, the vegetation gradually changes to include a number of indigenous red maples especially near the ephemeral drainages. In addition to the oak and shagbark history these maples range up to a foot in diameter to form part of the continuous primary forest canopy. The secondary canopy is primarily made up of the major canopy species type and is generally light at this point in time affording good visibility to other parts of the site. However, the herb/shrub layer is presenting large areas of young maple saplings up to five feet in height that will some day create some impressive maple groves given enough time. An occasional specimen ash or persimmon may be noted here and there.

Maple/Oak forest type - the southeast corner of the site affords views to a spectacular sandstone bluff this is somewhat dominated by maple trees up to a foot in diameter. In this zone, the maples far outnumber the oaks and hickories and afford an opportunity for viewing strong fall color. No doubt, ephemeral water falls exist in this area during periods of heavy rain that can afford the viewer with a unique opportunity to experience





the natural site drainage. Deer trails are especially evident in this zone and the herb/shrub layer is quite light affording easy walking opportunities.

Reserve Area and Barns – The middle of the most southern part of the site is punctuated with several picturesque barns that are just off the site and an area of roughly $\frac{3}{4}$ acre in fescue grass that is on the site. The grass area will be part of two acres to be reserved in this zone and the open area maintained in its open condition. It is important to note that the opening in the tree canopy here, the grassy hillside, and the barns present a wonderful rural scene in the forest surrounded by a rapidly developing suburban landscapes.

Cedar/Oak forest type – The southwest corner of the site is dominated by Cedars and White Oaks to create a somewhat continuous cover. The red cedars offer interest in the winter months and create good wildlife habitat due to their rather dense cover. Typically red cedar indicate dryer site conditions or past site disturbance as they are typically considered a transitional species in plant succession models. Secondary stratification is far less noticeable here as the cedars present a denser vegetation habit than the hardwoods of the site. Therefore, visual penetration into the forest is less, but the backdrop of cedars provides strong seasonal interest and is especially good for bird habitat. The hardwood component is typically white oak that is around 15" dbh. Shrub honeysuckle is evident along Smokehouse Trail.

Oak/Hickory forest type – The northwest part of the site is the most typical to northwest Arkansas with white oak and several hickory species dominating the forest canopy. While a few maples may be seen along the ephemeral drainages, they are far less in number than in other parts of the site. However, the mature trees offer a strong canopy in the summer months and provide a good stabilizing cover for the erodable soils. Plants typical to the understory of the Oak/Hickory forest and the site under study are:

Purple Trillium - *Trillium recurvatum*
Bloodroot - *Sanguinaria canadensis*
Sessile Woodoats - *Chasmanthium sessiliflorum*
Crested Iris - *Iris cristata*
Trout Lily - *Erythronium rostratum*
American Redstart - *Setophaga ruticilla*
Flowering Dogwood - *Cornus florida*
Beauty Berry - *Callicarpa americana*
Cardinal Flower - *Lobelia cardinalis*
Water Willow - *Justicia americana*
Southern Lady Fern - *Athyrium filix-femina*
Inland Riveroats - *Chasmanthium latifolium*
Yellow-fringed Orchid - *Platanthera ciliaris*
Eastern Redbud – *Cercis Canadensis*

John V. Crone, ASLA
Professor of Landscape Architecture
University of Arkansas





Image © 2006 Arkansas GIS

Pointer 36°02'41.09" N 94°13'16.53" W elev 1344 ft Streaming 100% Eye alt 4672 ft

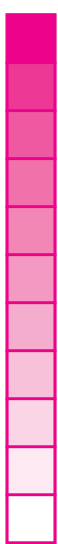
Google

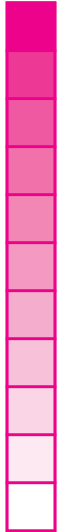
Message parts

Description

Mime-type

Size





Appendix F
City Plan 2025
for the City of
Fayetteville, Arkansas



DRAFT

1 we will make infill & revitalization our highest priorities

allow as-of-right development in designated locations
decrease or eliminate road impact fees for close-in locations within the designated infill area
convert shopping centers & commercial corridors to mixed-use centers, adding residences, offices, & lodging
promote densest development around future transit stops
reinvest in parks, streets, & civic buildings within the heart of the city
promote historic preservation & adaptive re-use of buildings
cooperate with the school district & maintain populations and patterns that promote neighborhood-focused schools
promote shared parking
form expanding employment clusters in & around downtown, the University of Arkansas campuses, the north end, and the rail corridor

2 we will discourage suburban sprawl

strengthen the timing-of-development ordinance so infrastructure & development are concurrent
increase road impact fees for far-flung locations beyond the designated infill area
provide for transfer of development rights from newly annexed areas, with the rights multiplied & made more valuable when exercised in the infill areas

3 we will make traditional town form the norm

require new growth that results in neighborhoods, districts and corridors that are:

- **compact** - via denser housing, meaningful open spaces & preserves, small blocks
- **complete** - via varied housing, mixed uses, civic uses, jobs-housing mix in the neighborhoods
- **connected** - via street-oriented buildings, interconnected streets, interconnected greenways & trails

prepare a transit-worthy community: densify in highly walkable areas along logical future transit routes, and anticipate rail
increase the viability of businesses by leveraging the superior performance of appealing environments that are mixed-use, walkable, and integrated with green space
aggregate employment into centers with amenities, to appeal to newly formed businesses and office relocations

4 we will grow a livable transportation network

community design precedes and outranks traffic planning: commit to increasing mobility via auto, transit, bike & walking, while reducing vehicle-miles-traveled
walking is part of the function: walkable, cyclist-friendly road designs with compatible design speeds, and block-and-street layouts must be the standard
plan & construct multiple corridors instead of single oversized ones
transform existing corridors into great streets: tree-lined, moderate-speed, multi-modal, good addresses
commit to evolving a rich menu of transit choices, including citywide & regional transit; promote the NWA rail transit initiative
plan employment in locations with access to walkable amenities and transit rather than in isolated locations
expand & interconnect the trail system at the neighborhood, citywide, & regional levels

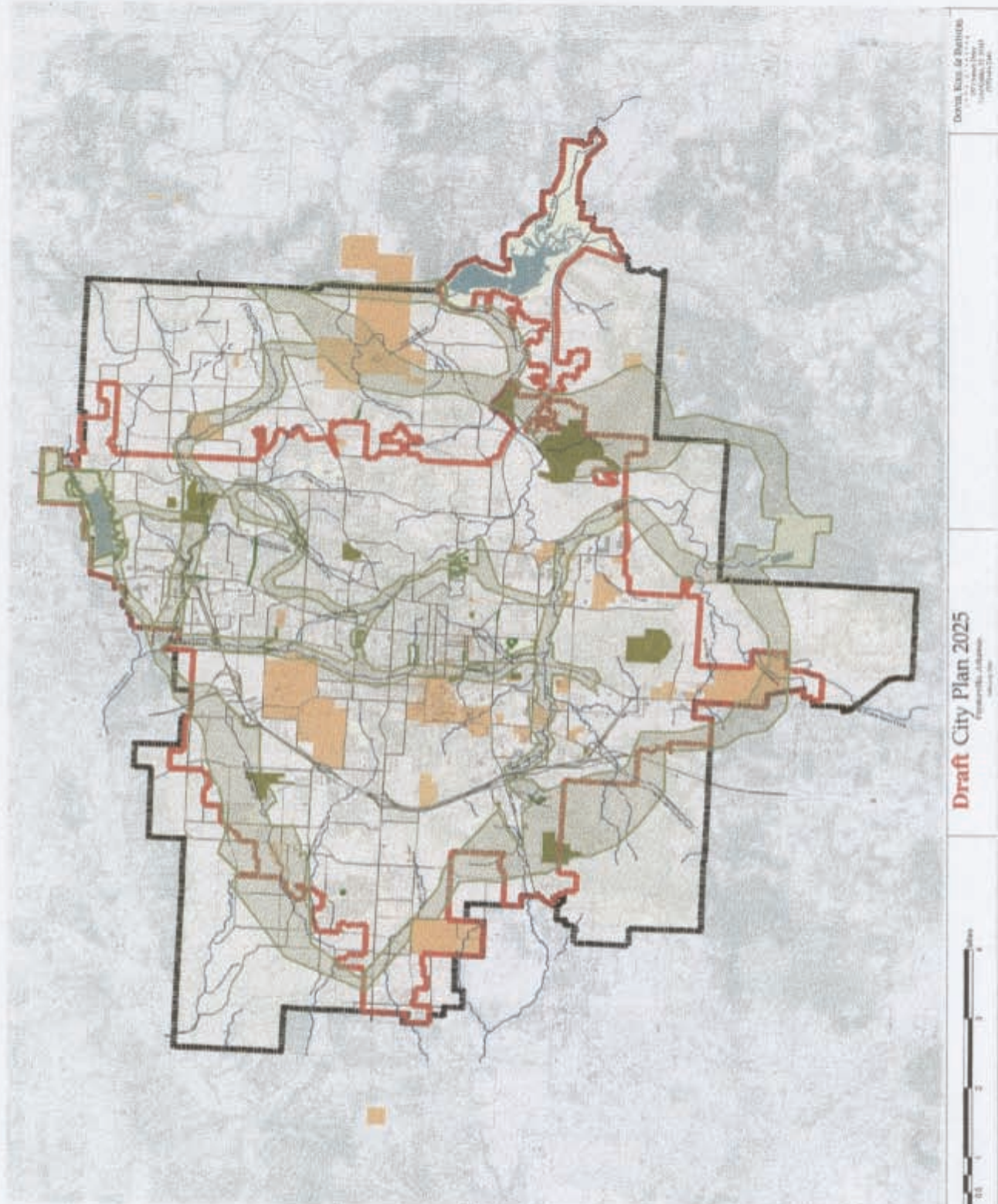
5 we will assemble an enduring green network

vigilantly nurture a continuum of green, including:

- tree-lined streets
 - canopy restoration and protection
 - small neighborhood parks, squares, commons & greenbelts
 - major parks & recreation facilities
 - greenways & trails
 - large-scale preserves for stabilizing hillsides, protecting natural habitats & water quality, and scenic vistas
- accelerate public acquisition of open space & parks
promote widespread deployment of conservation easements, transfer of development rights, & cluster development
maximize City influence over development & preservation in outlying unincorporated areas

b. Affordable, Obtainable Housing

*Approved by
City Council
July 17, 2006*



Trail System Focal Areas

A network of trails connecting interrelated growth areas can be created by linking publicly-owned lands along green corridors, because of the complexities involved in securing land and easements for trails a single trail placement is depicted.

The trail system map is planned for vacant land where possible, traverses concentrations of large open spaces by viewsheds and runs the perimeter of food zones, streams and wetlands which may be valuable for environmental preservation. Where possible the trails include parks which are priority acquisition areas for the Nature Conservancy. Outcrop lines on hillside are followed to investigate slopes. Trail heads end at large public areas where individual trails are expected to be more precisely planned.

After input from the city the map includes trails proposed by the Fayetteville Alternative Transportation and Trail Plan.

No suggested pathway is expected to be completed in its entirety but a meaningful trail system can be created with enough connections.

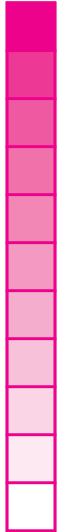
- Planning Area
- City Limits
- Lakes
- Possible Trail Areas
- Parks and Reserves
- City/State/University Lands
- Privately Owned/Open Spaces
- Existing Trails

Shapefile accuracy: +/- 600 feet
Data created and assembled: 12/06



Draft City Plan 2025
Fayetteville, Arkansas

David Ross & Partners
1000 N. University Ave.
Fayetteville, AR 72701
(479) 326-1100





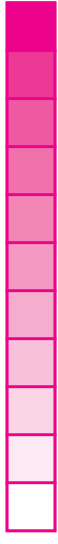
12 Guiding Policies



- 12.1 Future Land Use Plan
- 12.2 Master Street Plan
- 12.3 Annexation



<http://cityplan2025.accessfayetteville.org>





12.1 FUTURE LAND USE PLAN

12.1.1 Introduction

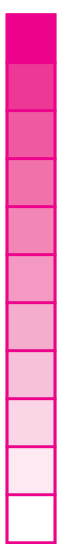
Rather than separating uses, the Future Land Use Map promotes a form-based development pattern, incorporating key elements from the SmartCode, which utilizes a "sequence of environments...that...identify a set of habitats that vary by their level and intensity of character..."



Planning staff first identified the areas from the SmartCode transect that seemed appropriate for both Fayetteville's current development patterns and the vision for development patterns as expressed in City Plan 2025. These area descriptions were then modified to address Fayetteville's resources and development characteristics. The areas are:

- Natural Areas
- Rural Areas
- Residential Neighborhood Areas
- City Neighborhood Areas
- Urban Center Areas
- Complete Neighborhood Plan Areas
- Civic and Private Open Space Areas/Parks
- Civic Institutional Areas
- Non-Municipal Government Areas
- Industrial Areas

Each area is defined on the following pages and accompanied by examples and guiding policies. The Future Land Use Map will be formally reviewed and updated by the Planning Commission and City Council annually to reflect policy decisions and changing circumstances.





12.1.2 Future Land Use Map Designations



Natural Areas:

Natural Areas consist of lands approximating or reverting to a wilderness condition, including lands with limited development potential due to topography, hydrology, vegetation or its value as an environmental resource. An environmental resource could include stream and wildlife corridors, and a *Natural Area* designation would establish a buffer that prevents degradation of these areas. This area requires conservation and preservation in any development pattern.

Guiding Policies:

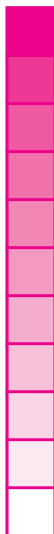
- a. Preserve a network of habitat and open space, protecting biodiversity and enhancing the City's quality of life.
- b. Preserve native vegetation and meet the habitat needs of multiple species.
- c. Encourage recreational and educational opportunities in appropriate areas to enhance appreciation for existing environmental resources.
- d. Identify areas of environmental concern and protect and preserve environmental resources.



Clabber Creek



Lake Wilson





Rural Areas:

Rural Areas consist of lands in an open or cultivated state or sparsely settled. These may include woodland, agricultural lands or grasslands. These areas only have infrastructure and public services to support low-density zoning (i.e. 1 home per 15 acres or more). They do not have adequate transportation or public services to support urban development patterns at this time. Developments in these areas are not in close proximity to commercial services. This area encourages conservation and preservation in any development pattern.

Guiding Policies:

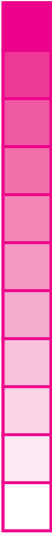
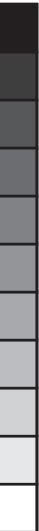
- a. Conserve open space and protect areas of significant riparian benefit, tree canopy and other environmental resources through cluster development provisions, density controls, protective easements and/or other development tools.
- b. Allow and encourage historical agricultural and related uses to continue and to occur as permanent land uses within planned developments.
- c. If developed, encourage alternative development patterns to achieve compatibility with surrounding rural areas.



Mally Wagon Road



Archer Farm





Civic and Private Open Space/Park Areas

Civic and Private Open Space/Parks Areas are sites that are permanently dedicated to open space or parkland.

Guiding Policies:

- a. Encourage parkland dedication and conservation easements for trails that support the Fayetteville Alternative Trails and Transportation Plan, the 10-Year Parks Master Plan and the enduring green network.
- b. Provide an integrated network of open space areas throughout the City to serve local residents as well as provide a regional asset and visitor attraction.
- c. Plan for the long-term preservation and enhancement of open space (including undeveloped natural areas, utility corridors, and key scenic corridors) within the Fayetteville green network.
- d. Conserve open space within the Fayetteville green network through private acquisition and other acceptable conservation methods.
- e. Encourage the creation of connected trails and walkways between community activity areas and neighborhoods and enhance with kiosks and rest stations.
- f. Encourage community-based "green" infrastructure such as rain gardens, vegetated drainages and bio-retention facilities.
- g. Encourage pocket parks, especially in the urban center areas.

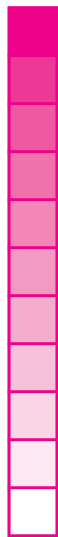


Confederate Cemetery



Lake Fayetteville
Spillway Bridge





Appendix G
Trails of the property
Trails Master Plan
for the City of
Fayetteville, Arkansas





125 W. Mountain St.
Fayetteville, AR 72701
Telephone: (479) 575-8206
Fax: (479)575-8202

ENGINEERING DIVISION CORRESPONDENCE

December 1, 2006

Mr. Frank Sharp
P.O. Box 37
Farmington, AR 72730-0037

Re: Kessler Mountain Trail

Dear Mr. Sharp:

The Fayetteville Alternative Transportation and Trails master plan identifies the Kessler Mountain Trail to be located on several parts of your property including across the 20 acre parcel to be placed in a conservation easement. The goal of this trail is to provide a pedestrian connection from Sixth Street (Hwy 62) over Mt. Kessler to Judge Cummings Road and the proposed South Pass Development. This trail would be a soft surface nature trail constructed primarily with volunteer work. In addition to the main Kessler Mountain Trail, we also recommend completing a loop trail along the east side of the 20 acre parcel to take advantage of the great views and the large bluff on the southeast corner. This loop trail will be approximately 0.6 miles in length (see attached map). The conservation easement will need to include language to allow public access thereto, on, over, across, and through the 20 acre parcel.

Thank you for providing this great amenity for public use,

Matt Mihalevich
Trails Coordinator





December 2006

PROPOSED NATURE TRAIL ON 20 ACRE CONSERVATION EASEMENT



