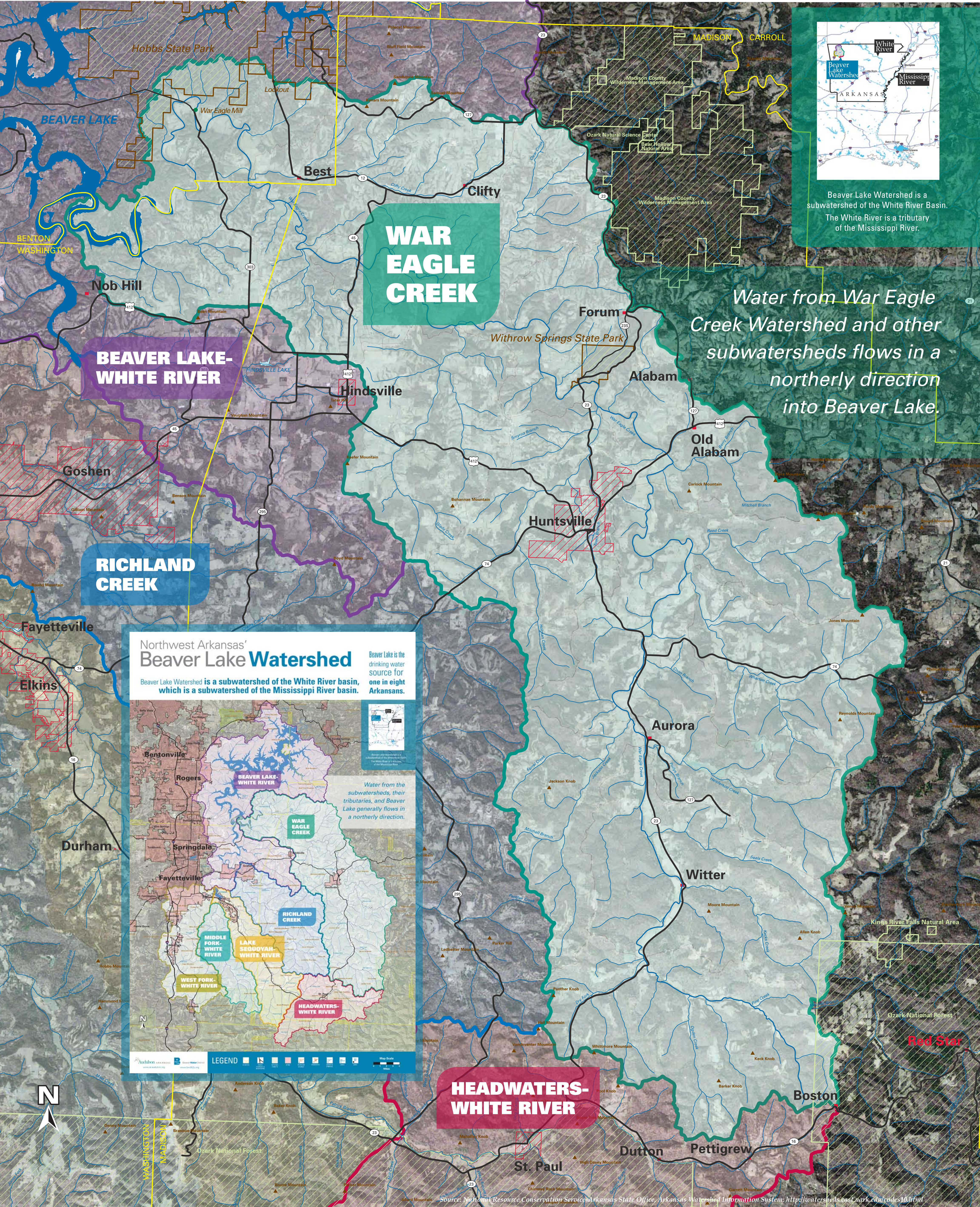


Northwest Arkansas' War Eagle Creek Watershed

War Eagle Creek Watershed is one of seven subwatersheds in the Beaver Lake Watershed. Beaver Lake Watershed is a part of the White River Watershed.

Beaver Lake is the drinking water source for one in eight Arkansans.



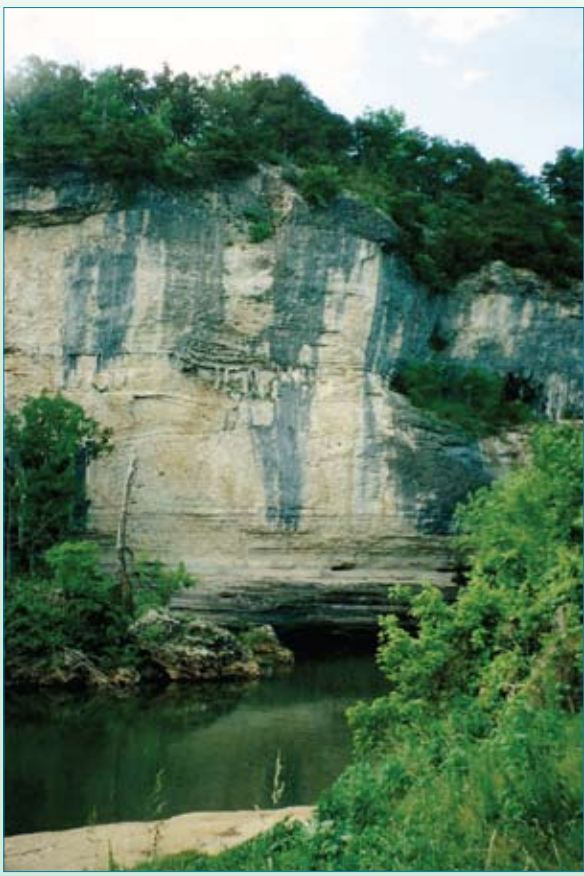
War Eagle Creek Watershed

Why is the watershed important?

War Eagle Creek Watershed is an Ozarks' treasure, extending from its headwaters near the town of Red Star in the Boston Mountains to its confluence with Beaver Lake near the town of Nob Hill. The watershed contains 215,779 acres of mostly rural land, including 468 miles of streams and 664 miles of roads. In 2000, the population of the watershed was 8,735, a 26% increase over the 1990 population. When settlers came to this part of Arkansas, they came in part because there was clean water, good hunting and fishing, and land available for farming.

Audubon ARKANSAS
www.ar.audubon.org

Beaver Water District
www.bwdh2o.org



The bluff at Big Eddy
Photo Courtesy Robert Samin

The War Eagle Creek Steward Program

Recognizing friends of War Eagle Creek

In an effort to recognize individuals and groups who have made important contributions to conservation efforts in the War Eagle Creek Watershed, Beaver Water District and Audubon Arkansas have created the War Eagle Creek Steward Program. This program seeks to identify and reward members of the community whose actions promote the long-term health of War Eagle Creek. With the stewardship program



in place, the source of drinking water for thousands of people in Arkansas will be protected from unwanted pollution and degradation from unsafe influences, and War Eagle Creek will remain a vital source of life and progress for Northwest Arkansas. Additionally, birds and other wildlife that have historically relied on this water source will be assured of a future habitat. To nominate a group or individual, please contact Audubon Arkansas at (479) 527-0700.

Managing Trash and Recyclables

How to recycle and dispose of waste with water in mind

Madison County may be a little off the beaten path as far as shopping malls and interstates go, but it is the home of a remarkable state-of-the-art recycling center. Started in 1986 by Larry Karigan-Winter, the center boasts an ingenious and streamlined design, maximizing recycling as well as resale opportunities. "Our goal is to generate enough revenue to provide countywide trash service without tax dollars," says Larry. He is well on his way.

The center has a resale shop with clothes, toys, electronics and books. The center also buys and resells stainless steel, brass, copper, aluminum cans, and other items. Most importantly, the center properly disposes of waste, helping to keep the watershed clean by reducing vast amounts of trash and chemicals that might otherwise end up in the streams and ultimately

Beaver Lake. The center also hosts volunteers and field trips.

Madison County Solid Waste and Recycling Center is 1 mile south of Huntsville on Airport Road off Highway 74 West. For a full list of services, visit www.madisoncounty.net/~recycle.



Recycling cans at Madison County Recycling Center

What is a Watershed?

What does it contain?

"Watershed" is the area of land that catches rain and snow which drains or seeps into a marsh, stream, river, lake, or groundwater. Tributaries are smaller streams that flow into other larger streams.

Watershed protection is a key piece of the ecosystem puzzle. Watershed preservation encourages proper land use and uniform protection of tributaries within the watershed.

Watersheds contain:

- Businesses
- Pastures
- Farms
- Riparian zones
- Forests
- Rivers & Streams
- Homes
- Wetlands
- Lakes
- Wildlife

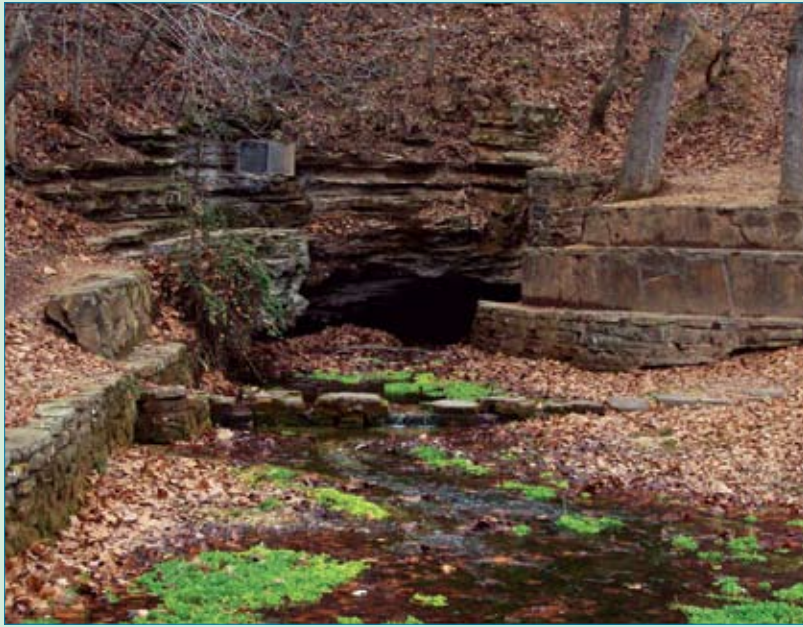


Illustration courtesy of Massachusetts Executive Office of Energy and Environmental Affairs

Recreation & Outdoor Education Opportunities

Withrow Springs State Park is nestled in a shaded hardwood forest along the banks of the War Eagle Creek. The park, with 790 acres, offers campsites, canoe rental, fishing, hiking, swimming, tennis, picnic sites, pavilions, and a gift shop. The park works with area residents to provide an inspiring outdoor venue for annual community events, such as Madison County Pet Shelter's Paws & Claws road race and pet hike in March, and War Eagle Appreciation Day.

Withrow Springs State Park is located five miles north of Huntsville on Ark. 23 or 20 miles south of Eureka Springs on Ark. 23. Call (479) 559-2593. Visit www.arkansasstateparks.com.



Springs abound at Withrow Springs State Park

Hobbs State Park Conservation Area is located about 12 miles east of Rogers on Hwy. 12. At 12,045 acres, it is the largest state park in Arkansas. The park includes ridges, hollows, wildlife, wildflowers, unique geology, and lots of history. Much of the park remains timeless, recalling what early Arkansas settlers glimpsed of the beauty of the Ozarks and the resources of the region. Hobbs offers many opportunities including hiking, hunting, bicycling, horseback riding and a



free shooting range. In addition, there are many educational opportunities, including interpretive lessons in early industrial history and nature walks with park staff. Construction of a 17,000-square-foot Visitor Center is now under way. Call (479) 789-2380 for more information. Visit www.friendssofhobbs.com.

Eastern entrance to Hobbs State Park on state Hwy. 12. The park is known for its tall stands of Shortleaf pine trees.

Best Management Practices for Land Owners

As stewards of their property, local land owners are in the best position to protect the quality of water in War Eagle Creek and Beaver Lake, into which the creek flows. Practices that land owners may implement to protect the creek include:

dead bird composters will help to prevent contaminants from permeating into the soil and environment.



A hydroseeder is used to sow grass seed in riparian areas.

Photo courtesy of Madison County NRCS

Poultry Litter Application

In 2004, the Arkansas Natural Resources Commission identified War Eagle Creek Watershed as a nutrient surplus area. Poultry growers within the watershed are now required to comply with Arkansas Natural Resources Commission rules and regulations regarding application of litter and other fertilizers at rates that will protect the water quality in the watershed.



Stacking shed

Photo courtesy of Madison County NRCS

Stacking Sheds

Stacking sheds are an important part of animal waste storage. In order for litter to be managed properly, it must be stored out of the rain until it is needed. A well built stacking shed will keep litter dry so that the nutrients remain stored in the litter until it is time to apply the litter as a fertilizer. Dry storage of litter also prevents potential fires due to the heating of the litter during microbial decay if it gets wet.

Composters

The natural decay of dead animals produces contaminants. A properly constructed and utilized

Erosion Control

Pasture and hayland planting helps prevent erosion of soil after clearing. When areas are cleared to provide pasture, it is important that grasses are quickly planted. Heavy rains will wash away unprotected soil causing soil degradation and increased turbidity within local waterways.

Heavy Use Area Protection

Areas frequently and intensively used by people, animals or vehicles are susceptible to erosion. By establishing vegetative cover, surfacing with suitable materials, and/or by installing needed structures and vegetated filters, land owners can reduce soil erosion, improve water quantity and quality, improve air quality, improve aesthetics, and improve livestock health.

Constructed Ponds

A well planned and constructed pond will provide water storage. Ponds constructed on newly cleared land will also capture sediment and prevent degradation of water quality within the watershed. Fencing helps maintain water quality in the pond and in discharge from the pond.

Fencing & Rotational Grazing

Fencing along with a rotational grazing plan helps to provide better pasture management. When cattle are rotated within a series of fenced areas, grasses are not depleted below their metabolic reserve, and they are able to renew themselves once the cattle are moved to the next grazing area. A well managed pasture will improve soil and water quality by preventing erosion, increasing infiltration and reducing runoff.



Trees on the right show a healthy riparian buffer.

Riparian Buffers

Maintenance of a strip of native vegetation along streams helps to prevent stream bank erosion, shades and cools the water, filters pollutants, and improves fish and wildlife habitat.

Timber Management Plan

A timber management plan is an essential part of the Best Management Practices (BMP) line-up. The timber management on forested lands within the watershed can have significant impact on the water quality. Timber and other vegetation that grows adjacent to stream banks prevents erosion and stabilizes the soil.

Without proper planning, harvesting techniques can create soil erosion and sediment- heavy runoff, which often leads to an increase in sediment in the water. Heavy runoff can lead to erosion, which ultimately threatens to alter the stream geometry,

thereby changing the route of the river. These types of changes in the stream ecology can alter the habitat of many species of fish, crawfish and macro-invertebrates that live there. Ultimately, these changes in stream ecology will affect the birds and forest wildlife that feed there.

Landowners within the War Eagle Creek Watershed have the potential to make decisions that influence the health and vitality of this magnificent river. Timber management plans allow landowners to carefully plan activity within forested areas for both the long term benefit of neighboring water bodies and continued benefit of the landowner.

The Arkansas Forestry Commission offers landowner's guidance developing timber management plans, at no cost. For more information about the consultation services offered to landowners, contact the Arkansas Forestry Commission office in Huntsville at (479) 738-2037.

Freeze Proof Tanks

Freeze proof tanks provide water to cattle throughout the year and help protect water quality within the watershed. When freeze proof tanks are used, cattle can have a dependable year round source of water. Cattle can then be kept away from the source and water quality protected by reducing trampling on stream banks and direct deposition of animal wastes.



Freeze proof tanks help protect water quality.

Photo courtesy of USDA Natural Resources Conservation Service

Water Quality in War Eagle Creek Watershed

Monitoring the quality of water resources

Holman Creek, which flows into War Eagle Creek, and War Eagle Creek down to its confluence with Holman Creek are listed on the Arkansas Department of Environmental Quality (ADEQ) 2004 Integrated Water Quality Monitoring and Assessment Report 303(d) list as impaired streams. The 303(d) list identifies stream reaches that do not currently meet state water quality standards. Both creeks have a medium priority rating on the 303(d) list. The pollutants of concern are chloride, sulfate and total dissolved solids.

There are two active water quality monitoring sites within the War Eagle watershed: ADEQ WHI0070 on Holman Creek and USGS 704900 on the main stem of the War Eagle. There are also five legacy water quality sites throughout the watershed.



Waterfall at War Eagle Mill

Photo by Cory Holbert

War Eagle: A Peaceful Place for Birds

Songs, Diversity, and Grandeur in the Trees

Nestled within the Ozarks, War Eagle Creek Watershed is home to many birds typical of the region plus a few surprises. The key to finding a wide variety of birds is to explore many different habitats in different seasons.

From the dry pine-oak ridge tops to the hardwood hollows below, a cornucopia of colorful Neotropical migrants feed and breed during spring, summer, and fall including warblers, vireos, thrushes, and tanagers. Black-throated Green Warbler, Worm-eating Warbler, Scarlet Tanager, and Wood Thrush are ones to watch out for. These tiny jewels breed in Arkansas but winter in Central and South America and the Caribbean.

On summer nights listen for the persistent songs of Chuck-will's-widows and Whip-poor-wills. People often confuse these two species, but you can easily separate their songs with practice. The area's substantial Shortleaf pine stands are perfect places for Pine Warblers year-round, but an even better find is a family of Pine Siskins, a species that rarely lingers beyond winter to breed in Arkansas. Bald Eagles nest in small numbers during spring and summer, but in winter many birds roost together near sources of open water and food.



The Eastern Bluebird or Sialia salia is a popular year round resident of the area. About 7 inches long, this bird is known for its vibrant color, cheerful song, and territoriality.

Photo by Julie Durham

Greater Roadrunners range across many habitat types throughout the region, but Grasshopper Sparrows are restricted to the scattered prairie remnants. Prairie habitat within the War Eagle Creek Watershed is a rare commodity that should be protected whenever possible.

Need a peaceful place to go birding? In the War Eagle Creek Watershed and its vicinity, visit the Ozark Natural Science Center located in Madison County Wildlife Management Area, Withrow Springs State Park, Hobbs State Park-Conservation Area, or the War Eagle Minnow Farm.

The regal symbol of our nation, the Bald Eagle or Haliaeetus leucocephus, is always a thrilling sight on the War Eagle. The presence of this bird is evidence of a healthy river.

Photo by Julie Durham

The Legend of War Eagle

How War Eagle Creek got its name

Maps dating back to the 1820 Louisiana Purchase refer to this area as War Eagle, with early settlers reportedly telling the tale of fateful lovers, one of them named War Eagle, who was the son of a Cherokee chief. Legend has it that the young brave lived in a village in Eastern Oklahoma. His childhood sweetheart, Se-qua-dee, lived in a neighboring village. Their families hoped for a wedding in the spring, but plans went awry when a French trapper became smitten with Se-qua-dee and asked her to marry him. When she refused, the trapper kidnapped her and fled into Arkansas. Enraged, War Eagle and his closest friends led a furious pursuit of the trapper. Soon chased by a posse of white settlers for venturing out of Indian Territory, War Eagle and his band lost the trail of the trapper but evaded the posse.

Later ambushed, all of War Eagle's friends were killed, leaving him alone. Refusing to give up on his beloved, War Eagle searched fruitlessly for months, living off the land with stealthy acumen. Finally, on a beautiful stream bank, War Eagle spied Se-qua-dee as she prepared a meal for the drunken trapper. War Eagle attacked and killed the Frenchman. He was then set upon by several of the trapper's company, who killed War Eagle. Legend has it that, overcome with grief, Se-qua-dee persuaded the men to allow her to stay with her lover as they moved on. She died at his side of a broken heart.

Today, beautiful War Eagle Creek still bears the name of the brave and determined Cherokee warrior and is a testament to the rich and colorful history of Northwest Arkansas.

War Eagle Creek Watershed History

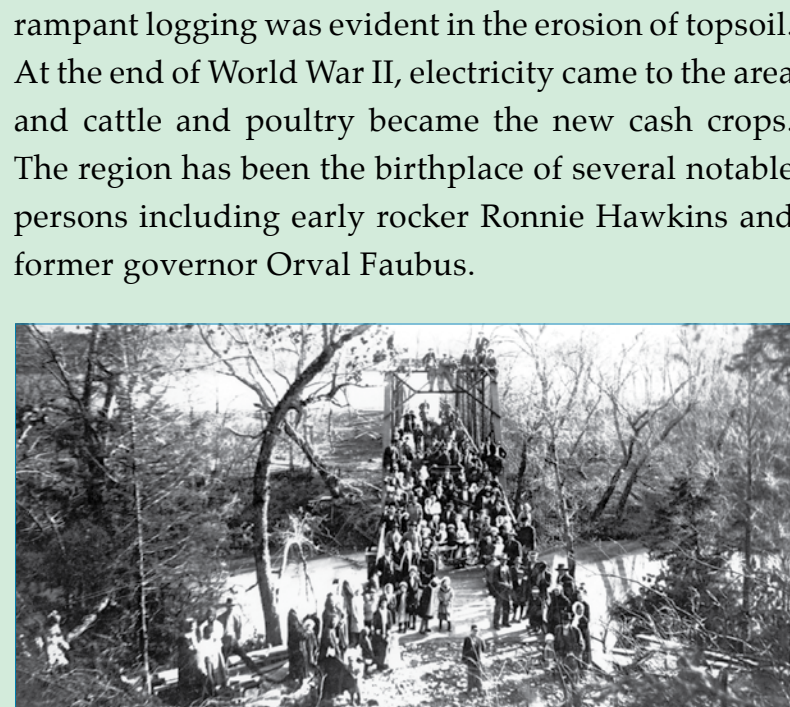
From Ozark Bluff Dwellers to European Settlers

Throughout history, War Eagle Creek has provided energy for mills and habitat for fish and other wildlife.

The War Eagle area has hosted inhabitants for at least 3000 years according to archeologists. Ozark Bluff Dwellers were hunter-gatherers but there is also evidence of primitive agriculture.

Early Anglo settlers arrived in the 1820s, many coming from Huntsville in Madison County Alabama, naming the area after their previous home. Many also came from Tennessee. These ancestors hunted, trapped, fished, and farmed.

After the Civil War, the railroad and the timber trade brought prosperity, and towns like Pettigrew and St. Paul grew. Many small canneries emerged as well. With the depression of the 1930's however, the area was hard hit and the impact of



Grand Opening of War Eagle Bridge, January 4, 1915

Photo courtesy Shiloh Museum of Ozark History