

White River, Richland Creek and Middle Fork Project

Over the past year, we have conducted six programs on streamside, forest and pasture management in the White River and Richland Creek Watersheds with over 100 landowners in attendance. In addition to educational programs, we are continuing to conduct a variety of stewardship events. In 2017, we held five volunteer stream cleanups and with the help of volunteers, were able to remove 8,000 pounds of trash! Nine volunteer planting events helped to increase native trees and shrubs for water quality and wildlife improvement. Efforts continue to remove invasive plants at Bunch Park in Elkins, eradicating invasives such as bush honeysuckle and Chinese privet. Thank you to community members that have helped make 2017 a success!

We've also been working with landowners to adopt a variety of volunteer best management practices on their property. While we have been advising landowners, we are also measuring streambank erosion at three different locations in the watershed. A new USGS stream gauge is being added to collect stream flow data in the White River Watershed.

This winter and spring we will be continuing to provide forest, pasture, landscape, and streamside management workshops for landowners, and we will also be conducting community watershed input meetings. This is a great opportunity to engage in the efforts of watershed protection and stewardship and we hope to see you there!

Funding Available for BMP Demonstration in the Richland Creek & Middle Fork Watersheds:

Funding is available now to help achieve your goals on your property through the use of best management practices such as low impact development features like rain gardens, rain harvesting, landscape management as well as unpaved road and driveway improvements.

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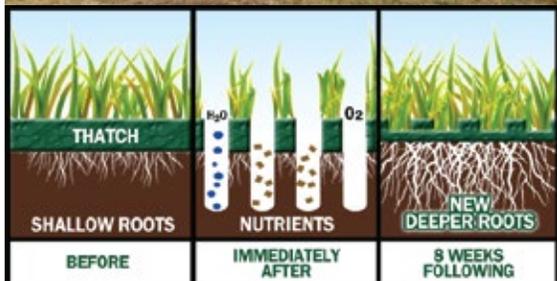
We are proud to partner with the Knolls Subdivision in Goshen, Arkansas to protect the Beaver Lake Watershed!

A conservation management plan was completed for their open space areas and included:

- no mow zones along streams
- riparian buffer enhancement
- naturalistic lawn recommendations
- upland forest plantings
- pond management

BWA worked with the Knolls and other organizations such as Arkansas Game and Fish Commission to complete a wildlife management plan and Arkansas Forestry Commission to produce a forest management plan for the subdivision.

BMP Spotlight: Pasture Aerator



The Beaver Watershed Alliance, University of Arkansas, and USDA-Natural Resource Conservation Service (NRCS)—Agricultural Research Service received a Conservation Innovation Grant from the NRCS to continue scientific and economic research on the benefits of pasture renovation for water quality and farm economics.

Use of the pasture renovator and subsequent stormwater runoff monitoring at Lollars Creek around the turn of the 21st century shows that pasture renovator use can significantly increase fertilizer retention on the farm through reducing runoff from pastures. Benefits include increases in farm production and producer profit, as well as protection of the quality of soil, water and air resources.

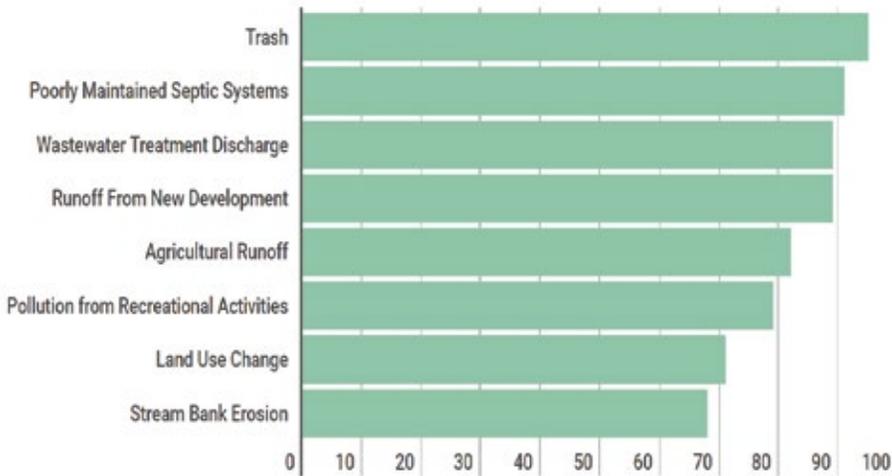
Landowners in the Beaver Lake watershed can use the renovator at no cost for up to 5 days, as part of the program. Call to find out more! Contact Beaver Watershed Alliance at info@beaverwatershedalliance.org or call 479-750-8007.



Water Quality Survey Says...

A recent survey commissioned by the Beaver Watershed Alliance provided insight into water quality perspectives among residents about water quality the Beaver Lake Watershed. The survey polled 400 residents from portions of Benton, Washington, and Carroll Counties about pollutants of greatest concern in the watershed, what landowners used the watershed for, and whether or not they felt like they could make a difference in protecting their drinking water source through their individual actions.

While most participants named drinking water as their primary use of Beaver Lake and viewed protecting Beaver Lake as important to them and their families, not everyone was aware of the greatest pollutants of concern to their drinking water source and its treatment cost, or that their individual actions can make a difference.



(Above) 400 participants rated the importance of eight issues for Beaver Lake.
Source: *A Survey of Benton, Madison and Washington Counties, 2017*

(Right) Existing and projected phosphorus and sediment loads to Beaver Lake.
Source: *Beaver Lake Watershed Protection Strategy*

Ninety-five percent of participants who took the survey believed that trash in lakes and streams is the greatest issue for Beaver Lake, while poorly maintained septic systems and wastewater treatment plant discharges were believed to be the second and third greatest issues. Land use change and stream bank erosion were rated last in overall importance among survey participants.

Land use change is the conversion of land from one use to another, and the development of our region plays a significant role in the water quality of Beaver Lake. Low-density development is often referred to as urban sprawl, a growth pattern that results in more land use change. Any time that land use changes, so does the way that the water flows and the amount of soil that washes into ditches and streams that lead to Beaver Lake.

According to the Beaver Lake Watershed Protection Strategy (the Strategy), 53% of phosphorus loading and 61% of sediment loading to Beaver Lake comes from streambank erosion. Other sources of phosphorus contributions to the lake annually are agriculture (17%), wastewater treatment plants (15%), and septic systems (6%), with dirt roads, construction, forestry, and low-density development contributing the remaining portion. The Strategy also predicts future sediment loading to the lake to be dominated by streambank erosion and low-density development.

While trash is unsightly, degrades the environment, and negatively affects wildlife, it is not greatly impacting the drinking water quality in Beaver Lake or its treatment cost anywhere near as much as streambank erosion. Streambank erosion is the number one source of sediment and phosphorus pollution to Beaver Lake, according to the Strategy.

The good news is that we know a lot of people are doing good things already and we know more about the public understanding of the issues affecting Beaver Lake. Streambank erosion and low-density development can be addressed in large part to public participation in our ongoing outreach programs, and increased public support for projects that address streambank erosion and support thoughtful land use such as **urban infill** and conservation of natural open spaces.

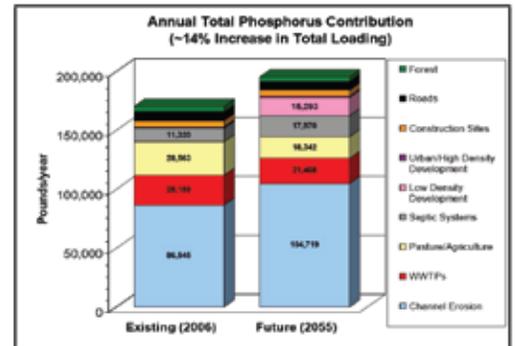


Figure 2-9. Comparison of Existing and Future Phosphorus Loading (methodology and results described in [Supplemental Pollutant Loading Analysis](#))

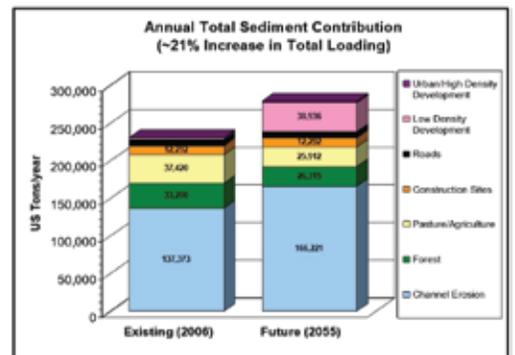


Figure 2-7. Comparison of Existing and Future Sediment Loading (methodology and results described in [Supplemental Pollutant Loading Analysis](#))



West Fork Watershed Restoration Initiative



District Conservationist Rhonda Foster and Grasslands Specialist Ralph Harris evaluating an intensive grazing system that is utilizing a 3 week rotation of cattle grazing. The area on the right has been grazed for 3 weeks while the area on the left has rested and is ready for grazing by cattle.

Photo courtesy of USDA Natural Resources Conservation Service.

It's been just over a year since Environmental Quality Incentives Program (EQIP) funding for the West Fork White River Watershed Restoration Initiative started in October 2016. To date, 536 people have participated including 64 property visits with landowners, who have established 86 best-management practices (BMPs) on more than 6,500 acres within the Regional Conservation Partnership Program (RCPP) project area.

These BMPs include tree planting, streambank stabilization, riparian buffer establishment, pond construction, and management plans for nutrients, wildlife, forestry, farms, and other improvements. Many other landowners express interest in receiving BMPs or are in the process of implementing them. 13 landowners have signed up for EQIP this year, and a few hundred thousand dollars will be available to them to implement BMPs to protect water quality and improve wildlife habitat. We are extremely grateful for the warm reception this program has received and look forward to working with the residents of Greenland, Fayetteville, and West Fork, and Washington County in the project area to protect and restore the West Fork White River, a tributary of our drinking water source, Beaver Lake.

In 2019, the Natural Resource Conservation Service (NRCS) will once again award landowners funds for conservation practices in the West Fork White River Watershed Restoration Initiative as part of the RCPP project. To apply for 2019 EQIP funding, sign up any time by contacting the Washington County NRCS office. However, as funding is competitive, landowners are encouraged to increase their approval chances for EQIP funding by implementing other BMPs on their property, such as forest management plans, wildlife management plans, and nutrient management plans. If you're interested in obtaining funding to improve your land, contact BWA for a site visit - we'll assist you through every step of the application, funding, and implementation and ensure every step meets EQIP standards.

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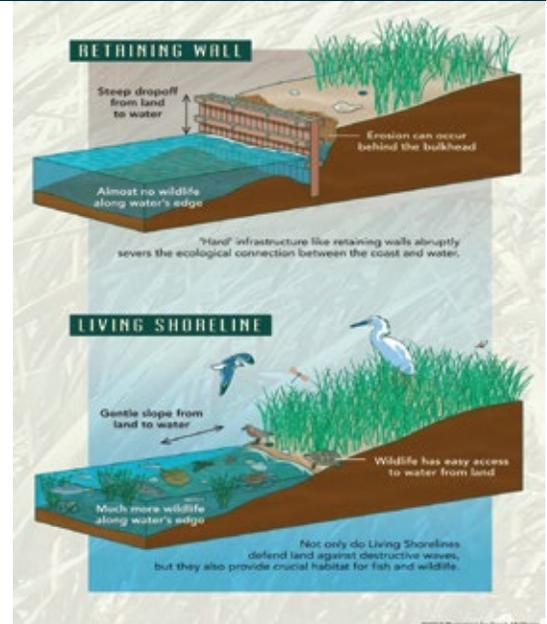
Restore Your Shore with Lakescaping

Beaver Lake has more than 487 miles of shoreline, and its surface covers 31,710 acres. The U.S. Army Corps of Engineers manages Beaver Lake and the government lands surrounding the lake. For many lakeside residents, those lands are part of your backyard.

We often receive inquiries about lakeside/shoreline erosion. Using native vegetation to create or enhance the buffer zone around the lake is a good way to prevent shoreline erosion. Shoreland landscaping, also known as "**lakescaping**," can be beneficial for your property by reducing land-loss, improving wildlife and aquatic habitat and reducing pollutants from directly entering Beaver Lake.

Creating or keeping a buffer zone is the basic lakescaping concept. The wider your buffer zone, the more improvement it will make. We recommend at least 25' from your shoreline/US Army Corps of Engineers property line. Additional benefits include less management, i.e. mowing, and more time enjoying your lakeside property!

Contact BWA to order free trees and shrubs to lakescape your buffer, or contact our staff for a free site visit to assess and help make recommendations for your lakeside property.



Low Impact Development - Request for Projects



Low Impact Development features such as permeable paver systems, underground water storage, flush curbs, rain gardens and bioswales can be installed in new development or retrofits can be made to existing infrastructure.

Using native plants and features that soak in rainfall helps to protect and enhance our watershed ecosystem.

The Beaver Watershed Alliance is pleased to announce a request for projects (RFP) for installation of low impact development parking lots in the Beaver Lake Watershed as part of an Arkansas Natural Resource Commission and Environmental Protection Agency nonpoint source pollution reduction grant. The grant will provide funding to help communities protect water quality, manage stormwater, and enhance quality of life. Eligible projects include parking areas in public places where permeable pavers, rain gardens, and bioswales are incorporated as design elements. Projects can be **retrofits** to current infrastructure or part of a new development. Interested parties need to contact Beaver Watershed Alliance by January 15, 2018.

The goal of this program is to increase the adoption of low impact development practices throughout the Beaver Lake watershed by providing municipalities and Beaver Lake watershed residents with resources, technical assistance and information. Low impact development (LID) uses design techniques that infiltrate, filter, evaporate, and store runoff close to its source. Rather than rely on costly large-scale conveyance and treatment systems, LID addresses stormwater through a variety of small, cost-effective landscape features located on-site. LID is a versatile approach that can be applied to new development, urban retrofits, and revitalization projects.

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Funding Available Now

Beaver Watershed Alliance, along with our partners and sponsors, is making available grant funding to assist landowners and property owners with watershed improvement programs. Applications for funding can be found on our website, www.beaverwatershedalliance.org, or contact us and we will help connect you to the right program. Phone 479-750-8007 / Email info@beaverwatershedalliance.org.

Free Tree & Shrub Program

BWA provides a wide variety (30 species) of free, bare-root seedling, Ozark native trees and shrubs for landowners that are interested in using these plants to restore or enhance their streamside (riparian area) vegetation or reforest their property.

Early-bird Ordering Nov - Dec 2017
Final Orders by January 30, 2018

Rain Garden Mini-Grant

The Rain Garden Mini-Grant Program continues to assist property owners, businesses, schools, cities, churches and other public spaces to implement rain gardens to improve water quality for the Beaver Lake watershed.

Applications are taken throughout the year and will be reviewed as they are received. BWA offers technical assistance to help select a location, design and can recommend management techniques for rain gardens.

\$250 for Landowners/Residents
\$1,000 for Business/Public Spaces

BMP Mini-Grant

The Best Management Practice (BMP) Mini-Grant Program can fund up to **10% or maximum of \$10,000** for the cost of implementing BMPs on private land, residential spaces, business locations and public places.

Applications are taken throughout the year and will be reviewed as they are received.

To learn more about BMPs that are eligible for funding, please contact Beaver Watershed Alliance.



US Army Corps of Engineers



Washington County Conservation District



WATERSHED CONSERVATION RESOURCE CENTER

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Inside:
Funding Available
For Property
Owners and Public
Spaces



Free Educational Programs and Volunteer Opportunities

Please email info@beaverwatershedalliance.org or call 479-750-8007 to RSVP and to stay informed of the details for these events!

FREE PROGRAM	TIME	DATE	LOCATION
Headwaters - White River Cleanup	9 am - 12:30 pm	Jan 20, 2018	St. Paul
Richland Creek Cleanup	9 am - 1 pm	Feb 10, 2018	Goshen Community Building
BWA Speaker Series: Nutrient Trading	11:30 am - 1 pm	Feb 22, 2018	TBD
Streamside Management Workshop	9 am - 1 pm	March 3, 2018	Elkins Community Center
Middle Fork Cleanup	9 am - 12:30 pm	March 17, 2018	Bunch Park, Elkins
East Fork Cleanup	9 am - 12:30 pm	April 14, 2018	Bunch Park, Elkins

Beaver Lake Watershed News



This newsletter is being sent to you because our records show that you own property or land in the Beaver Lake Watershed. If you would prefer to receive a digital copy only or have your name removed from this mailing list, please notify the Beaver Watershed Alliance by calling 479-750-8007.

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A Full Year Ahead for Watershed Protection

Hello Beaver Lake Watershed Resident, Landowner, or Manager,

One of the constants in life seems to be that things are always changing. Sort of like the weather in Arkansas. As we've been working to reach landowners in the Beaver Lake Watershed, we've certainly seen a change in the number landowners that we are reaching. We started by reaching just a handful of landowners, and now we are up to reaching about 20,000 landowners, land managers, or residents. We initially started working with landowners on just a few thousand acres, and now we are reaching landowners on about 800,000 acres. There are only 746,000 acres in the Beaver Lake Watershed, but every watershed has a boundary, and many of our stakeholders in the Beaver Lake Watershed live on the watershed divide and also own land in the Illinois, Elk, Kings, Mulberry, Lee Creek, and Frog Bayou Watersheds.

It is a fun process to be able to meet and work with so many different landowners in the Beaver Lake Watershed that all have a unique land management interest and land, water, and wildlife stewardship style. We are grateful to the individuals, businesses, communities, and families that are doing the best that they can do to help take care of the Beaver Lake Watershed. We are also grateful for the changes in land management that landowners are making now and that they are aware of management strategies and practices that can help accomplish multiple goals on their property.

With the help of participating landowners and land managers, we are changing our watershed for the better when and where we can. Since we are outnumbered about 20,000 watershed landowners to 5 BWA staff, we have not yet been able to meet about 75% of our watershed landowners in person, on their property, or at our programs but we sure would like to visit with those that we've not yet met about land management interests and goals. Without your interest, your involvement, and your support, the water quality of Beaver Lake and the associated tributaries in the watershed will likely change for the worse, but we want it to stay as good as it is or change for the better. So, if you've not yet checked in with us, please consider us as a resource and give us a call. If you have some land management goals, interests, or concerns that you would like to share or receive free consultation about, please check in with us by calling 479-750-8007 or emailing us at info@beaver-watershedalliance.org.

John Pennington, Executive Director

Glossary of Newsletter Words

Lakescaping — Creation of a buffer zone of native vegetation that extends both lakeward and landward from the water's edge. A buffer zone that extends 25-50 feet from shore can provide wildlife and water quality benefits. Lakescaping can restore many functions and diversify and enhance your shoreline and provide a seasonal show of color.

Land use change — is the conversion of land from one use to another, and the development of our region plays a significant role in the water quality of Beaver Lake. Examples are conversion of forest to pasture or pasture to development.

Urban Infill — The reuse of vacant spaces within a town or community that decreases urban sprawl and promotes thoughtful land use. Infill can be achieved in a variety of ways such as adding to an existing structure, creating a new layer over the old, or it can simply be filling an abandoned lot.

Retrofits — Improving or enhancing existing infrastructure, such as parking lots, by incorporating technologies such as Low Impact Development to capture, treat and filter stormwater. Retrofits are sometimes necessary in highly urbanized areas where there is not room for additional development.

Special thanks to sponsors and partners:

