

NIANGUA RIVER WATERSHED

HEALTHY WATERSHED PLAN



COMMUNITY PARTNERSHIP PROJECT

2016

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EXECUTIVE SUMMARY

The Niangua River Watershed Community Partnership project is part of the Missouri Department of Natural Resources “Our Missouri Waters Watershed Collaborative”. The goal of this effort is to engage local residents in identifying water resource related issues within the watershed, then work cooperatively with local partners to develop solutions and focus on available resources.

As the project framework was developed, the discussion focused on how to maximize community involvement in order to fully meet the project objectives. The project objectives are defined as follows:

- Research and provide information about the watershed.
- Assemble a Watershed Advisory Committee representing a broad cross-section of watershed residents.
- Coordinate and host a series of watershed advisory committee meetings.
- Document the identified watershed priorities with actions being suggested.
- Assist in compiling information gained during the planning meetings.
- Communicate watershed information; promote watershed protection, preservation and enhancement.

- Develop a Healthy Watershed Plan.

Community Engagement Process

To gain a better knowledge of current partnerships and activities having a positive impact on water resources in the watershed, local planning partners compiled a list of completed and active environmentally friendly projects. This ensured that we engaged active groups and organizations in the planning process. It was quickly realized that there may be opportunities to expand upon current projects by collaborating with the numerous organizations and volunteers already working to improve and protect water quality in the watershed.

This “Healthy Watershed Plan” has been developed during an 17-month community engagement process, that included a series of eight public meetings and numerous outreach events. During this time, valuable input was received from local agencies, and organizations that participate in water protection, water preservation, and environmental activities within the Niangua River watershed.

The Watershed Advisory Committee

A key component in watershed planning is engaging the people who live and work in the watershed. Local input and ownership, during the planning process helps develop

goals and action items that have local buy-in and are more likely to be implemented. Establishing a locally-driven Watershed Advisory Committee is an important part of the process. The Watershed Advisory Committee involved participants from the many industry sectors that are represented within the watershed, including: Tourism, Agriculture, Education, Conservation, Local Governments, and others that have an interest in the future of the watershed. Each of these groups participated throughout the planning process and provided valuable information on the current condition of the Niangua River watershed, expressed concerns about the future of the watershed, and the importance of protecting the Niangua River watershed for future generations.

Funding Opportunities

As funding resources have dwindled in many areas, the work of volunteers has become ever more important. Too often, the lack of funding resources is often a common reason that projects do not move forward. As the Watershed Advisory Committee identified potential projects and action items, a list of potential volunteer organizations and funding opportunities was developed to help with those projects. This comprehensive list of volunteer and funding resources is summarized in Chapter 5 of this document.

Planning for the Future

With the watershed dynamics explored and shared, we have developed a better sense of how a watershed approach can have a positive impact on the quality of water throughout the region. With a broad range of activities, industries, and residents it has been interesting to see the crossover of common issues that the Watershed Advisory Committee viewed as concerns, and was willing to develop common goals and actions.

This Healthy Watershed Plan outlines what we learned during the planning process, the difficulties we experienced and the triumphs along the way. It also creates a road map for organizations, agencies, and volunteers on possible projects, and funding opportunities within the Niangua River watershed.

CHAPTER 1

INTRODUCTION

What is a watershed?

Planning Partners

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WHAT IS A WATERSHED

What is a Watershed?

A watershed is an area of land that drains to a particular water body like a stream, river, or lake, such as the Niangua River. Everyone lives in a watershed. A healthy watershed is very important as it can help sustain the designated uses for that body of water which vary from recreation to drinking water to supporting a healthy aquatic life. Watersheds do not conform to manmade boundaries, so residents from various counties share the important responsibility of protecting and improving their water resources in the watershed.

What is a HUC?

Similar to a zip code, a hydrologic unit code (HUC) is a sequence of numbers used to identify specific drainage areas of a lake, river, stream, or other waterway. A HUC number can be anywhere from 2-digits to 12-digits. The more digits in a HUC, the smaller the land area covered by that HUC. For example, there are nearly 2,000 HUC-12 sub-basins in Missouri, but only 66 HUC-8 sized watersheds. The Niangua River watershed, the focus of this project, is a HUC-8 watershed with the HUC 10290110.

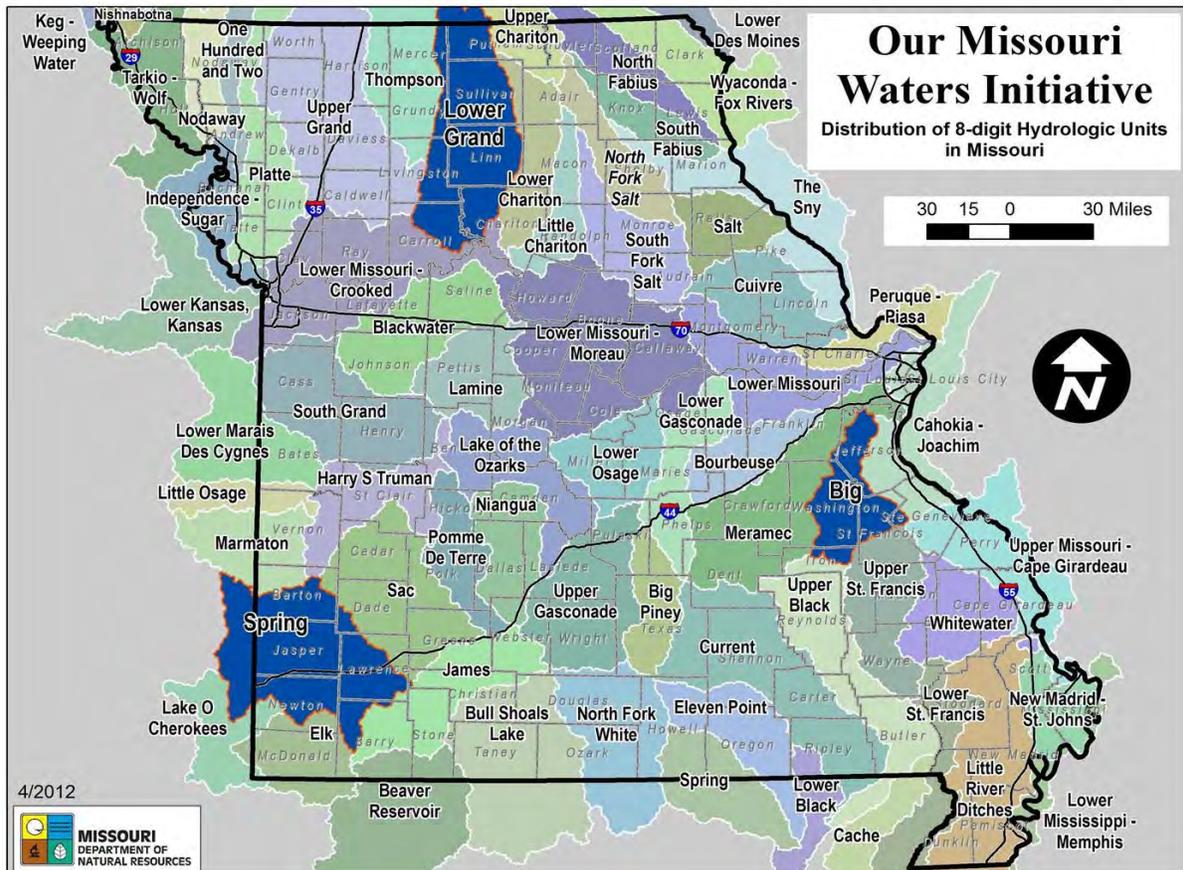


Fig 1.1

PLANNING PARTNERS

Regional Partners

The Niangua River watershed crosses the boundaries of three different regional planning commissions: Lake of the Ozarks Council of Local Governments, Southwest Missouri Council of Governments, and Kaysinger Basin Regional Planning Commission. Working with our neighboring regional planning partners was an important aspect of the project. Each of these organizations are familiar with their own counties and their local officials. Bringing them on as planning partners helped maintain a level of knowledge about the region that proved to be beneficial in both collaboration and data collection.

Organizations and Other Agencies

Through the watershed collaborative process there was engagement with a number of organizations and agencies that expressed an interest in water quality within the Niangua River watershed. These organizations include: University of Missouri Extension, Missouri Department of Conservation, the Missouri Caves & Karst Conservatory, Missouri Stream Teams Program, local Soil and Water Conservation Districts, Ameren Missouri, local County and City Officials, Missouri Farm Bureau, local United States Department of Agriculture's Natural Resources Conservation Service and others.

Landowners

The Niangua River watershed is comprised of nearly 90 percent forest and pasture land

and less than 6 percent urban areas. In this rural setting, it was imperative that private landowners participate in the discussion and planning process. Each of the local counties were contacted to obtain ownership information on large parcels of land to include those landowners in the meetings and planning events. Working with the local Soil and Water Conservation Districts and Missouri Department of Conservation additional outreach was conducted to landowners.

Tourism

Tourism is an important economic driver in this region that makes this watershed unique. From river outfitters on the Niangua River to waterfront resorts on the Lake of the Ozarks, there are numerous local businesses that rely on watershed health for their livelihood. A comprehensive list of these local businesses was developed to ensure these groups were engaged throughout the process. Additional outreach was conducted to waterfront property owners. There were number groups that regularly participated and provided input during the engagement process, and some that continued to be involve in the Watershed Advisory Committee.

Volunteers

Since implementation of the Healthy Watershed Plan is strictly voluntary, the participation of people who care about the watershed and its future is extremely important. Volunteers from all areas of interest and experience were encouraged to participate.

CHAPTER 2

NIANGUA RIVER WATERSHED

CHARACTERISTICS

General Characteristics

Public Use Areas

Land Use

Water Resources

Geology/Hydrology

Flooding

Water Quality Impairments

Total Maximum Daily Loads

National Pollutant Discharge Elimination System

Missouri State Operating Permits

Permits By County

Water Availability and Water Use

Demographics of the Niangua River Watershed

Population

Age Groups

Population Growth Trends

Employment Information

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FACTS ABOUT THE NIANGUA RIVER WATERSHED

General Characteristics

- Drainage Area approximately 1,030 square miles (659,200 acres)
- Includes portions of five counties, including Camden, Dallas, Hickory, Laclede, and Webster
- Part of the Osage River System
- Some 1,796 miles of streams are present in the Niangua River watershed
- The Niangua River is approximately 120 miles long
- The Little Niangua River is approximately 65 miles long
- Headwaters of the Niangua Arm of the Lake of the Ozarks
- Ninety Percent Forest and Pasture Areas
- Less than six percent Urban/Developed Areas

Public Use Areas

The Niangua River watershed is home to several recreational areas with the focus on water sports and activities. These public use areas include: Bennett Springs State Park, Ha Ha Tonka State Park, Lead Mine Conservation Area, Mule Shoe Conservation Area, and Fiery Fork Conservation Area.

Land Use

The Niangua River watershed's land use is primarily forest and pasture comprising nearly ninety percents of the overall land use. The Watershed is dominantly rural with less than six percent urban or developed areas. The areas of population growth are in

Buffalo, Camdenton, Conway, Marshfield and Urbana. For more information on populations and population growth see the demographics section of this document. There is very little commercial cropland in use in the Niangua River watershed (less than one percent).

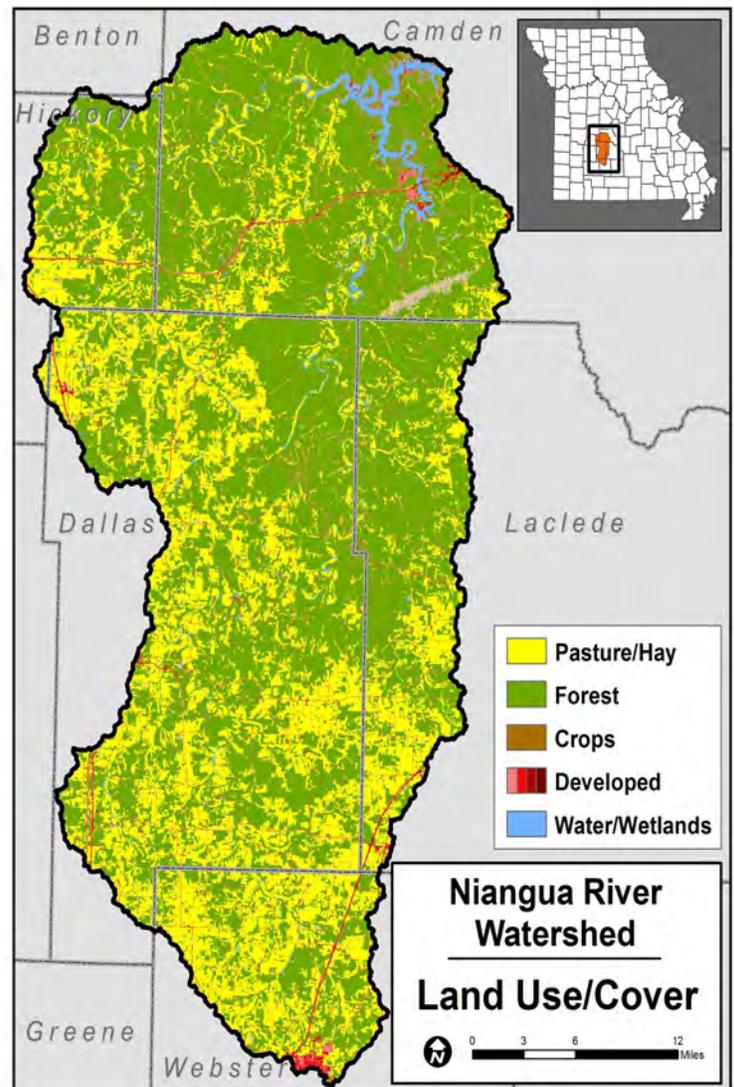


Fig 1.2

FACTS ABOUT THE NIANGUA RIVER WATERSHED

Water Resources

Surface Water

There are 1,795 miles of major streams and 42,454 acres of lake. Some of the larger streams include the Niangua and Little Niangua rivers, Dousinberry and Fourmile creeks, among others. Little Niangua and Niangua rivers make up the Niangua Arm of the Lake of the Ozarks.

Groundwater

There are two major aquifers that underlie this region: the St. Francois and Ozark aquifers. The aquifer ranges in thickness from less than 200 feet to, locally, more than 700 feet thick. Most wells are deep enough to produce from the St. Francois aquifer, but the shallower Ozark aquifer is also used.

Springs

There are 88 springs located throughout the watershed. Ha Ha Tonka, Blue, and Sand Springs are among the largest. Ha Ha Tonka

Spring is the 12th largest in Missouri. Bennett Spring contributes 50 to 60 percent of the flow from Niangua River.

Geology/Hydrology

The watershed is dominated by exposures of dolomite and sandstones of Ordovician age. The soluble, carbonate bedrock has contributed to karst topography with numerous springs, sinkholes, caves and losing streams.

Due to the geology of the area and the presence of faults, there is considerable subsurface movement of water, particularly in the eastern part of the basin. All the springs emerge from the Gasconade formation and are primarily recharged with water from losing streams. There is a considerable amount of groundwater in the Gasconade formation, and streams that incise the middle or lower part of this layer have well-sustained baseflows, even during dry periods.

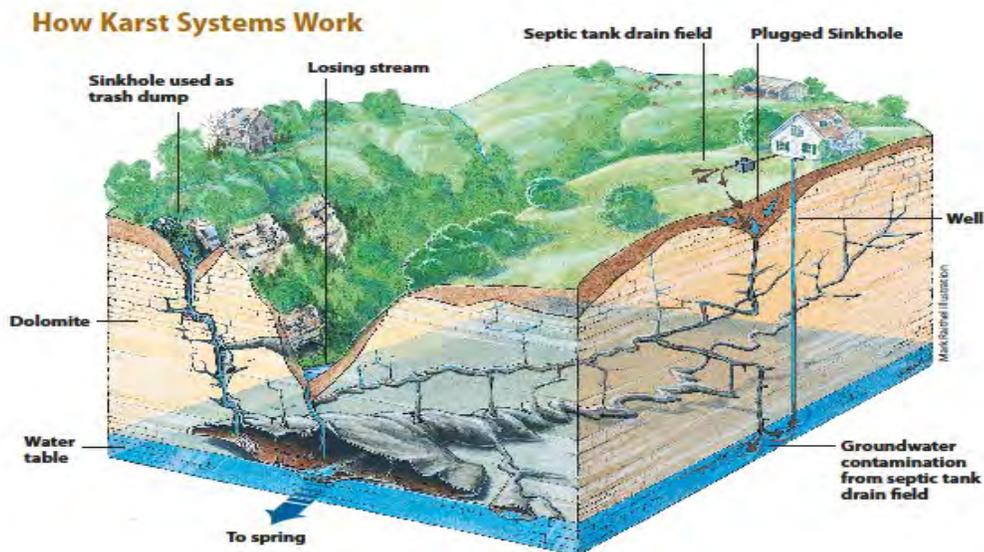
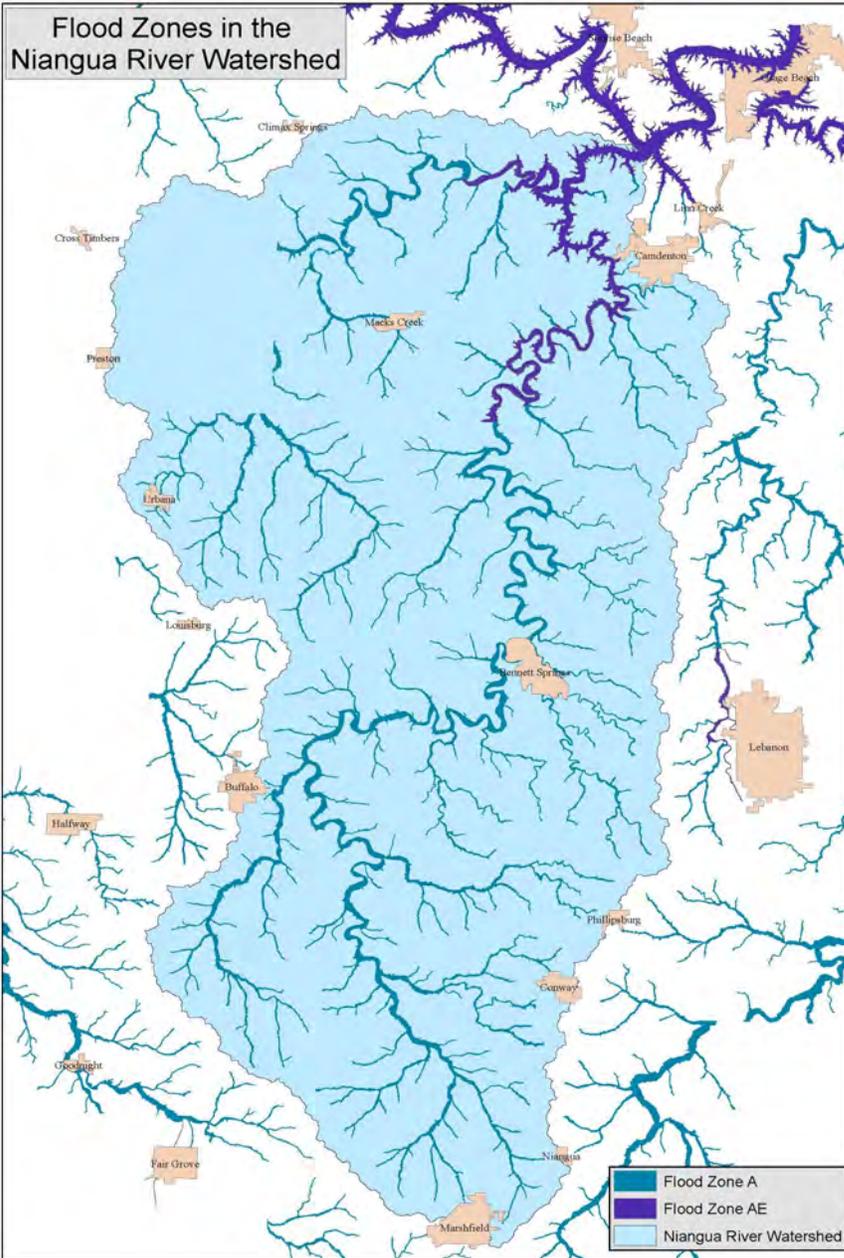


Fig 1.3

Flood Zones Within the Niangua River Watershed



Flooding

This section explains the different classification of flood zones. Zone A is described as an area with a 1 percent chance of flooding (100-year flood) and a 26 percent chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within this zone. Mandatory flood insurance purchase requirements apply. Zone AE is described as an area with a 1 percent chance of flooding (100-year flood) and a 26 percent chance of flooding over the life of a 30-year mortgage. Detailed analyses are performed and the base floodplains are identified with the base flood elevations provided. Mandatory flood insurance purchase requirements apply.

National Flood Insurance Program Participation (NFIP)

The chart below shows the counties and each jurisdiction that participate in the NFIP within the Niangua River watershed.

Those counties and jurisdictions within the watershed that do not currently participate in the NFIP are Webster County, the City of Preston, the City of Urbana, City of Conway, and the City of Phillipsburg.

Participating in the NFIP allows property owners obtain flood insurance. If a community does not participate the property owners will not have access to the flood insurance programs.

Fig 1.4

National Flood Insurance Program (NFIP) Participation			
County	Jurisdiction	Entry into NFIP	Date of Current FIRM
Camden County	Camden County	05/01/1994	06/16/2011
	City of Camdenton	06/16/2011	06/16/2011
Dallas County	Dallas County	09/15/1983	04/19/2010
	City of Buffalo	09/15/1983	04/19/2010
Laclede County	Laclede County	04/17/1985	09/29/2010
	City of Lebanon	06/01/1982	09/29/2010
Webster County	Webster County	07/17/2002	09/17/2010
	City of Marshfield	07/17/2002	09/17/2010
	City of Niangua	07/17/2002	09/17/2010

Fig 1.5

FACTS ABOUT THE NIANGUA RIVER WATERSHED

Water Quality Impairments

Water quality impairments can have long lasting environmental as well as financial impacts to a region. Working towards a planning framework that will work towards water quality sustainability rather than a reactionary response to an impairment is the goal behind the Healthy Watershed Plan. Working with local residents on conservation and pollution prevention activities will have a much higher return on our investment of both time and money when it comes to maintaining a healthy watershed.

Section 303(d) of the Federal Clean Water Act requires each state to identify waters that do not meet water quality standards and for which adequate water pollution controls are not in place. These identified waters are considered impaired. Water quality standards protect beneficial uses of water such as whole body contact (e.g. swimming), maintaining fish and other aquatic life, and providing safe drinking water for people, livestock and wildlife.

Impairments can be caused by known sources like point or nonpoint source pollution, or may be unknown; however, identifying activities near impaired water bodies can provide key information in determining the sources of contamination as well as developing solutions for impaired waters.

Examples of **point sources** of pollution include municipal wastewater treatment plants, land disturbance sites, large confined animal operations, and treated industrial wastewater discharges. Common challenges for wastewater treatment include the limited contaminant removal capacity of certain types of treatment. When facilities experience difficulty in providing the proper level of treatment and contaminant removal, the department often works with them to im-

prove the treatment process and quality of the discharge. In the case that point source emitters are unwilling to improve the quality of their discharge, the department has regulatory authority to ensure that inappropriate discharges are discontinued in a timely manner.

Nonpoint pollution sources refer to contaminants that do not come from specific conveyances and may come from multiple sources, such as failing septic systems and contaminants carried in stormwater runoff from rural, urban, and agriculture lands. Other causes of water body impairments include natural causes like precipitation, climate, and drought which can alter stream flow and channel characteristics leading to changes in water quality.

The following streams within the Niangua River watershed are listed on the **Missouri's 2016** list of impaired waterways. (Fig 1.6)

Dousinberry Creek in Dallas County was originally put on the impaired list in 2006 sited for Escherichia Coli (E-Coli, Bacteria). The source of the pollutant is marked as nonpoint source.

Niangua River in Dallas and Webster Counties was originally put on the impaired list in 2006 sited for Escherichia Coli (E-Coli, Bacteria). The source of the pollutant is also marked as nonpoint source.

The Little Niangua River in Camden and Dallas Counties was originally on the impaired list in 2006 due to dissolved oxygen. Fortunately, this waterway has now been "delisted", according to the proposed 2016 Missouri 303(d) list. In the most recent water quality assessment, this stream was shown to be meeting the water quality standards for dissolved oxygen. (Source: US EPA Region 7, 2016 Decision Document, Missouri's Clean Water Act Section 303(d) List (dated July 11, 2016, page 11)

FACTS ABOUT THE NIANGUA RIVER WATERSHED

Total Maximum Daily Loads (TMDL)

Within the Niangua River watershed, there is a TMDL study for the West Fork Niangua River in Webster County. A TMDL is the formula or mathematical calculation of the maximum amount of a specific pollutant that a water body can effectively absorb without impacting the water quality and allows the water to meet the current water quality standards. A TMDL study identifies the potential of suspected pollutant sources in the water and allocates the allowable pollutant load in regard to those sources. The TMDL for West Fork Niangua River established pollutant allocations and target reductions to nutrients, sediment, ammonia, and bio-chemical oxygen demand. A TMDL includes an implementation strategy that will identify how to reduce the load to an acceptable level that will protect the water quality. In order to effectively meet the needed reductions to restore the waterway, both point and nonpoint sources are considered.

National Pollutant Discharge Elimination System (NPDES)

Missouri Department of Natural Resources regulates point sources by issuing permits known as the National Pollutant Discharge Elimination System (NPDES). In Missouri, they are also known as Missouri State Operating Permits (MSOP). These permits provide detailed prescribed conditions for operating the point discharge and limit the discharge of water contaminants. In addition to required reporting

by the operating entity, the Missouri Department of Natural Resources inspects regulated facilities and analyzes the water samples to ensure that the facilities are not polluting surrounding waters. On the map on page 17 (Fig 1.8), you will see where the NPDES permits are within the Niangua River watershed. Then on the subsequent pages you will find a detailed look at the permits for each of the counties within the watershed.

The map on page 19 (Fig 1.8) identifies all the permitted sites. A more in-depth discussion on the permitting and permit types within the watershed can be found on pages 21-24.

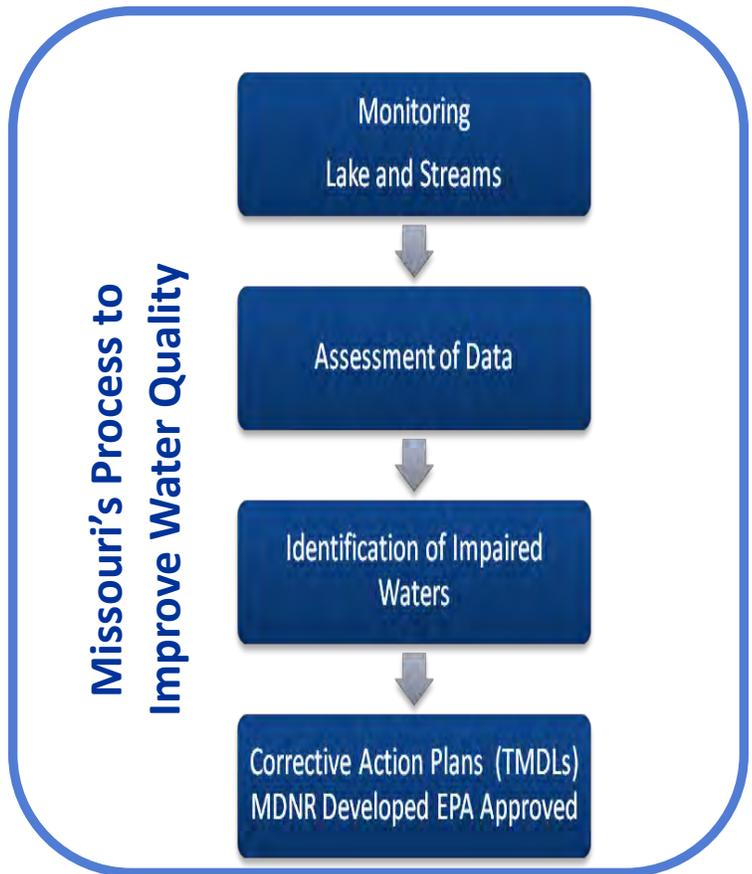


Fig 1.7

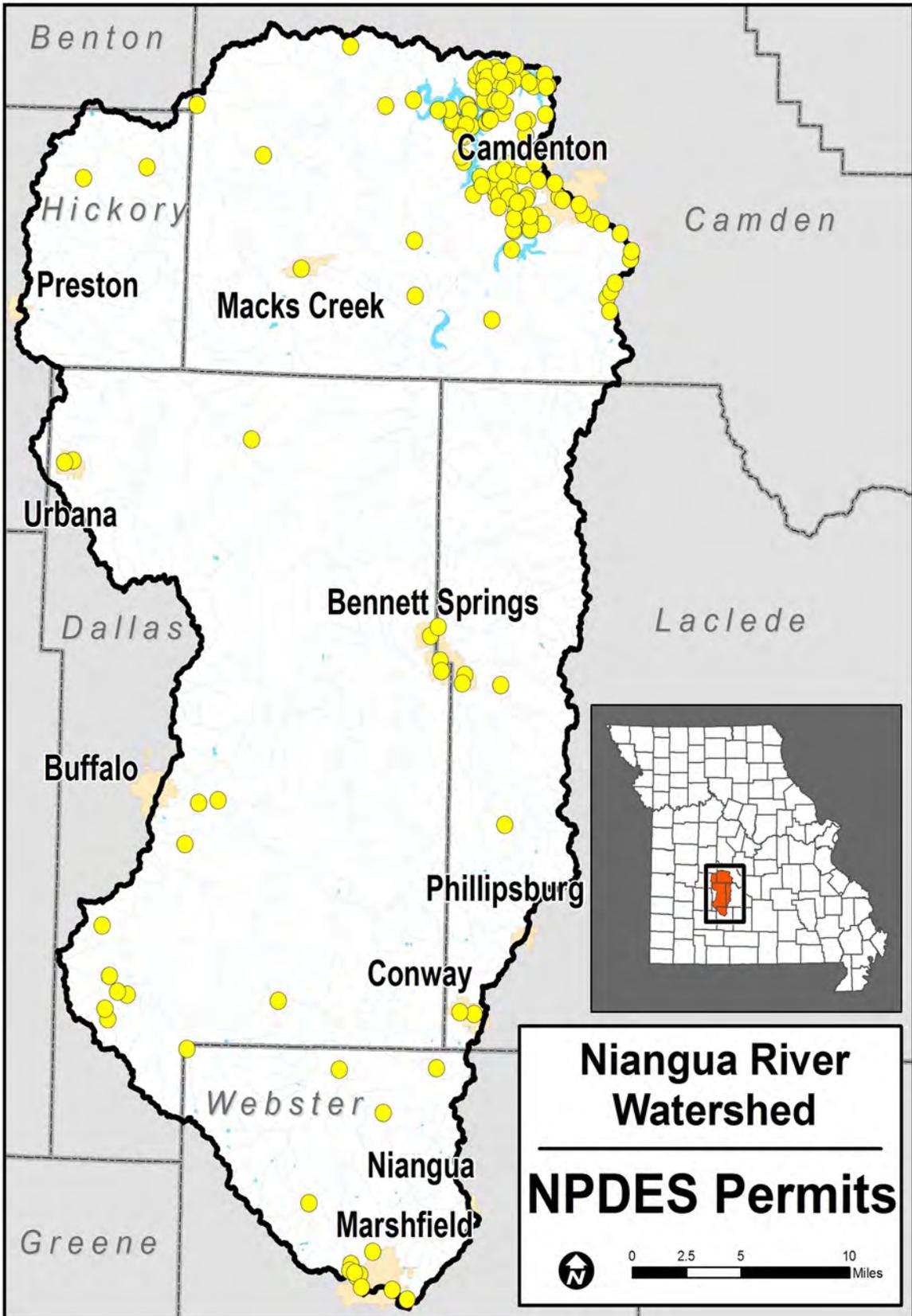


Fig 1.8

FACTS ABOUT THE NIANGUA RIVER WATERSHED

Missouri State Operating Permits

Missouri Department of Natural Resources, Division of Environmental Quality is tasked with water quality issues and issues permits for a number of activities that are regulated. These permits include, but are not limited to:

- Land Disturbance
- Industrial Stormwater
- Municipal Stormwater
- Animal Feeding Operations
- Wastewater Facilities
- Other General Permits

The Water Pollution Control Branch issues Missouri State Operating Permits, or MSOPs, to build, erect, alter, replace, operate, use or maintain existing point sources of water pollution. The majority of these permits are for the discharge of treated wastewater from domestic and industrial facilities. However, permits are also issued for the land application of wastes from domestic, industrial and agricultural facilities. MSOPs usually require regular sampling of wastewater, best management practices, and other compliance measures to ensure discharges are protective of water quality.

Most of these permits are written to be site-specific to reflect the unique nature of the waste water or the receiving stream. General Permits (as opposed to site-specific permits) are issued to multiple locations where activities are similar enough to be covered by a single set of requirements. All facilities receiving a MSOP must adhere to the permit conditions until it expires or the permit is terminated.

The chart on page 21 (Fig 1.10) gives a brief description of each permit type and what type of activities it monitors.

For the purpose of this report, we have looked at the number of these permitted activities for the entire watershed, as well as each individual county within the watershed.

The chart on page 21 (Fig 1.9) reflects the percentage of overall permits within the Niangua River watershed. There were a total of 20 land disturbance permits, 12 industrial stormwater permits, 23 other general permits, 1 major municipal wastewater permit, 4 minor wastewater permits, 2 minor municipal wastewater permits, 103 minor non-municipal wastewater permits and 3 minor state wastewater permits. The highest percentage of permitted activities is in the wastewater category with 67 percent of all permits issued in the Niangua River watershed.

There are no permitted Animal Feed Operations within the Niangua River watershed. There are also no permitted Municipal Stormwater facilities (MS4s) within the watershed. With a total of 165 permits issued in the watershed, Camden County by far has the most permitted activities within the watershed with a total of 118 permits.

The proceeding pages will give you a detailed look at each county and the total number of permits and the type of permitting activities that are present within each county within the Niangua River watershed.

Niangua River Watershed Permit Types

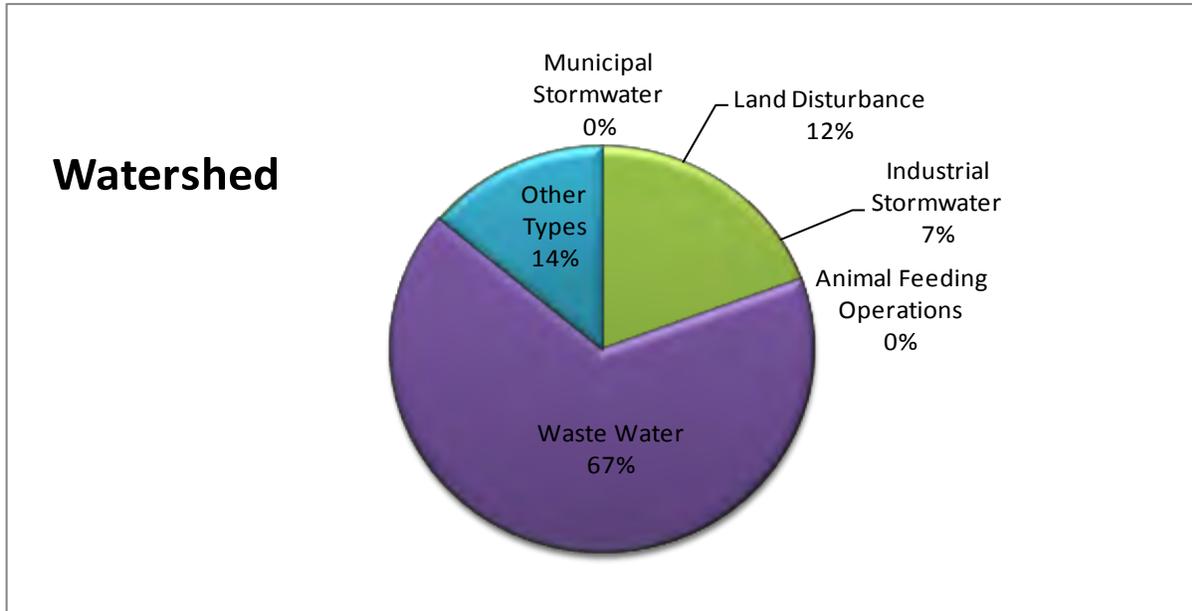
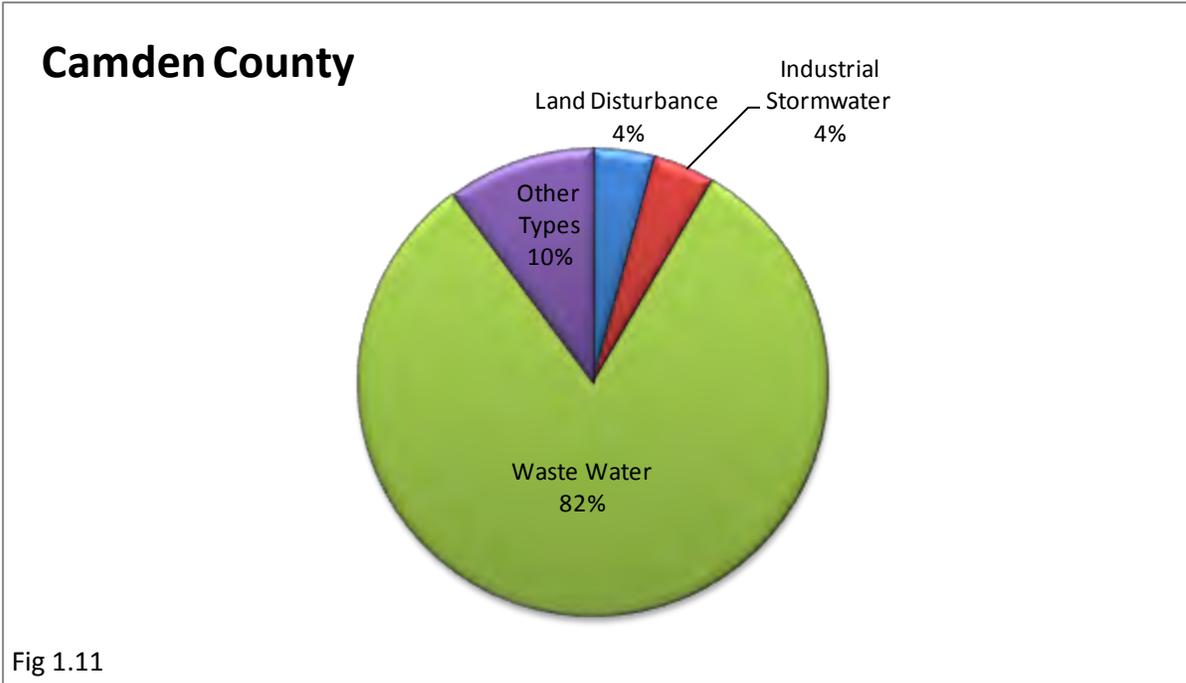


Fig 1.9

Missouri State Operating Permit Types	Description
Animal Feeding Operations	Large animal agricultural facilities that raise a specific number of animals in production barns or confinement pens.
Municipal Wastewater Discharges	Treated domestic wastewater discharges from towns and cities.
Other Wastewater Discharges	Other facilities that handle domestic sewage or industrial process wastewater discharges.
Municipal Stormwater (MS4)	Stormwater runoff that is regulated due to community or city being in an urbanized area, as determined by the latest US Census.
Industrial Stormwater Discharge	Stormwater runoff that requires treatment with best management practices because it may come in contact with onsite pollution sources.
Land Disturbance	Permits are required for land disturbance projects that disturb > 1 acre in size, or are part of a larger common development plan. Some exemptions include agriculture and private residential building.

Fig 1.10

Permit Types by County

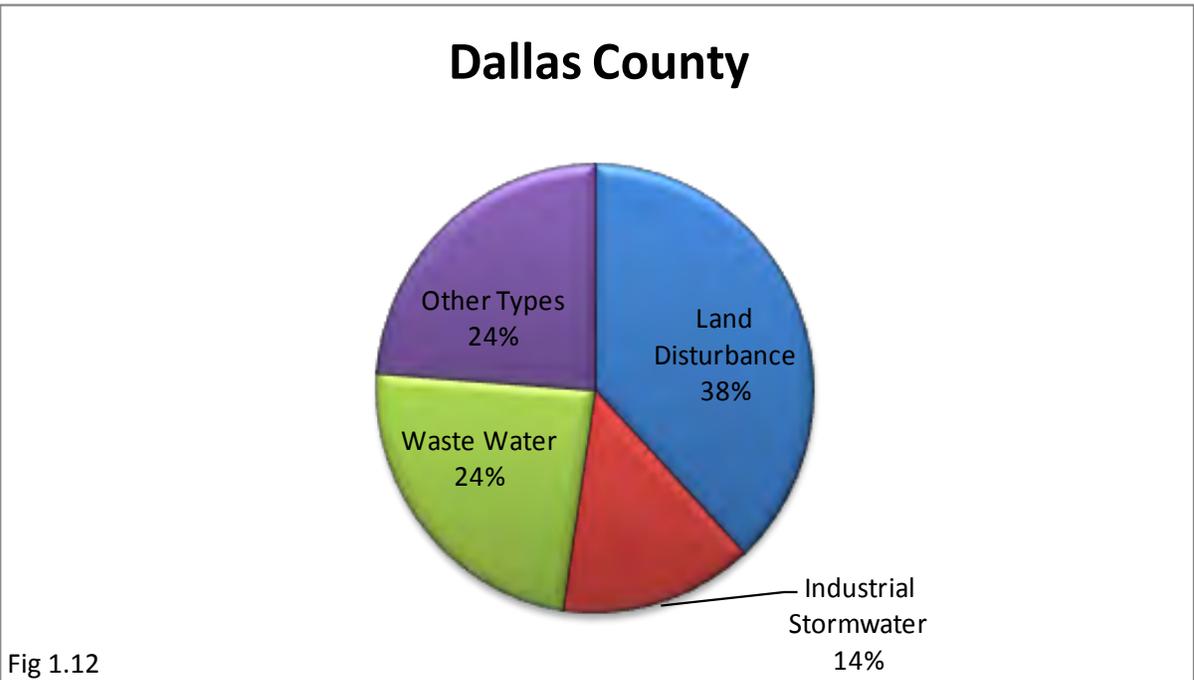


Camden County

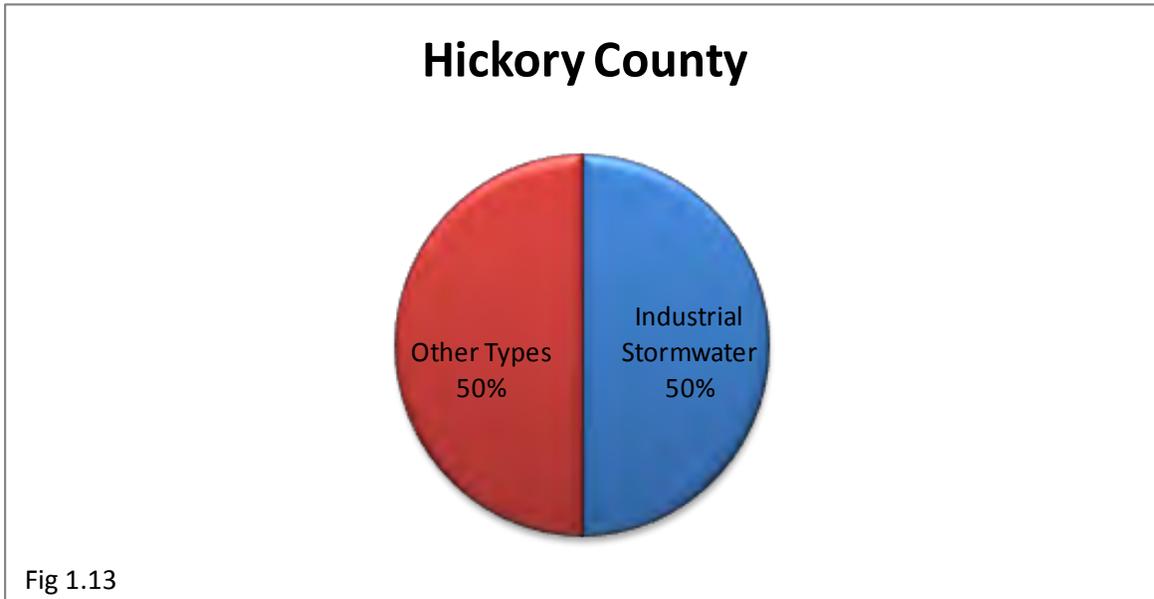
With the largest number of permits within the watershed, Camden County has 5 land disturbance permits, 5 industrial stormwater permits, 96 wastewater permits and 12 other general permits for a total of 118 permits.

Dallas County

With the second largest number of permits within the watershed, Dallas County has 8 land disturbance permits, 3 industrial stormwater permits, 5 wastewater permits and 5 other general permits for a total of 21 permits.



Permit Types by County

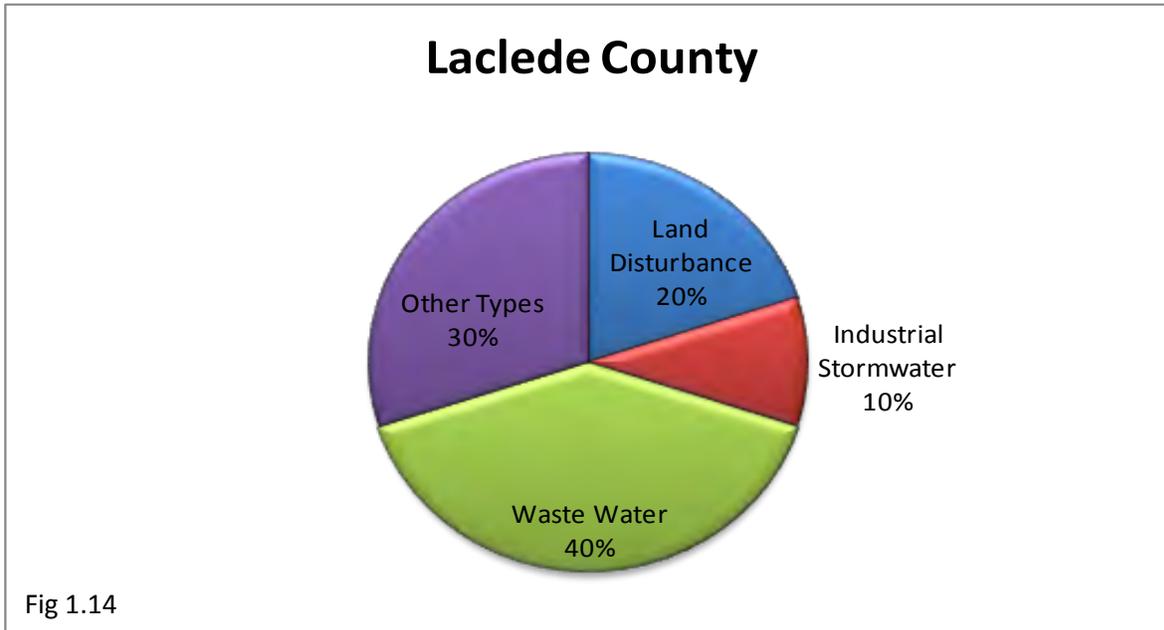


Hickory County

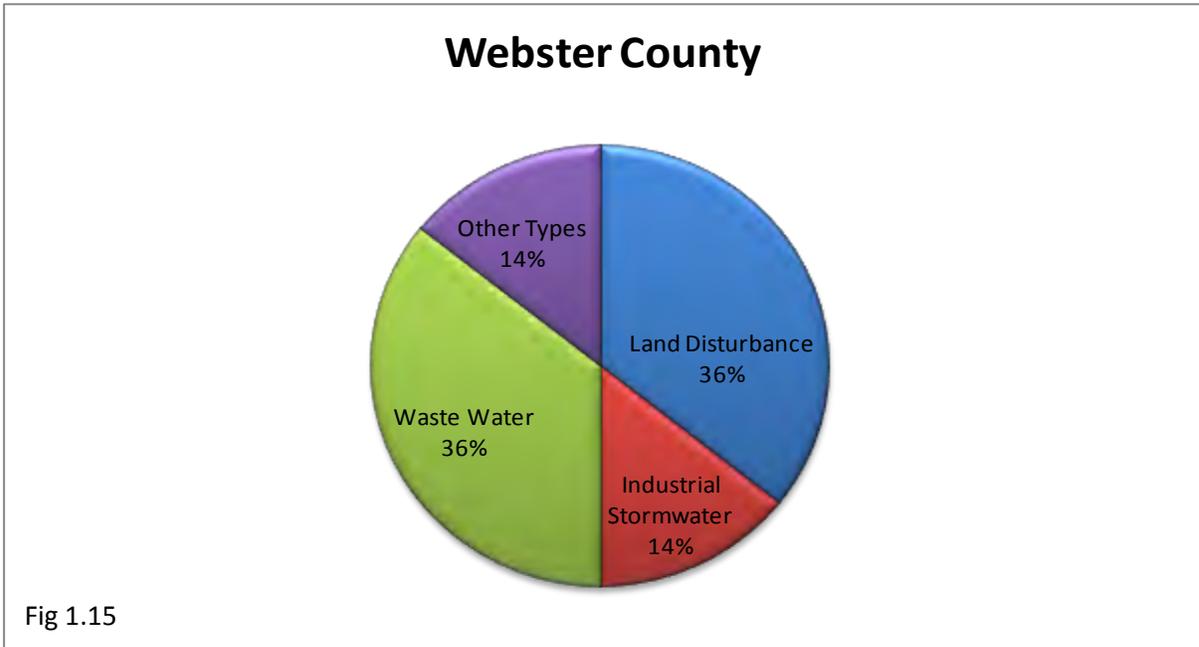
Hickory County has by far the lowest number of permits within the watershed with a total of two permits, with 1 permit for industrial stormwater and 1 other general permit.

Laclede County

With only 10 permits within Laclede County, it is considerably lower than Camden and Dallas Counties. Laclede County has 2 land disturbance permits, 1 industrial stormwater permit, 4 wastewater permits and 3 other general permits.



Permit Types by County

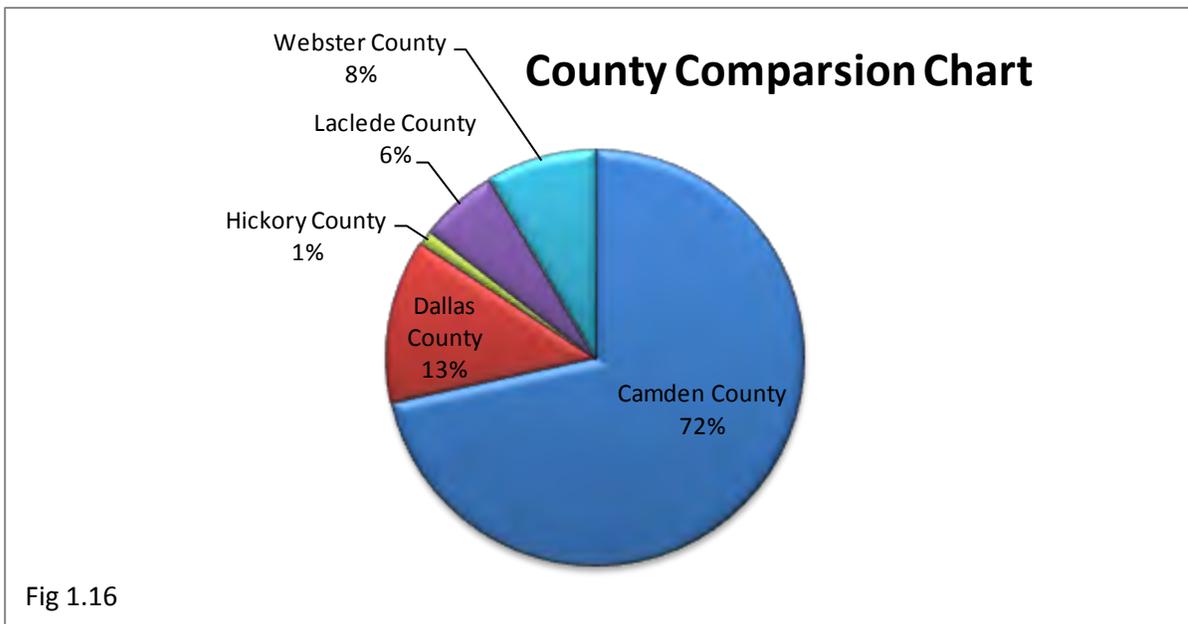


Webster County

Webster County has a total of 14 permits within the county with 5 land disturbance permits, 2 industrial stormwater permits, 5 wastewater permits, and 2 other general permits.

County Comparison

Camden County has the most number of permits within the watershed with 118 permits. Dallas County has a total of 21 permits. Hickory County has a total of 2 permits. Laclede County has a total of 10 permits. Webster County has a total of 14 permits.



Water Availability and Water Use

Precipitation

The chart below demonstrates the level of precipitation in Missouri from 1895 to 2015. There has been an increased amount of wet periods reflected in the chart since 1980. The data also reflects that there has been an increase in heavy precipitation events. Severe dry periods were significant in the 1930 and the 1950. There was a severe drought in 2012 but did not extend over a period of years, like the previous drought periods.

A facility is deemed a Major Water User if they have the capacity to withdraw more than 70 gallons per minute or 100,000 gallons per day. The estimated annual water use is 499 billion gallons. Nearly 99 percent of that water is diverted surface water and only 0.1 percent is ground water. There are 30 major water users registered in the Niangua River watershed. The Bennett Springs Fish Hatchery diverts 88.1 percent of surface water to maintain the hatchery's needs.

Water Usage

There are 92 public drinking water systems serving approximately 30,537 Missourians. Water systems reporting to MDNR show that nearly 2.25 million gallons of water are consumed daily. There is currently 10.7 million gallons of water available as drinking water deemed for public water use.

Major Water Use Trends in Niangua River Basin

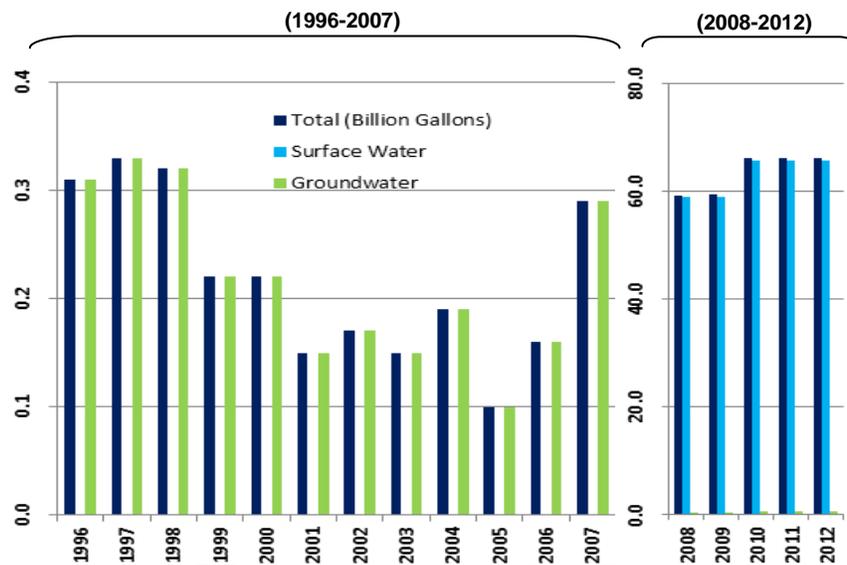


Fig 1.17

Missouri Annual Average Precipitation (1895-2015)

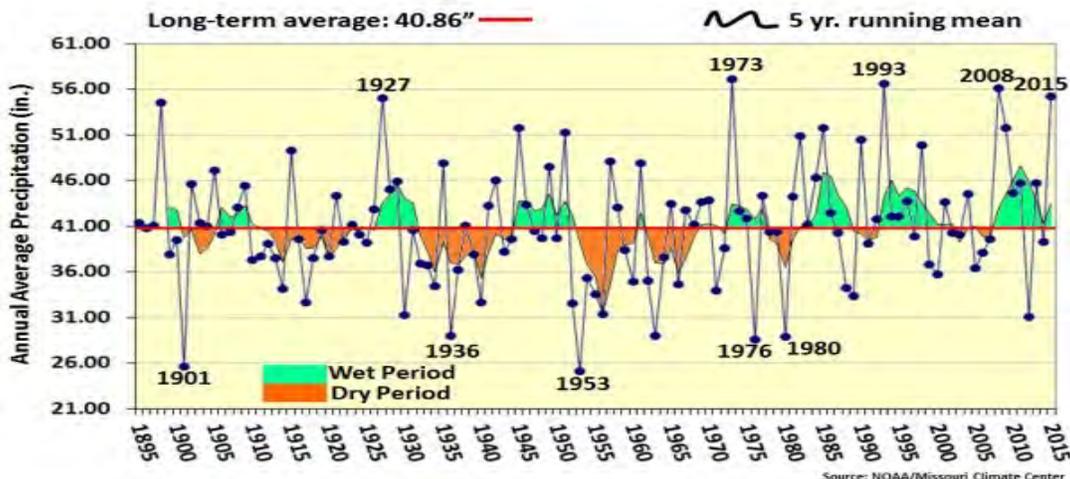


Fig 1.18

FACTS ABOUT THE NIANGUA RIVER WATERSHED

Water Availability and Water Use

Groundwater and Stream Monitoring

There are two groundwater monitoring wells located in Marshfield, and Ha Ha Tonka State Park. These wells are part of the Groundwater and Level Observation well network. The annual average ground level measurements appear to be relatively stable

at both of these monitoring wells. Ground water levels will fluctuate several feet throughout the year, with ground water levels lower during the winter and higher in the spring.

There are also five stream gauges that measure average stream flow that varies from 26 (tributary) to 275 (mainstream Niangua) million gallons per day.

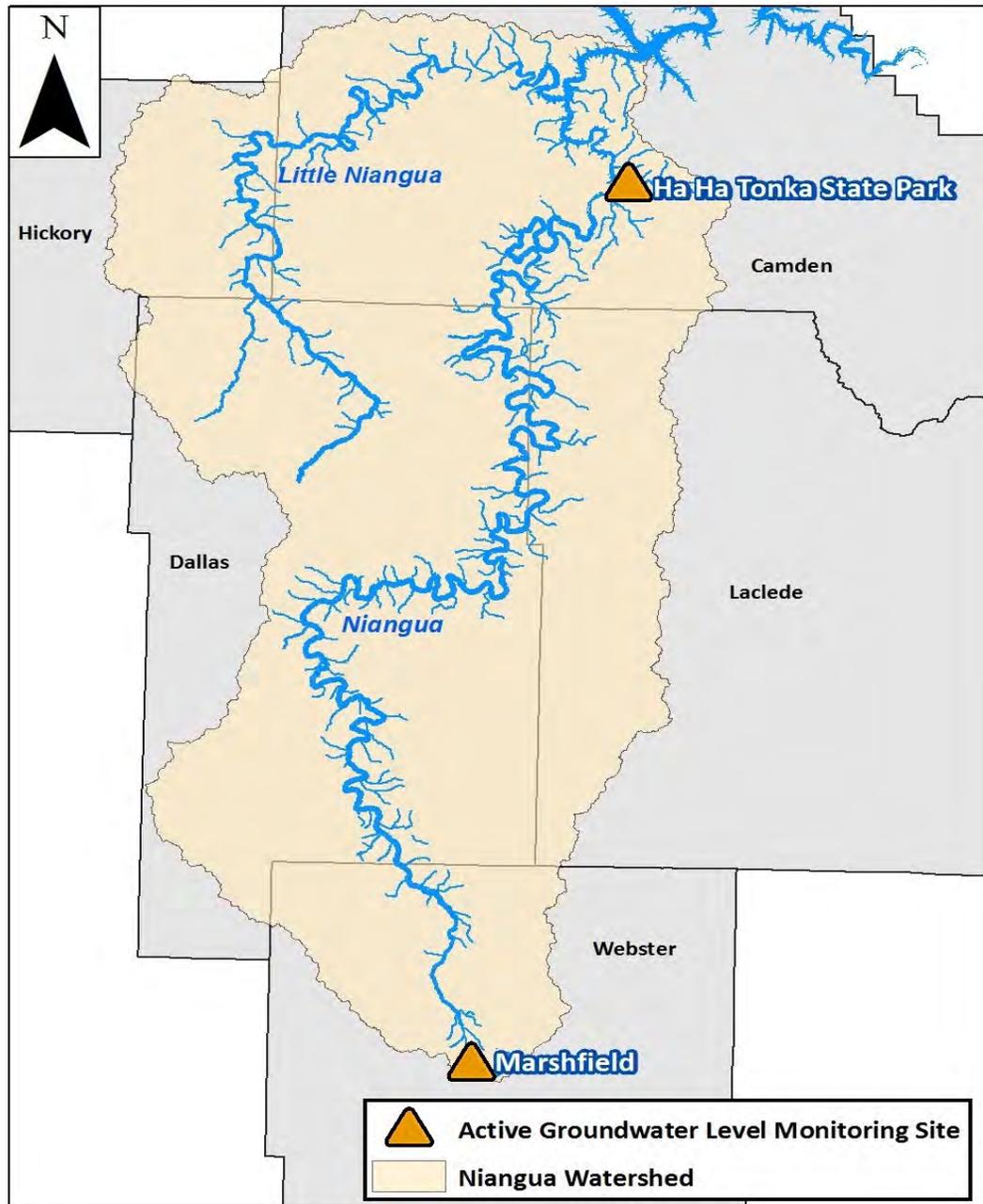


Fig 1.19

Water Usage Today and in the Future

Water usage varies based on human habits as well as the age of our water consuming appliances/devices. The average water usage is 80-100 gallons of water per day per person according to the USGS Water Science School.

Even with water saving appliances, faucets, showerheads, and toilets increased water usage is projected based on population increases. The chart to the right (Fig 1.20) reflects the percentage of water usage based on our daily activities. The map below (Fig 1.21) demonstrates the usage and population projections to 2030 within the United States.

We will review the population projections for the Niangua River watershed on pages 28-31.

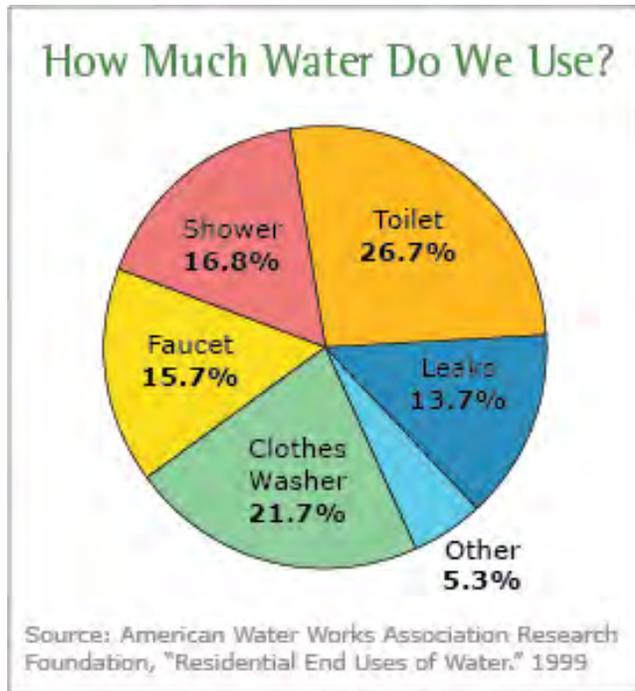
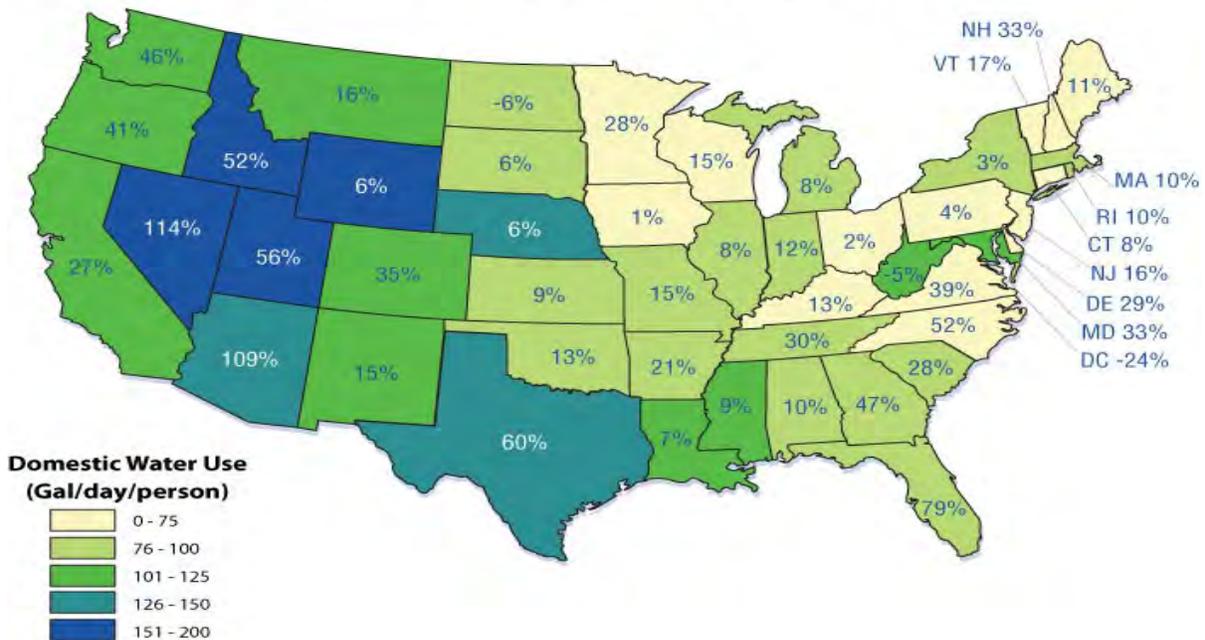


Fig 1.20 Source: https://www3.epa.gov/watersense/our_water/water_use_today.html

Domestic Water Use in Gallons per Day per Person and Projected Percent population Change by 2030



Source: https://www3.epa.gov/watersense/our_water/tomorrow_beyond.html

Fig 1.21

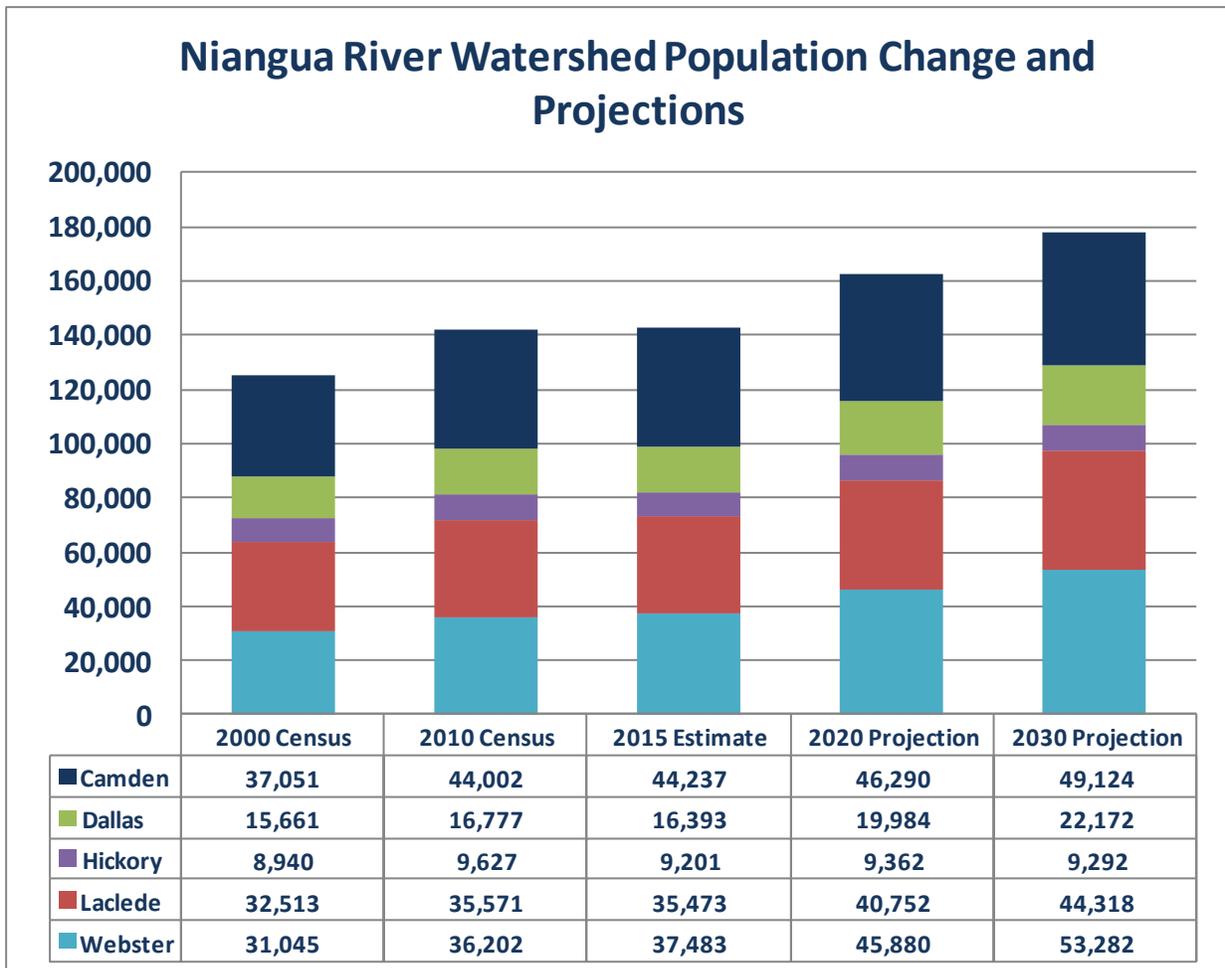
DEMOGRAPHICS OF THE NIANGUA RIVER WATERSHED

Population of the Niangua River Watershed

Population growth and projected growth is an important factor to consider when analyzing the water and wastewater needs of a region. It will help us understand the trends in growth as well as areas of decline that may be happening within communities that are in the Niangua River watershed.

Population in the Niangua River watershed has been growing steadily since the turn of the century. This section will delve into

some of the reasons for that growth, address the challenges that our region faces today, and analyze where our growth is headed in the future. Census figures and estimates were provided by the U.S. Census Bureau, and their Population Estimates Program, respectively. Population projections were sourced from the Missouri Office of Administration, which created 30-year estimates for each county in Missouri in the year 2000.



Source: Census Data from U.S. Census Bureau, Projections from Missouri Office of Administration (2002)

Fig 2.1

Population Age Groups

In 2010, the Niangua River watershed had a median age of 44, six years older than the state average of 38. The youngest county in the watershed is Webster, with a median age of 38, and the oldest county is Hickory, with a median age of 54. The largest age group is aged 35-54, which contains 1 out of every 4 people in the watershed, which is consistent with State figures. The largest differences in age groups between the watershed and the state are the 18-34 and the 65 and older groups. There are 6% more people aged 65 and up in the watershed than in the state of Missouri, and 6% fewer people aged 18-34.

The largest population aged 18 and under in the county is in Webster (28%, 10,137), with Dallas and Laclede not far behind at 25% of their populations. All three have larger 18 and under populations than the state of Missouri (24%). It comes as no surprise that Webster has the largest under 18 population as it is the fastest growing county in the watershed, which it likely enjoys because of its location in the booming Springfield-Branson Metropolitan Area. Camden and Hickory have the oldest median ages and also the smallest percentage of their populations 18 and under. These counties have larger populations of those who are retired.

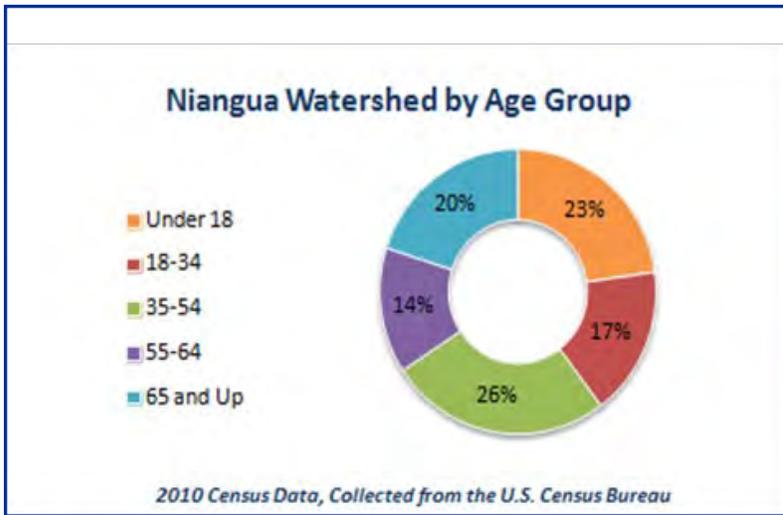


Fig 2.2

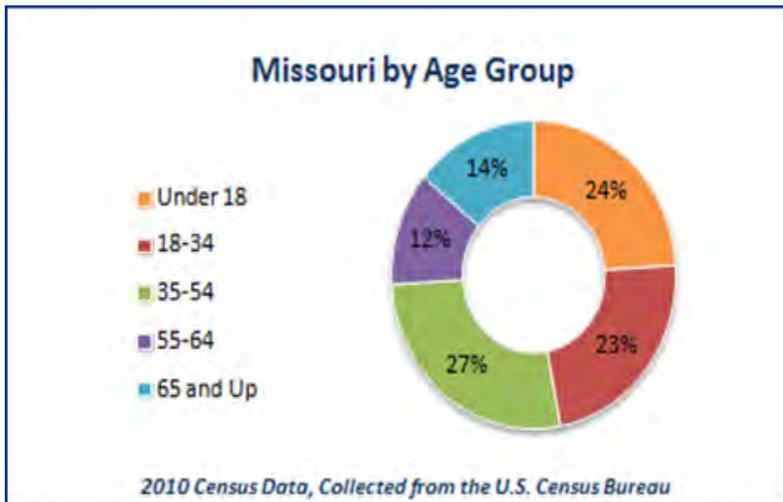


Fig 2.3

Median Age	
County Name	2010 Census
Camden	49
Laclede	39
Dallas	41
Hickory	53
Webster	38
Niangua Watershed	44
Missouri	38

2010 Census Data Collected from U.S. Census Bureau

Fig 2.4

DEMOGRAPHICS OF THE NIANGUA RIVER WATERSHED

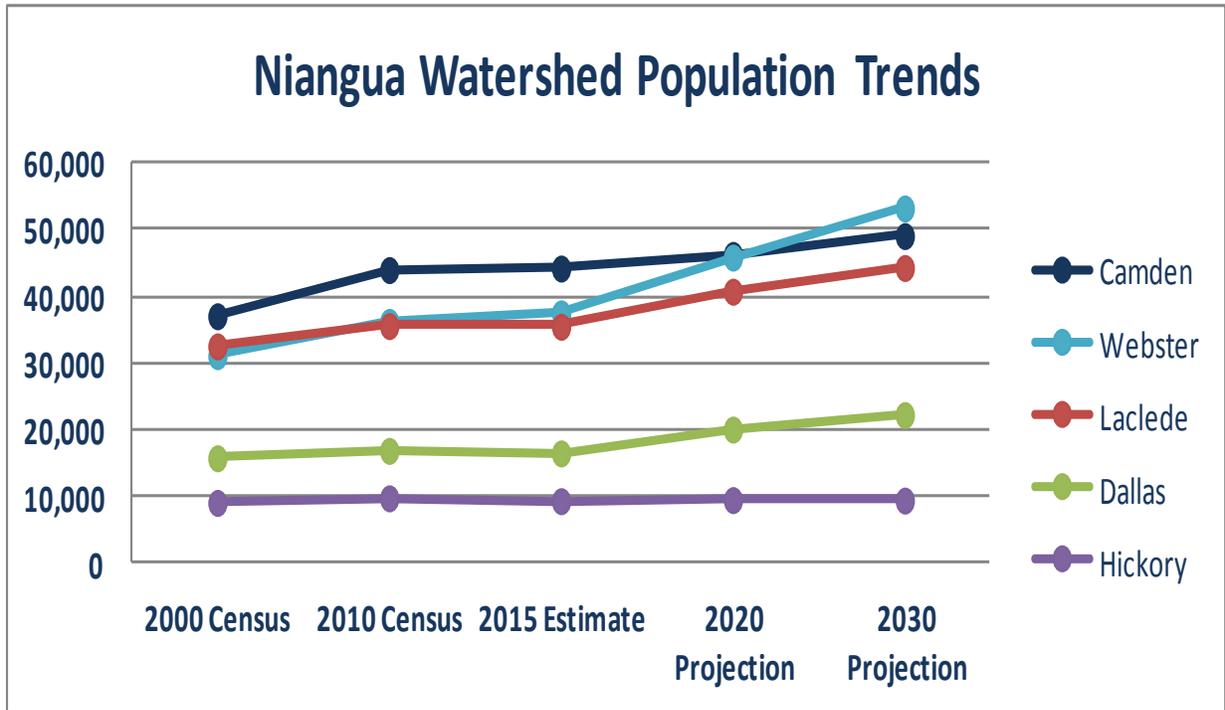


Fig 2.5 Source: Census Data from U.S. Census Bureau, Projections from Missouri Office of Administration (2002)

Population 2000-2010

Population trends demonstrate a stable and in some areas an upward trend in growth during 2000-2010. The 2015 estimates show that the five-county watershed region has grown by about 14% since the 2000 Census. The county with the largest increase during that period was Camden County, adding nearly 7,000 people in that time, reflecting a 19% increase. Camden County's growth is directly tied to the economy of the Lake of the Ozarks, and Missouri's most popular tourist attraction was booming in the early 2000s.

Other counties enjoyed similar levels of growth during this time, such as Webster (17% increase) and Laclede (9%). Webster County's growth can be attributed to its position in the Springfield-Branson Metropoli-

tan area, which saw historic levels of growth around the turn of the century. Laclede County is home to a strong workforce in the manufacturing industry, which benefits from its location on Interstate 44. During this decade, Webster County surpassed Laclede County in total population, becoming the second-most populous county in the Niangua River watershed region after Camden County.

Population Projections 2010-2015; 2020 and 2030

With the economic downturn of the country, it also impacted the region during 2008, and we are still feeling the effects of this locally. This has impacted the populations in our most rural areas.

As the first decade of the new millennium came to a close amidst the economic downturn in the country, the Niangua River watershed also felt the effects of the economy and saw its population growth begin to stall. Three of the five counties in the watershed actually lost population during this time (Dallas, Hickory, and Laclede), while the other two made modest gains (Camden, Webster).

Analysis of Areas of Growth

Overall, the Niangua River watershed is estimated (2015) to have only added a mere 608 people since 2010, a far cry short of the pace established by the original 2000 estimates, which estimated our region would add over 20,000 people between 2010-2020. Five years in, the watershed region has added 608 people overall, with a large majority of the growth coming in Webster County (See 'Niangua River watershed Population Change' chart page 28 Fig 2.1).

One explanation for the current pace being so far behind is that the projections were based on the 2000 census, meaning that the projections fail to account for the economic downturn's effect on the economy and growth. This effect has been most notable in the watershed's most populous counties; Camden, Laclede, and Webster. The 2015 estimate is a much better reflection of this phenomenon than the 2010 Census because the Recession began so late in the previous decade (2008).

So while the 2010 Census figures appear to be more or less on track to reach their 2020 projections, the 2015 estimates reveal a much different trajectory. If the half-way

(2015) mark of the original projections are any indicator, the watershed's 2030 population will be substantially lower than the 2030 projections, with a few county-specific exceptions. Hickory, the least populated county, was predicted to have a net gain of less than 300 people in those thirty years and is 91 people away from that goal. Webster, the region's fastest-growing county, was given an overly optimistic projection of adding over 20,000 people (71% gain) by that time.

Analysis of Areas of Decline

Since 2010, three of the watershed's five counties have seen slight decline in their populations: Dallas, Hickory, and Laclede. Of all the counties in the watershed during 2000-2010, Dallas had the smallest growth by percentage (7%), so it is understandable that after the economic crisis, the Great Recession, its growth rate would struggle even more in the years after. Hickory is home to the oldest median age in the watershed (54), and has been growing older the last two decades; which is an indicator that new births have been on the decline for a number of years. It is also the smallest county in the watershed by population, so it is again understandable how it could experience a negative growth rate after the Recession.

Laclede County was perhaps affected the most by the economic downturn, as it has the largest labor force in the watershed (16,006 in 2014); 25.9% of which is involved in the manufacturing industry, which was hit particularly hard by the recession based on the 2014 ACS 5-year estimate.

DEMOGRAPHICS OF THE NIANGUA RIVER WATERSHED

Employment

Most of the employed population within the Niangua River watershed is employed in the private sector with 76 percent working for privately owned businesses. There are 14 percent employed in a government position, and the remaining 10 percent are self-employed.

The chart on the next page reflects the employment-occupation types for the jobs within this region (Fig 2.7). With 25 percent of occupations falling into the management, business, science and arts, it is equal to the sales and office positions also at 25 percent of all jobs within the region. Production, transportation, and moving materials represent 19 percent of the occupation types. There are 17 percent of jobs in service-related industries. The remaining 15 percent of employment is in the natural resources, construction, and maintenance employment category.

Unemployment

The data reflects that the unemployment rate within the Niangua River watershed is consistently higher at 5.5 percent in June 2016 than the average unemployment rate for the State of Missouri at 4.9 percent for the same time period. There has been an improvement in the employment from June 2015 to June 2016 within the watershed region, but still higher than the state average. During that same period of time, Dallas and Hickory counties have remained

higher than the other counties within the watershed, both with 5.8 percent unemployed in June 2016.

Household Income

Household income plays a vital role in maintaining a healthy watershed, as septic and on-site treatment facility installations and repairs have proved to be very costly for many. The median household income in the Niangua River watershed is 17.2% lower than in the state of Missouri as whole. Hickory County has the lowest household income in the watershed as well as the third-lowest household income in the state, at \$28,097 (Fig 2.6). Many of the people in the rural parts of the watershed are retired, or are on a fixed income; so making the water and wastewater options affordable will need to be a priority in order to ensure continued healthy water quality within the watershed.

Median Household Income	
<i>County Name</i>	<i>2010</i>
Camden	\$44,617
Dallas	\$38,101
Hickory	\$28,097
Laclede	\$37,294
Webster	\$40,889
Niangua Watershed	\$37,800
Missouri	\$44,306

Source: American Community Survey 2010

Fig 2.6

Employment by Occupation Type

<i>Employment-Occupation Type</i>	<i>Camden</i>	<i>Dallas</i>	<i>Hickory</i>	<i>Laclede</i>	<i>Webster</i>
Management, business, science, and arts	5,424	1,748	794	3,683	3,704
Service	3,906	986	524	2,663	2,459
Sales and office	4,533	1,532	725	3,085	3,624
Natural resources, construction, and maintenance	1,729	622	492	1,296	2,130
Production, transportation, and materials moving	2,190	1,273	467	3,747	2,715
Employed Population	17,782	6,161	3,002	14,474	14,632

Fig 2.7

Source: American Community Survey 2014

Employed Population by Class of Work

<i>Class</i>	<i>Camden</i>	<i>Dallas</i>	<i>Hickory</i>	<i>Laclede</i>	<i>Webster</i>	<i>Niangua Watershed</i>
Private Workers	13,768	4,714	2,067	11,380	11,523	43,452
Government Workers	2,285	802	542	1,786	1,822	7,237
Self-Employed Workers	1,691	621	393	1,273	1,264	5,242
Employed Population	17,782	6,161	3,002	14,474	14,632	56,051

Fig 2.8

Source: American Community Survey 2014

Unemployment Rates

<i>County Name</i>	<i>June-16</i>	<i>June-15</i>
Camden	5.0	5.4
Dallas	5.8	6.5
Hickory	5.8	6.2
Laclede	5.3	6.0
Webster	5.4	5.4
Niangua Watershed	5.5	5.9
Missouri	4.9	5.2

Fig 2.9

Source: MERIC 2016

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CHAPTER 3

COLLABORATION IN THE NIANGUA RIVER WATERSHED

Community Projects

Ameren Missouri

City of Lebanon

Lake of the Ozarks Watershed Alliance , Inc.

Missouri Department of Conservation

Solid Waste District T

Missouri Master Naturalists Lake of the Ozarks Chapter

Local Soil and Water Conservation Districts

Lake of the Ozarks Council of Local Governments

Kaysinger Basin Regional Planning Commission

Southwest Missouri Council of Governments

Missouri Caves and Karst Conservancy

Missouri Steam Teams Program

NIANGUA RIVER WATERSHED COMMUNITY PROJECTS

Community Projects

When we started the discussion on what was going on within the watershed we reached out to a number of community organizations to see what types of projects they were doing and how they were impacting the watershed in a positive aspect. We were impressed with the number of organizations and the activities that were already being done within the region. We will highlight those activities and the successes these organizations have been able to demonstrate.

Ameren Missouri

Ameren Missouri Shoreline Cleanup Program

The mission of the Adopt-the-Shoreline program is to assume a leadership role in creating and maintaining a shoreline clean of debris and litter, thus enhancing the quality of life at the Lake of the Ozarks and increasing public awareness of the importance of keeping the Lake clean.

Adopt-the-Shoreline began in 1991 as the Shoreline Beautification Cleanup. Nine civic organizations adopted 89 miles of shoreline during the first year of the program. Today, more than 90 organizations have adopted more than 700 miles of shoreline. As stewards of our environment, Ameren Missouri (then known as Union Electric) sponsored the first cleanups and continues to fund the program today.

Thanks to more than 13,000 volunteers, we

are able to keep 1,150 miles of shoreline clean and create a quality experience for visitors to Lake of the Ozarks. To manage this task, the Lake is divided into geographical zones with a zone coordinator who assists each adopting group with cleanup preparations. The Niangua and Little Niangua Arms of the lake are managed as Zone 10 and currently 13 groups have adopted 96 miles of shoreline within this zone.

Each adopting group is responsible for cleaning a minimum of five (5) shoreline miles and participating in at least two (2) shoreline cleanup events. Once a section of shoreline is adopted, the adopting group is responsible for organizing its volunteers, obtaining the necessary boats or equipment to complete the cleanup, and delivering the trash collected to the assigned dumpster location. We have found that with careful consideration of a dumpster site and a little planning, most cleanups are completed in about 4 hours.

Since the inception of the program, over five million pounds of trash and debris have been removed from the lakes shoreline.



Photo courtesy of Ameren Missouri Fig 3.1

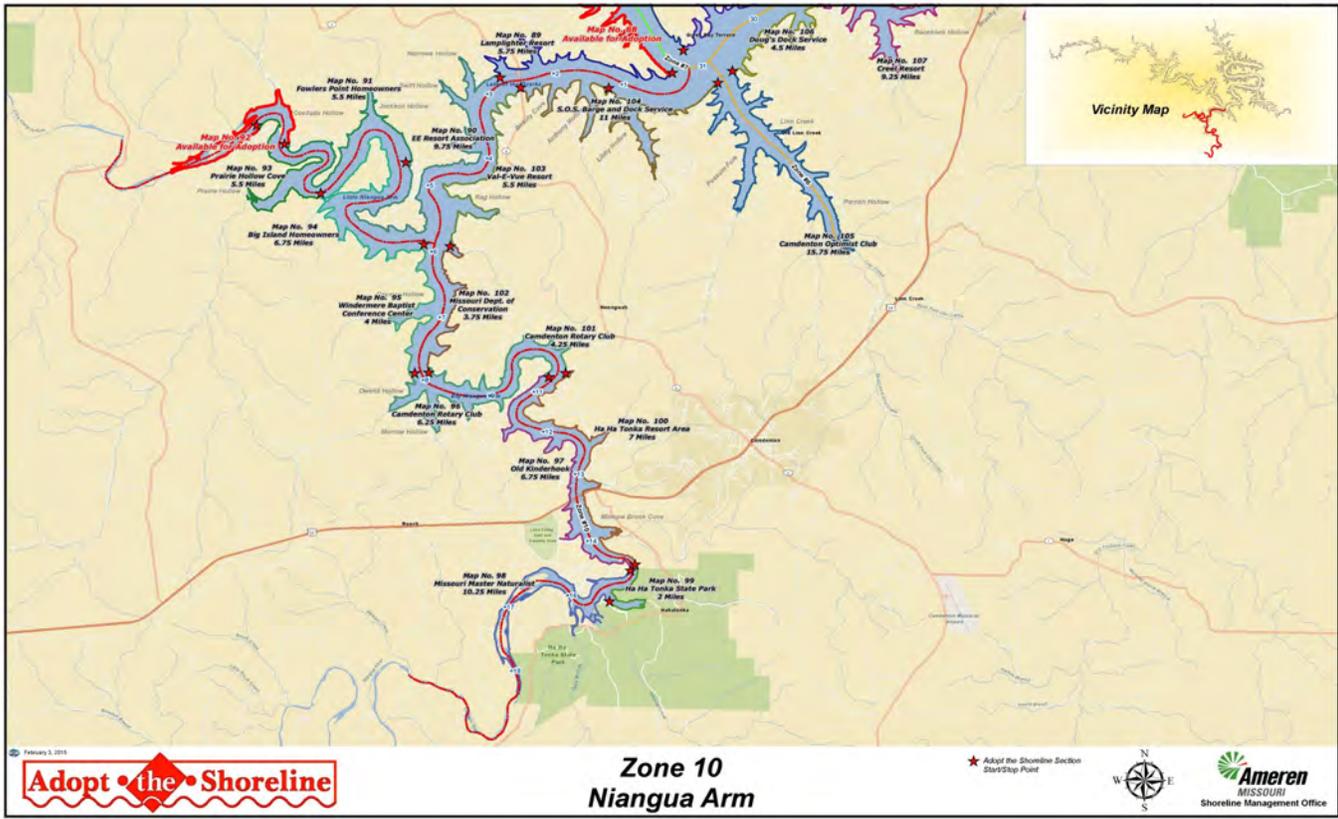


Fig 3.2

Maps provided by Ameren Missouri

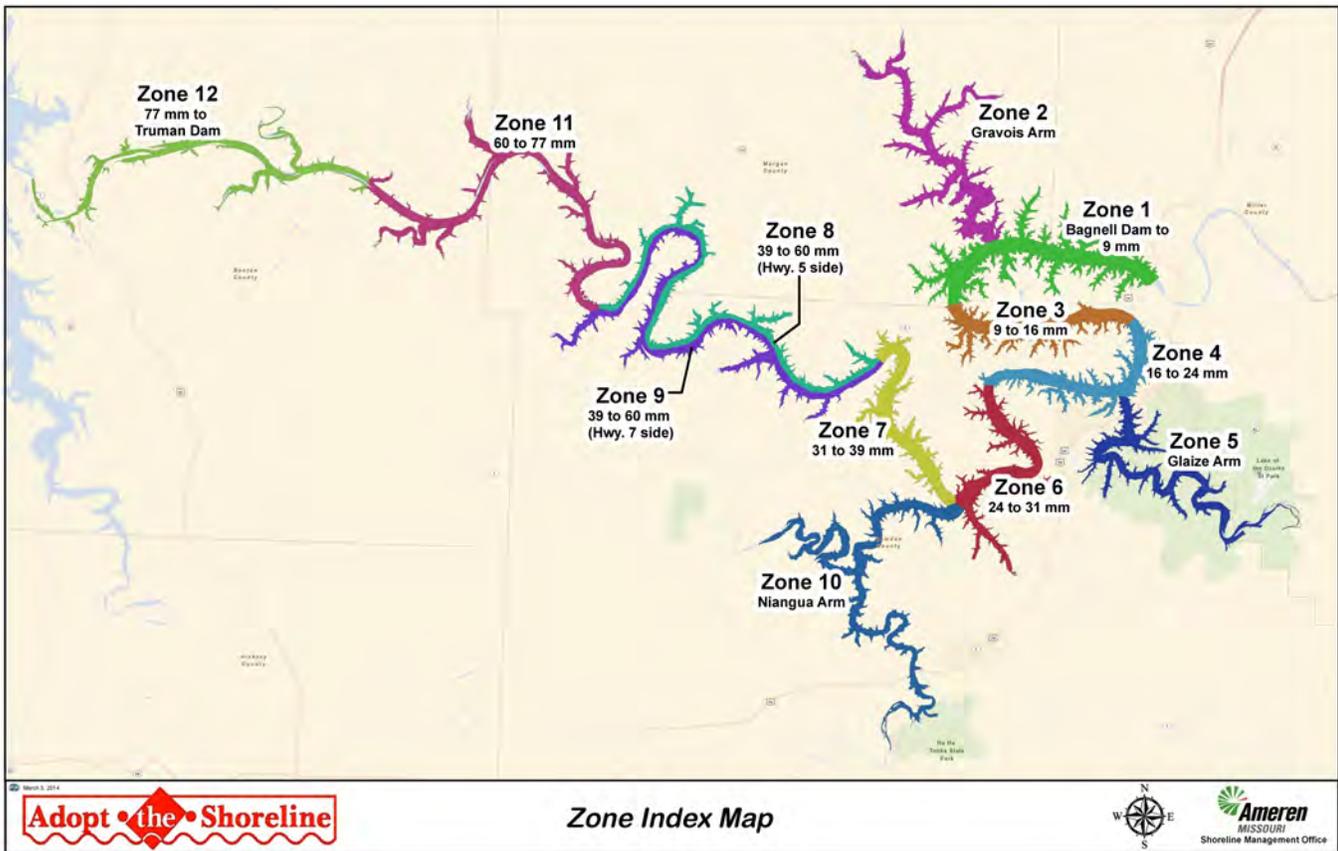


Fig 3.3

NIANGUA RIVER WATERSHED COMMUNITY PROJECTS

City of Lebanon

The City of Lebanon partnered with LOWA to host a recycling event on Earth Day April 22, 2015. With volunteers from US Bank, University of Missouri Extension Master Gardeners, and Habitat for Humanity the recycling event attracted 408 families from Camden and Miller counties.

Items that were collected include:

- Two trailers loads of non-hazardous household waste
- Three truck load of electronics, including 51 computers monitors and 114 televisions
- Two 40 yard dumpster of metal products
- Freon removal services
- 500 gallons of paint in good condition will be re-purposed for Habitat for Humanity

Lake of the Ozarks Watershed Alliance, Inc. (LOWA)

Missouri’s Nonpoint Source Grant Program funds activities and practices that work to reduce nonpoint source pollution in our lakes, streams and rivers. Grants can be used for a variety of activities such education, outreach, planning, conservation, protection and restoration. The overall goal of this program is to restore the quality of impaired waters by providing citizens with the knowledge and tools to implement better land use practices– from urban to agriculture. Locally, in 2011, a watershed planning grant was awarded to local nonprofit organization- Lake of the Ozarks Watershed Alliance, Inc. This grant was used to promote water quality improvement practices like septic system maintenance, watershed management planning, water quality monitoring, soil conservation practices, educa-

tion and outreach efforts and other activities in the Ha Ha Tonka watershed (a subwatershed of the Niangua River watershed).



Photo provided by The City of Lebanon

Fig 3.4

Missouri Department of Conservation (MDC)

The Missouri Department of Conservation, Lebanon Office Craig Fuller has been a tremendous help in the planning and development of the Healthy Watershed Plan. His participation in all our meetings has enhanced the engagement of all our Watershed Advisory Committee members. We initially met Mr. Fuller when developing the list of projects within the watershed. There are a number of projects that are currently in progress:

- Little Niangua River Habitat Conservation Initiative
 - Conservation of River and Stream Landscapes in Missouri
 - Aquatic Organism Passage Improvements.
 - Landowners Projects
- (continued on page 32)

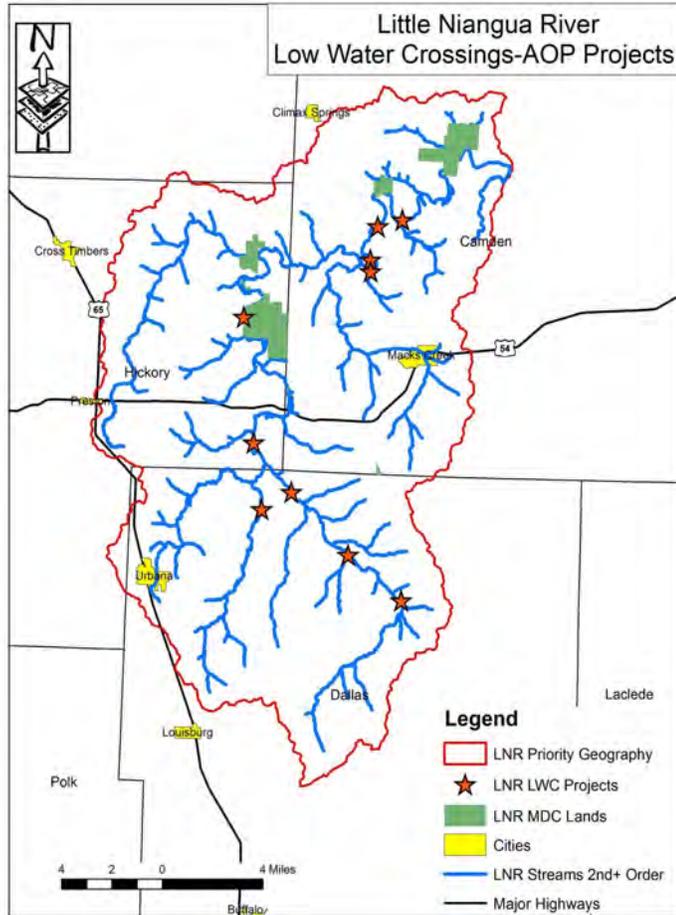


Fig 3.5

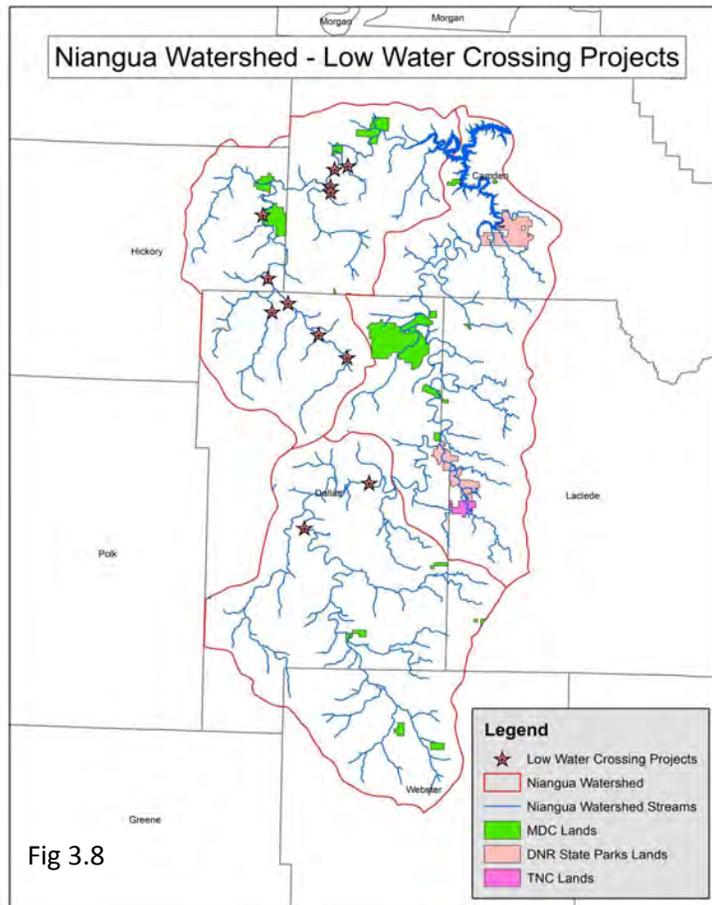


Fig 3.8



Fig 3.6



Fig 3.7

Photos and maps provided by MDC Lebanon

NIANGUA RIVER WATERSHED COMMUNITY PROJECTS

Missouri Department of Conservation (MDC)

The Landowner projects are important to the planning process as we discovered throughout the planning meetings that many of the landowners were not aware of the vast number of resources available to them. Some were aware of the programs, but repeatedly, the topic of match and the amount of money to match each of the programs was sometimes out of reach for many of the local landowners.

Mr. Craig Fuller shared the projects (illustrated on the map Fig 3.9) and how these projects impacted the Niangua River watershed in a positive way.

Map to the right shows:

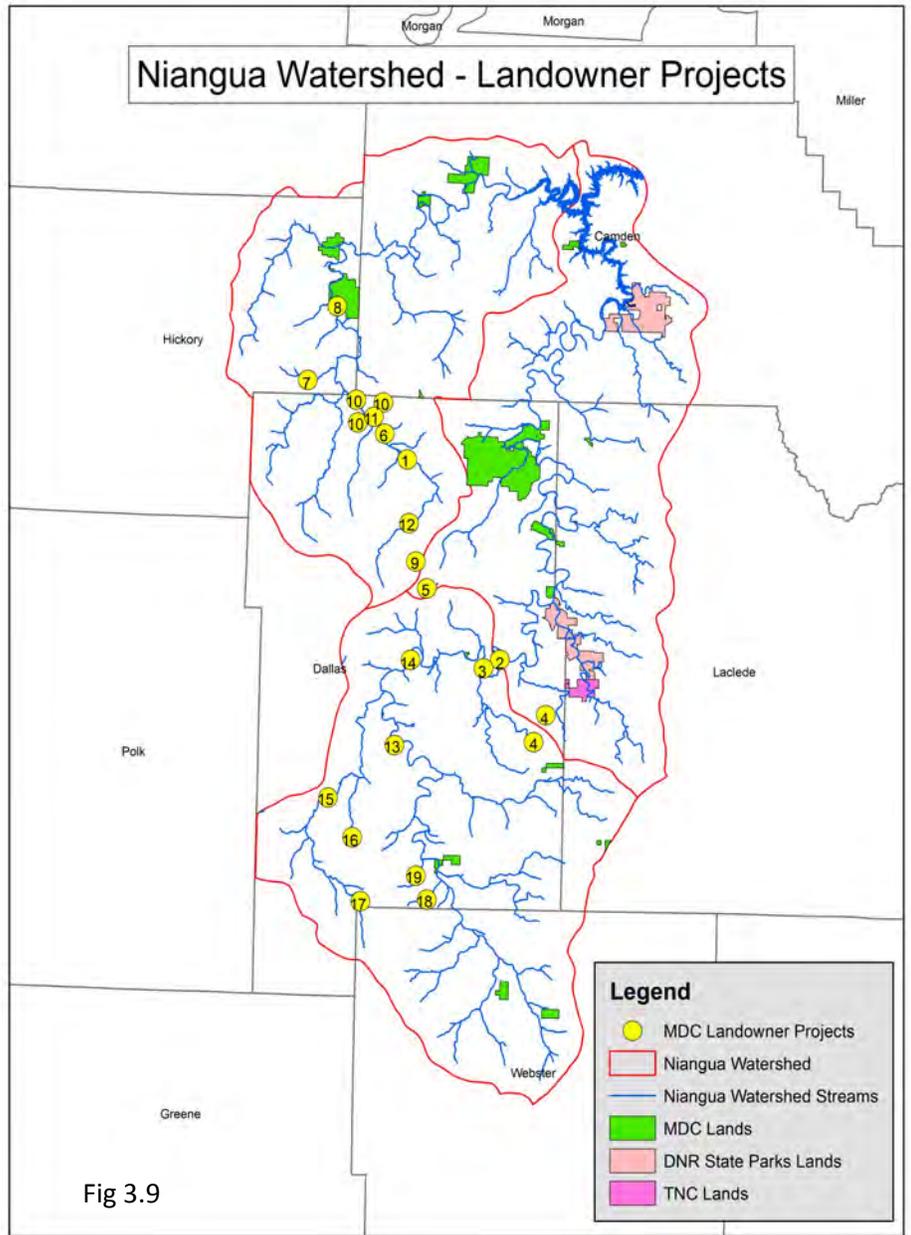
Conservation Easement (1)

Stream Bank Stabilization and Riparian Habitat Corridor (6)

Livestock Exclusion/ Alternate Water

(2,3,4,5,7,8,9,10,11,12,13,14,15,16,17,18,19)

These are completely voluntary programs offered by MDC, and this was one of the reasons we wanted to highlight these projects, as the entire premise of the Healthy Watershed Plan is the voluntary actions and participation in the implementation of the plan.



Being able to demonstrate the success of voluntary programs was important to see that it does work and landowners are sharing in the benefits with the Watershed and the environment.

Map provided by MDC Lebanon

Solid Waste District T

The Solid Waste District T serves the counties of Camden, Laclede and Miller. They use their funds to provide grants to other organizations to implement environmental friendly projects.

Grant Opportunities used for Environmental Projects:

2013 Grant to Macks Creek Schools for a box trailer for cardboard recycling.

2013 Grant to Lake Area Industries for recycling equipment.

2014 Grant to Lake Area Industries for recycling equipment.

2015 Grant to Palmer Recycling for recycling equipment.

2015 Grant to Camdenton Recycling for on-board scale equipment.

Missouri Master Naturalist Lake of the Ozarks Chapter

The Lake of the Ozarks Chapter of the Missouri Master Naturalist is a very active group of volunteers providing a wide variety of activities including*:

- Conservation Kids Club
- Nature Trail Projects
- Lakeshore Cleanup
- Missourians for Monarchs
- Lakes of Missouri Volunteer Program

(*this list is not all inclusive)

The Missouri Master Naturalists is a partnership with the Missouri Department of Conservation and the University of Missouri Extension. They encourage Missourians to volunteer in community service activities. They also provide science-based educational workshops.

Soil and Water Conservation Districts

Several of the local Soil and Water Conservation Districts participated in the planning of this Healthy Watershed Plan. They provide conservation programs and funding for activities throughout Missouri.

Soil and Water Conservation Districts set goals for conservation issues and concerns. These practices are funded and implemented to help districts meet their resource conservation goals, which conserves soil and improves water quality by reducing sedimentation in our rivers and streams. The chart below illustrates the number of practices implemented for each concern in the watershed from 2009 to 2014, relative to the total number of practices for this watershed. No irrigation management practices were implemented during this time. District funding requests for FY15 show that grazing management and sheet, rill and gully practices are most prevalent.

2014 Conservation Practices

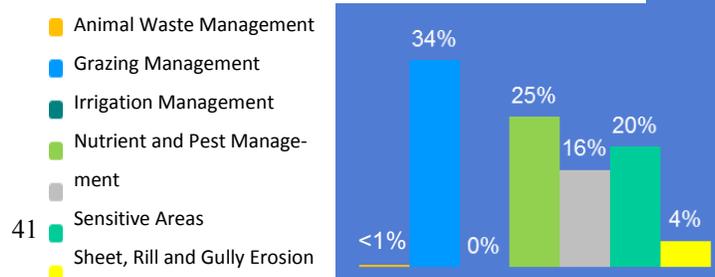


Fig 3.10

NIANGUA RIVER WATERSHED COMMUNITY PROJECTS

Regional Projects

There are three Regional Planning Commissions within the Niangua River Watershed.

Lake of the Ozarks Council of Local Governments representing Camden and Laclede Counties.

Kaysinger Basin Regional Planning Commission representing Hickory County.

Southwest Missouri Council of Governments representing Dallas and Hickory Counties.

As the local planning organizations the services they are able to offer their communities has a variety of aspects from community development planning, transportation planning, economic development planning, environmental assessments and much more.

Each of the organizations offer the Brownfield Assessment Program through Missouri Department of Natural Resources. The Brownfield program offers property owners access to a Phase I and if needed a Phase II environmental review to determine the level of contamination on a property site. There is also assistance available if clean up is determined to be needed.

They all also offer the On-site Wastewater Grant and Loan program through a program with Missouri Department of Natural Resources with an agreement with Missouri Association of Councils of Governments (MACOG). This is an excellent program where a homeowner with a failing on-site system can obtain grant and loan funds to repair and or replace their failing on-site septic systems.

These regional organizations also have staff that offer grant writing to help small communities find the resources to help resolve some of the issues they face. Here are some examples of recent projects with each of the organizations that represent the Niangua River watershed.

Lake of the Ozarks Council of Local Governments

- Statewide Wastewater Assessment
- Normac Sewer District Feasibility Study
- Camelot Sewer District Feasibility Study
- Eldon Brownfield Assessment Phase I
- Eldon Brownfield Assessment Phase II
- Eldon Brownfield-EIERA Cleanup Project
- Iberia Brownfield Assessment Phase I
- Iberia Brownfield Assessment Phase II
- Eldon Economic Development Corp Brownfield Phase I and Phase II
- (3) On-Site Loans Approved

Kaysinger Basin Regional Planning Commission

- Statewide Wastewater Assessment
- Nemo Brownfield Assessment Phase I
- Galmey Brownfield Assessment Phase I
- Pomme De Terre Brownfield Assessment Phase I
- Village of Preston Study Wastewater
- City Wheatland Study Wastewater

Southwest Missouri Council of Governments

- Statewide Wastewater Assessment
- Worked with MDC and property owners to assist in the repair and replacement of Low Water Crossing and installing Aquatic Organism Passage crossing from 2004-2012

Missouri Cave and Karst Conservancy

Goodwin Sinkhole and Cave Clean up Project

This sinkhole is located in Laclede County, just outside the Niangua River watershed, but it has a direct impact on the quality of water within the watershed. The sinkhole is approximately 24 feet deep and a half acre in size. The clean up began in 2012 with all volunteers cleaning out the garbage and debris.

In 1980 Missouri Department of Natural Resources conducted a dye test to see where the water flowed out of the sinkhole. It was found later in the Ha Ha Tonka Springs.

From January 2012 to June 2015 volunteers have donated nearly 761 volunteer days to clean up approximately:

- 4,442.5 tons of clean fill processed
- 142.98 tons of trash laden materials disposed
- 32.43 tons of trash disposed
- 3.47 tons of metal recycled
- 7.37 tons of tires recycled

There is still much more to clean up and volunteer time needed. This is an ongoing project and funds are needed to help move this forward to completion.



Fig 3.11



Fig 3.12

Photos Provided by MDNR

NIANGUA RIVER WATERSHED COMMUNITY PROJECTS

Missouri Stream Teams

Missouri Stream Teams Program is sponsored by Missouri Department of Conservation, Missouri Department of Natural Resources, and the Conservation Federation of Missouri. The Stream Teams Program is a network of volunteers who tackle water quality issues with outreach, projects and education. The most important part of the Stream Teams are the volunteers. In 2014, the Stream Teams Programs celebrated 25 years of success with volunteers promoting citizen awareness and involvement in water quality preservation.

There are several local Stream Teams that are very active within the Niangua River watershed with a variety of conservation activities, including:

- Litter Pick Up
- Storm Drain Stenciling
- Tree Planting
- Adopt-An-Access Program
- Stream Bank Stabilization Projects
- Volunteer Water Quality Monitoring
- Monofilament Recycling Program
- Education Projects for Teachers
- Stream Teams Educational Workshops
- Mentoring
- Photo Point Monitoring

Litter pick up events are a regular occurrence in the watershed. The Niangua River is used for a large number of recreational activities, there is a lot of trash that is left behind by the tourists. There are several stream teams that have trash pick up

events, and they also sponsor an annual cleanup event in September where they partner with the local outfitters and do a large section of the Niangua River. It has been an extremely successful event with a large number of volunteers who participate in this annual trash pick up.

According to the annual report of the Stream Teams activities during 2014, some 496 tons of trash were picked up. Over the 25 years of the program, some 20,090 tons of trash were picked up. All this trash was picked up with volunteers donating their time for a cause they care about.

Stash your trash is another program by Missouri Department of Conservation in which they provide trash bags to Missouri's float outfitters to provide their customers with an easy convenient receptacle for trash, keeping the trash off the rivers and back to the outfitter to properly dispose of it. Green and red mesh bags are provided to the business owners at no cost.

During the planning process for the Healthy Watershed Plan it was shared over and over again the benefits to the trash pick up programs. The Watershed Advisory Committee also identified this as an action they wanted to continue to support.

The map on page 45 (Fig 3.13) shows the locations of the Stream Team activities within the Niangua River watershed.

Information provided by Kat Lackman and Craig Fuller of Missouri Department of Conservation and www.mostreamteam.org.

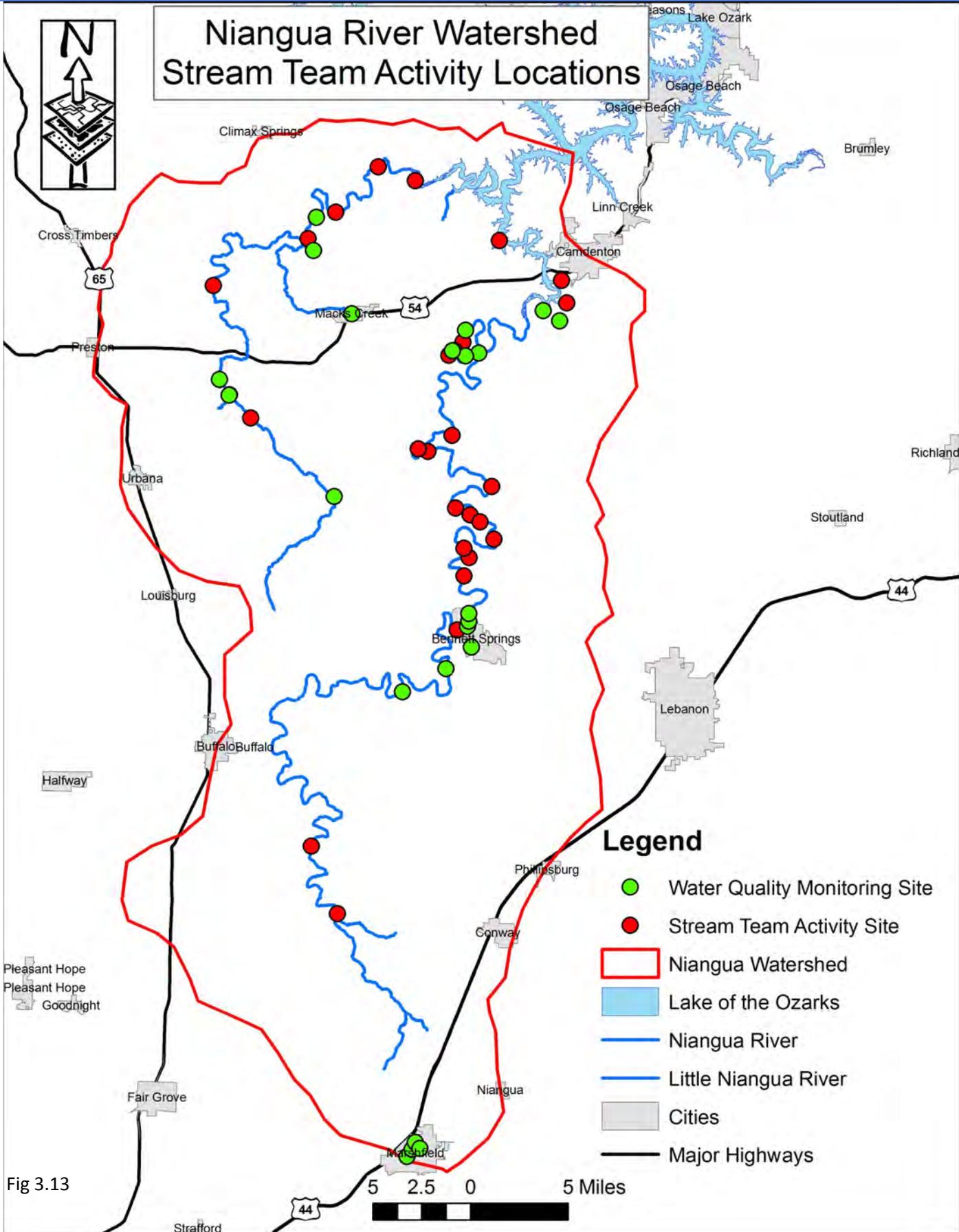


Fig 3.13

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CHAPTER 4

COMMUNITY ENGAGEMENT

Planning Meetings

Meeting Timeline and Topics

Community Partnership Engagement

Watershed Advisory Committee

Developing the Healthy Watershed Plan

PLANNING MEETINGS

The Planning Meetings

We hosted a series of meetings in all corners of the Niangua River watershed. Our goal was to engage the maximum number of people interested in the planning process.

Thursday, July 23, 2015 at 6:00 p.m.

Laclede Electric Cooperative Meeting Room
1400 E. Route 66
Lebanon, MO 65536
Number of people in attendance 59

Wednesday, August 19, 2015 at 3:00 p.m.

Preston Community Center
120 W. Hwy 54
Preston, MO 65732
Number of people in attendance 40

Tuesday, August 25, 2015 at 5:30 p.m.

O'Bannon Bank Community Room
1347 South Ash
Buffalo, MO 65622
Number of people in attendance 31

Wednesday, October 21, 2015 at 5:30 p.m.

Bennett Springs State Park Dining Lodge
26262 Highway 64A
Lebanon, MO 65536
Number of people in attendance 36

Tuesday, January 26, 2016 at 3:00 p.m.

Central Bank Public Meeting Room
1197 Spur Drive
Marshfield, MO 65706
Number of people in attendance 34

Thursday, March 31, 2016 at 3:00 p.m.

Laclede Electric Cooperative Meeting Room
193 S. Highway 5
Camdenton, MO 65020
Number of people in attendance 28

Tuesday, May 10, 2016 at 2:30 p.m.

Laclede Electric Cooperative Meeting Room
193 S. Highway 5
Camdenton, MO 65020
Number of people in attendance 22

Wednesday, September 14, 2016 at 2:30 p.m.

Laclede Electric Cooperative Meeting Room
1400 E. Route 66
Lebanon, MO 65536
Number of people in attendance 14

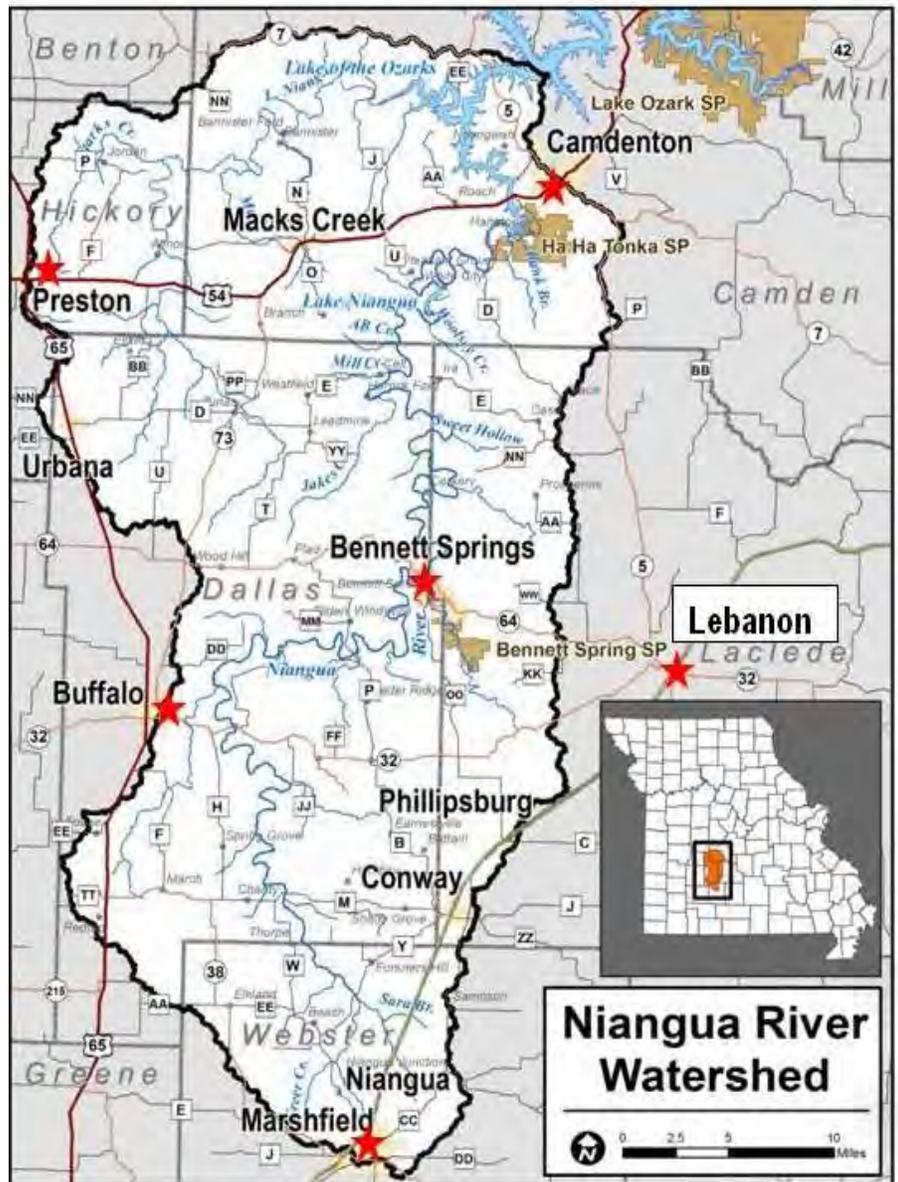


Fig 4.1

MEETING TIMELINE AND TOPIC

Date	Meeting	Meeting Summary
7/23/2015	Introduction to Healthy Watershed Plan (1) This meeting was within the jurisdiction of LOCLG (Camden & Laclede Counties)	<ul style="list-style-type: none"> • Education on watershed planning • Discuss the purpose of the “Healthy Watershed Plan” • Overview of the “Niangua River Watershed” • Community engagement • Community projects within the watershed • Surveys
8/19/2015	Introduction to Healthy Watershed Plan (2) This meeting was within the jurisdiction of KBRPC (Hickory County)	<ul style="list-style-type: none"> • Education on watershed planning • Discuss the purpose of the “Healthy Watershed Plan” • Overview of the “Niangua River Watershed” • Community engagement • Community projects within the watershed • Surveys
8/25/2015	Introduction to Healthy Watershed Plan (3) This meeting was within the jurisdiction of SMOG (Dallas & Webster Counties)	<ul style="list-style-type: none"> • Education on watershed planning • Discuss the purpose of the “Healthy Watershed Plan” • Overview of the “Niangua River Watershed” • Community engagement • Community projects within the watershed • Surveys
10/21/2015	Developing the Healthy Watershed Plan	<ul style="list-style-type: none"> • Discuss the participation at the first three meetings • Review the survey results • Developing the Watershed Advisory Committee • Developing the priorities within the Niangua River Watershed, discussing the areas of concern and identifying specific problems that need to be addressed • Building on projects already being done within the watershed • Identifying funding resources for projects
1/26/2016	Watershed Advisory Committee-Initial List of Priorities	<ul style="list-style-type: none"> • Identifying the purpose and responsibilities of the Watershed Advisory Committee • Developing the vision and mission of the committee • Review the list of identified goals and actions and determine priority, probability and implementation
3/31/2016	Watershed Advisory Committee-Refining the List of Priorities	<ul style="list-style-type: none"> • Emphasis on the purpose and responsibilities of the Watershed Advisory Committee • Review of the list of identified actions and ranking of those actions • Identifying possible volunteer groups to help implement those actions • Timeline established for the completion of the Watershed Plan
5/10/2016	Watershed Advisory Committee-Focus Groups	<ul style="list-style-type: none"> • Review of action items and group discussions based on water quality in regard to: <ul style="list-style-type: none"> • Tourism and recreation • Agriculture and landowners • Drinking water • Habitat restoration-river and stream health • Continued to identify volunteers to help implement the actions
9/14/2016	Watershed Advisory Committee-Review of the Healthy Watershed Plan	<ul style="list-style-type: none"> • Draft copy of the Healthy Watershed Plan presented • Final review of goals and action items • Discussion on implementation and volunteers • Future of Watershed Advisory Committee • Question and comment period

Fig 4.2

Community Engagement

Community engagement was a key component to developing the Healthy Watershed Plan. It was also the first step to building the Watershed Advisory Committee. A list of key stakeholders was identified early on, so that we could engage those community leaders in the planning process. The initial list of key stakeholders included but not limited to:

- Watershed groups
- Universities/Extensions
- Soil and Water Conservation Districts
- Missouri Master Naturalists
- Missouri Department of Conservation
- Missouri State Parks
- Missouri State Water Patrol
- County Officials
- City Officials
- Chambers of Commerce
- Ameren Missouri
- Laclede Electric
- Other Utility Companies
- Marine/Boat Organizations
- Outfitters/Canoe Rentals
- Engineers/Engineering Firms familiar with water and wastewater projects
- Wastewater Dept/Health Dept
- Missouri Farm Bureau
- Farm Representation
- Board Members
- Large Land Owners
- Groups identified as having environmental activities within the watershed

Community Partnerships

We encouraged all community leaders attending our watershed meetings to sign up and participate as a Watershed Advisory Committee Member. Many of the current members of the committee are from those who volunteered early on in the planning process. Because of the diversity within the group, we have all learned about aspects of the watershed that we may not have considered before. With the input of all our committee members, we have been able to develop the Healthy Watershed Plan and plans on how to implement the actions identified during the planning process.

From the list of key stakeholders, we have had participation at some level in the planning process from each group identified. We continue to provide information on the planning activities and meetings to all the key stakeholders on our project database. We have also continued to enhance our database for the project to continually engage the community, and key stakeholders in the planning of the Healthy Watershed Plan.

Media

As part of the planning efforts, it is important to keep the public engaged and informed of the project. We developed and shared press releases with all our local media contacts about our project and all the public engagement meetings that were scheduled. Copies of the press coverage can be found in the Appendix B.

Community Engagement Meetings July 2015-September 2016



Fig 4.3



Fig 4.4



Fig 4.5



Fig 4.6

Niangua River Watershed Advisory Committee

From the onset of the project we knew that we would need to establish a Watershed Advisory Committee to help bring the Healthy Watershed Plan to fruition and provide guidance and valuable input during the planning process. During our first introductory meetings we discussed the plan development and the planning process and we solicited volunteers to sit on the committee.

We were successful in gaining a broad base of volunteers that represented a diverse range of interests to agree to be a part of the Watershed Advisory Committee. The committee members have been actively participating in the planning meetings and the development of the plan. As we were establishing our committee we developed a vision and mission for the Watershed Advisory Committee, to help guide us as to the purpose of the committee and what we hoped to accomplish.

The key to a successful Watershed Advisory Committee is the voluntary efforts of our committee members who are willing to share their time and expertise in developing our Healthy Watershed Plan that will serve as our guide to watershed protection and preservation.

Niangua River Watershed Advisory Committee

Vision: Through communication, collaboration and coordination, the residents of the Niangua River watershed can work together on water-related concerns and develop a shared vision for the Niangua River watershed.

Mission: Voluntarily giving guidance and input into the planning process, we want to develop a shared responsibility for the water quality and water protection within the Niangua River watershed.

A complete list of our watershed advisory committee members can be found on pages 54-55 (Fig 4.8)

In order to move the watershed plan forward to the implementation stage it would be beneficial to keep the Watershed Advisory Committee active and helping to support the implementation of our actions identified in the Healthy Watershed Plan.



The Watershed Advisory Committee explored the value of water within the Niangua River Watershed

Quality of Life

All of us depend on clean and available water in our everyday lives, for drinking, bathing and recreating.

Quality of Place

The region within the Niangua River watershed has a tremendous amount of water related tourism activities in which we experience an economic benefit that has made our region nationally recognized.

Quality of our Future

Promoting watershed stewardship will help us create an environment in which we will have a sustainable water resource for our future, not only for us but for generations to come.

Niangua River Watershed Advisory Committee

Name of Committee Member	Affiliation/Representing
Albert Hempel	Landowner
Eddie Whitworth	Landowner
Ernie Calvert Sr.	SWCD-Camden Cty
Ernie Calvert Jr.	Landowner
John Haake	Titanova Laser
Helmut & Nancy Von Loewe	Landowner/Business Owner
Nanci Morris	Landowner, business, stream team
Patricia Barrett	MU Extension
Jodi Moulder	MDC
Greg Hasty	Camden County
Georganne Bowman	Ameren
Warren Witt	Ameren
Joy Harrison	Landowner
Jack Adams	Landowner
John Young	Landowner
Terry Halleran	MU Extension-Hickory County
Klaus Leidenfrost	Missouri Caves and Karst Conservatory
Craig Fuller	MDC
Cliff & Tina Aultman	Landowner
Carl Romesburg	Stream Team-MDC
Curt Jones	Landowner
Mike Walty	City of Osage Beach
Bob Schultheis	MU Extension

Fig 4.8

Niangua River Watershed Advisory Committee

Jennifer Hoggatt	MDNR
Gwenda Bassett	MDNR
Elizabeth VanWinkle	Kaysinger Basin RPC
Cyndee Schmidt	Kaysinger Basin RPC
Cassie Sanders	Kaysinger Basin RPC
Linda Conner	Lake of the Ozarks Council of Local Governments
Taylor Schlueter	Lake of the Ozarks Council of Local Governments
Terre Brown	Lake of the Ozarks Council of Local Governments
Pam Gilbert	Lake of the Ozarks Council of Local Governments
John Schumacher	USGS
Jordan Wilson	USGS
Diana Sheridan	USDA Natural Resources Conservation Service
Eric Fuchs	MRWA
Bob Broz	MU Extension
Leon Thompson	Soil & Water Conservation Program
Leslie Holloway	Farm Bureau-Legislative
Ronda Headland	MDC
Gorman Bennett	NRCS
Guy Winters	Extension Council
Landry Jones	MDC
Greg Hasty	Camden County Presiding Commissioner
Kevin Sharpe	Dallas County Presiding Commissioner
Robert Sawyer	Hickory County Presiding Commissioner
Danny Rhoades	Laclede County Presiding Commissioner
Paul Ipock	Webster County Presiding Commissioner

Watershed Advisory Committee Members

Project Planning Partners

Technical and Resource Committee

Ex-Officio List Each County within the Watershed Representative

Fig 4.8

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CHAPTER 5

NIANGUA RIVER WATERSHED PRIORITIES AND ACTIONS

Developing the Watershed Priorities

Developing the Goals and Actions

Identifying the Concerns and Issues

Potential Action Items Identified

Survey Results

Priorities Identified

Volunteers for Implementation

DEVELOPING THE NIANGUA RIVER WATERSHED PRIORITIES AND ACTIONS

Developing the Watershed Priorities

The Watershed Advisory Committee spent considerable time exploring the concerns and issues of the Niangua River watershed each of which were discussed in depth at our planning meetings. The Committee listened to the concerns and issues and looked for shared priorities, common areas that they could address with effective actions that would have a positive impact on the overall health of the Niangua River watershed. The Committee developed actions that would create a clear path to positive change while educating the community about the watershed and watershed protection and preservation activities.

Through the planning process, it became clear that there were three areas of importance that the Committee wanted to focus on as they developed the goals and actions identified in the Healthy Watershed Plan.

- Water Quality
- Education and Public Outreach
- Habitat Preservation and or Restoration-River and Stream Health

The Advisory Committee also realized that Water Quality had several distinct and equally important areas that needed to be addressed because of the diversity of land use within the Niangua River watershed. During the planning meetings, there were focus groups that discussed water quality as it pertains to three individual areas of interest.

- **Water Quality in regard to Tourism and Recreation**
- **Water Quality in regard to Agriculture and Land Owners**
- **Water Quality in regard to Drinking Water and Protection of Drinking Water**

With the areas of focus clearly defined the Watershed Advisory Committee reviewed specific concerns that were brought up at the planning meetings.

Water Quality in regard to Tourism and Recreation

- Large amounts of trash
- Fish guts being put back into the water
- On-site wastewater systems failing
- Large dumping areas that impact our waterways

Water Quality in regard to Agriculture and Land Owners

- Livestock in the river
- Soil erosion
- Pesticides and fertilizers and other pollutants

Water Quality in regard to Drinking Water and Drinking Water Protection

- The number of abandoned wells
- The number of new wells coming online
- Surface water protection

Developing the Goals and Actions

Goal 1: Provide educational opportunities within the Niangua River watershed that will help increase awareness and voluntary stewardship to help maintain and or improve water quality within the region.

Goal 2: Increase communication and coordination among key stakeholders within the Niangua River watershed to encourage voluntary implementation of water protection and preservation activities.

During the planning meetings we asked our Watershed Advisory Committee to help develop the goals and action items that would specifically address the concerns that were brought forth at the meetings.

Developing the goals and action items that everyone felt were obtainable was important as we move forward with the voluntary implementation of the Healthy Watershed Plan. Providing clear and understandable goals along with specific action items that directly connected to those goals was accomplished at our final planning meeting. The Watershed Advisory Committee then

looked for groups that would be a good fit for the implementation stage of the project. There are a number of already active community groups that we could engage in the implementation of the Healthy Watershed Plan. We then identified a list of Organizations and Resources for Implementation, which can be found in Chapter 5 of the Healthy Watershed Plan.

The actions were developed over a couple of the planning meetings and you can see the progression of the actions on pages 62-67 with the final action items identified on page 68 of this planning document.

What are the concerns and issues?



Stream Bank Erosion

Fig 4.9

Photo Provided by MDC

Illegal Dumping



Fig 4.11

Photo Provided by MDNR



Photo Provided by MDNR

Fig 4.10

Trash in the Rivers and Streams

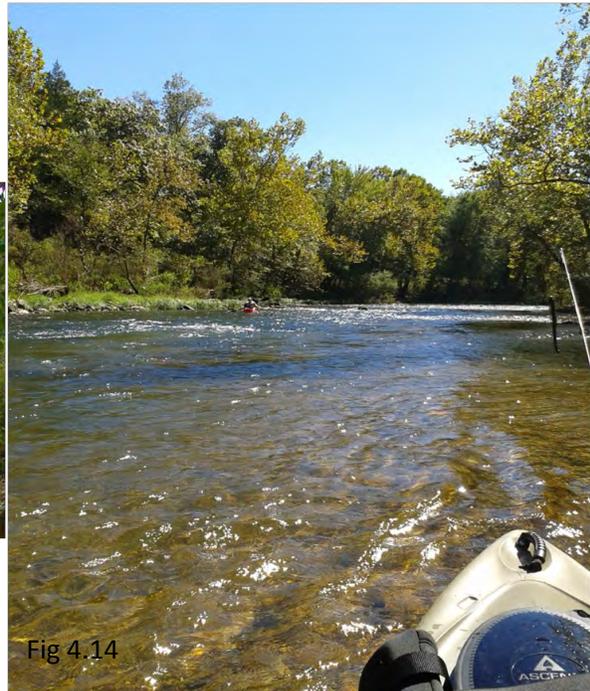
What are the concerns and issues?



Fig 4.12

River and Stream Health

Photo Provided by MDC



Livestock in the River

Photo Provided by MDC

Photo Provided by MDC



Failing on-site waste-water systems or lagoons

Fig 4.15

Question	Response
Test Question	
I _____ in the Niangua River Watershed.	
	A) Live 16%
	B) Work 12%
	C) Live and Work 60%
	D) Do not live or work 12%
Water Quality	
How important do you feel water quality is to you personally and your family?	
	A) Very important 75%
	B) Somewhat important 25%
	c) Not important 0%
Water Quality in regard to Tourism/Recreation	
How important do you feel water quality is to our local tourism and recreational activities and the local economy?	
	A) Very important 60%
	B) Somewhat important 36%
	c) Not important 4%
Water Quality in regard to Agriculture & Land Owners	
How important do you feel water quality is to the agriculture industry and landowners?	
	A) Very important 60%
	B) Somewhat important 36%
	c) Not important 4%
Water Quality in regard to Drinking Water and Protection	
How important do you feel water quality is for drinking water and protecting that drinking water for the future?	
	A) Very important 80%
	B) Somewhat important 12%
	c) Not important 0%
Education and Public Outreach	
How important do you feel education and public outreach is to water quality protection and preservation?	
	A) Very important 71%
	B) Somewhat important 21%
	c) Not important 8%
Habitat Preservation and or Restoration	
How important do you feel habitat preservation and or restoration is to our communities now and for future generations?	
	A) Very important 64%
	B) Somewhat important 24%
	c) Not important 12%

Fig 4.16

Water Quality in regard to Tourism/Recreation			
1)	<i>Annual award recognition to businesses that support, promote, and do environmentally friendly activities.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	80%
		No	20%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	48%
		No	24%
		Not Sure	28%
2)	<i>Working with local Stream Teams to schedule a volunteer clean up along the banks of the Niangua River on more regular intervals.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	84%
		No	16%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	48%
		Not Sure	44%
		No	8%
3)	<i>Working with local organizations and Stream Team volunteers to increase the number of water samples collected on the Niangua River.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	63%
		No	38%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	46%
		Not sure	33%
		No	21%
4)	<i>Expanding the fish cleaning stations to more fishing recreational areas.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	63%
		No	38%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	33%
		Not sure	42%
		No	25%
5)	<i>Explore opportunities to recycle and use the fish and fish guts in organic fertilizers.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	52%
		No	48%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	21%
		Not sure	33%
		No	46%

Fig 4.17

Survey Results

Water Quality in regard to Agriculture and Land Owners			
6)	<i>Engaging and educating farmers on programs available with MDNR, MDC, NRCS, and FSA.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	83%
		No	17%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	63%
		Not sure	17%
		No	21%
7)	<i>Offering educational workshops or Lunch & Learn Programs on agriculture related subjects from experts on those subjects and or programs.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	68%
		No	32%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	42%
		Not Sure	46%
		No	13%
8)	<i>Organizing field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	65%
		No	35%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	42%
		Not Sure	42%
		No	17%

Fig 4.17

Survey Questions

The questions were developed to gain a better understanding of how the planning committee felt based on two different aspects of the proposed actions. First, do they want to include it into the Healthy Watershed Plan. Second, do they feel the Watershed Advi-

sory Committee could be successful in engaging others to participate and support the action. This was important for us to understand how we would be able to implement the actions identified in the Healthy Watershed Plan in the future. The results can be viewed to the right of each question.

Survey Results

Water Quality in regard to Drinking Water/Protection			
9)	<i>Developing a comprehensive inventory list of abandoned wells.</i>		
	Do you support this as an action item that we should consider including in our Healthy Watershed Plan?	Yes	57%
		No	43%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	30%
		Not Sure	17%
		No	52%
10)	<i>Developing a community plan to apply for well plugging grants to fill/plug those abandoned wells.</i>		
	Do you support this as an action item that we should consider including in our Healthy Water-	Yes	74%
		No	26%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	39%
		Not Sure	35%
		No	26%
11)	<i>Developing a comprehensive list of abandoned or dilapidated properties and identifying them as potential Brownfield projects for possible lead-based paint and asbestos cleanup with grant funds.</i>		
	Do you support this as an action item that we should consider including in our Healthy Water-	Yes	48%
		No	52%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	29%
		Not Sure	38%
		No	33%
12)	<i>Exploring ways for the local community and business owners within a relatively close distance to the Bennett Springs State Park to connect to the State Park wastewater treatment</i>		
	Do you support this as an action item that we should consider including in our Healthy Water-	Yes	39%
		No	61%
	Do you feel that we can successfully encourage local participation and engagement in this activity?	Yes	8%
		Not Sure	38%
		No	54%

Fig 4.17

Survey Results

We used the Turning Technologies data collection devices and software to capture the survey results at our fifth meeting. Two additional meetings took the proposed action

items, and breakout groups refined the actions and discussed the implementation of each action. The following pages show the results of the working groups recommendations.

Priorities Identified

The Watershed Advisory Committee met to finalize the actions and determine which actions to move forward into the Healthy Watershed Plan. In order to accomplish this, we had several breakout sessions where committee members discussed the pros and cons and the probability of completing the proposed action. The group's focus was on a specific area during each breakout, including:

- Tourism & Recreation
- Agriculture & Landowners
- Drinking Water
- Habitat Restoration-River & Stream Health

The chart on page 67 (Fig 4.18) reflects the top selected actions for each category. Additional items were discussed during these individual group meetings. Some of the more prominent discussions are shared below.

Tourism & Recreation

The discussion indicated that there needed to be more information available on the economic impact on the region that quality water provides and being able to demonstrate or share that with the public. An economic impact study was recommended to better quantify the economic impact that clean water provides to our region.

Agriculture & Landowners

Erosion control continued to be a topic of conversation and additional information is needed in the form of educational workshops on specific topics including stream bank stabilization, using rip rap, using vege-

tation and gravel removal. There is a definite need to provide education on “what can be done” in regard to gravel removal and erosion control.

Even with programs available for land management and best practices being demonstrated in many parts of the Niangua River watershed it is the cost associated with using these programs that often times prohibits a landowner from participating in these programs. Finding a more cost effective way for property owners to use these programs was brought up throughout all the meetings.

Drinking Water

Abandoned wells was commonly misunderstood in regard to the importance of why this was identified as an action item. There needs to be more education on the impacts of wells on our ground water resources. It was also discussed that we may not be able to complete a comprehensive inventory with the resources available. So that action was later changed to education and awareness in regard to abandoned wells.

Habitat Restoration-River & Stream Health

Understanding the connection between the endangered species and the impact it has on human existence was discussed, and more education in regard to this was highly recommended. The preservation and restoration of habitats is commonly misunderstood and education and awareness actions were recommended.

All the groups shared a common sentiment, that public awareness and education on the watershed was important.

Top Three Actions Identified—Per Working Groups

Tourism & Recreation	
1)	<i>Working with local Stream Teams to schedule a volunteer clean up along the banks of the Niangua River on more regular intervals.</i>
2)	<i>Offering educational workshops or Lunch & Learn programs on illegal dumping- how to combat the problem and what are the ramifications legally and financially.</i>
3)	<i>Working with local 4H programs, FFA programs, MU Extension Programs, Local Schools, MDNR, MDC, NRCS, and FSA to promote water quality, water protection and preservation.</i>
Agriculture & Landowners	
1)	<i>Organizing field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated.</i>
2)	<i>Engaging and educating farmers on programs available with MDNR, MDC, NRCS, and FSA.</i>
3)	<i>Working with local 4H programs, FFA programs, MU Extension Programs, Local Schools, MDNR, MDC, NRCS, and FSA to promote water quality, water protection and preservation.</i>
Drinking Water	
1)	<i>Developing a comprehensive inventory list of abandoned wells and developing a community plan to apply for well plugging grants to fill/plug abandoned wells.</i>
2)	<i>Offering educational workshops or Lunch & Learn programs on loan and grant programs for the repair and replacement of failing on-site septic systems.</i>
3)	<i>Offering educational workshops or Lunch & Learn programs on illegal dumping- how to combat the problem and what are the ramifications legally and financially.</i>
Habitat Restoration- River and Stream Health	
1)	<i>Offering educational workshops or Lunch & Learn programs on illegal dumping- how to combat the problem and what are the ramifications legally and financially.</i>
2)	<i>Offering educational workshops or Lunch & Learn programs on water sampling and analysis in the Niangua River watershed.</i>
3)	<i>Offering educational workshops or Lunch & Learn programs on recycling- how to encourage this as a better option.</i>

Fig 4.18

Priority Actions Established for the Niangua River Watershed

1)	<i>Working with local Stream Teams to schedule a volunteer clean up along the banks of the Niangua River on more regular intervals.</i>
2)	<i>Organizing field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated.</i>
3)	<i>Engaging and educating farmers on programs available with MDNR, MDC, NRCS, and FSA.</i>
4)	<i>Working with local 4H programs, FFA programs, MU Extension Programs, Local Schools, MDNR, MDC, NRCS, and FSA to promote water quality, water protection and preservation.</i>
5)	<i>Education and outreach on hazards of abandoned wells and funding availability of well plugging grants to fill/plug abandoned wells.</i>
6)	<i>Offering educational workshops or Lunch & Learn programs on loan and grant programs for the repair and replacement of failing on-site septic systems.</i>
7)	<i>Offering educational workshops or Lunch & Learn programs on illegal dumping- how to combat the problem and what are the ramifications legally and financially. Recycling, encouraging this as a better option.</i>
8)	<i>Offering educational workshops or Lunch & Learn programs on water sampling and analysis in the Niangua River watershed.</i>
9)	<i>Develop educational materials that demonstrate the Watershed as a place that we live and enjoy. How to protect it for our future generations.</i>

Fig 4.19

Volunteers Needed for Implementation of Action Items

The Watershed Advisory Committee identified potential groups and organizations that could help implement the actions they had finalized. The Healthy Watershed Plan is a completely voluntary plan and identifying volunteer groups is a critical part of the planning efforts. Without the help of volunteer groups, it will not be possible to accomplish the priority action items that have

been established. The list on page 71 reflects a comprehensive list of potential volunteers to help with the implementation stage of this plan.

Partnering with people who have a passion for the project will help this plan be successful. Many of these organizations have already demonstrated their passion for the preservation of our water resources within the Niangua River watershed.

CHAPTER 6

PARTNERS AND RESOURCES

Volunteer Resources

Financial Resources

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Organizations-Resources for Implementation

During our final planning meeting we discussed the different organizations that have a vested interest in the watershed and have the most potential to helping implement the actions identified in the Healthy Watershed Plan. This is the list of groups and organizations that have been identified as potential partners for the implementation stage of the plan.

- **Land Owners**-have decision making authority and own much of the land within the watershed
- **MU Extension**-educational programming and planning activities
- **Missouri Department of Conservation (MDC)**-educational programming, technical and financial assistance, water quality data
- **Missouri Department of Natural Resources (MDNR)**-technical and financial assistance, water quality data
- **MDNR Solid Waste Districts**-financial assistance for specific projects
- **Local Soil & Water Conservation Districts (SWCD)**-technical and financial assistance
- **Natural Resource Conservation Service-(NRCS) USDA**-technical and financial assistance, water quality data
- **Farm Service Agency (FSA)**-technical and financial assistance
- **Corps of Engineers**-planning and technical assistance
- **United States Geological Survey (USGS)**-water quality data
- **Lake of the Ozarks Watershed Alliance, Inc. (LOWA)**-planning and technical assistance
- **Stream Teams**-stream cleanups, educational programming, outreach activities, water quality data
- **Lake of the Ozarks Council of Local Governments (LOCLG)**-planning and technical assistance
- **Land Improvement Contractors of America (LICA)**-labor and volunteer time
- **Master Gardeners (MU Extension program)**-technical assistance & specific projects
- **Master Naturalist (MU Extension program)**-technical assistance & specific projects
- **FFA Chapters**-water quality projects
- **Local School Districts**-water quality projects
- **Volunteer Water Quality Monitoring Groups**-water quality projects
- **Project Wet**-Education for Teachers
- **Local Boy Scout Troops**-specific projects as identified by troops
- **Local Girl Scout Troops**-specific projects as identified by troops
- **Local FFA Chapters**-specific projects as identified by chapters
- **Other Local Youth Groups**-specific projects as identified by groups

FINANCIAL RESOURCES

319 Nonpoint Source Project Grants are available to public institutions of higher education, units of government and nonprofit organizations with 501(c) (3) status for the prevention, control or abatement of nonpoint source water pollution projects. **(MDNR)**

604b Water Quality Management Planning Grants assist the state, regional public comprehensive planning organizations and interstate organizations to carry out water quality management planning, to determine the nature and extent of point and nonpoint source pollution and to develop management plans to address them with an emphasis on a watershed approach. **(MDNR)**

Abandoned Well Plugging Grants are used for public water systems that use a groundwater well to plug abandoned drinking water wells that may affect water systems source of supply. **(MDNR)**

Agriculture Loan Programs are available to individual farmers for animal waste treatment facilities. **(USDA)**

Brownfields Assessment Program is a Voluntary Cleanup program that offers Brownfields site-specific assessments of properties for public entities such as cities, counties and quasi-governmental entities, as well as for nonprofit organizations. These assessments provide answers to questions regarding potential cleanup costs and environmental liability associated with the Brownfield properties. **(MDNR)**

Brownfields Voluntary Cleanup Program has financial incentives available for some sites enrolled in the department's Voluntary Cleanup program. Incentives can take the form of grants, loans, and tax credits, which are offered and administered by other agencies in cooperation with the Department of Natural Resources. **(MDNR)**

Brownfields Revolving Loan Fund provides loans and sub-grants to support cleanup activities for sites contaminated with petroleum and hazardous substances. Sub-grants are limited to political subdivisions and nonprofit corporations. **(MDNR)**

Clean Water State Revolving Fund provides subsidized loans to any political subdivision of the state for the construction of wastewater treatment facilities. **(MDNR)**

Certified Local Government Program has grant funds for communities that have established a historic preservation program that meets certain standards set by the State and National Park Service. **(MDNR-SHPO)**

Conservation Stewardship Program (CSP) helps agricultural producers maintain and improve their existing conservation system and adopt additional activities to address priority resource concerns. **(NRCS)**

Drinking Water Source Water Protection Grants are provided to community water systems to implement source water protection strategies or develop a source water plan. (MDNR)

Drinking Water Engineering Report Service Grants are provided to help community water systems hire an engineer to review all aspects of the water systems and recommend ways to improve the system's compliance performance and ability to provide safe drinking water. (MDNR)

Drinking Water State Revolving Fund provides subsidized loans to any community water system and nonprofit non-community water system not federally owned for construction of drinking water facilities. (MDNR)

Dry-cleaning Environmental Response Trust Fund is a State fund and is administered by the Hazardous Waste Program, which provides funding for the investigation, assessment, and cleanup of releases of chlorinated solvents from eligible dry cleaning facilities. (MDNR)

Environmental Quality Incentives Program (EQIP) provides financial and technical assistance to agricultural producers in order to address natural resource concerns and deliver environmental benefits such as improved water and air quality, conserved ground and surface water, reduced soil erosion, and sedimentation. (NRCS)

Environmental Improvement and Energy Resources Authority provides low-interest loans and sub-grants to eligible participants to support cleanup activities for sites that contain contamination with petroleum and hazardous substances. (EIERA)

Hazardous Substance Emergency Relief Loan Fund is available to political subdivisions or volunteer fire protection associations for reimbursement of actual cost incurred in responding to a hazardous substance emergency. (MDNR)

Historic Building Rehabilitation Tax Credits Federal and State investment tax credits are available for rehabilitation of historic buildings for property owners, developers, and architects to provide advice on appropriate rehabilitation. (MDED-SHPO)

Historic Preservation Fund has Federal matching grants available annually for the identification, evaluation, registration, and protection of cultural resources. (MDED-SHPO)

Land and Water Conservation Fund is a Federally funded grant available to local government and school districts to be used for renovation, development of outdoor recreation facilities, and land acquisition. (MDNR-LWCF)

FINANCIAL RESOURCES

Local Government Reimbursement Program helps local communities be reimbursed up to \$25,000 for costs incurred in responding to a hazardous substance emergency. **(MDNR)**

Missouri Department of Economic Development provides financial incentives for the redevelopment of commercial or industrial sites that are contaminated with hazardous substances and have been abandoned or underutilized for at least three years. **(MDED)**

Missouri Heritage Properties Program provides grants for the preservation of important National Register-listed or National Register-eligible properties in public ownership. **(MDNR)**

Missouri Market Development Program promotes the development of markets for recovered materials and recycled content products throughout Missouri by providing financial and technical assistance to businesses, governments and other organizations. **(EIERA)**

Nonpoint Source Animal Waste Treatment Facility Loan Program has low-interest State revolving fund loans for small producers and farmers for design and construction of animal waste treatment facilities and application of best management practices. **(MDNR)**

Private Activity Bond Financing issues tax-exempt and taxable revenue bonds in cooperation with the Department of Economic Development for private and public companies for certain facilities and improvements with environmental and energy resource impacts. **(EIERA)**

Private Water Company Bond Financing Program is available through the Missouri Environmental Improvement and Energy Resources Authority for private water companies to assist in the construction of water delivery systems and wastewater treatment facilities. **(MDNR)**

Petroleum Storage Tank Cleanup Assistance Owners and operators of properties contaminated by leaking petroleum storage tanks may be eligible for monies from the Petroleum Storage Tank Insurance Fund for cleanup costs. **(MDNR)**

Rural Sewer Grant Program can be used for two types of wastewater construction projects: to fund un-sewered areas, and to fund the additional costs of meeting more stringent permit requirements for wastewater treatment in public sewer districts, public water districts, and communities less than 10,000. **(MDNR-USDA)**

Scrap Tire Cleanup by Nonprofit Groups reimburse fraternal, charitable, or other non-governmental nonprofit organizations for disposal costs of scrap tires collected during voluntary cleanups of land and water resources. **(MDNR)**

Other financial resources may be available from other local government agencies and not non-profit organizations.

Scrap Tire Playground Surface Material and Non-playground Grants are made available for the cost and delivery of scrap tire material used for playgrounds, running tracks, walking trails, other surfacing projects, or for a project that uses a product made from at least 40 percent Missouri generated scrap tires, such as picnic tables, benches, mats for weight rooms, vegetative mats, stall mats, running tracks, or mulch. **(MDNR)**

Small Borrowers Program - Clean Water and Drinking Water is a program that makes low-interest loans to municipalities and water districts that serve 1,000 or fewer people and want to borrow \$100,000 or less. **(MDNR)**

Small Community Engineering Assistance Grants helps fund engineering costs to complete wastewater facility plans or engineering reports to municipalities, counties, public sewer or water districts, political subdivisions, or instrumentalities of the state with a population of less than 10,000. **(MDNR)**

Solid Waste Management Grants USDA For public bodies and nonprofit corporations to reduce/eliminate pollution of water resources and to improve planning and management of solid waste sites. **(USDA)**

Solid Waste Management District Grants provides grant funding to Missouri's 20 solid waste management districts to fund their operations and community-based waste reduction, reuse, composting and recycling projects. **(MDNR)**

Soil and Water Conservation Cost-Share Program provides partial funding to landowners for voluntarily implementing practices on agricultural land that prevent or control erosion and protect water quality. These efforts help protect the water resources of the state and the productive power of farmland. **(SWCD)**

State Wildlife Grants (SWG) funds the development and implementation of projects for the benefit of fish and wildlife and their habitats, including species that are not hunted or fished. Priority is placed on projects that benefit species of greatest conservation concern (U.S. Fish & Wildlife Service). **(MDC)**

Technical Assistance and Training Grants USDA For private nonprofit organizations with tax exempt status to identify and evaluate solutions to water and waste disposal problems in rural areas, assist applicants in preparing applications for water and waste disposal grants, and to improve operation and maintenance of existing water and waste disposal facilities in rural areas. **(USDA)**

Water & Waste Disposal Loans/Grants USDA For public bodies, counties, and special

REFERENCE MATERIALS

- Missouri Department of Natural Resources' Our Missouri Waters: <http://dnr.mo.gov/omw/>
- Missouri Department of Natural Resources Financial Assistance Opportunities: <https://dnr.mo.gov/pubs/financial-asst-brochure-2014.pdf>
- Natural Resources Conservation Service (NRCS): <http://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>
- Missouri Rural Waters Association (MRWA): <http://www.moruralwater.org/>
- Missouri Public Utilities Alliance (MPUA): <http://www.mpu.org/>
- EPA Region 7 Environmental Finance Center (EFC): <https://www.epa.gov/envirofinance/efcn>
- United States Department of Agriculture Rural Development (USDA-RD): <http://www.rd.usda.gov/>
- EPA Water Usage: https://www3.epa.gov/watersense/our_water/water_use_today.html and https://www3.epa.gov/watersense/our_water/tomorrow_beyond.html
- Missouri Department of Economic Development (DED): <https://ded.mo.gov/home.aspx>
- 2010 & 2014 Census data: <http://www.census.gov/> and <http://factfinder.census.gov>
- Center for Applied Research and Environmental Systems: <http://www.cares.missouri.edu/>
- Department of Natural Resources' Groundwater Level Observation Well Network Page: <http://dnr.mo.gov/env/wrc/groundwater/gwnetwork.htm>
- Department of Natural Resources' Missouri State Water Plan Series, Surface Water Resources of Missouri, 1995, Groundwater Resources of Missouri, 1996: <http://dnr.mo.gov/env/wrc/statewaterplanMain.htm>
- Department of Natural Resources' Source Water Protection Program Page: <http://dnr.mo.gov/env/wpp/pdwb/swpp.htm>
- Department of Natural Resources' Major Water Users Page: <http://dnr.mo.gov/env/wrc/mwu-forms.htm>
- Missouri Stream Team Program Website: <http://www.mostreamteam.org/aboutTeams.asp>
- Missouri Stream Team Watershed Coalition Website: <http://mstwc.org/>
- Multi-Resolution Land Characteristics Consortium, 2011 and 2001 National Land Cover Database: <http://www.mrlc.gov>
- Missouri Climate Center: <http://climate.missouri.edu/charts.php>
- Flood Map Data: www.floodmaps.com/zones
- National Flood Insurance Data: <https://www.fema.gov/national-flood-insurance-program-community-status-book>
- U.S. Army Corps of Engineers, Southwest Missouri Water Resource Study—Phase I. Sept. 2012: http://tristatewater.org/?page_id=12
- Guinan, Pat, State Climatologist, MU Extension, Missouri Climate Center: <http://climate.missouri.edu/modata.php>
- Ameren Missouri: <https://www.ameren.com/missouri/>
- City of Lebanon, MO: <http://www.lebanonmissouri.org/>

Missouri Department of Conservation: <http://mdc.mo.gov/>
District T Solid Waste District: <https://dnr.mo.gov/env/swmp/swmd/distt.htm>
Missouri Master Naturalist: <http://lakeozarkmasternaturalist.com/php/index.php>
Missouri Soil and Water Conservation: <http://swcd.mo.gov/>
Lake of the Ozarks Council of Local Governments: <http://www.loclg.org/>
Kaysinger Basin Regional Planning Commission: <http://www.kaysinger.com/>
Southwest Missouri Council of Governments: <http://smcog.missouristate.edu/>
Missouri Cave and Karst Conservancy: <http://www.mocavesandkarst.org/>
Missouri Office of Administration: <http://archive.oa.mo.gov/bp/projections/TotalPop.xls>
MERIC: <https://www.missourieconomy.org/pdfs/urel1607.pdf>

APPENDIX A

Meeting Information

Agendas

Sign-In Sheets

Presentations at Meeting

Meeting Summaries



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING NOTICE & AGENDA**

**Thursday, July 23, 2015
6:00 p.m.
Laclede Electric Cooperative
1400 E. Route 66
Lebanon, MO 65536**

- I. CALL TO ORDER**
- II. INTRODUCTIONS AND SIGN-IN SHEET**
- III. PURPOSE OF MEETING**
- IV. EDUCATIONAL COMPONENT**
 - a. Watersheds 101**
 - b. Importance of watershed planning**
 - c. Overview of the Niangua River Watershed**
- V. COMMUNITY PROJECTS**
 - a. Discuss current environmental activities**
 - b. Impacts of those environmental projects**
- VI. PROJECT TIMELINE**
 - a. Future meetings**
 - b. Surveys**
- VII. OPEN DISCUSSION**
- VIII. CONCLUSION**
- IX. ADJOURN**

This project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources

**Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686**



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING NOTICE & AGENDA**

**Wednesday, August 19, 2015
3:00 p.m.
Preston Community Center
120 W. Hwy 54
Preston, MO 65732**

- I. CALL TO ORDER**
- II. INTRODUCTIONS AND SIGN-IN SHEET**
- III. PURPOSE OF MEETING**
- IV. EDUCATIONAL COMPONENT**
 - a. Watersheds 101**
 - b. Importance of watershed planning**
 - c. Overview of the Niangua River Watershed**
- V. COMMUNITY PROJECTS**
 - a. Discuss current environmental activities**
 - b. Impacts of those environmental projects**
- VI. PROJECT TIMELINE**
 - a. Future meetings**
 - b. Surveys**
- VII. OPEN DISCUSSION**
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SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING NOTICE & AGENDA**

Tuesday, August 25, 2015

5:30 p.m.

O'Bannon Bank Community Room

1347 South Ash

Buffalo, MO 65622

- I. CALL TO ORDER**
- II. INTRODUCTIONS AND SIGN-IN SHEET**
- III. EDUCATIONAL COMPONENT**
 - a. Watersheds 101**
 - b. Importance of watershed planning**
 - c. Overview of the Niangua River Watershed**
- IV. PURPOSE OF MEETING**
- V. COMMUNITY PROJECTS**
 - a. Discuss current environmental activities**
 - b. Impacts of those environmental projects**
- VI. PROJECT TIMELINE**
 - a. Future meetings**
 - b. Surveys**
- VII. OPEN DISCUSSION**
- VIII. CONCLUSION**
- IX. ADJOURN**

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P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686**



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING NOTICE & AGENDA**

Wednesday, October 21, 2015

5:30 p.m.

Bennett Springs State Park Dining Lodge

26262 Highway 64A

Lebanon, MO 65536

- I. CALL TO ORDER**
- II. INTRODUCTIONS AND SIGN-IN SHEET**
- III. REVIEW OF PLANNING ACTIVITIES TO DATE**
 - a. Recap of the first three meetings**
 - b. Discuss the survey results**
 - c. Volunteers for the Watershed Advisory Committee**
- IV. DEVELOPING THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED**
 - a. Areas of Interest**
 - b. Areas of Concern**
 - c. Areas already identified**
- V. COMMUNITY PROJECTS WITHIN THE NIANGUA RIVER WATERSHED**
 - a. Building on projects already being done within the watershed**
 - b. Identifying resources for those projects**
- VI. OPEN DISCUSSION**
- VII. CONCLUSION**
- VIII. ADJOURN**

This project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING NOTICE & AGENDA**

Tuesday, January 26, 2016

3:00 p.m.

Central Bank Public Meeting Room

1197 Spur Drive

Marshfield, MO 65706

- I. CALL TO ORDER**
- II. INTRODUCTIONS AND SIGN-IN SHEET**
- III. RESPONSIBILITIES OF THE WATERSHED ADVISORY COMMITTEE**
 - a. Volunteers interested in the future of the Niangua River Watershed
 - b. Willingness to share time and participate in the planning and implementation of the Niangua River Healthy Watershed Plan
- IV. DEVELOPING THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED**
 - a. Review list identified from last public meeting
 - b. Identify the probability of each action being feasible
- V. NIANGUA RIVER WATERSHED COMMUNITY PLAN**
 - a. Community engagement
 - b. Identifying groups interested in implementation of projects
- VI. OPEN DISCUSSION**
- VII. CONCLUSION**
- VIII. ADJOURN**

This project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING NOTICE & AGENDA**

Thursday, March 31, 2016

3:00 p.m.

**Laclede Electric Cooperative
Camdenton Office Community Room
2620 S. State Highway 5
Camdenton, MO 65020**

- I. CALL TO ORDER
- II. INTRODUCTIONS AND SIGN-IN SHEET
- III. WATERSHED ADVISORY COMMITTEE
 - a. Discuss how the Watershed Advisory Committee has been established
 - b. Discuss the role of the Watershed Advisory Committee in developing the Healthy Watershed Plan
- IV. REVIEW THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED
 - a. Review the action items and ranking of actions from previous meeting
 - b. Review questions submitted from previous meeting
 - c. Identify the possible volunteer groups to help implement actions
- V. NIANGUA RIVER WATERSHED HEALTHY WATERSHED PLAN
 - a. Timeline to completion
 - b. Review period and public comments
- VI. OPEN DISCUSSION
- VII. CONCLUSION
- VIII. ADJOURN

This project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources

**Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686**



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING NOTICE & AGENDA**

Tuesday, May 10, 2016

2:30 p.m.

**Laclede Electric Cooperative
Camdenton Office Community Room
2620 S. State Highway 5
Camdenton, MO 65020**

- I. CALL TO ORDER
- II. INTRODUCTIONS AND SIGN-IN SHEET
- III. ESTABLISHING THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED
 - a. Review the action items identified from focus groups from previous meeting in regard to water quality:
 - i. Tourism and recreation
 - ii. Agriculture and landowners
 - iii. Drinking water
 - iv. Habitat restoration
 - b. Identify the possible volunteer groups to help implement actions
- IV. NIANGUA RIVER WATERSHED HEALTHY WATERSHED PLAN
 - a. Timeline to completion
 - b. Review period and public comments
- V. OPEN DISCUSSION
- VI. CONCLUSION
- VII. ADJOURN

This project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources

**Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686**



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING NOTICE & AGENDA**

**Wednesday, September 14, 2016
2:30 p.m.
Laclede Electric Cooperative
1400 E. Route 66
Lebanon, MO 65536**

- I. CALL TO ORDER**
- II. INTRODUCTIONS AND SIGN-IN SHEET**
- III. OVERVIEW OF THE ENTIRE PROJECT**
- IV. HEALTHY WATERSHED PLAN**
 - a. Review the draft copy of the Healthy Watershed Plan**
 - b. Public Comment Period-30 Days to Send Comments to LOCLG**
 - c. Final copy of Healthy Watershed Plan-Submitted to MDNR October 14, 2016**
- V. OPEN DISCUSSION**
- VI. CONCLUSION**
- VII. ADJOURN**

This project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT

Thursday, July 23, 2015
6:00 p.m.
Laclede Electric Cooperative
1400 E. Route 66
Lebanon, Missouri 65536

Sign In Sheet

1. Eric Fuchs MRWA e fuchs@naturalwater.org
2. Penny Lyons City of Osage Beach
3. Gwenda Bassett MDNR
4. Linda Conner LOCLG
5. ~~Piper Smith~~
6. Joe Holman
7. Patricia Barrett MUEst
8. Rebecca J. Travniched
9. Bob Braz MUExtension
10. EDDIE WHITWORTH

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

11. Guy Winters Extension Comm
12. CLIFTON LUBER - CAMDEN COUNTY COMMISSION
13. Jean Thompson - Soil & Water Conservation program
14. Bryan George - WCA / Swamp District T "Planner"
15. FRED & DONNA WAGNER
16. Jim & Jim Burns
17. IKE SKELTON
18. MARK RICHARDSON
19. Matt Walz
20. Bob Schultzeis - MU Extension
21. Dorothy B Smith x 10320 Hwy E
22. Homestead BSSP
23. Ron McCullough 12025 Hwy 64 Leb.
24. Klaus Leidenrost - Missouri Caus @ Cam
25. Stan Ma
26. Rick Kirchberg
27. CLIFF & TINA AULTMAN / 13450 Hwy. E FLDRIDGE, MO. 65463
28. KAREN NIXON



SERVING CAMDEN, LALEDE, MILLER AND MORGAN COUNTIES

29. Don & Alisa Steen
30. Charles Bassett Mo. Farm Bureau
31. Brian Thompson - Lebanon RSD
32. Jack Glendinning LAC County
33. Joe Caulfield Lac
34. ~~Mark~~
35. Jayne Stovus
36. Godi Moulder
37. Jay TRAVIS LAC Co MO
38. Karl Mapees
39. Nancy Matherson Ha Ha Tonka S.P.
40. Jeff Hancock City of Camdenton
41. Carl Romesburg Stream Team - MAC
42. Sam Silbert LOCLG
43. Pamela Gatzert
44. Onyhemoon
- 45.



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

- 46. Warren Witt - Ameren Mo.
- 47. Curt Jones - Springfield, Mo
- 48. JOE & LISA MITCHELL - CAMDENTON, MO
- 49. Barbara Gredshaw Camden Mo.
- 50. Georganne Bowman Ameren Mo &
- 51. PAUL + BARB TROTTIER ROACH, MO
- 52. JIM RENZIARO ROLLA.
- 53. Davis Frankline St Rep ~~Rep~~ Camden
- 54. Albert Hempel Eldridge
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SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT

Wednesday, August 19, 2015
3:00 p.m.
Preston Community Center
120 W. Highway 54
Preston, Missouri 65732

Sign In Sheet

1. JESSE Mc CALL JDOINMC@AOL.COM
2. Martha McCollum
3. Linda Conner LOCLG
4. Bob Bra MU Ext
5. Bob Schuttler MU Ext
- 191 * 6. Klaw Leidenfrost MO Govt & Const Cons
7. Ann Gilbert LOCLG
8. Nahn Boly For IDA young
9. Tim Pratt
10. James Russell Camden Co.

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

- * 11. John Young DALLAS 417-993-0593 yes
- 12. CAR MEIER MSHHP
- 13. Matt Young MSHHP
- * 14. JOE MAULDER CAMDEN YES
- 15. Brian Flanary Dallas
- 16. Emie Albert Camden SWCD
- * 17. Eddie Whitworth CAMDEN YES
- 18. Carl Button Hickory
- 19. Preston Knapp Laclede
- 20. Tony Hallum Hickory mv EXTENSION
- 21. RON GARDNER MASON, IA
- 22. Matt Schmit Camden
- 23. ADRIAN Choate Camden
- 24. Ashley Swartz, KBRPC
- 25. Elizabeth Ogg, KBRPC
- 26. Austa Meant, KBRPC
- 27. Wayne Compton Camden
- 28. Adam Button Dallas



SERVING CAMDEN, LALEDE, MILLER AND MORGAN COUNTIES

- 46. Albert M. Foyel Camden
- 47. Victor Phillips Hickory
- 48. Dawn Vader Hickory
- 49. Jeff Owen Hickory
- 50. Vicki Potts Hickory
- 51. Al Lind Hickory
- 52. Don Smith NRC S
- 53. Johnny L. Mage
- 54. Jan Soree Hickory/Dallas
- 55. Clifton Duber
- 56. John S. Foyel Camden
- 57.
- 58. ✓ Mr. Potts Hickory/Dallas
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SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT

Tuesday, August 25, 2015
5:30 p.m.
O'Bannon Bank Community Room
1347 South Ash
Buffalo, Missouri 65622

Sign In Sheet

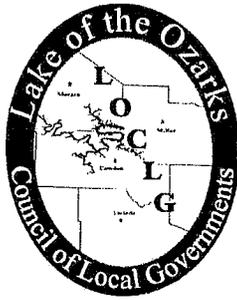
1. *Jean Knud*
2. *Bob Broy ML, Est 593-882-0085*
3. *Klaus Reidewitz*
4. *Gram Milburn LOCLG*
5. *Andy McCarter Extension*
6. *Linda Conner LOCLG*
7. *Bob Schutteis*
8. *William R. Brown*
9. *Richard Rollings Jr.*
10. *Cathy Harrison*

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686



SERVING CAMDEN, LALEDE, MILLER AND MORGAN COUNTIES

- | | | | |
|-----|-------------------------|----------------|-------------------------------|
| 11. | <i>Gene Chet</i> | <i>Camden</i> | <i>SWCD</i> |
| 12. | <i>Eddie Whitworth</i> | <i>CAMDEN</i> | <i>LAND OWNER</i> |
| 13. | <i>[Signature]</i> | <i>Camden</i> | <i>" "</i> |
| 14. | <i>Barbara Cochran</i> | <i>Camden</i> | <i>" "</i> |
| 15. | <i>[Signature]</i> | <i>Camden</i> | <i>" "</i> |
| 16. | <i>Wayne Archia</i> | <i>Dallas</i> | <i>" "</i> |
| 17. | <i>Lauren Bridges</i> | <i>Hickory</i> | <i>" "</i> |
| 18. | <i>Leslie Holloway</i> | <i>Cole</i> | <i>Missouri Farm Bureau</i> |
| 19. | <i>Ronda Headland</i> | <i>MDC</i> | |
| 20. | <i>Jason Ray</i> | <i>SMCOG</i> | |
| 21. | <i>Stacey Armstrong</i> | <i>WCO</i> | |
| 22. | <i>Hosea Clemens</i> | <i>Dallas</i> | <i>Landowner</i> |
| 23. | <i>Margie Clemens</i> | <i>"</i> | <i>"</i> |
| 24. | <i>Albert Meyer</i> | <i>Camden</i> | <i>YES 573-343-5213</i> |
| 25. | <i>LANIE BAXTER</i> | <i>GREENE</i> | <i>landowner</i> |
| 26. | <i>Don Myers</i> | <i>Laclede</i> | <i>Laclede Co Health Dept</i> |
| 27. | <i>William Berry</i> | <i>Dallas</i> | <i>Land owner</i> |
| 28. | <i>Derry Berry</i> | <i>Dallas</i> | <i>Land owner</i> |



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

29. *Kenneth Zuck*

30. *IKE SKELTON*

31. *Andy Thomason*

LOCLG

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SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT

Wednesday, October 21, 2015

5:30 p.m.

Bennett Springs State Park Dining Lodge

26262 Highway 64a

Lebanon, Missouri 65536

SIGN IN SHEET

NAME	REPRESENTING
1. Curt Jones	
2. Bob Broz	MU Extension
3. Patricia Barnett	MU Extension
4. Jennifer Hoggatt	MDNR
5. Eddie Whitworth	LAND OWNER
6. James R. Covert	Land owner C. SWCD
7. Howard & Babae Cochrane	Land owner
8. Ernie Covert Jr.	Land Owner
9. Nancy Steward	Land owner

Lake of the Ozarks Council of Local Governments

P.O. Box 3553 Camdenton, MO 65020

Phone: 573-346-5692 Fax: 573-346-9686



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

10. Bam Silvert LOELG

NAME	REPRESENTING
11. <u>William Berr</u>	<u>—</u>
12. <u>Larry Jones</u>	<u>MDC</u>
13. <u>Cassie Sanders</u>	<u>Kaysinger Basin RPC</u>
14. <u>Greg Healy</u>	<u>CAMDEN COUNTY</u>
15. <u>Pepper Guthrie</u>	<u>LANDOWNER</u>
16. <u>Joe Holman</u>	<u>LANDOWNER</u>
17. <u>John Schumacher</u>	<u>USGS</u>
18. <u>Bob Schutheis</u>	<u>MU Extension</u>
19. <u>Jordan Wilson</u>	<u>USGS</u>
20. <u>Craig Fuller</u>	<u>MDC</u>
21. <u>Tom Breen</u>	<u>LOELG</u>
22. <u>Cole Karr</u>	<u>State Rep. Diane Franklin</u>
23. <u>Kathy Fayant</u>	<u>Landowner</u>
24. <u>Jay Harrison</u>	<u>Landowner</u>
25. <u>Jack Adams</u>	<u>Landowner</u>

714
345
2008
farmerjod
@gmail.
com



Jack
Adams
180 Rd
Leadmsh
Tunis 64
MU
65-7

SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

26.

NAME

REPRESENTING

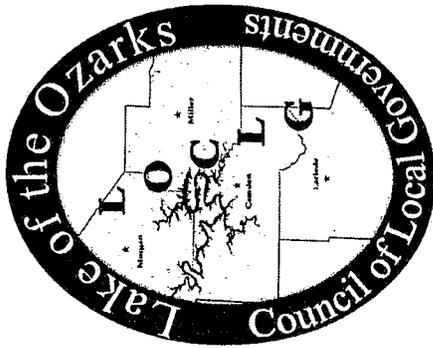
- 27. Andy McCorkill MU Extension
- 28. IKE SKETCH LIBERTY + PROPERTY RIGHTS
- 29. John Young TONAS MO 65764
- 30. Albert Hempel Clidney MO
- 31. Brunan Brunan " "
- 32. ~~Shaw~~ Dallas County
- 33. Don Map Laclede Health Dept
- 34. Helmut von Joewe Baronland Farms
- 35. Nancy von Joewe " "
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Print Name	Contact Phone #	Email Address
11. Jodi Moulder	573/346-2210 *233	jodi.moulder@mdc.mo.gov
12. Georganne Bowman	573-673-7145	gbowman@ameren.com
13. Lauri Peterson		lauripub@siobell.net
14. Patricia Barnett	573 369 2394	patnb@missouri.edu
15. Joy Hartison	417-345-2808	farmjoy@gmail.com
16. Jack Adams	417 3452808	
17. Warren Witt	573-365-9322	w Witt@ameren.com
18. Amie Ivey	417-718-2681	amiey2@hotmail.com
19. Greg Ivey	417-718-9459	alibi51@hotmail.com
20. Nanci Morris	573-836-1618	nanci-dovetail@hotmail.com
21. Klaus Leidenhart	573-465-0040	Klaus1@fidnet.com
22. Jim Plassmeyer	573-751-4932	Jim.Plassmeyer@bar.mo.gov
23. Jason Ray	417-379-6890	JasonRay@missouristate.edu
24. Michelle Lambeth	417 619 1144	Michelle@missouricarro.org
25. JOHN SHANNONNESSY	417 241 0646	JOHNSSHA@GMAIL.COM
26. HEIMUT VON LOEWE	573-363-5801	698baron@socket.net

Stanak → 70 Dillion Ford
 Buffalo MO - 65622 - Camm ittee!

Add to
 Comm

Print Name	Contact Phone #	Email Address
27. Albert Hempel	573-303-5213	
28. Elizabeth Vanwisum	606-885-3393	elizabeth@kaysinger.com
29. Cyndee Schmidt	606-885-3393	cscmidt@kaysinger.com
30. Terre Brown	618-556-9431	news050@yahoo.com
31. David Stokely	417-612-2107	david_stokely@mcstskill. gov.
32. Paul Spork	417 859 4250	PIPOCK@WEBSTER COUNTY, MO
33. Linda Conner	513-346-5692	linda.conner@lodge.org
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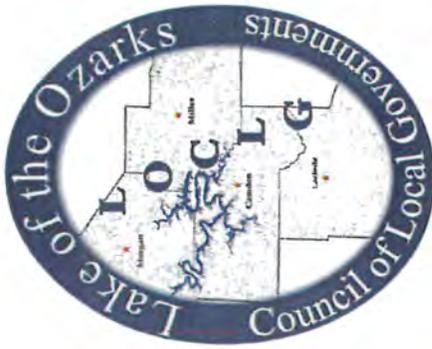
Niangua River Watershed Planning Meeting

Thursday, March 31, 2016 3:00 p.m.

Laclede Electric Co-op

193 S. Highway 5, Camdenton, MO 65020

Print Name	Contact Phone #	Email Address
1. Craig Fuller	417/532-7612	Craig.Fuller@mdc-mo.gov
2. Connye Griffin	405-821-8274	cgriffin@gmail.com
3. Johnnie Burns	417-718-3941	
4. Barbara Burns	417-532-4333	
5. Bob Burns	417- 604 -2173	
6. Klor Leidenfort	573-465-0090	Klor.L@fidnet.com
7. Kelly Holloway	573-893-1409	holloway@moib.com
8. Bob [Signature]	573-228-0928 cell	brozr@missouri.edu
9. Eddie White [Signature]		
10. Anna Barnett	573-372-8161	barnettpr@missouri.edu



Niangua River Watershed Planning Meeting

Tuesday, May 10, 2016 2:30 p.m.

Laclede Electric Cooperative Community Room

2620 S. State Highway 5, Camdenton, MO 65020

Print Name	Contact Phone #	Email Address
1. Taylor Schlueter	636-524-3519	taylor.schlueter@locig.org ^{or gr}
2. Julie Brown	573-346-5692	terve.brown@locig.org
3. Bob Brown	573-882-0085	bob@munimul.org
4. Helmut + Nancy von Kroppe	573-363-5801	698baron@socket.net
5. Pam Silbert	573-346-5692	pam.gilbert@locig.org
6. Andy Thomason	573-346-5692	Andy.Thomason@locig.org
7. John Young	417-553-0553	
8. Jessie Hollaway	573-893-1469	shellaway@mofb.com
9. Curt Tonkes	417-823-9254	CA Stone @ SBC Global Net
10. Jodi Moulder	573-346-2210 #233	

Print Name	Contact Phone #	Email Address
11. Patricia Barnett	573 3692391	
12. Swenda Bassett		
13. Landry Jones	417-326-5189	landry.jones@mdc.mo.gov
14. Ketur Leidenhart	573-465-0040	
15. Jennifer Hoggatt		
16. Georganne Bowman	573-673-7145	gbowman@ameraw.com
17. Jeff Green	573 365 9214	wgreen@ameraw.com
18. Olivia Mayfield		
19. Nick Waddy	573-302-2000	nwaddy@osagebased.org
20. Craig Fuller	573 / 482-7612	Craig.Fuller@mdc.mo.gov
21. Linda Conner	573-346-5692	linda.conner@lorfg.org
22.		
23.		
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26.		



Nangua River Watershed Planning Meeting
Wednesday, September 14, 2016 2:30 p.m.
Laclede Electric Cooperative
1400 Route 66, Lebanon, MO 65536

Print Name	Contact Phone #	Email Address
1. Pam Gilbert	573-346-2692	pam.gilbert@lelcg.org
2. Gwendol Bassett		
3. Terry Halberg	417-818-2818	HALBERG@WCA_Missouri.edu
4. Ken Sidomort	517-465-0440	KSURID@fdu.edu
5. ERNIE CRUERT	573-552-5722	
6. EDDIE WHITCORTH	573)480-2012	
7. Linda Conner	573-346-5692	linda.conner@lelcg.org
8. Garry Hillard	573 552 1463	garryhillard@lelcg.org
9. Curt Jones	417 823 9254	CJones@SBCglobal.net
10. Albert Klempf	573-363-5213	

Print Name	Contact Phone #	Email Address
11. Craig Fuller	417/532-7612 x 224	Craig.Fuller@mlc.mo.gov
12. Terre Brown	573-346-5692	terre.brown@lsc
13. For AA Taylor Seligson	636-524-3519	taylor.seligson@lsc.org
14. Tricia Barrett	573-369 2394	
15.		
16.		
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CHALLENGES OF THE GOODWIN PIT SINKHOLE & CAVE CLEAN-UP PROJECT

Missouri Caves and Karst Conservancy
2012 to present



1980

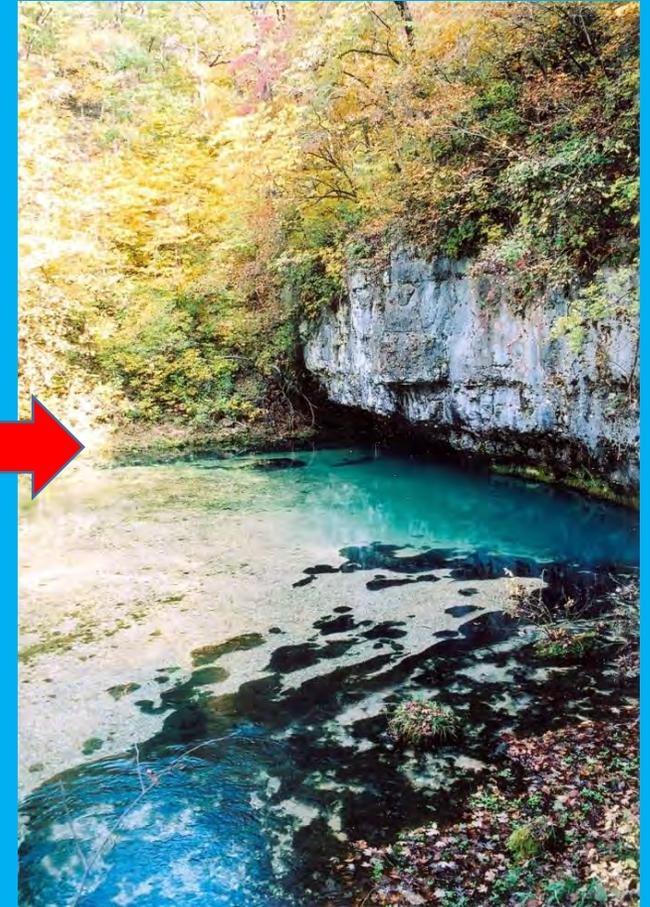
Missouri Department of Natural Resources Dye traces



1980



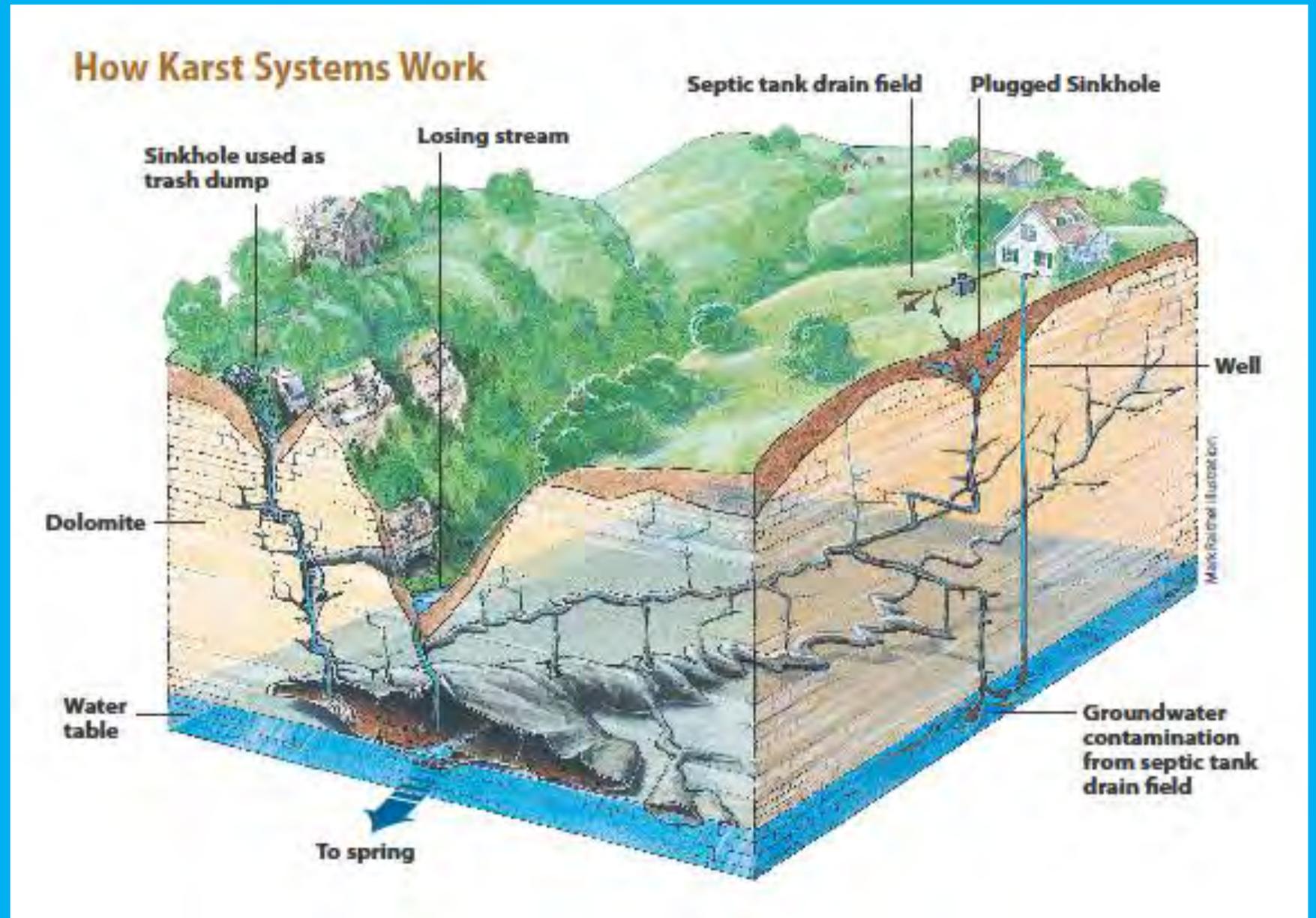
2009



Ha Ha Tonka Spring

8/31/2016

**Sinkholes are
a direct
conduit to
groundwater.**



The sinkhole is approximately 24 feet deep and ½ acre in size and is located in rural Laclede County, Missouri





The previous owner & his parents tried to stop the dumping but had no luck.

The previous owner contacted some state agencies looking for help. But had no luck.

The previous owner meet with the Missouri Caves and Karst Conservancy in 2011/2012 .

In 2012 they donated the sinkhole to the Missouri Caves and Karst Conservancy.

December 2011/January 2012



February 2012



The trash was brought up the steep hill by hand



Safety & logistical concerns being addressed



Initial sediment trap and test pit March 2012



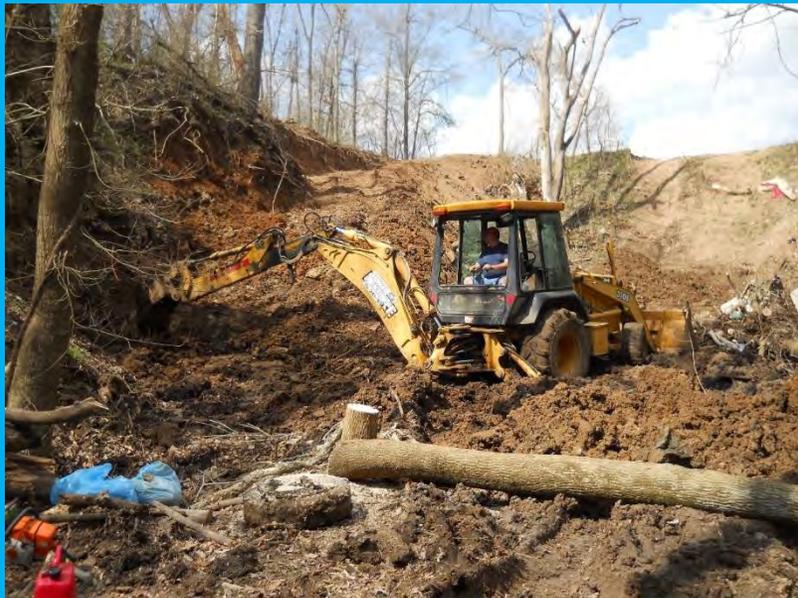
Original & new cave entrance



Prior to March 2012 we collected 7.37 tons of tires



Drought of 2012



Fall 2012



Volunteers - 2012 Spring and Fall Workdays



Missouri Department of Natural Resources Geoprobe November 2012

**The depth to rock ranged
between 13 and 64+ feet.**

**A core sample found trash 12
feet below the surface.**



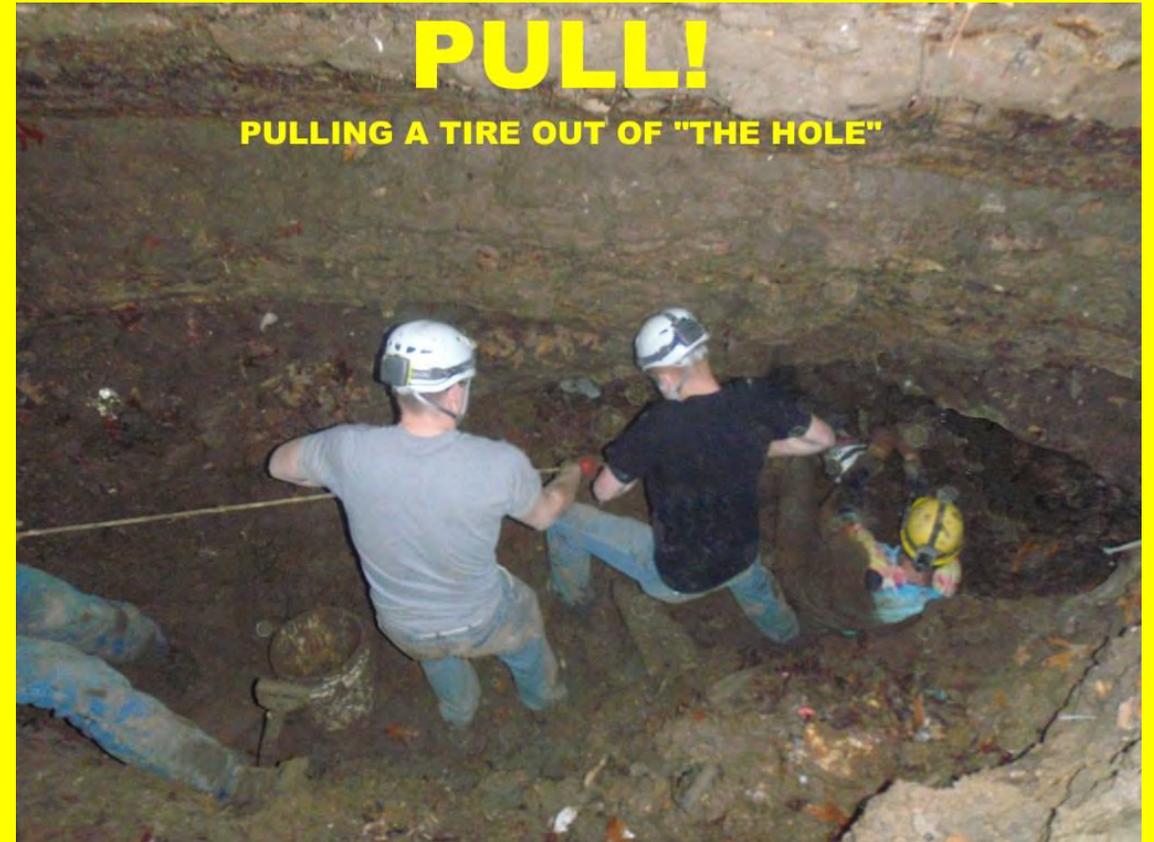
February 2013



March 9, 2013 – Before/After



Unidentified Round Black objects in cave





Removing material from cave



Stockpiling trash-laden material

Water cascading into sediment trap below waterfall



An unexpected negative consequence of the trash removal



The trash was acting as an energy dissipater



Base of Lancaster Road – April 2013

More rain on March 17, 2013

7:18 a.m.



The force of water results in significant damage



March 2013



April 2013 after several rainfalls



Sediment trap in front of silt fence



Excavated material a few weeks later

After a heavy rain, there is always new debris near cave entrance



Severe erosion below Lancaster Road after a April 2013 rain



August 7 – 10, 2013

More than 12 inches of rain falls

The sinkhole totally fills with water on the first day

The sinkhole partially fills with water on each of the next three days



 *Wildgame*
RESEARCH

076F 02:01PM 08/07/2013 ○ 0236 GOODWIN

What to do with the thousands of tons of clean fill to be removed from sinkhole



Slash filter windrow

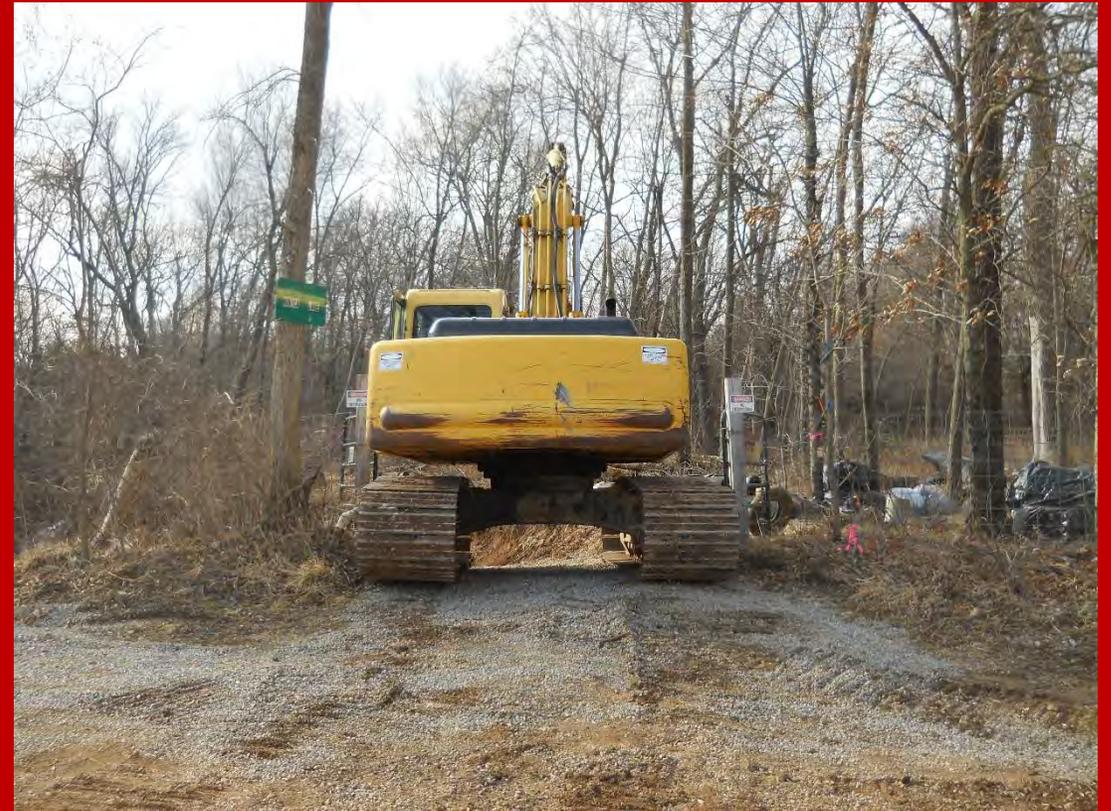
Making room for equipment to work safely in the bottom



He tried, but he just could not move the tiny root wad.



March 2014



More tires, trash and metal unearthed in 2014



Near cave entrance



New silt fence by cave entrance

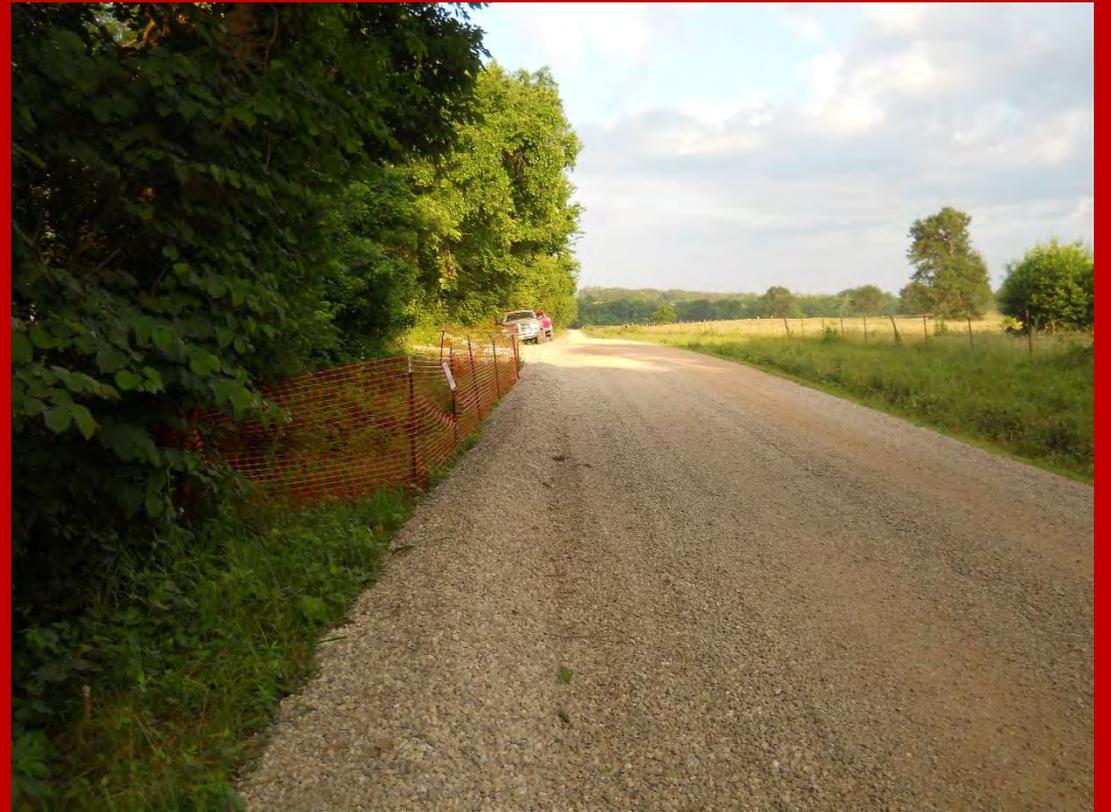


A week later

Nearby impacts to the sinkhole



Lancaster Road



May 2014 work days





January 2012



June 27, 2014

Enlarging the entrance to cave - June 2014



Re-vegetation efforts



April 2014



May 2014

First sewer camera attempt - June 2014



Can it be Clean Fill or does it go straight to the transfer station?



4 steps taken to meet the definition of “Clean Fill”



July 2014 – Finally able to get excavator into the cave



Working in the cave – July 2014



Horseshoe of mud/gravel/trash inside the cave



July 2014 – views from inside the cave



Pumping water out of lower sediment trap and washing dirt/trash from the rock face



View of both cave entrances



October 2014



8/31/2016

51

April 12, 2015 work day



Debris washed in from across the road



Silt fence inside cave



April 26, 2015



May 25, 2015

Newest non-passable cave opening



April 26, 2015



June 16, 2015

Gravel from Lancaster road caught in the upper sediment trap below the waterfall



April 26, 2015



May 25, 2015

May 30, 2015



July 5, 2015



There used to be a cave somewhere???



January 2012 – June 2015 project totals.

- 3,197.5 tons of clean fill (estimate).
- 142.98 tons of trash laden material.
- 30.47 tons of trash. *
- 1.25 tons of metal. *
- 7.37 tons of tires. *
- * Note: more is stockpiled on site.
- 60 workdays.
- 761 Volunteer days.



**1. No one saw the sinkhole & cave before
the dumping started in the 1950's**

???

2. Constantly changing weather



3. Funding



4. Finding and retaining volunteers



5. Having good weather, funding and volunteers available at the same time

Donations and/or services valued at over \$250.

- Missouri Caves and Karst Conservancy
- Douglas and Stacey Goodwin
- Shotts INC
- Peter Chulick Law Office
- Jeffries Abstract
- Lake of the Ozarks Grotto
- Laclede County Road and Bridge Department
- Doyel Excavation
- Missouri Department of Conservation
- Missouri Department of Natural Resources
- Meramec Regional Planning Commission
- United Rentals
- LAD Foundation
- Travelers Insurance Company Community Connections
- Bryan McAallister
- Lake of the Ozarks Watershed Alliance
- Moore's Ag and Farm
- David E. Hammack
- Mississippi Valley Ozarks Region
- Klaus Leidenfrost
- Adam Hoffman
- Billy Bolch
- Coover Foundation
- Legan Trucking and Excavation LLC
- Ted Windelst
- Ed Thompson
- William and Lorrie Kacerovskis
- Conservation Foundation of Missouri Charitable Trust
- Ameren Ue
- Numerous Volunteer days

Photo's by:

- **Johnathan Beard**
- **Matt Bumgardner**
- **Jeremy Clark**
- **Bill Gee**
- **Doug Goodwin**
- **Klaus Leidenfrost**
- **Ken Long**
- **Jim Vandike**
- **Gary Zumwalt**
- **Missouri Department of Natural Resources**
- **Missouri Department of Conservation (Karst Diagram)**

Your help is needed

- **MCKC lacks the funding needed to complete the sinkhole and cave clean-up and restoration. Without additional funding MCKC may have to abandon the project before it is completed.**



20??



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Niangua River Watershed



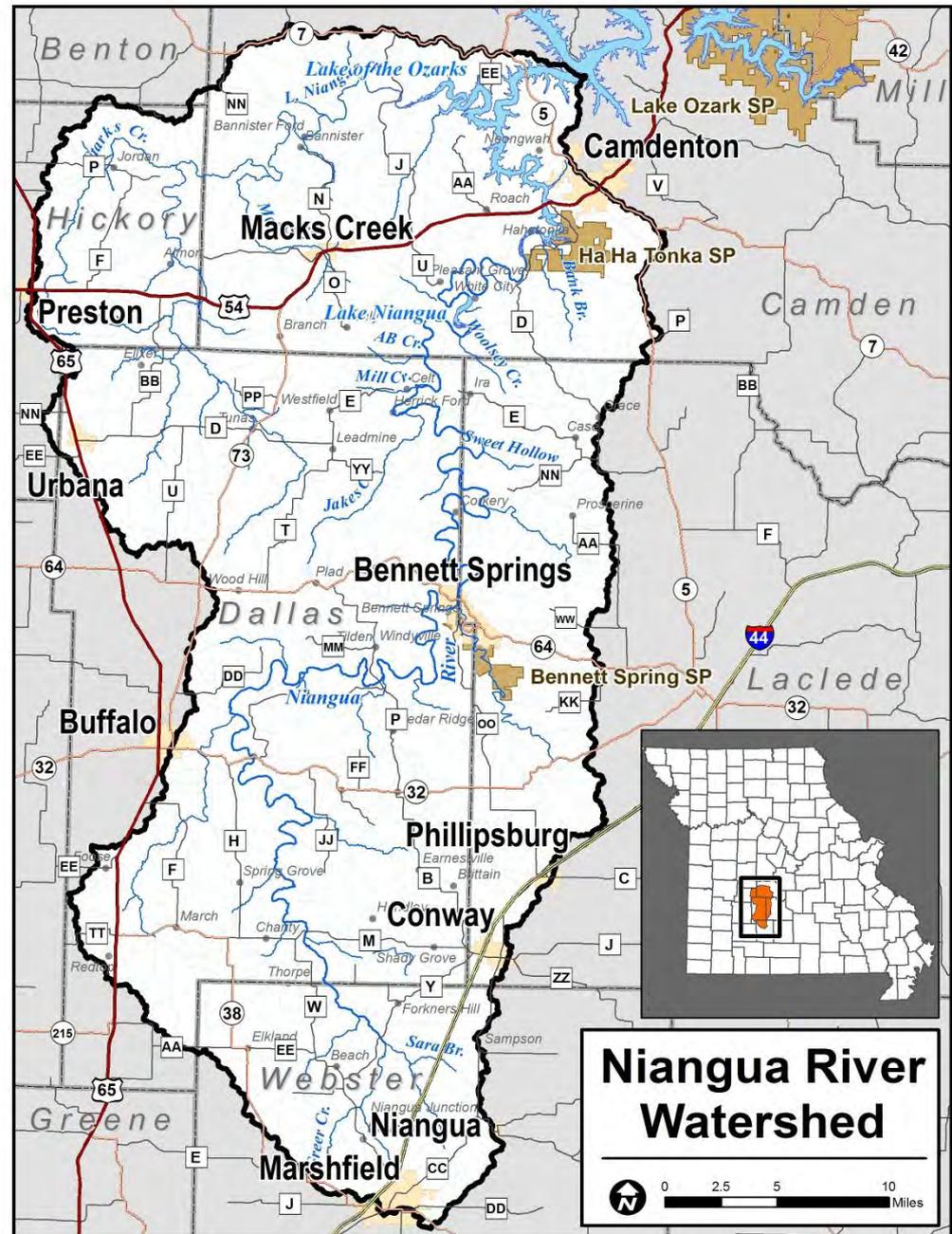
**Craig Fuller, Fisheries Management Biologist
Missouri Department of Conservation**



Niangua River Watershed

Watershed Facts

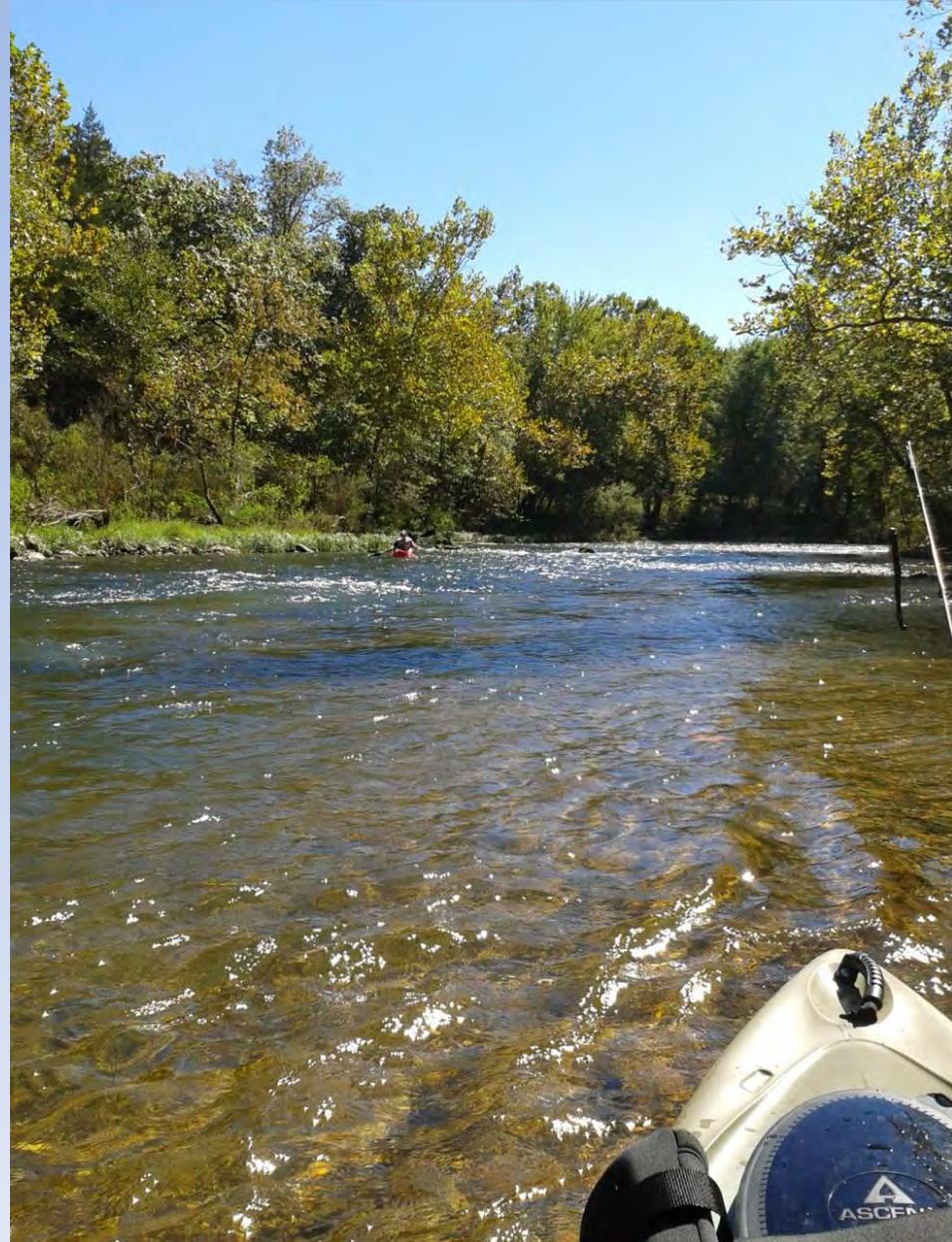
- 1,030 square miles (659,200 Acres)
- 1,796 miles of streams
- Niangua River ~120 miles long
- Little Niangua River ~65 miles long
- Lake of the Ozarks 42,454 acres



Niangua River Watershed

Goal:

Restore, enhance and maintain an Ozark stream and surrounding watershed to improve water quality and habitat for a wide range of fish, wildlife, and, people.



Niangua River

Riparian Habitat



Wild Turkey



White-tailed Deer



Bald Eagle



Gray Bat

Rivers and Streams Habitat



Niangua Darter



Eastern Hellbender



Smallmouth Bass



Largemouth Bass

What are the landscape level challenges/opportunities in this geography?



Woodland

Bluffs
Glades
Caves
Springs

Agricultural Lands
- Cattle Pasture
- Hayland

Riparian Habitat

Ozark Stream

Agricultural Lands
- Cattle Pasture
- Hayland

03/27/2008 09:43

Current Challenges/Opportunities



Erosion

Habitat Instability

Nutrient Enrichment

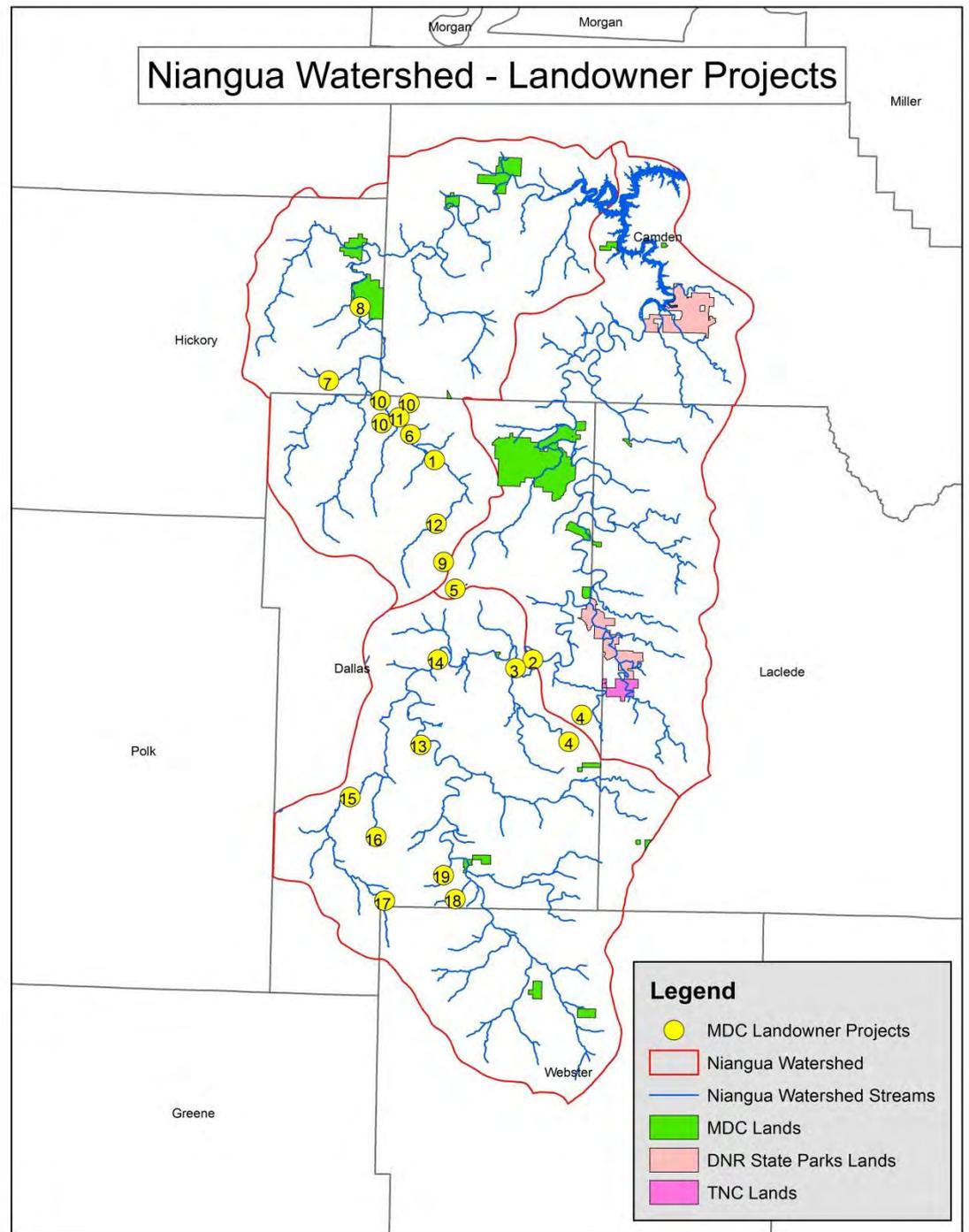
Sedimentation

06/29/2012 12:44

Niangua River Watershed

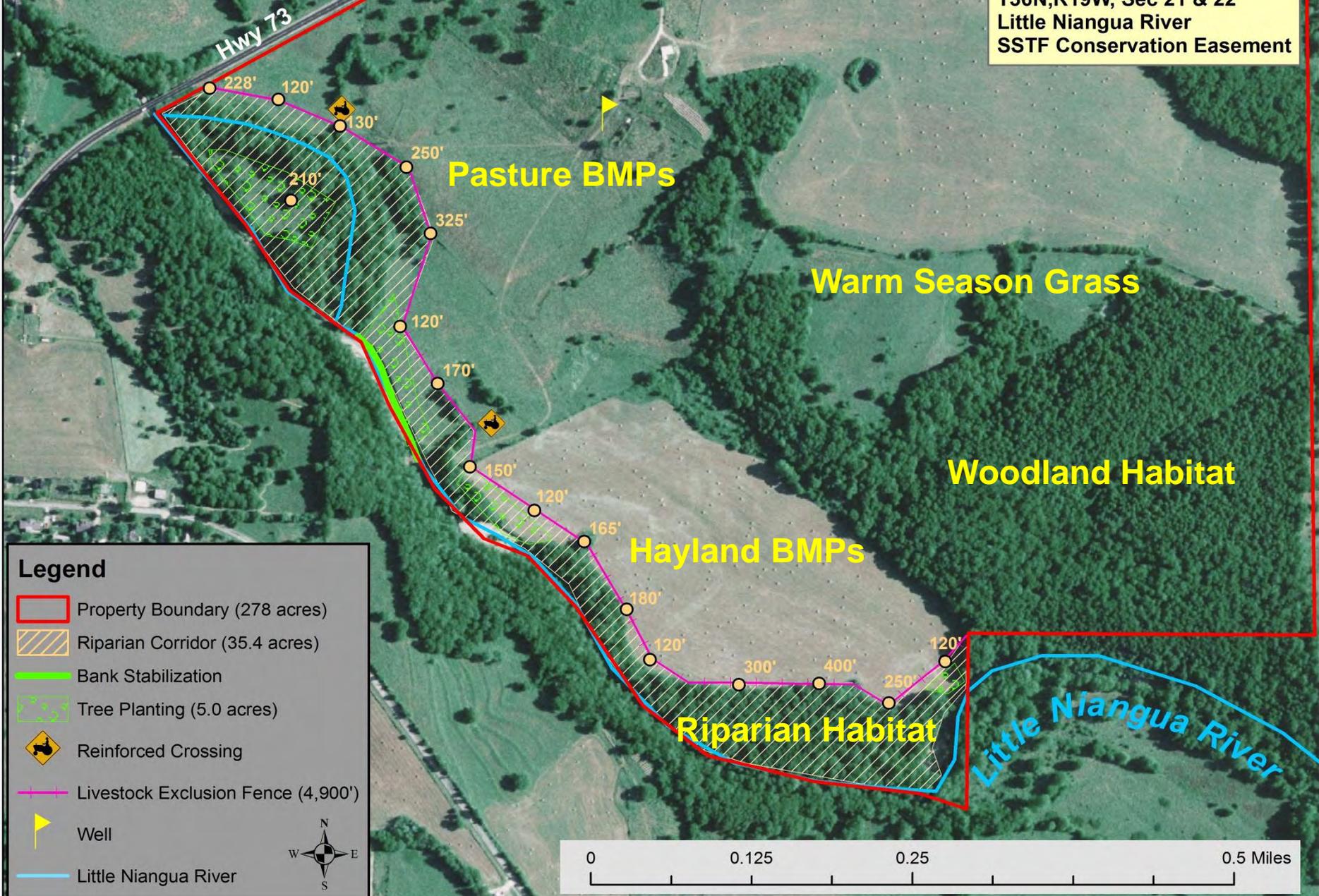
Landowner Projects

- 19 Landowners
- 22 Projects
- 26.2 Miles of stream
- 271 Acres of riparian corridor



Model of Conservation Practices

Brett Jeffryes
Dallas County
T36N,R19W, Sec 21 & 22
Little Niangua River
SSTF Conservation Easement







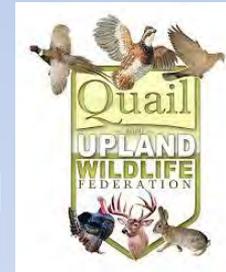




Partners



Serving nature and you®



Niangua River

The ***desired future condition*** of the Niangua River watershed is to have healthy streams and clean water for all people and all uses, such that future generations will have clean water to live, work and recreate, and where native habitats, fish and wildlife will be abundant and resilient.



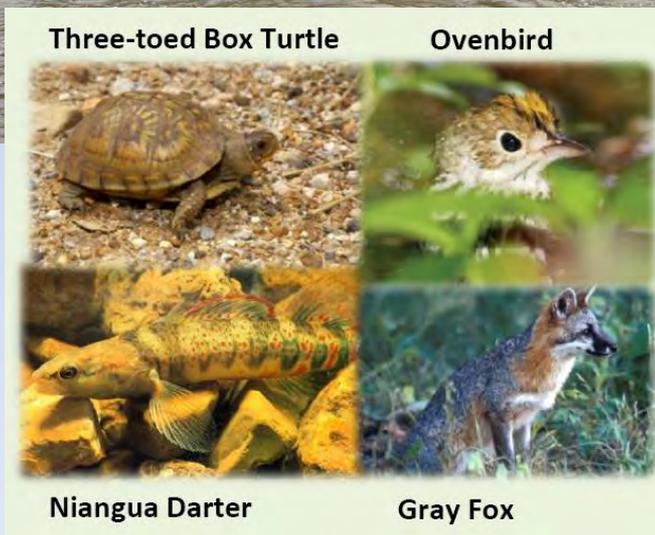
Priority *Habitat Systems*

- Aquatic, Riparian, and Bottomland Forest
- Conservation practices need to meet the needs of landowners



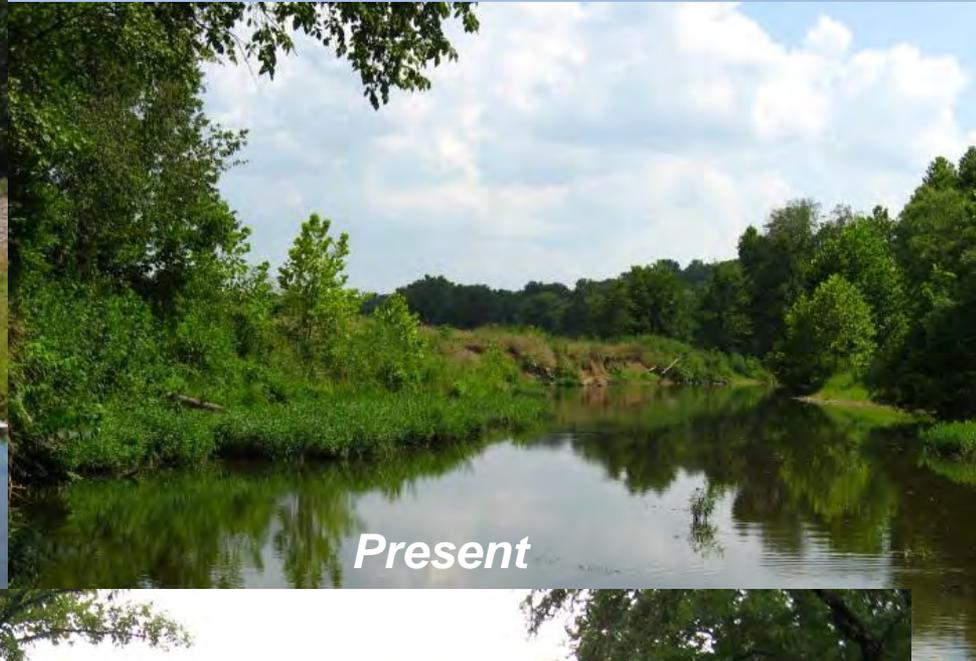
Focus

- Riparian and Bottomland Forest
- Immediate improvements in habitat for fish and wildlife



Long-term Benefits

- Reduced: erosion, nutrients
- Improvements: water quality, stream bank stability



Niangua River



Working together for a high-quality Ozark stream with clean water surrounded by healthy habitat; with abundant and diverse plants and animals.



Watershed 101

Bob Broz and Dan Downing
University of Missouri Extension
Water Quality Program
(573)-882-0085

UNIVERSITY OF MISSOURI
 Extension



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Content

- In this training we will:
 - Discuss the value of water resources
 - Introduce the concept of a watershed
 - Provide an overview of watersheds and Missouri Hydrologic Units
 - Discuss cause and affect of activities affecting water quality
 - Examine the value of watershed planning
 - Suggest how to identify partners and resources to assist in planning and implementation

Definitions

- Hydrologic Unit Code (HUC)
 - Classification System; More digits = smaller area
- Watershed or Basin
 - The land area that drains to a common waterway, such as a stream or a lake
- Point Source
 - One clearly identified source
 - Regulations prescribe limitations on their discharge
- Nonpoint Source (NPS)
 - A source that cannot be defined to originating from one, discrete point.
 - Many times there are multiple contributors
 - Work to address nonpoint sources is voluntary



The Value of Water and the Watershed

- All of us depend on clean, abundant water; it affects our health, industry, commerce, recreation, etc.
 - 66% of Missouri citizens use surface water for main water source and 34% use ground water for their main water source.
 - Two leading industries in Missouri are agriculture and tourism – highly dependent on clean, abundant water
 - So what does this have to do with why watersheds matter?
- Healthy, protected watersheds can ensure clean, abundant water for drinking, irrigation, industrial processes, and recreation. The condition of a watershed directly affects the quality and quantity of water in a lake, river, stream or wetland.

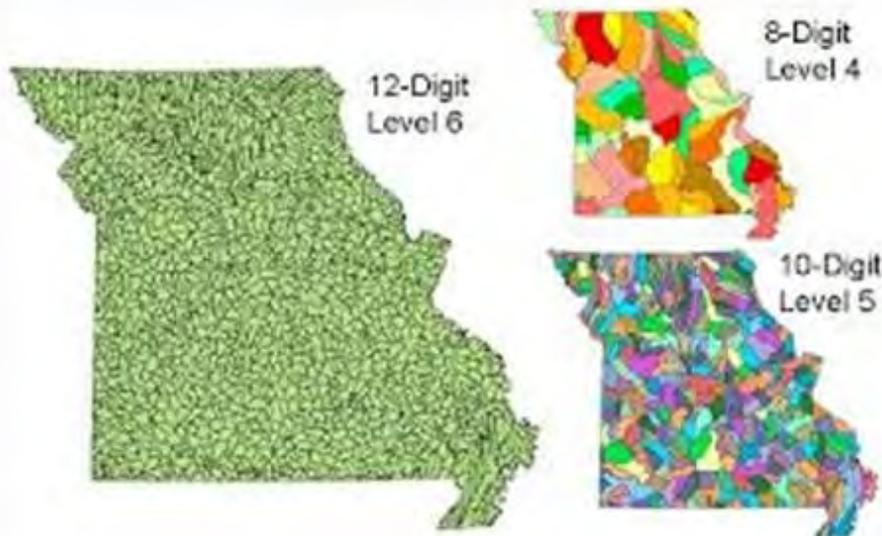
What is a Watershed?

The land area that drains to a common waterway, such as a stream or a lake

- Everyone lives in a watershed! We might live in a community or in a rural area, but you're always in a watershed.
- All of **OUR** activities affect our watershed and impact our valuable water resources.
- The term watershed and basin are often used synonymously.
- Watersheds come in different sizes...

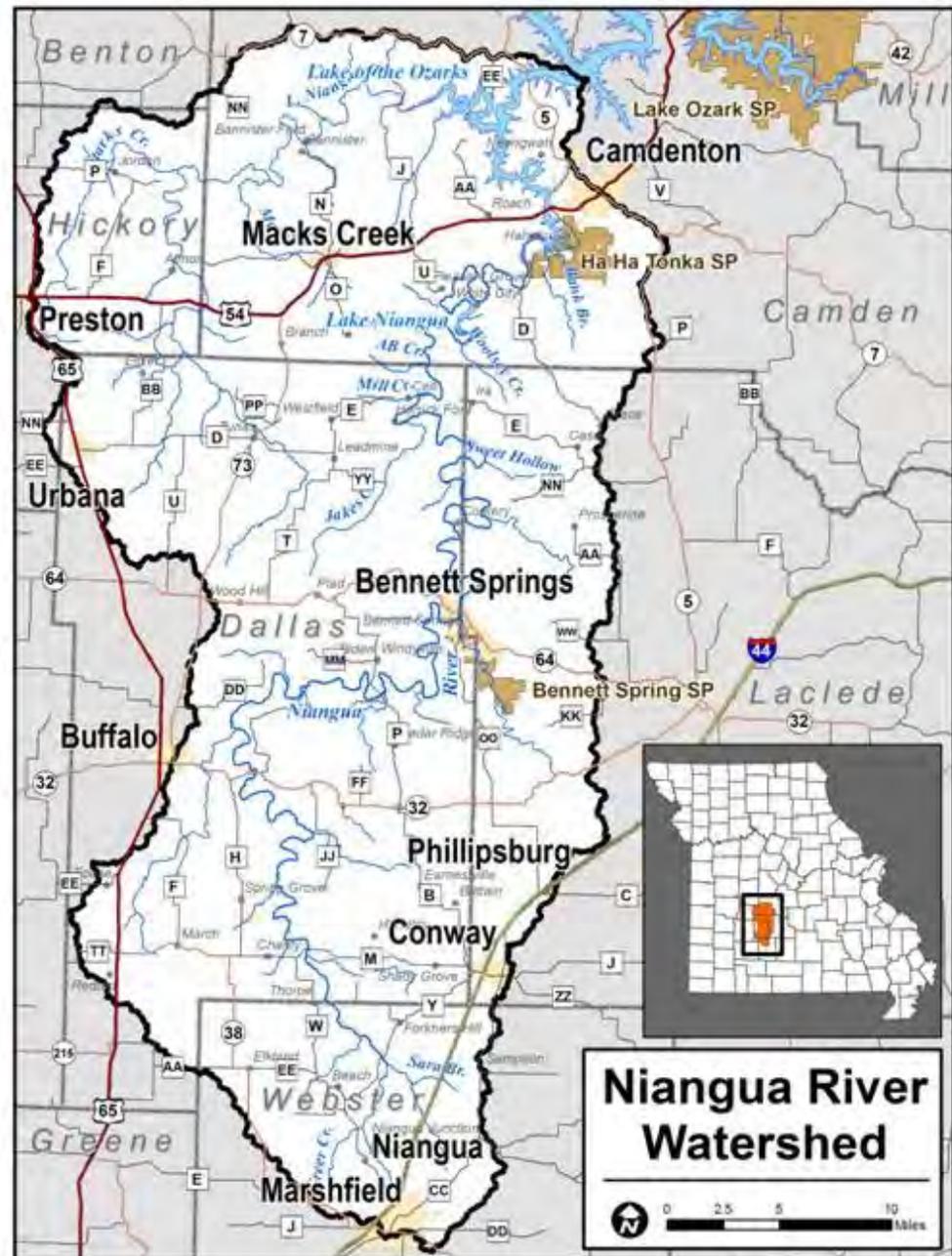
Mississippi River Basin

A watershed can be large, such as the Mississippi River watershed



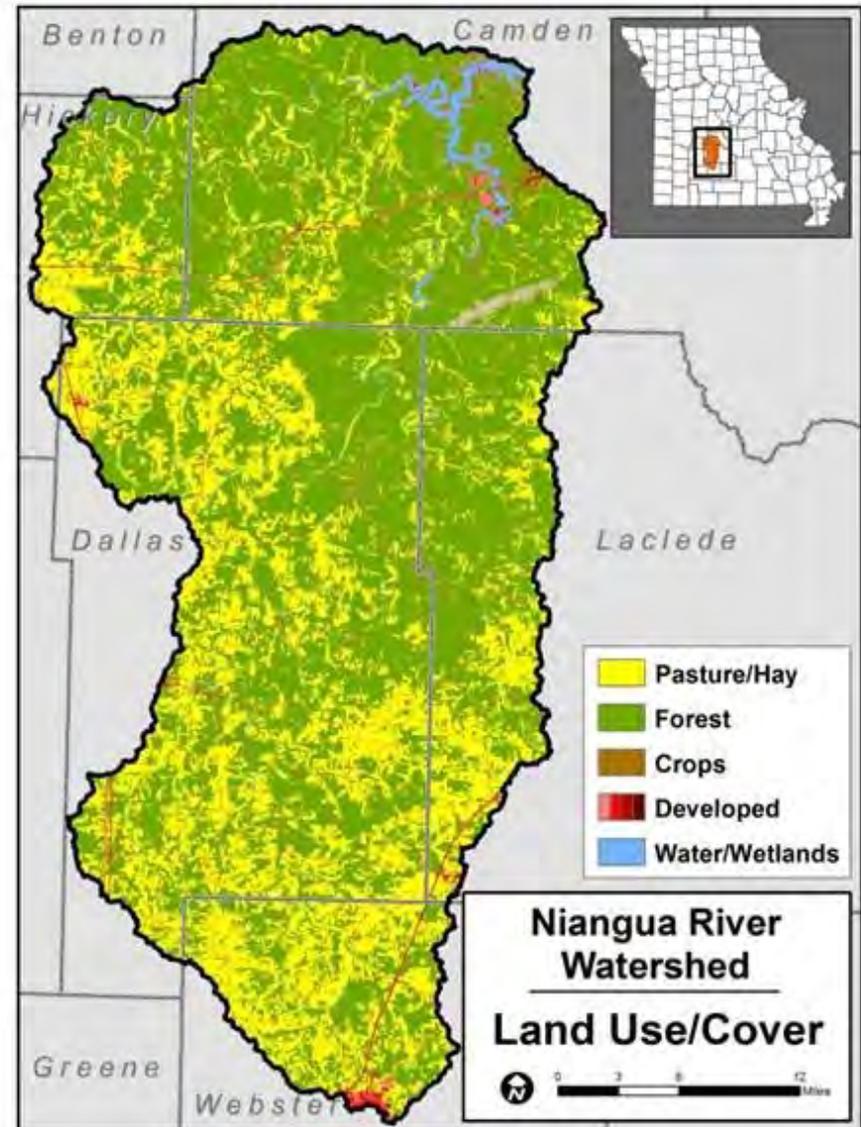
A watershed can be small. There are 66 HUC-8 watersheds in Missouri. At the HUC-12 size, there are nearly 2,000.

Our focus is on the 8 digit Niangua River HUC. This covers an area from Marshfield in Webster County to the Lake of the Ozarks in Camden County.



Watershed Characteristics

- There are some basic watershed characteristics that can help us identify sensitive areas
- Information can help us see trends that may lead to impacts on our water resources
 - Geology & soil type
 - Geography & slopes
 - Climate and rainfall
 - Land use
 - Land cover
 - Types of industry
 - Population (growing/shrinking)





Common Watershed Stressors

- Point sources
 - Activities that directly discharge to water
- Nonpoint sources
 - Sediment
 - Nutrients
 - Bacteria
 - Pesticides
 - other
- Population growth can lead to more urban areas, which leads to more stormwater runoff
- New industry can change the demands on water supply



Cause and Effect

- Just listing potential watershed stressors may not give us a clear picture of what they cause.
 - Soil erosion – habitat loss
 - Nutrient runoff /fertilizer – algae growth and low DO
 - Organics in water – can mean soil, plant materials, etc. May be caused by soil erosion and nutrient loading
 - Algae blooms/Blue Green Algae – partially caused by excessive nutrients and suspended sediment
 - Low DO – caused by not enough shade, too much algae, etc.

Cause and Effect (con't)

- Once we have identified possible pollution sources we need to identify practical solutions that help minimize the impact.
 - Inventory the human resources available
 - Identify who are the people that can provide technical, educational and financial support
 - Agency, watershed groups, local citizens, etc.
 - Find resources to develop solutions for areas of concern
 - Identify the practice(s) to reduce the potential pollution source
 - NRCS, MDC, SWCD, Ext, County/city stormwater, etc.



Planning at the Watershed Level



Examples of local community plans

- Source Water Protection Plan
- Stormwater Plan
- Nutrient Management Plan
- Conservation Plan
- Emergency Management Plan
- Human Services Transit Plan
- Etc.

Many of these plans are voluntary and need local input and collaboration for development.



The Power of Partnerships and Local Participation for Watershed Planning



Partnerships- individuals and groups working together around a common goal or purpose

- To what extent are the partnerships you are currently involved with complementing or assisting your organization as it strives to fulfill its purpose?
- Examples of partners we see within the watershed:
 - Agency partners
 - Watershed groups
 - Industry and local business
 - Interested citizens
 - Others



Types of Partnerships

- **Cooperation** – main partnership focus is to share information
- **Coordination** – resource commitments (time, personnel, funds, facilities)
- **Collaboration** – sharing and creating new resources, developing strong connections
- All require high levels of communication



Collaborative Partnerships

- To establish common ground for sound strategic watershed planning and management efforts
- To contribute input in to the decision-making processes
- To strengthen the implementation process
- To be eligible for state/federal funding
- To follow recommended guidance
- To comply with new legislative requirements
- To respond to federal/state mandates
- To address conflict over specific issues



Who are your partners/neighbors?

- Everyone that lives, works and recreates in the watershed:
 - Land owners
 - Renters
 - Residents
 - Absentee landowners
 - Non-residents
 - Businesses/industry
 - Everyone that is affected is part of the watershed community.
- Others



GROUND RULES APPLY TO EVERYONE

- All opinions are valued
- Participants listen respectfully
- Everyone is equal
- Everyone is invited to contribute to the discussions and interactions
- No one dominates discussion
- Respectful disagreement is OK, and may be necessary to move ahead
- Focus on the common ground.

State and Local Partners

- Examples of different groups and agencies currently working to address concerns and protect water resources.
 - Ameren Electric and other electric coops
 - Army Corps of Engineers
 - Department of Agriculture, Conservation, Health and Senior Services, and Natural Resources
 - Environmental Groups
 - Environmental Protection Agency and United States Department of Agriculture
 - Fish and Wildlife Service
 - Industry – Syngenta Corp, Cargill, Dupont, George's, Tyson, etc.
 - Natural Resource Conservation Service
 - NGO's - Farm Bureau, Corn Growers, Cattleman's, poultry, etc.
 - Private Citizens
 - Regional Planning Commissions
 - Soil and Water Conservation District
 - Universities and Colleges, Extension, Ag Research Service
 - Watershed groups
 - Others



Successful Watershed Planning

- Should be a voluntary approach
- Involves the different interest in the watershed
- Incorporates local input
- Needs local buy-in to make it successful
- Changes as new information becomes available or as implementation occurs
- Is as successful as local residents want it to be

Questions????

- Bob Broz and Dan Downing
 - 205 Agriculture Engineering
 - Columbia, Missouri
 - (573) 882-0085
 - E-mail:
 - brozr@missouri.edu
 - downingd@missouri.edu

UNIVERSITY OF MISSOURI
 Extension



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Niangua River Watershed: **Community Partnership Project**

Gwenda Bassett

Regional Watershed & Community Services Coordinator

Southwest Regional Office, Springfield, MO

gwenda.bassett@dnr.mo.gov | (417) 891-4300





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NATURAL RESOURCES

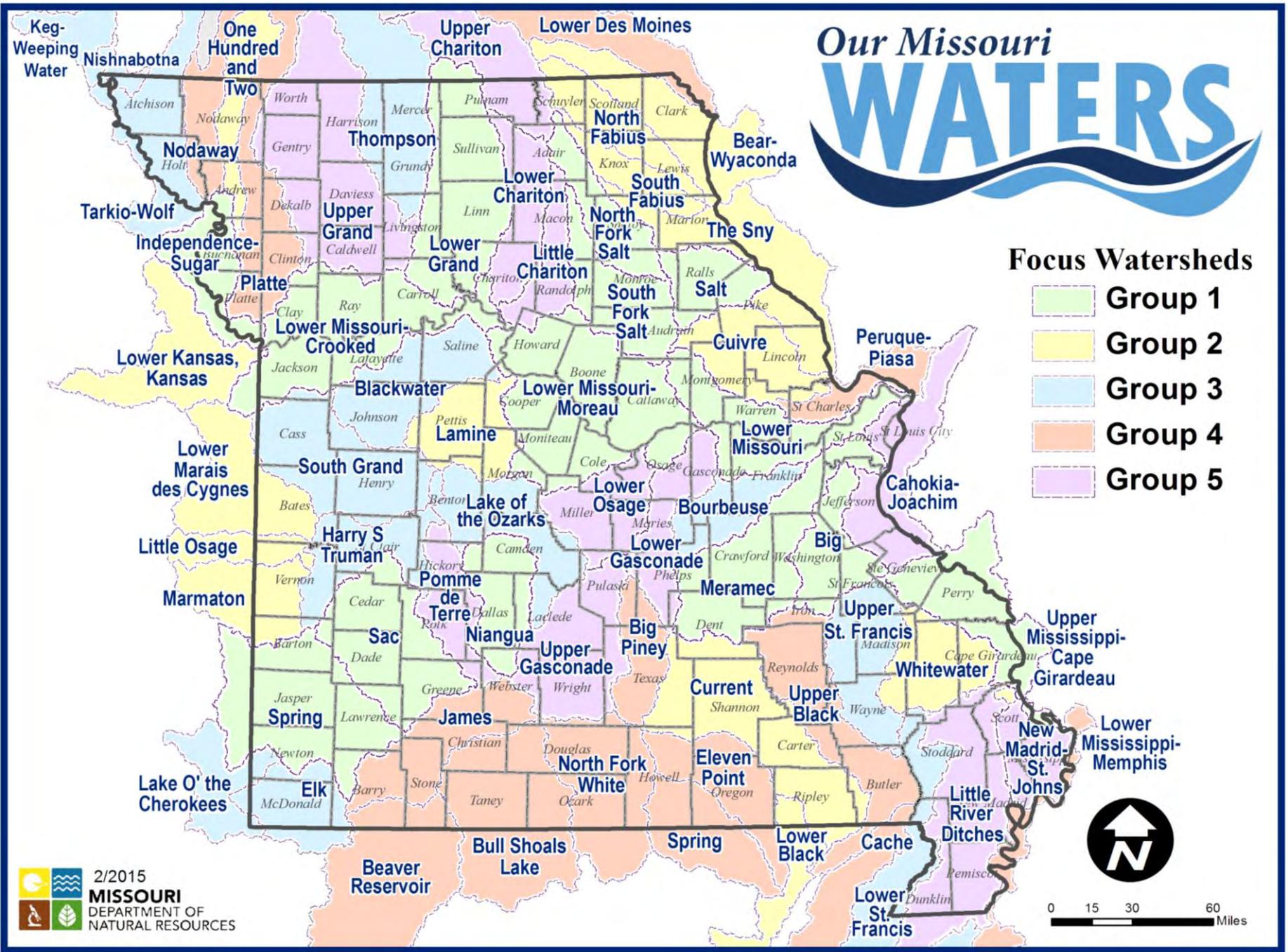
Our Missouri Waters

*A watershed based approach
to...*

- *Better integrate and target our resources and programs*
- *Seek help from local citizens*
- *Maximize overall environmental benefit for water resources*



Our Missouri WATERS



Focus Watersheds

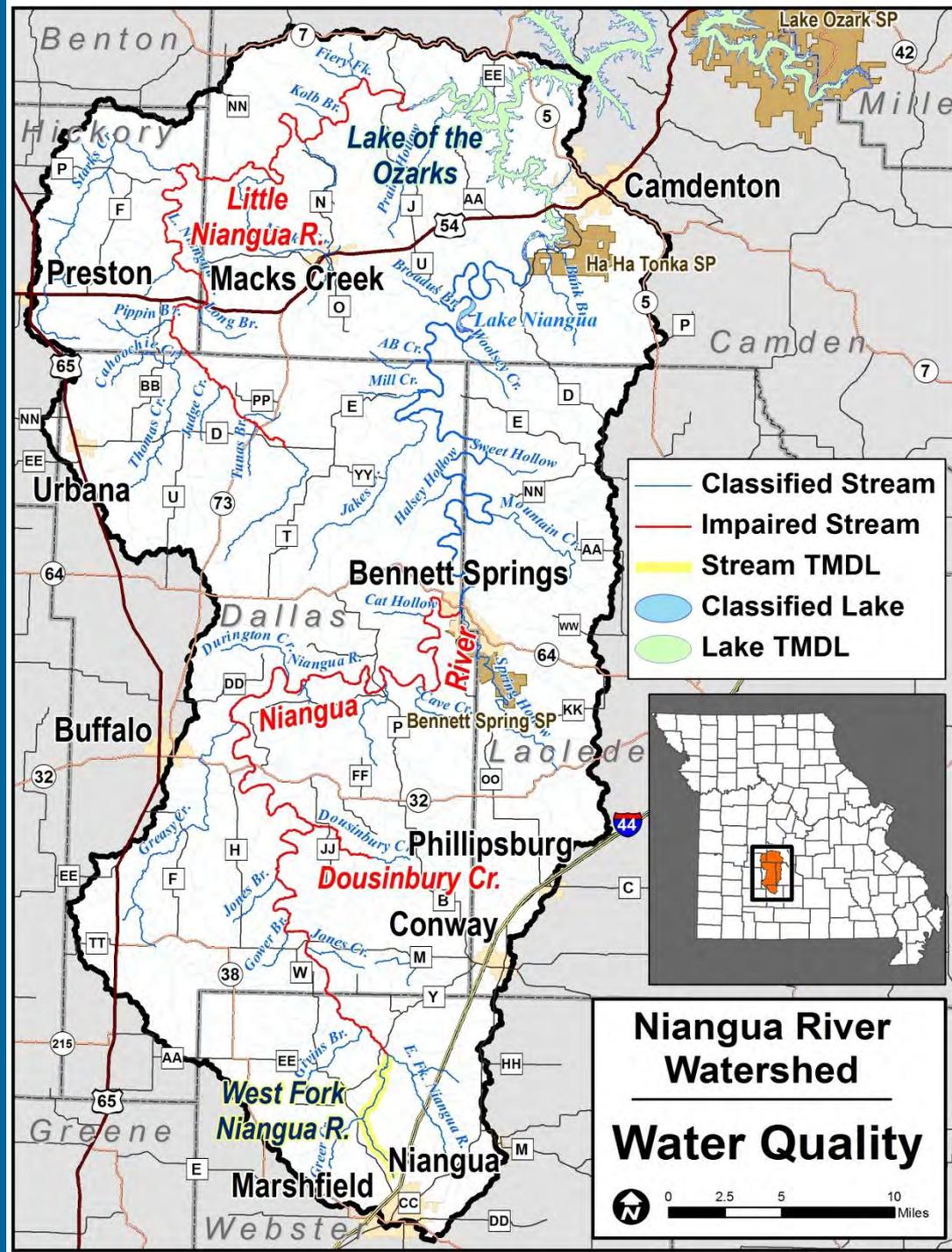
- Group 1
- Group 2
- Group 3
- Group 4
- Group 5

Local Outreach Project

- Information sharing between watershed citizens
- Learn about natural resources priorities and concerns
- Bring together *resources* (people & funding) that can help
- *Watershed Advisory Committee* to move goals forward
- *Healthy Watershed Plan*

Niangua River Watershed

- 1,030 miles²
- Osage River system
- Headwaters of Lake of the Ozarks
- Portions of 6 counties
- 90% Forest & Pasture; less than 6% Urban



Healthy Watershed Plan: Framework

- Background information on the watershed
- Local Comments/Concerns
- Priorities from the local Watershed Advisory Committee (WAC)
- Next Steps recommended by the local WAC



Examples of Concerns



*Streambank
Erosion*



*Trash in
streams*



Illegal dumping

What are the benefits?

- Local resident's shared vision for the watershed
- Provides guidance for future financial and technical support and programs
- Discover opportunities for partnerships
- Protect Our Missouri Waters



Visit our Websites!

Our Missouri Waters

Missouri has been **Our Missouri 66 WATERSHEDS**
WATERS
includes
115,000 & 3,080
miles of streams, rivers lakes, reservoirs

traditionally blessed with abundant and diverse water resources like few other states in the nation. The quality of life for each Missourian can be closely tied to the health of our state's natural resources. Ensuring we are able to enjoy our Missouri waters today as well as ensure the same for future generations is the essence of the Missouri Department of Natural Resources' mission.

Creating a rich legacy for our state's waters can be a daunting task, which is why we simply can't complete this alone. Missouri's waters belong to all of us. The department's **Our Missouri Waters** effort bring citizenry and good science to

Learn about Watersheds
Focus Watersheds
State Water Planning
Water Quality Assessment

Get Updates on this Issue

Our Missouri Waters - From the Clean Water

Contact Your Local Watershed Coordinator

<http://dnr.mo.gov/omw/>



Niangua
Watershed

Watershed
Planning

Advisory
Committee

Meeting
Notices

Meeting
Information

Community
Projects

FACTS about the Niangua River Watershed

There are 1,796 miles of major streams and 42,454 acres of lake within the watershed. There are two major aquifers that underlie the region: the St. Francois and Ozark aquifers. There are a total of 88 springs located throughout the watershed. Ha Ha Tonka and Sand Springs are among the largest. Ha Ha Tonka is the 12th largest in Missouri. Bennett Spring contributes 50-60 percent of the flow for the Niangua River.

What is a watershed?

A watershed is an area of land, defined by ridges, from which waters flow into a particular lake, river or wetland.

<http://nianguariverwatershed.org/>

Gwenda Bassett

Gwenda.Bassett@dnr.mo.gov

(417) 888-4046



**MISSOURI
DEPARTMENT OF
NATURAL RESOURCES**

“that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community.”

- John Wesley Powell

Niangua River Watershed Planning

Watershed Advisory Committee Meeting

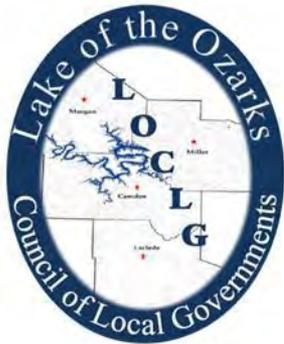
October 21, 2015

5:30 p.m.

Bennett Springs State Park Dining Lodge

26262 Highway 64A Lebanon, MO 65536

Planning Partners

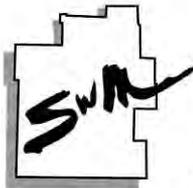


Lake of the Ozarks
Council of Local
Governments



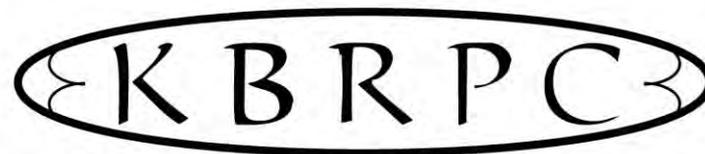
MISSOURI
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NATURAL RESOURCES

*Missouri State Parks - a division of the
Missouri Department of Natural Resources*



Southwest Missouri
Council of Governments

Southwest Missouri
Council of
Governments



A COOPERATIVE OF GOVERNMENTS

Kaysinger Basin
Regional Planning
Commission

Previous Meetings

- We hosted a series of meetings to discuss the project and developing the Watershed Advisory Committee
 - July 23, 2015 Lebanon, MO
 - August 19, 2015 Preston, MO
 - August 25, 2015 Buffalo, MO

Previous Meetings

- We had good attendance and many expressed interest in the project at all three meetings
 - Lebanon, MO had 53 people in attendance
 - Preston, MO had 40 people in attendance
 - Buffalo, MO had 30 people in attendance

Survey Results

Surveys were shared at each meeting

29 respondents answered this question and 1 skipped this question

- Lebanon, MO 75.86% of surveys completed came from the first meeting
- Preston, MO 13.79% of surveys completed came from the second meeting
- Buffalo, MO 10.34% of surveys completed came from the third meeting

Survey Results

Question 1 – What types of introductory information do **you feel needed more discussion at today's meeting?**

22 respondents answered this question and 8 skipped this question (respondents could choose more than one)

- What is a watershed and how it works 2
- Small Community success stories 2
- Agricultural success stories 5
- Conservation success stories 2
- Stream Team success stories 3
- Scope of a healthy watershed plan 8
- Overview of a healthy watershed planning process 7
- Other (see next slide) 4

Survey Results

- Other (from previous slide) 4 responses
 - Department of Natural Resources needs more explaining
 - You need to spend more time talking about why
 - Explain how all species are dependent on each other
 - **EPA's overlap if there is any**

Survey Results

Question 2 – What are common concerns related to water quality are you most interested in discussing at the next meeting?

20 respondents answered this question and 0 skipped this question (respondents could choose more than one)

- Lack of funding for implementation 11
- Increased wildlife preservation 10
- Impacts on recreational opportunities 5
- Impacts on agricultural productivity 7
- Distinguishing sources of pollution 19
- Septic tanks waste treatment 10
- Other (see next slide) 2

Survey Results

- Other (from previous slide) 2 responses
- More habitat enhancement
- Abandoned wells

Survey Results

Question 3 – What types of resources are you especially interested in learning more about during the next meeting?

26 respondents answered this question and 4 skipped this question (respondents could choose more than one)

- Financial resources 9
- Technical resources (agricultural) 8
- Technical resources (small community) 10
- Volunteer resources (peer-to-peer) 5
- Habitat restoration resources 10
- Other (see next slide) 1

Survey Results

- Other (from previous slide) 1 response
- Best practices for landowners

Survey Results

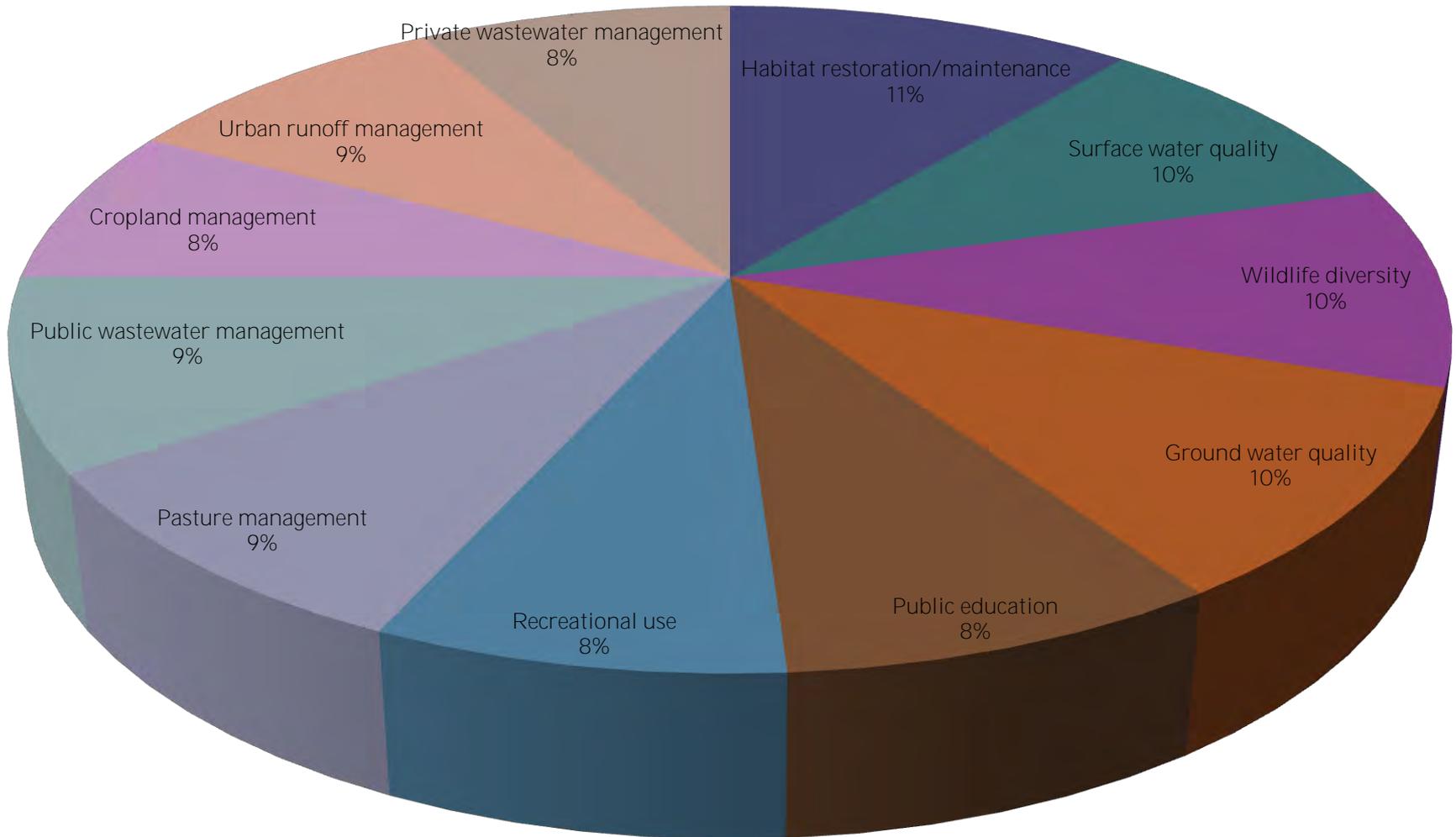
Question 4 – Please rank six of the following components of healthy watersheds in order of importance

26 respondents answered this question and 4 skipped this question (respondents only used the numbers 1-6 one time each)

Results are on the next slide....

Survey Results

Question # 4 Results



Survey Results

Question 5 – Please leave additional comments and thoughts.

8 respondents answered this question and 22 skipped this question

- Would like to have information on the meetings in the way of a newsletter
- Thank you for your efforts. You are very patient.
- **What's the purpose.**
- Very informative .
- Endangered species, again all are dependent upon each other. I ask, please have this explained so they understand we depend upon each other. Kill all of one species and others follow.
- Public waters supplies and rural (private) wells are at risk when community groups fail to be proactive and fail to address serious issues relating to safe clean water supplies.

Watershed Advisory Committee

As an important part of the planning framework we are establishing a Watershed Advisory Committee.

We will discuss the responsibilities of the Watershed Advisory Committee.

We will discuss how often they will meet, and what we hope to accomplish at each of these meetings.

Watershed Advisory Committee

As an important part of the planning framework we are establishing a Watershed Advisory Committee.

Planning involves a number of interested and engaged community leaders. People who can share information on the watershed, promote watershed protection, preservation and enhancement and inspire all of those with interest in the watershed to learn more and become involved in activities that have a positive impact on the watershed.

Watershed Advisory Committee

We will discuss the responsibilities of the Watershed Advisory Committee.

Help develop a list of priorities within the watershed.

Help develop a ranking system for those established priorities.

Help develop action plans that will help move those priorities forward to implementation.

Watershed Advisory Committee

We will discuss how often they will meet, and what we hope to accomplish at each of these meetings.

We will be hosting 5 more meetings:

1. Gather list of priorities for Niangua River Watershed
2. Continue to develop list of priorities for the Watershed
3. Finalize list of priorities and begin discussion on action items that we can implemented in the key priority areas
4. Continue discussion on action items and determine next steps, discuss how the committee will continue and the roles and responsibilities (volunteers willing to continue with project implementation within the watershed)
5. Finalize the plan and share with committee for final review, and further discussion on the roles and responsibilities (again volunteers willing to continue with project implementation within the watershed)

Developing Priorities for the Niangua River Watershed

Bob Broz

205 Agriculture Engineering

Columbia, Missouri

(573) 882-0085

E-mail:

brozr@missouri.edu

UNIVERSITY OF MISSOURI

 Extension

Ground Rules Apply to Everyone

- All opinions are valued
- Participants listen respectfully
- Everyone is equal
- Everyone is invited to contribute to the discussions and interactions
- No one dominates discussion
- Respectful disagreement is OK, and may be necessary to move ahead
- Focus on the common ground.

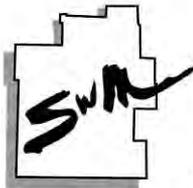
Niangua River Watershed Advisory Committee Meeting

Watershed Advisory Committee Meeting
January 26, 2016 at 3:00 p.m.
Central Bank Public Meeting Room
1197 Spur Drive Marshfield, MO 65706

Planning Partners

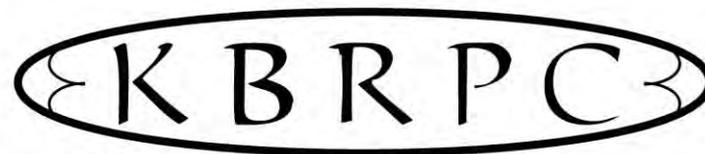


**Lake of the Ozarks
Council of Local
Governments**



**Southwest Missouri
Council of Governments**

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**Kaysinger Basin
Regional Planning
Commission**

Niangua River Watershed Planning Area

Camden County

Dallas County

Hickory County

Laclede County

Webster County

Today's Meeting

- **Why are we meeting in Marshfield....**
- **Because Marshfield, MO is the largest population density of all the communities within the Niangua River Watershed. (2010 Census population 6,633)**
- **Marshfield is in Webster County.**

Previous Meetings

- **We hosted a series of meetings to discuss the project and developing the Watershed Advisory Committee**
 - **July 23, 2015 Lebanon, MO (Laclede County)**
 - **August 19, 2015 Preston, MO (Hickory County)**
 - **August 25, 2015 Buffalo, MO (Dallas County)**
 - **October 21, 2015 Bennett Springs, MO (Dallas and Laclede)**

Previous Meetings

- **At each of the previous meetings we asked for volunteers to participate on our Watershed Advisory Committee.**
- **Many of you today have volunteered to be members of this Committee.**

Watershed Advisory Committee

As an important part of the planning frame work we use local input to make sure we understand the needs and concerns within the Niangua River Watershed. We will explain how the Watershed Advisory Committee fits into this role.

We will discuss the responsibilities of the Watershed Advisory Committee.

We will discuss how often they will meet, and what we hope to accomplish at each of these meetings.

Watershed Advisory Committee

As an important part of the planning framework we are establishing a Watershed Advisory Committee.

Planning involves a number of interested and engaged community leaders. People who can share information on the watershed, promote watershed protection, preservation and enhancement and inspire all of those with interest in the watershed to learn more and become involved in activities that have a positive impact on the watershed.

Watershed Advisory Committee

We will discuss the responsibilities of the Watershed Advisory Committee.

Help develop a list of priorities within the watershed.

Help develop a ranking system for those established priorities.

Help develop action plans that will help move those priorities forward to implementation.

Watershed Advisory Committee

We will discuss how often they will meet, and what we hope to accomplish at each of these meetings.

We will be hosting (4) more meetings:

1. Gather list of priorities for Niangua River Watershed –October 21, 2015
2. “Continue to develop list of priorities for the Watershed”-Today
3. Finalize list of priorities and begin discussion on action items that we can implemented in the key priority areas
4. Continue discussion on action items and determine next steps, discuss how the committee will continue and the roles and responsibilities (volunteers willing to continue with project implementation within the watershed)
5. Finalize the plan and share with committee for final review, and further discussion on the roles and responsibilities (again volunteers willing to continue with project implementation within the watershed)

Developing Priorities for the Niangua River Watershed

- ✓ Interested in developing shared priorities.
- ✓ Important to create a clear path to positive change.
- ✓ Support for science based decisions for the watershed.

Developing Priorities for the Niangua River Watershed

We reviewed information collected at all our previous meetings.

We reviewed the areas of interest and discussed the challenges and looked for opportunities.

Developing Priorities for the Niangua River Watershed

Based on the survey results and the input from our last public meeting these are the areas identified as areas of interest. We will explore these deeper and determine if you feel these areas need to be expanded into priorities for the Niangua River Watershed.

Water Quality

Education and Public Outreach

Habitat Preservation and or Restoration

Developing Priorities for the Niangua River Watershed

Water Quality in regard to....

- Tourism/Recreation
- Agriculture/Land Owners
- Drinking Water/Protection

Developing Priorities for the Niangua River Watershed

Water Quality in regard to....

➤ Tourism/Recreation-Areas of Concern

1. Large amounts of trash on the Niangua River after a holiday weekend
2. Fish guts being put back into the water at Bennett Springs
3. Lagoons at Bennett Springs undersized for the number of users
4. On-site wastewater systems are failing
5. Goodwin sinkhole water runs directly to the Ha-Ha Tonka State Park Spring

Developing Priorities for the Niangua River Watershed

Water Quality in regard to....

- **Agriculture/Land Owners-Areas of Concern**
 1. **Cattle in the river**
 2. **Soil erosion**
 3. **Pesticides and fertilizers/other pollutants**

Developing Priorities for the Niangua River Watershed

Water Quality in regard to....

- **Drinking Water/Protection-Areas of Concern**
 1. The number of abandoned wells
 2. The number of new wells coming online
 3. Surface water protection

Now we want to know what you think....

Again these were the main areas of interest with a list concerns discussed previously. Now we will look at specific actions that may be incorporated into the Healthy Watershed Plan that will address these interests and concerns.

Water Quality

Education and Public Outreach

Habitat Preservation and or Restoration

Turning Point 101!



Power
Button

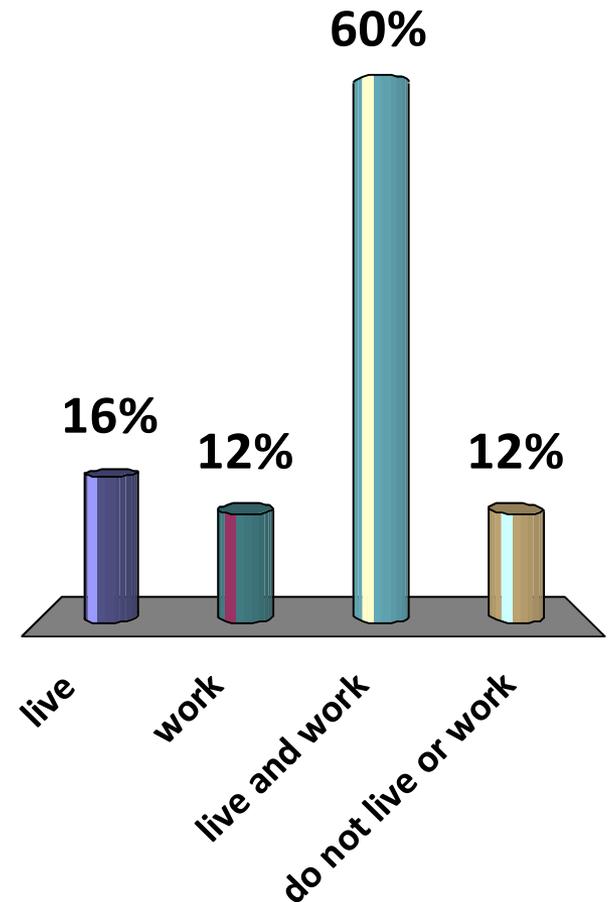
Answer
Key Pad

Now we want to know what you think....

Test Question:

I _____ in the Niangua River watershed.

- A. live
- B. work
- C. live and work
- D. do not live or work

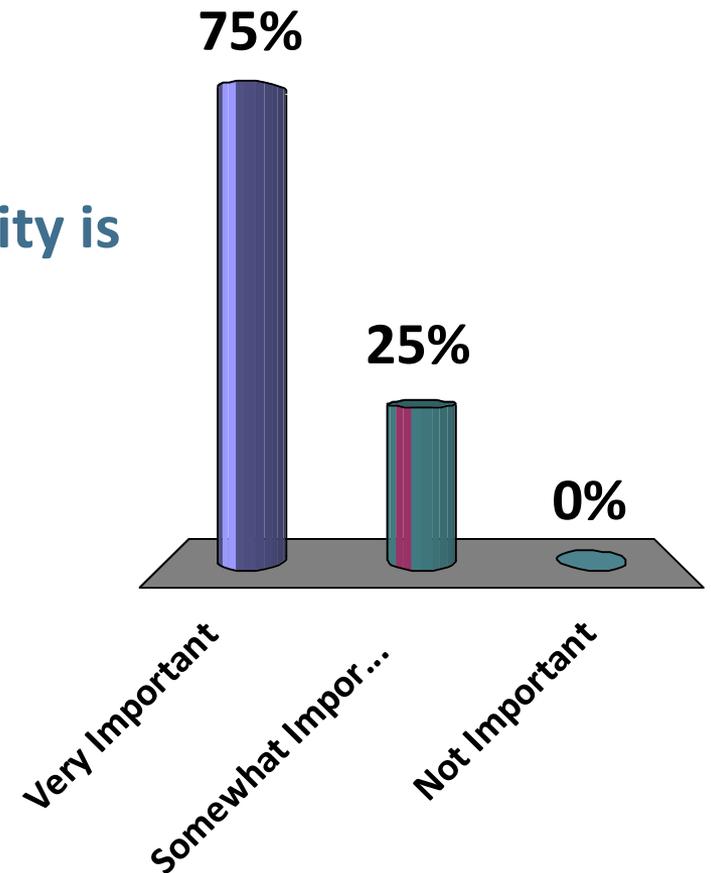


Now we want to know what you think....

Water Quality

How important do you feel water quality is to you personally and your family?

- A. Very Important
- B. Somewhat Important
- C. Not Important

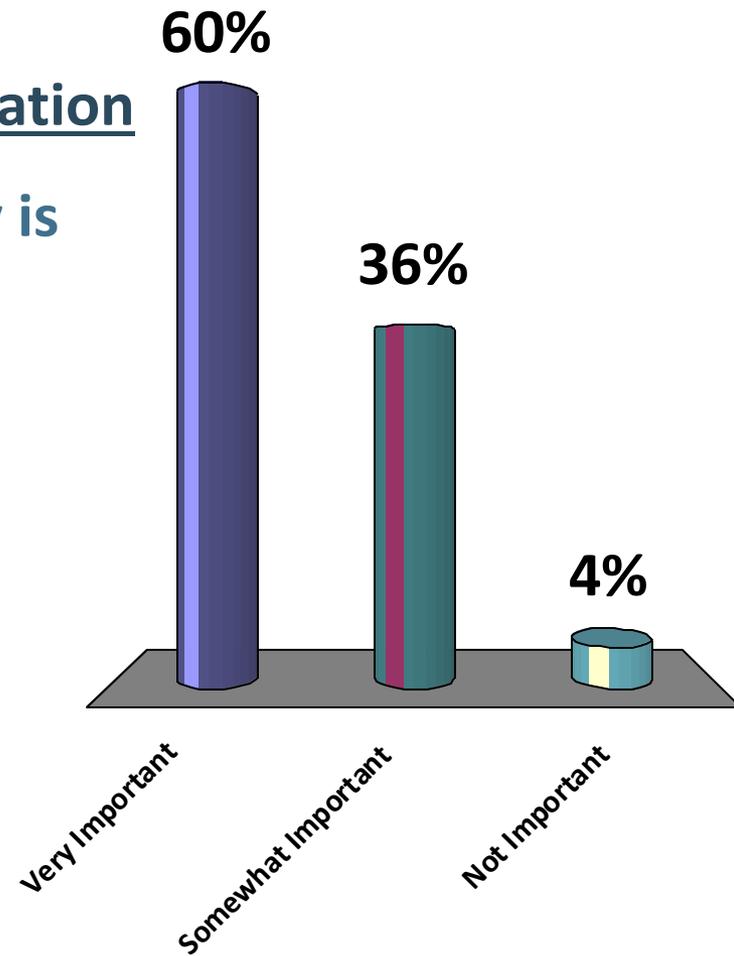


Now we want to know what you think....

Water Quality in regard to Tourism/Recreation

How important do you feel water quality is to our local tourism and recreational activities and the local economy?

- A. Very Important
- B. Somewhat Important
- C. Not Important

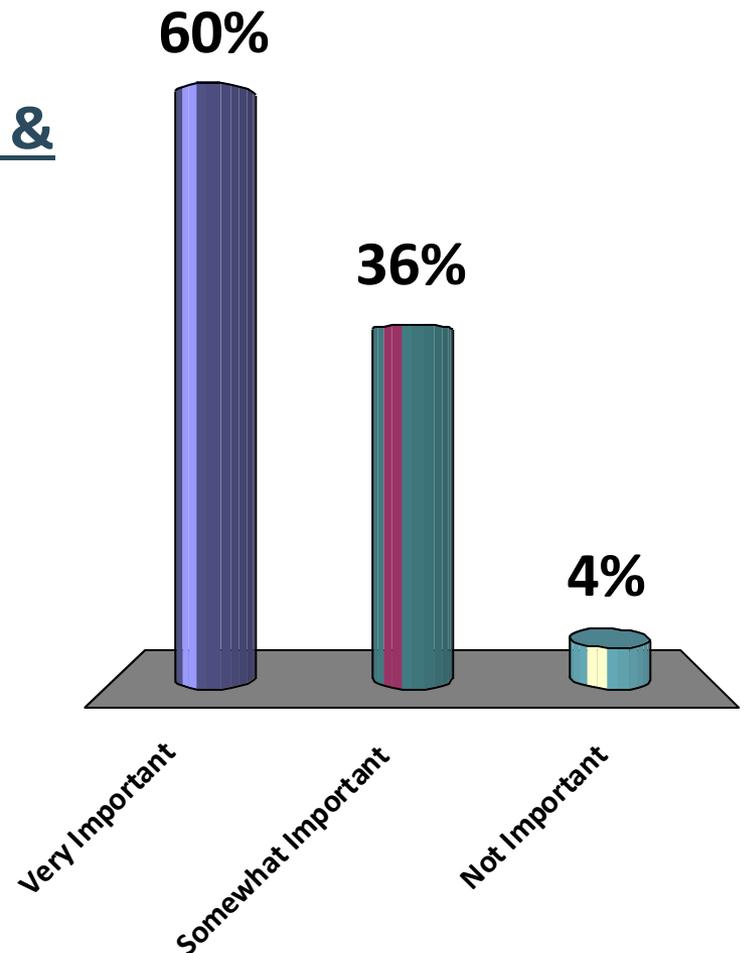


Now we want to know what you think....

Water Quality in regard to Agriculture & Land Owners

How important do you feel water quality is to the agriculture industry and land owners?

- A. Very Important
- B. Somewhat Important
- C. Not Important

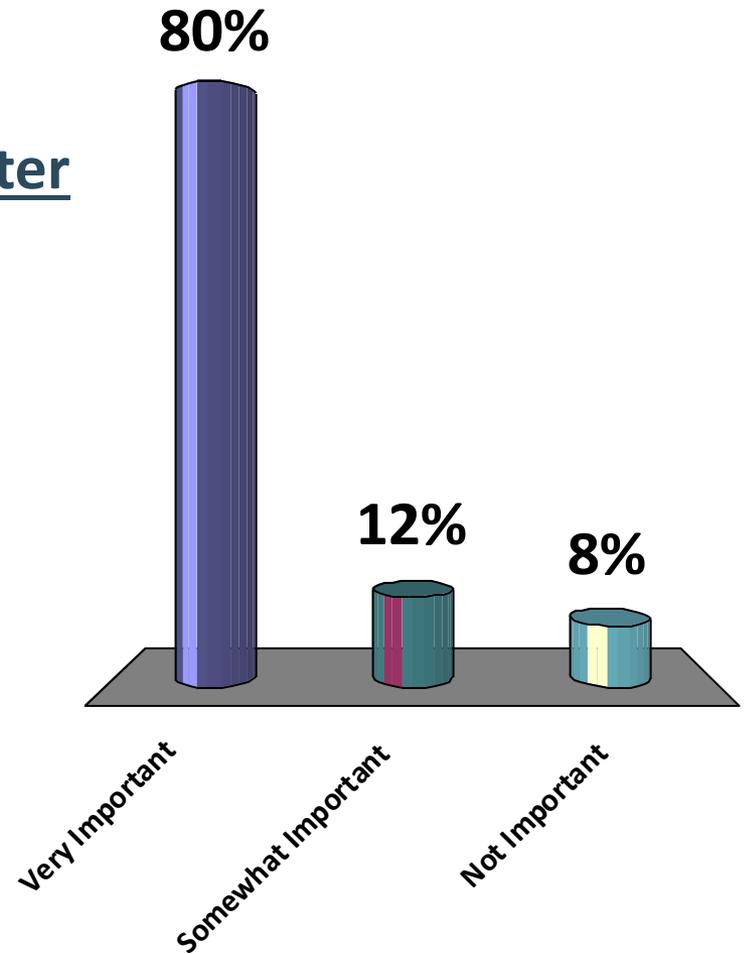


Now we want to know what you think....

Water Quality in regard to Drinking Water & Protection

How important do you feel water quality is for drinking water and protecting that drinking water for the future?

- A. Very Important
- B. Somewhat Important
- C. Not Important

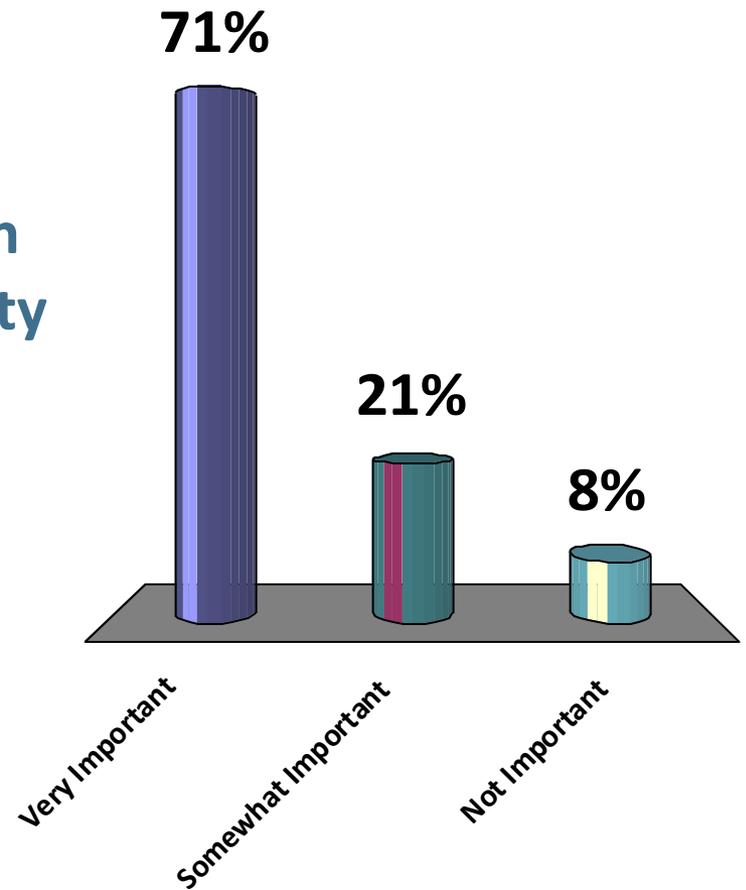


Now we want to know what you think....

Education and Public Outreach

How important do you feel education and public outreach is to water quality protection and preservation?

- A. Very Important
- B. Somewhat Important
- C. Not Important

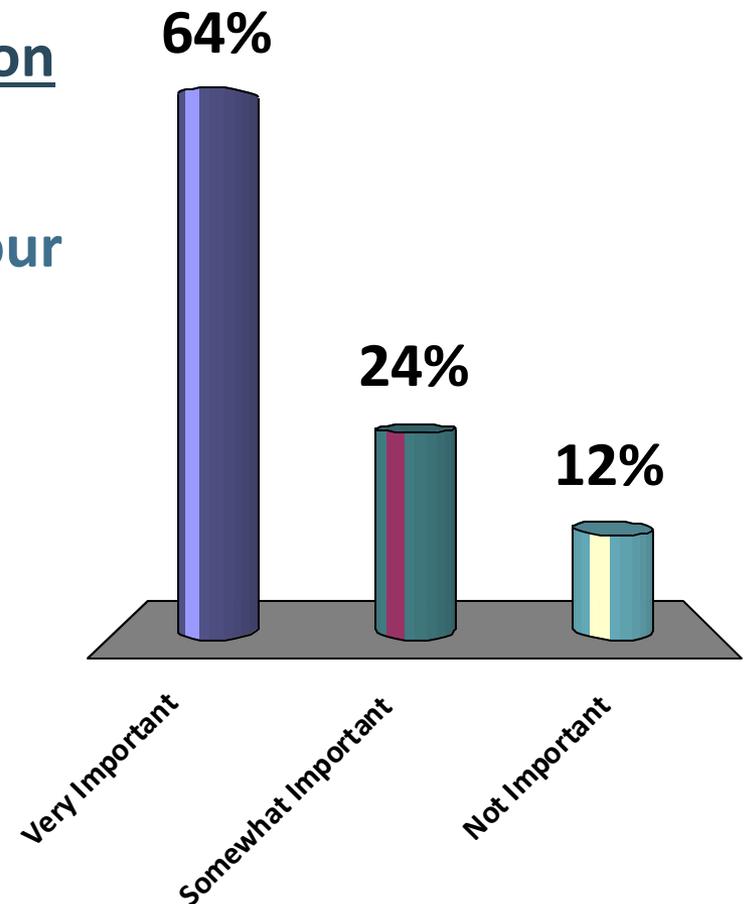


Now we want to know what you think....

Habitat Preservation and or Restoration

How important do you feel habitat preservation and or restoration is to our communities now and for future generations?

- A. Very Important
- B. Somewhat Important
- C. Not Important





Water Quality Questions

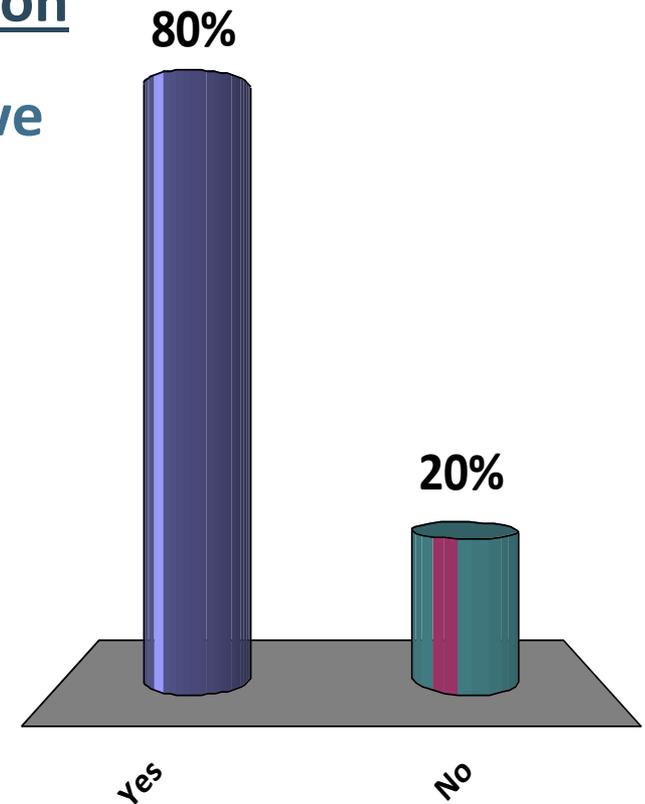
Now we want to know what you think....

Water Quality in regard to Tourism/Recreation

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Annual award recognition to businesses that support, promote and do environmentally friendly activities.

- A. Yes
- B. No



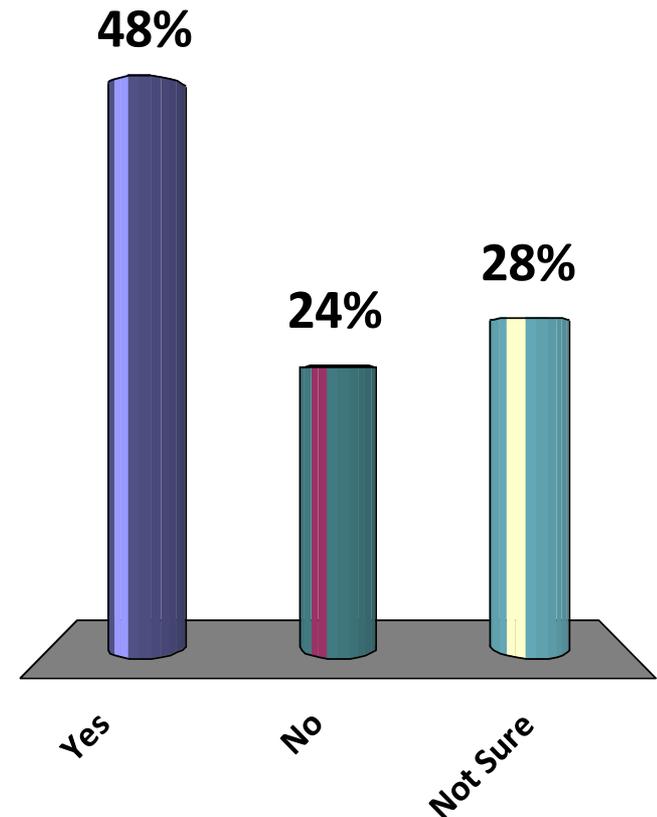
Now we want to know what you think....

Water Quality in regard to Tourism/Recreation

Do you feel that we can successfully encourage local participation and engagement in this activity?

Annual award recognition to businesses that support, promote and do environmentally friendly activities.

- A. Yes
- B. No
- C. Not Sure



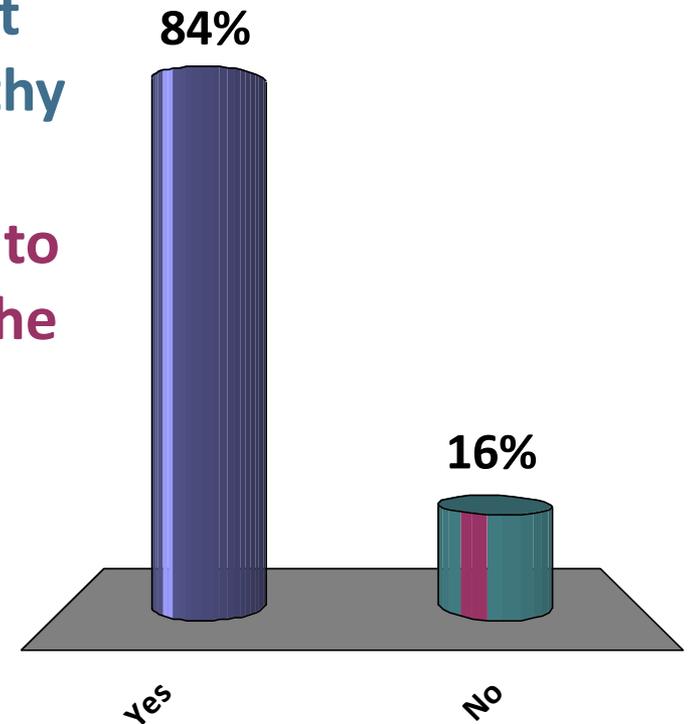
Now we want to know what you think....

Water Quality in regard to Tourism/Recreation

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Working with the local Stream Teams to schedule a volunteer clean up along the banks of the Niangua River on more regular intervals.

- A. Yes
- B. No



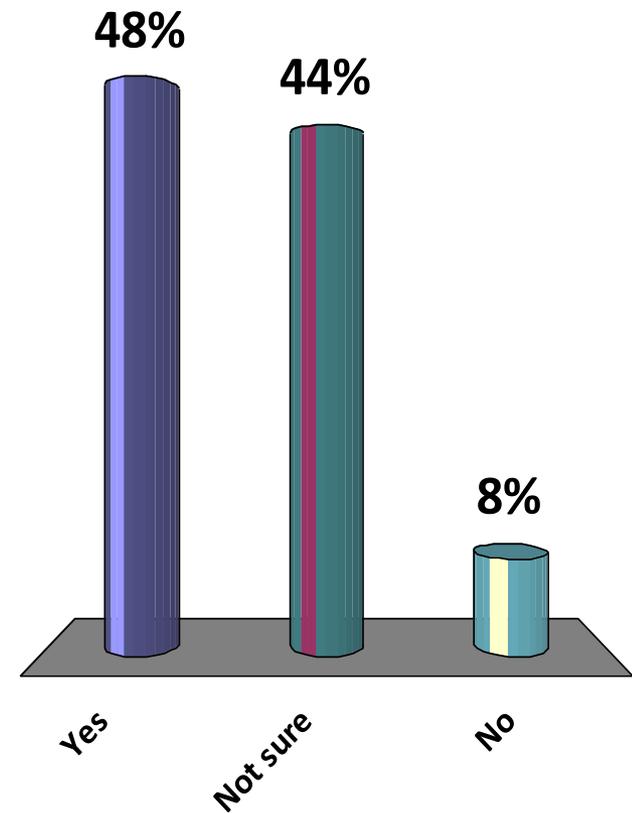
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- A. Yes
- B. Not sure
- C. No



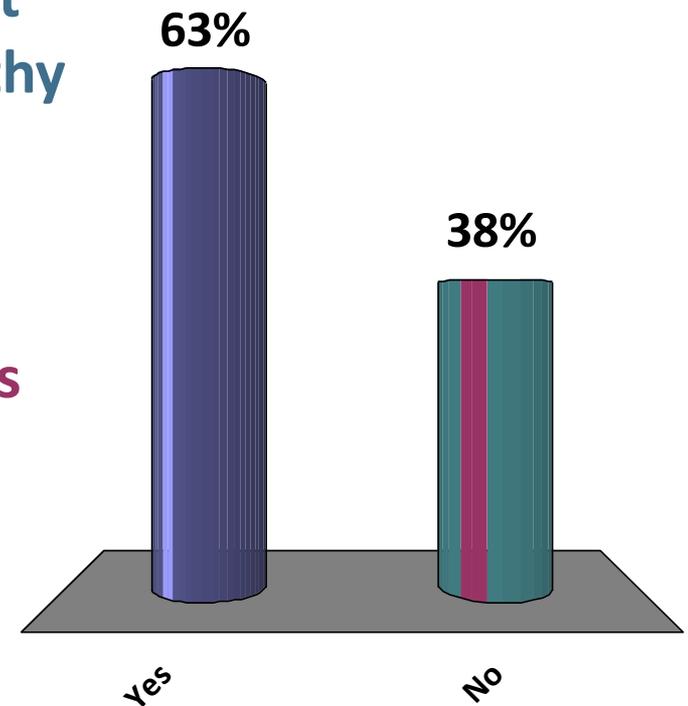
Now we want to know what you think....

Water Quality in regard to Tourism/Recreation

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Working with the local organizations and Stream Teams volunteers to increase the number of water samples collected on the Niangua River.

- A. Yes
- B. No



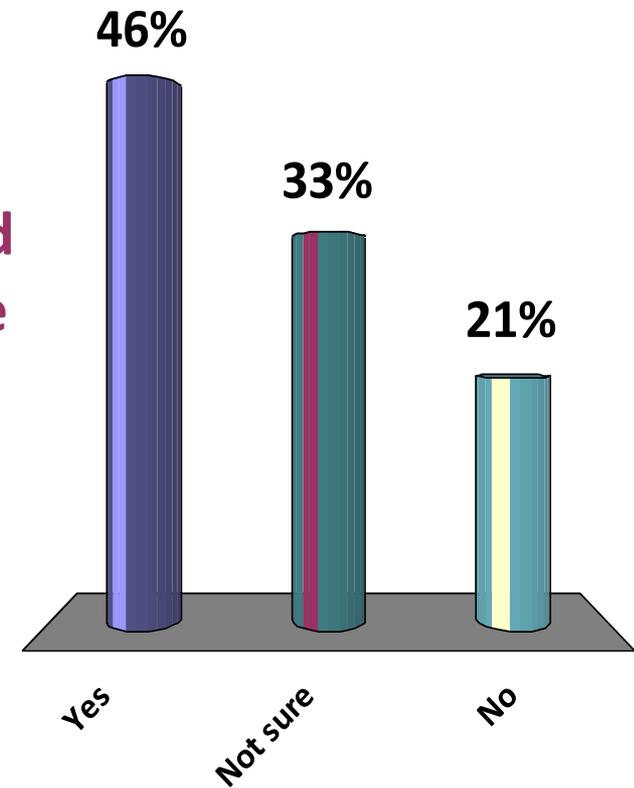
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- C. No



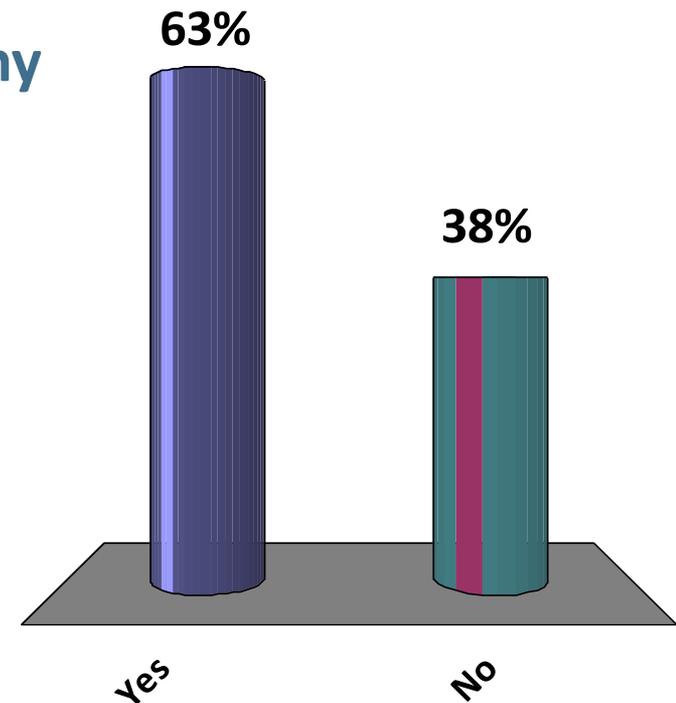
Now we want to know what you think....

Water Quality in regard to Tourism/Recreation

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Expanding the fish cleaning stations to more fishing recreational areas.

- A. Yes
- B. No



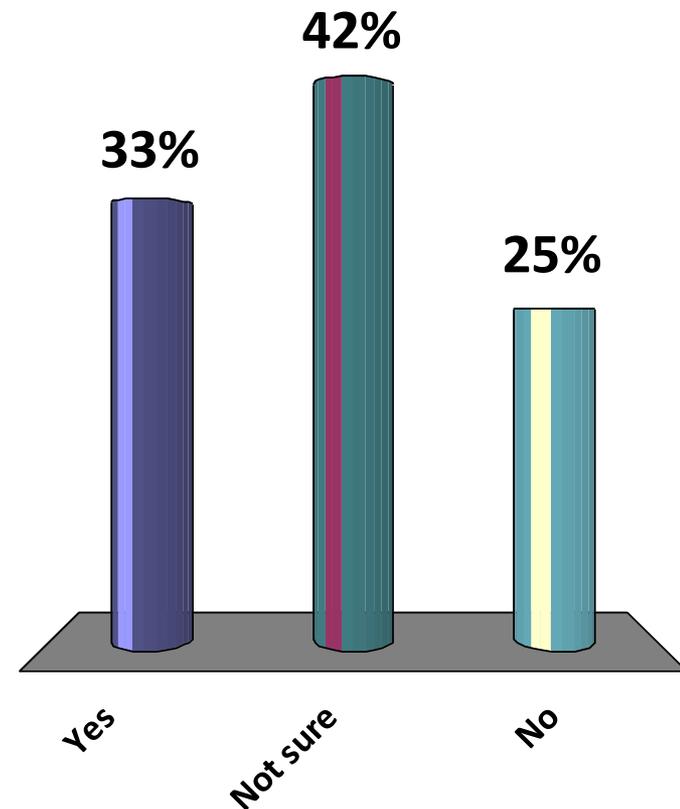
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Water Quality in regard to Tourism/Recreation

Do you feel that we can successfully encourage local participation and engagement in this activity?

Expanding the fish cleaning stations to more fishing recreational areas.

- A. Yes
- B. Not sure
- C. No



Now we want to know what you think....

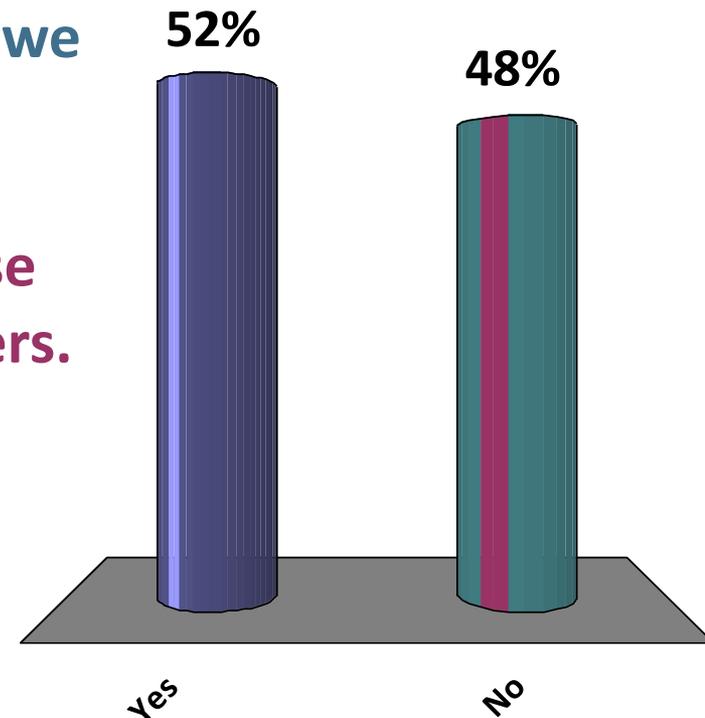
Water Quality in regard to Tourism/Recreation

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Explore opportunities to recycle and use the fish and fish guts in organic fertilizers.

A. Yes

B. No



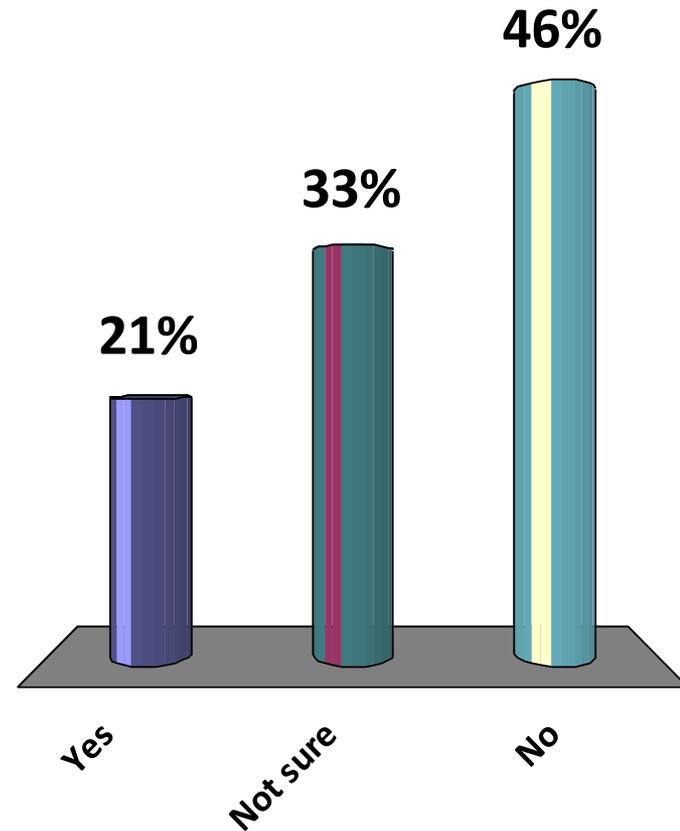
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- B. Not sure
- C. No



Now we want to know what you think....

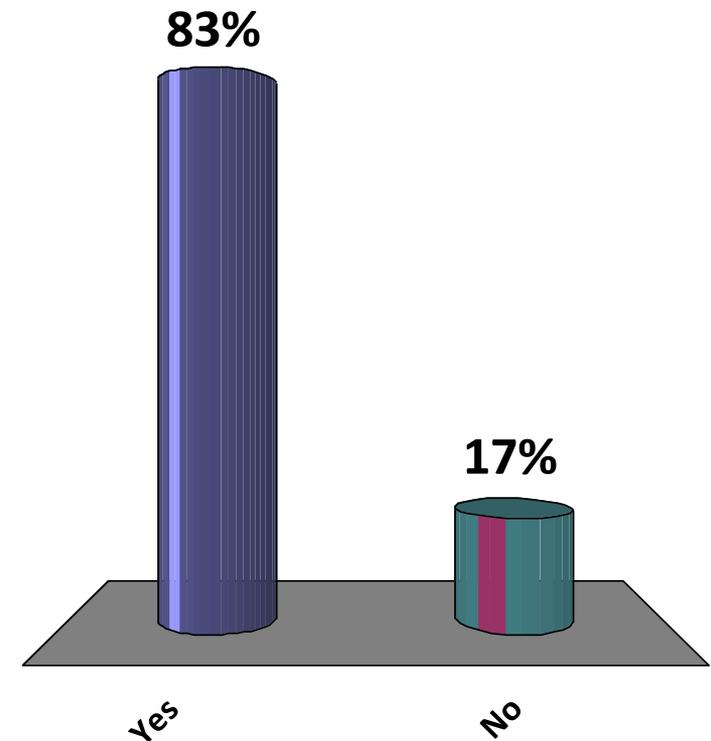
Water Quality in regard to Agriculture/Land Owners

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Engaging and educating Farmers on programs available with MDNR, MDC, NRCS, and FSA.

A. Yes

B. No



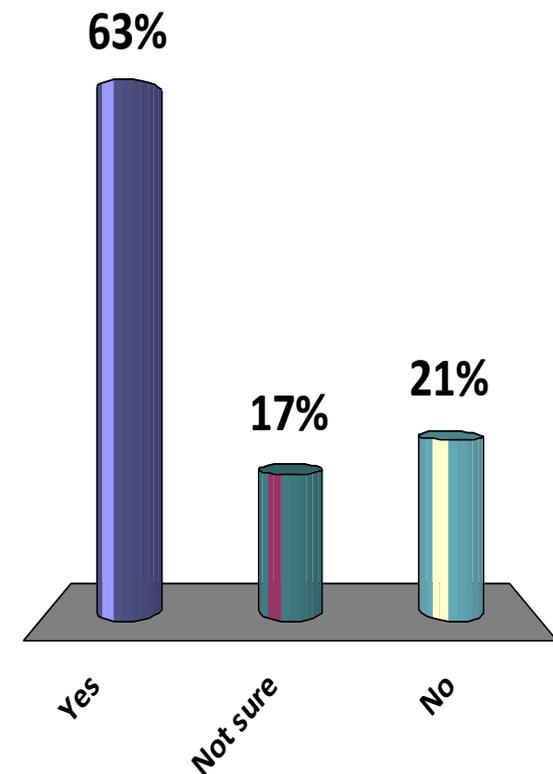
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- A. Yes
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- C. No



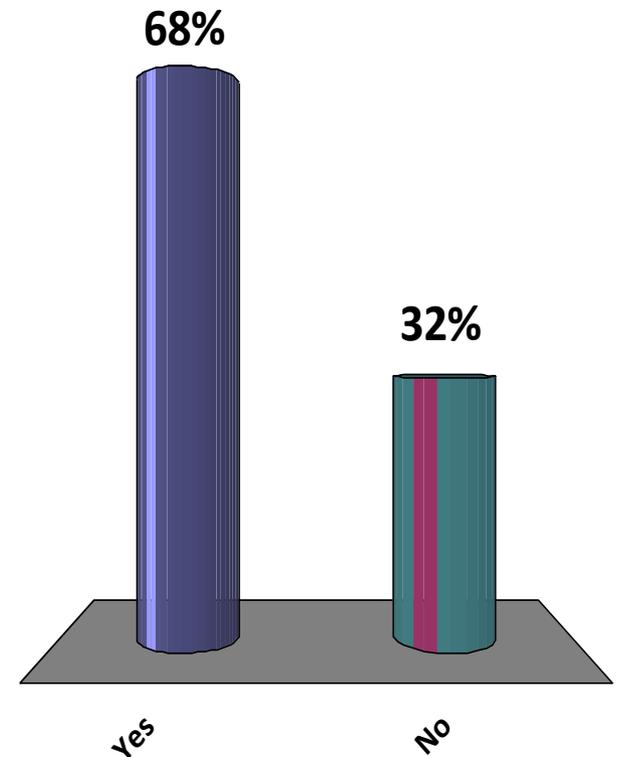
Now we want to know what you think....

Water Quality in regard to Agriculture/Land Owners

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Offering educational workshops or lunch and learn programs on agriculture related subjects from experts on those subjects and or programs.

- A. Yes
- B. No



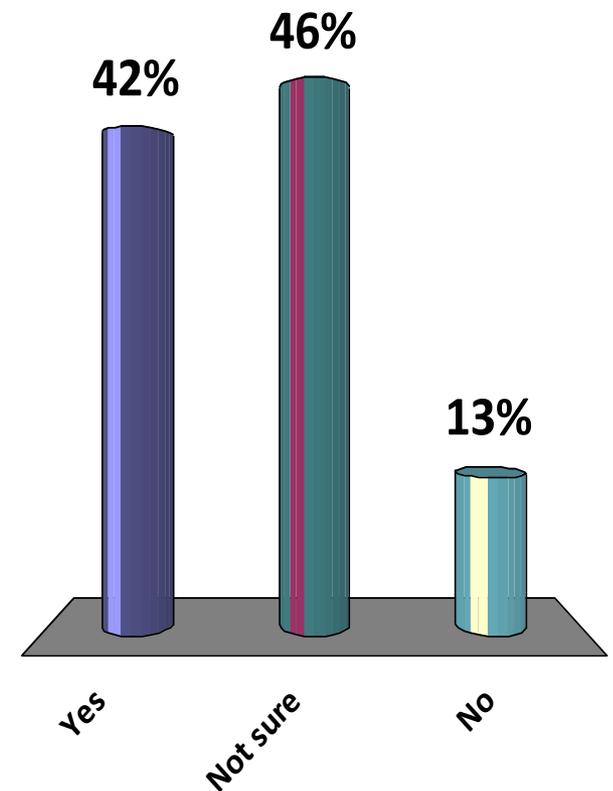
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- A. Yes
- B. Not sure
- C. No



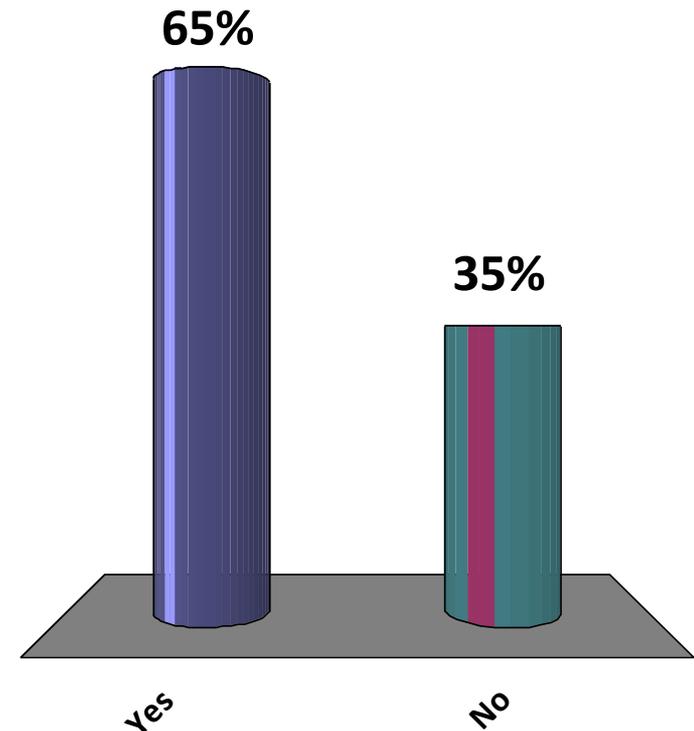
Now we want to know what you think....

Water Quality in regard to Agriculture/Land Owners

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Organizing field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated.

- A. Yes
- B. No



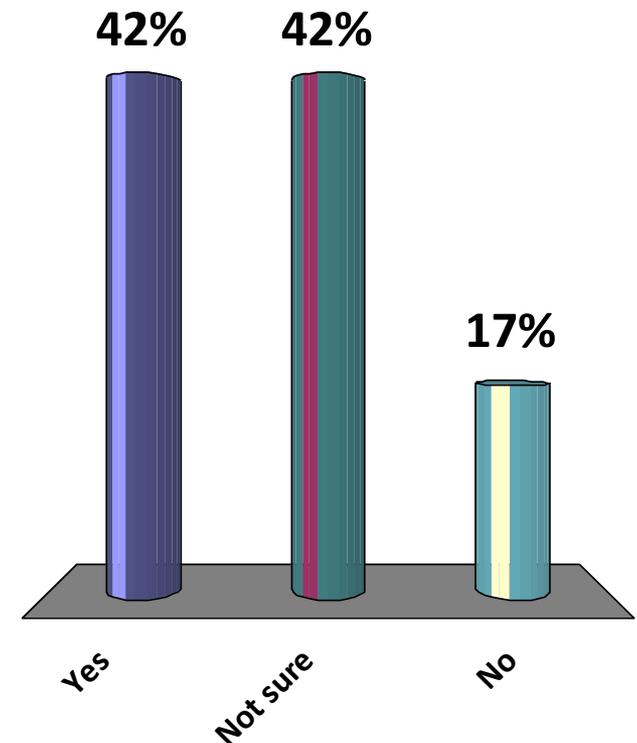
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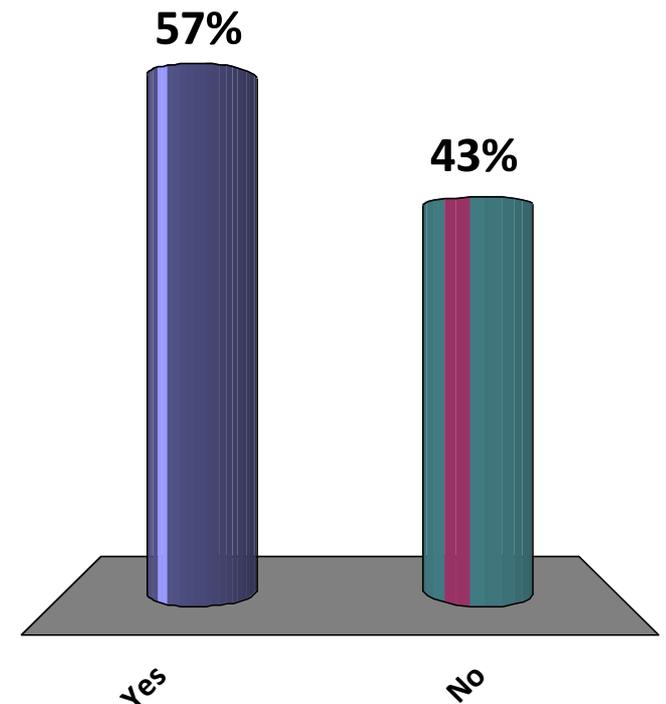
Now we want to know what you think....

Water Quality in regard to Drinking Water/Protection

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Developing a comprehensive inventory list of abandoned wells.

- A. Yes
- B. No



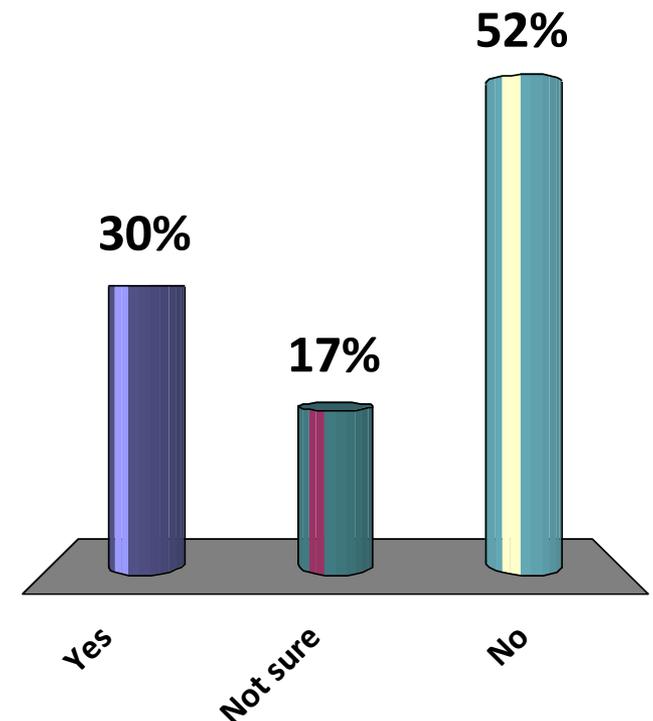
Now we want to know what you think....

Water Quality in regard to Drinking Water/Protection

Do you feel that we can successfully encourage local participation and engagement in this activity?

Developing a comprehensive inventory list of abandoned wells.

- A. Yes
- B. Not sure
- C. No



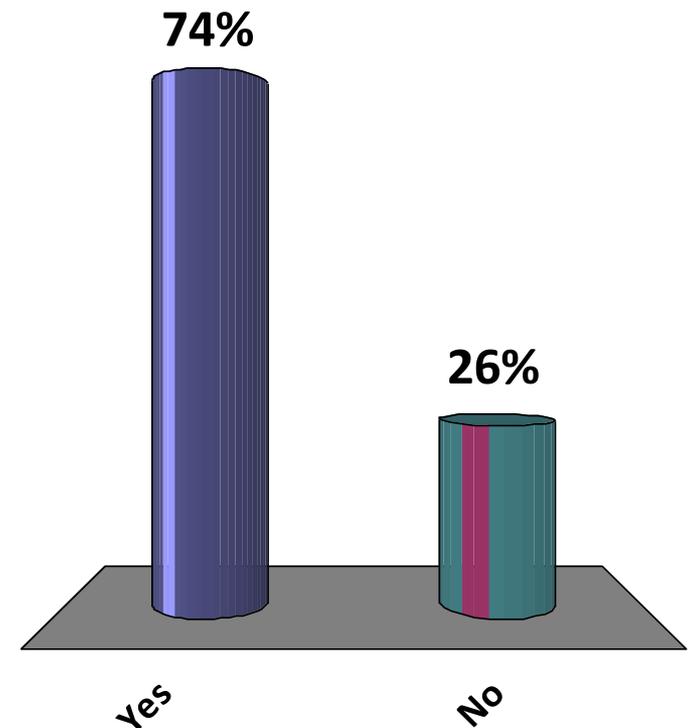
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Water Quality in regard to Drinking Water/Protection

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Developing a community plan to apply for well plugging grants to fill/plug those abandoned wells.

- A. Yes
- B. No



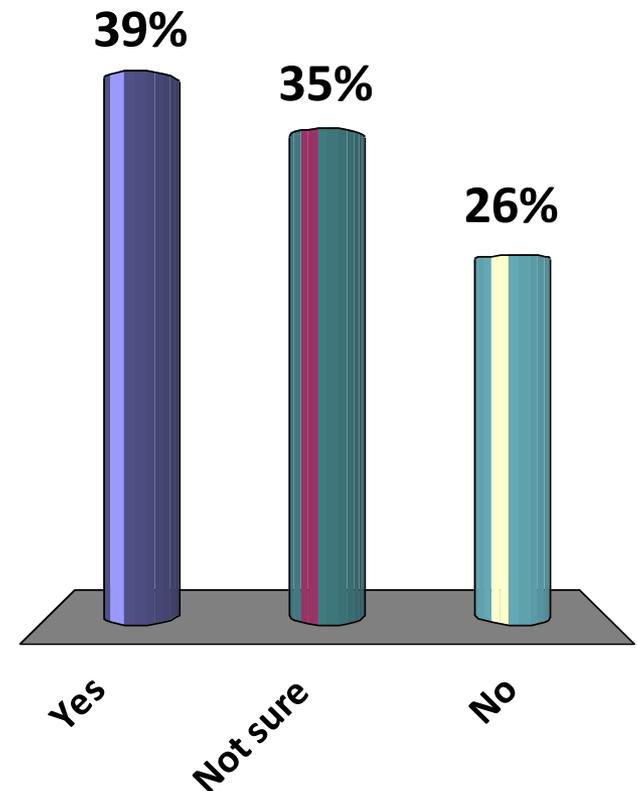
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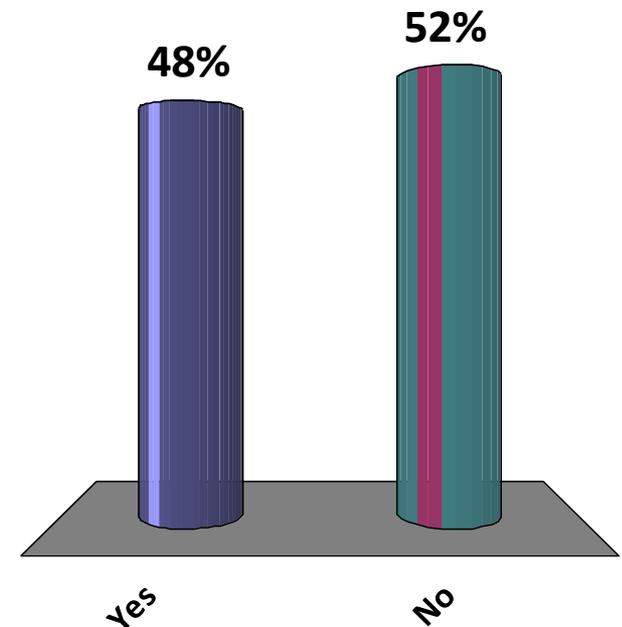
Now we want to know what you think....

Water Quality in regard to Drinking Water/Protection

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Develop a comprehensive list of abandoned or dilapidated properties and identifying them as potential Brownfield projects for possible lead base paint and asbestos cleanup with grant funds.

- A. Yes
- B. No



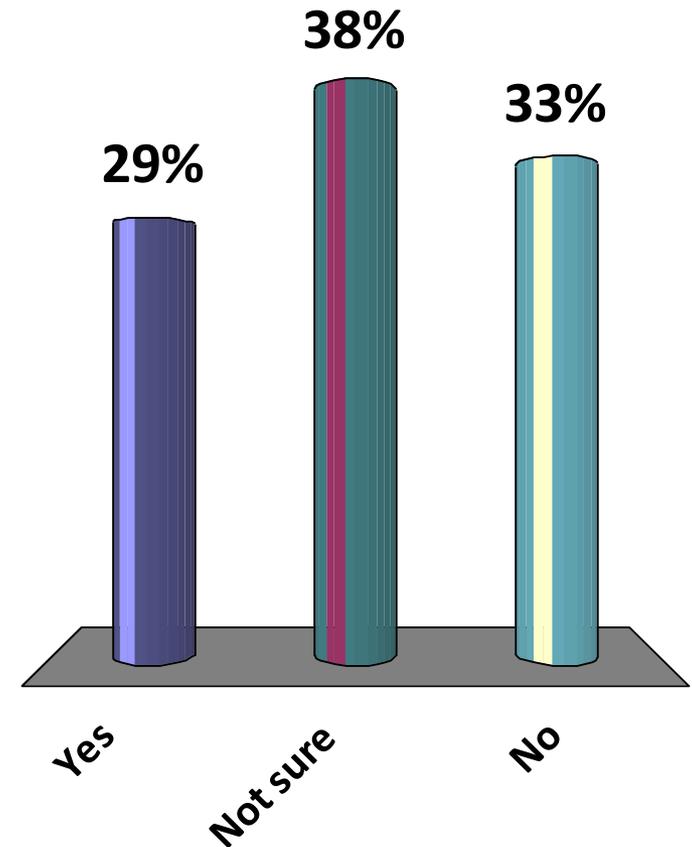
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Do you feel that we can successfully encourage local participation and engagement in this activity?

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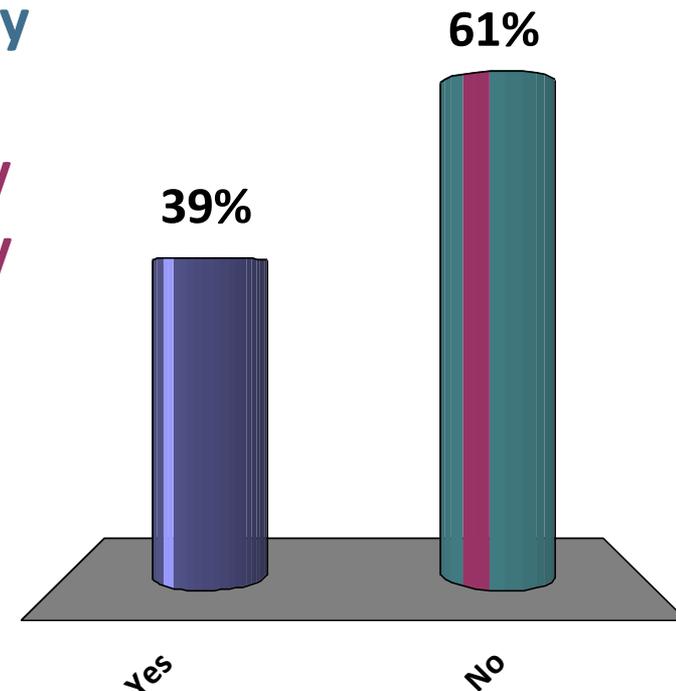
Now we want to know what you think....

Water Quality in regard to Drinking Water/Protection

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Exploring ways for the local community and business owners within a relatively close distance to the Bennett Springs State Park to connect to the state park wastewater treatment facility.

- A. Yes
- B. No



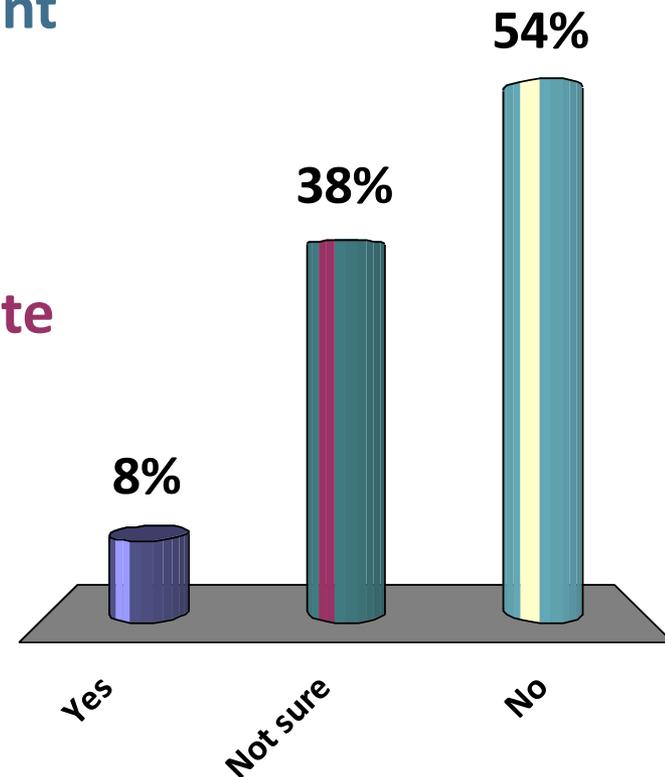
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- C. No





Education & Public Outreach Questions

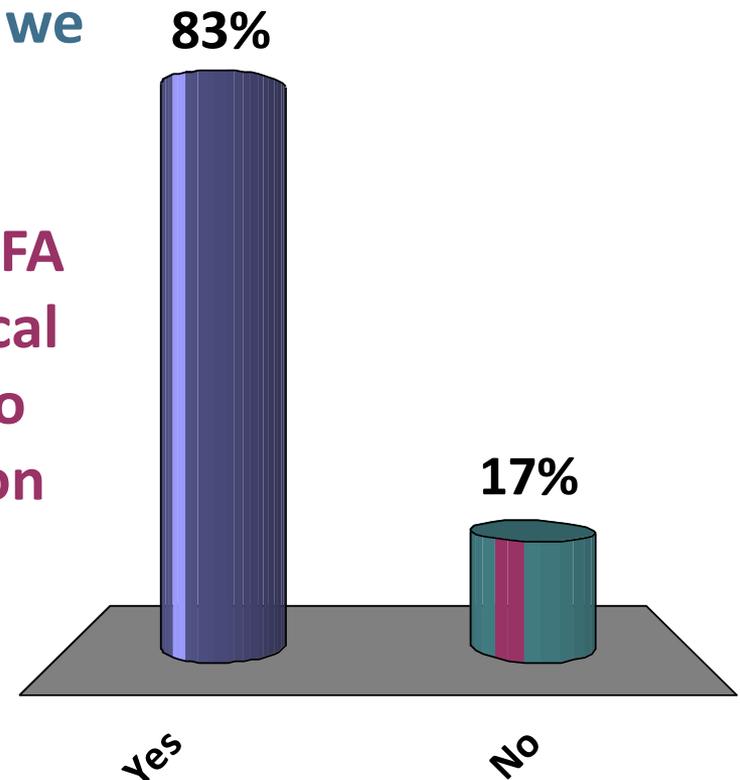
Now we want to know what you think....

Education and Public Outreach

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Working with local 4-H programs and FFA programs, MU Extension programs, Local Schools, MDNR, MDC, NRCS, and FSA to promote water quality, water protection and preservation.

- A. Yes
- B. No



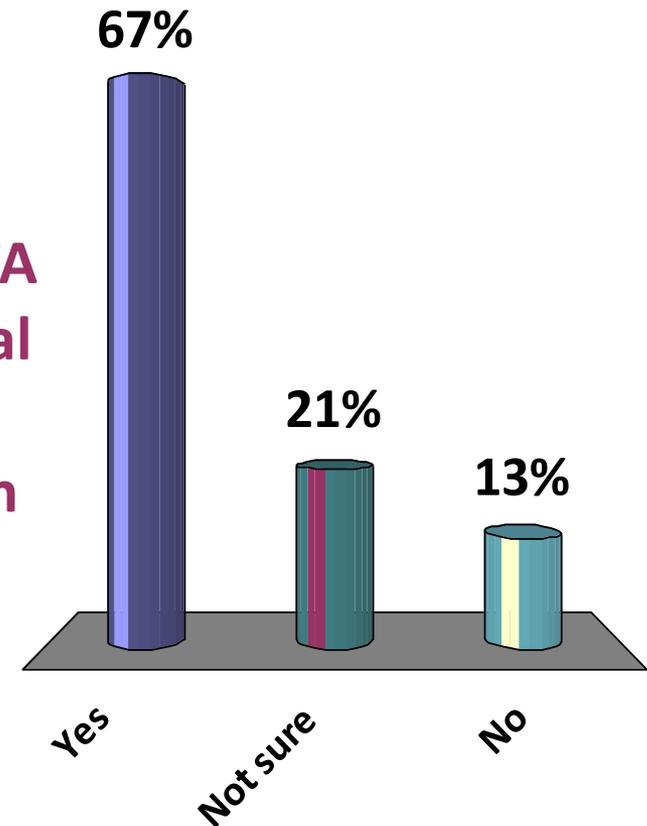
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- A. Yes
- B. Not sure
- C. No



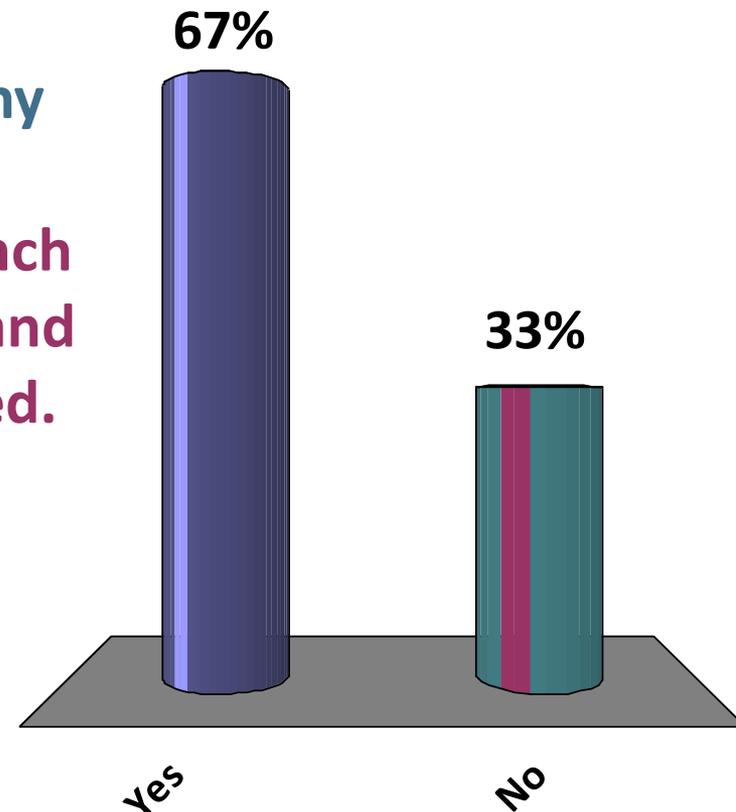
Now we want to know what you think....

Education and Public Outreach

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Offering educational workshops or Lunch & Learn programs on water sampling and analysis in the Niangua River watershed.

- A. Yes
- B. No



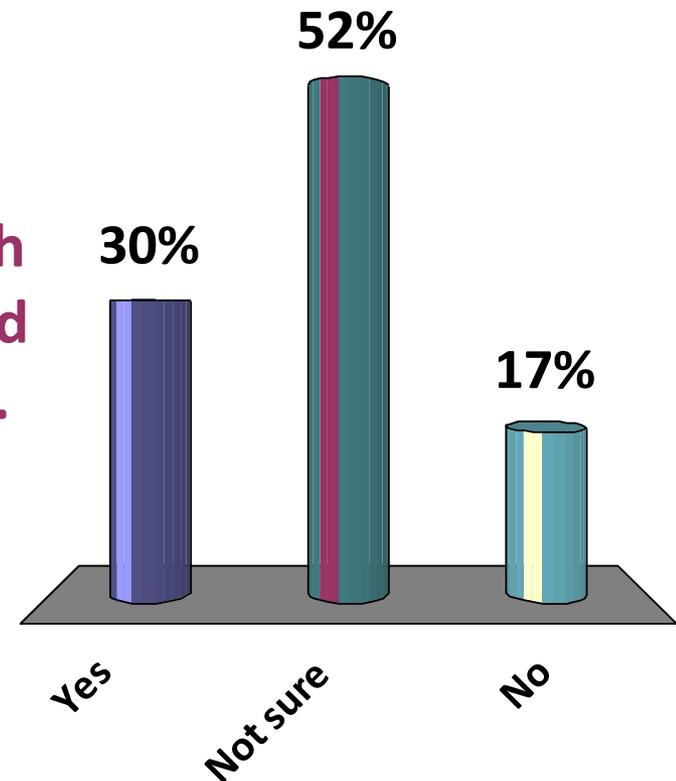
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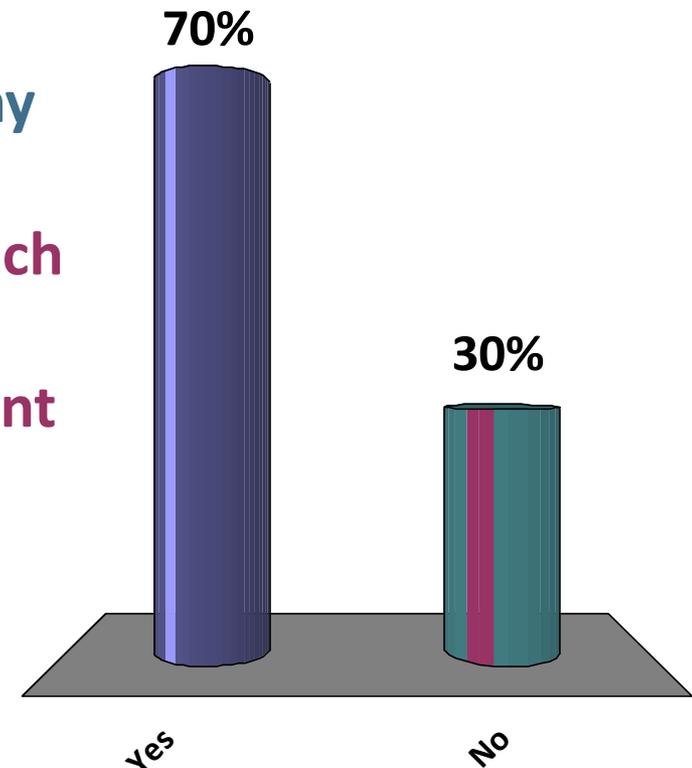
Now we want to know what you think....

Education and Public Outreach

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Offering educational workshops or Lunch & Learn programs on loan and grant programs for the repair and replacement of failing on-site septic systems.

- A. Yes
- B. No



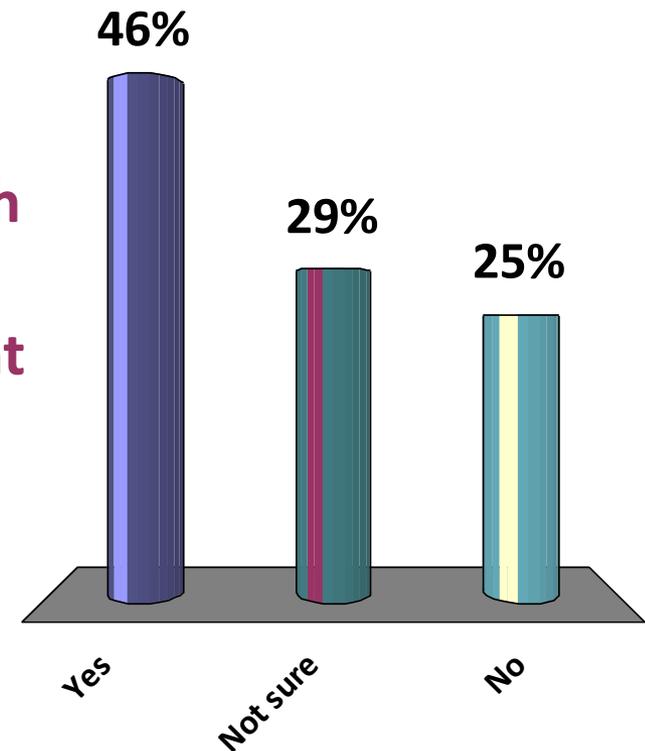
Now we want to know what you think....

Education and Public Outreach

Do you feel that we can successfully encourage local participation and engagement in this activity?

Offering educational workshops or lunch and learn programs on loan and grant programs for the repair and replacement of failing on-site septic systems.

- A. Yes
- B. Not sure
- C. No



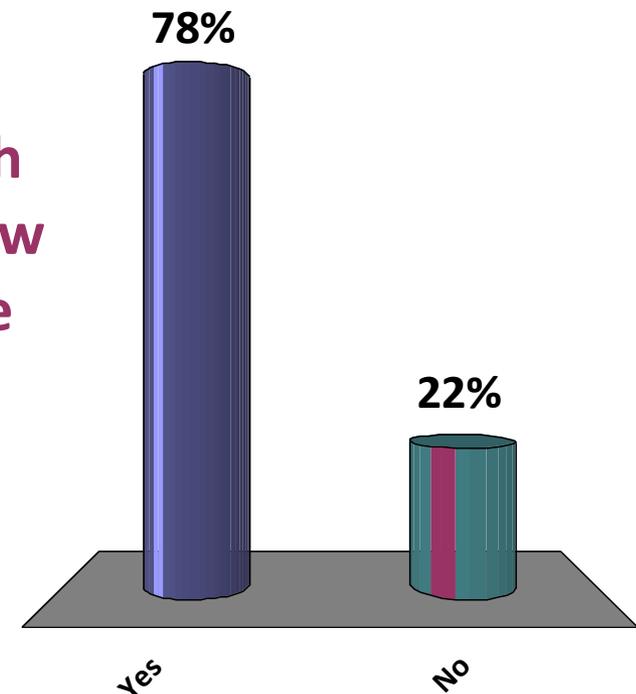
Now we want to know what you think....

Education and Public Outreach

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Offering educational workshops or Lunch & Learn programs on illegal dumping-how to combat the problem and what are the ramifications legally and financially.

- A. Yes
- B. No



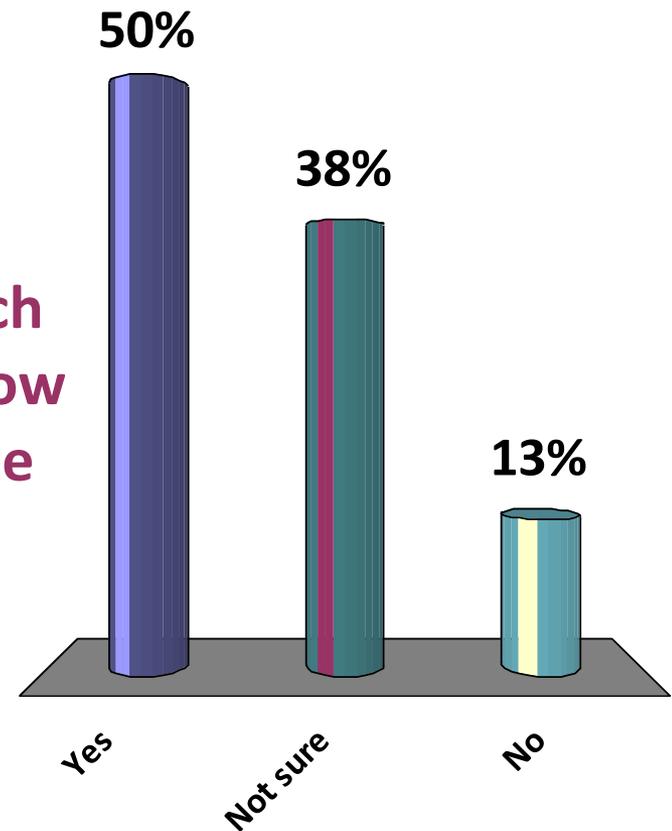
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- A. Yes
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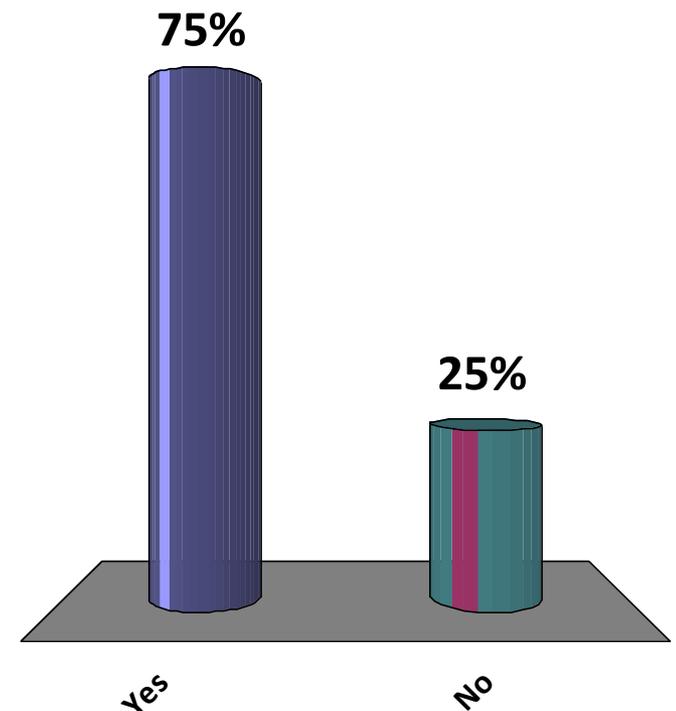
Now we want to know what you think....

Education and Public Outreach

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Offering educational workshops or Lunch and Learn programs on recycling-how to encourage this as a better option.

- A. Yes
- B. No



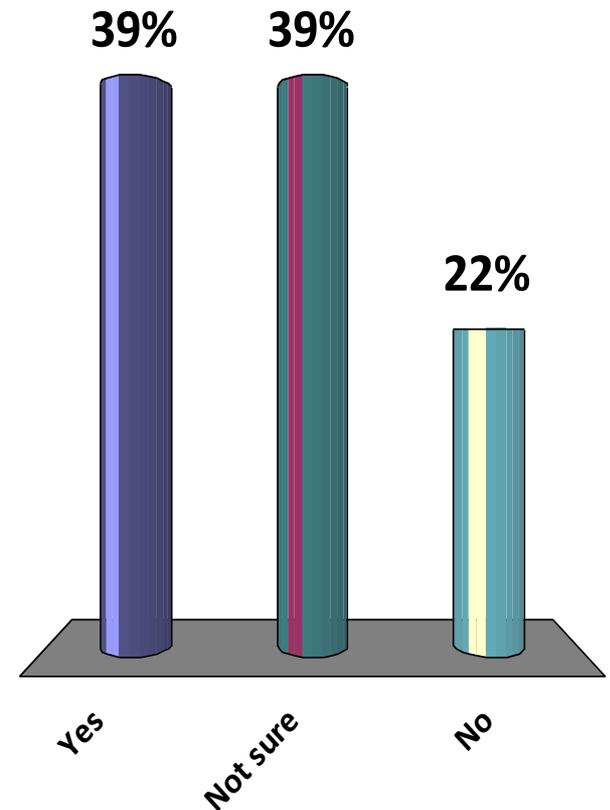
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- A. Yes
- B. Not sure
- C. No





Habitat Preservation & Restoration Questions

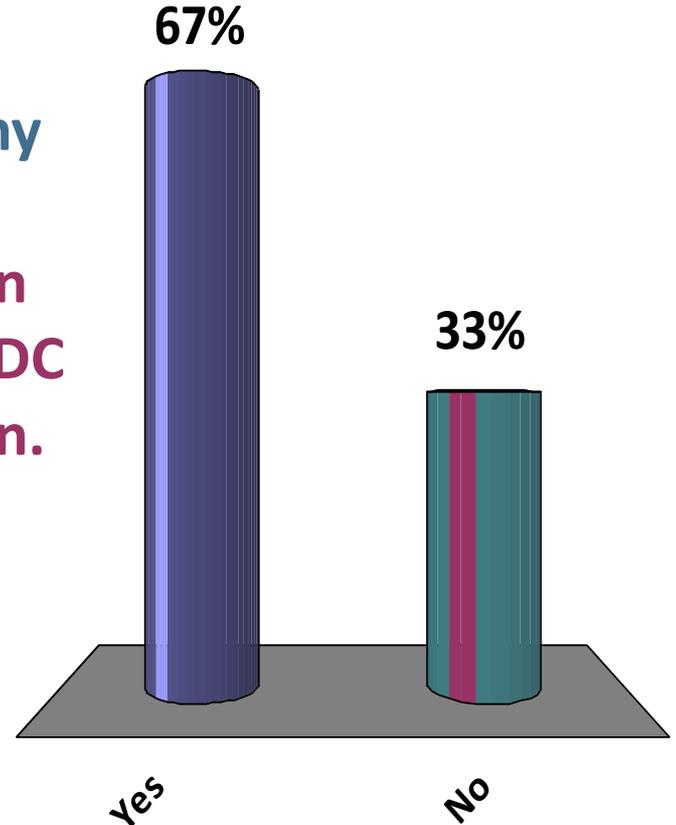
Now we want to know what you think....

Habitat Preservation and/or Restoration

Do you support this as an action item that we should consider including in our Healthy Watershed Plan?

Engaging and educating Landowners on programs available with MDNR and MDC on habitat preservation and restoration.

- A. Yes
- B. No



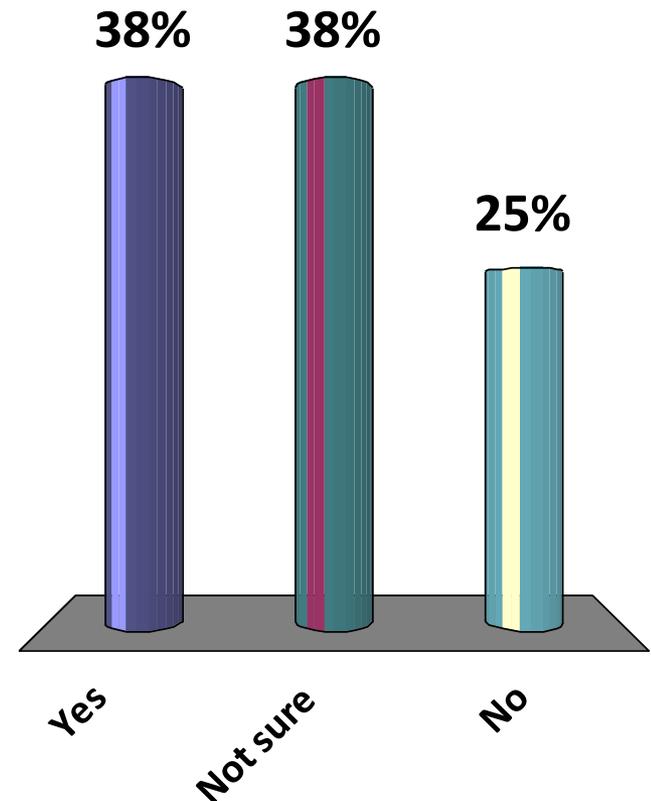
Now we want to know what you think....

Habitat Preservation and/or Restoration

Do you feel that we can successfully encourage local participation and engagement in this activity?

Engaging and educating Landowners on programs available with MDNR and MDC on habitat preservation and restoration.

- A. Yes
- B. Not sure
- C. No





Now we want to know what you think....

What other activities do you want to consider?

Please share your thoughts and ideas.

Thank you!

We appreciate your time, and your input into the planning process.

Our next meeting will be in March 2016 (date to be determined)

We will be meeting in Camden County, as it is the only county within the watershed that we have not yet met.

Thank you again!



Niangua River Watershed

Community Partnership Project

Watershed Advisory Committee Meeting

Tuesday, May 10, 2016

Laclede Electric Cooperative

Camdenton Office Community Room

2620 S. State Highway 5

Camdenton, MO 65020



Establishing the Priorities

At our last meeting, we had four areas in which we discussed and identified actions in regard to water quality. Each group discussed the top three actions they would like to move forward into the “Healthy Watershed Plan”

Four Focus Areas:

Tourism and Recreation

Agriculture and Landowners

Drinking Water

Habitat Restoration



Tourism and Recreation

Tourism and Recreation

Goal: Maintain and or improve water quality in regard to our rivers and lakes within the watershed that see a high volume of tourism and recreation activities.

Establishing the Priorities

Tourism and Recreation-Top Three Priorities Identified

1. Working with local Stream Teams to schedule clean up along the banks of the Niangua River on more regular intervals.
2. Offering educational workshops or Lunch and Learn programs on illegal dumping-how to combat the problem and what are the ramifications legally and financially. ***
3. Working with local 4H programs, FFA programs, MU Extension Programs, Local Schools, MDNR, MDC, NRCS, and FSA to promote water quality, water protection and preservation. **

Establishing the Priorities

Tourism and Recreation-Additional Actions Discussed

- a) Being able to quantify the economic impact on the region to be able to share with the public. An economic impact study on clean water within the Watershed should be conducted.
- b) Share the economic impact with the public, and more public awareness activities.
- c) Water sampling and testing by agency groups.



Agriculture and Landowners

Agriculture and Landowners

Goal: Maintain and or improve water quality in regard to our rivers and other water sources within the watershed that see a high volume of agricultural use.

Establishing the Priorities

Agriculture and Landowners-Top Three Priorities Identified

1. Organizing field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated.
2. Engaging and educating farmers on programs available with MDNR, MDC, NRCS, and FSA.
3. Working with local 4H programs, FFA Programs, MU Extension Programs, Local Schools, MDNR, MDC, NRCS, and FSA to promote water quality, water protection, and preservation. **

Establishing the Priorities

Agriculture and Landowners-Additional Actions Discussed

- a) Erosion control was the problem they wanted to address including what can be done with stream bank stabilization, using rip rap, using vegetation, and gravel removal
- b) Education and information from state and federal agencies on what landowners “can do” including gravel removal and erosion control
- c) Encourage individual landowners to proactively use best management practices
- d) Educational workshop on the riverfront landowners property rights

Establishing the Priorities

Agriculture and Landowners-Additional Discussion for Consideration

Some of the participants thought we may get a better response for several reasons if we used the term “landowner” more consistently throughout the plan.

Some felt that it may open up the participation in certain programs from large landowners, absentee landowners, and lessee/lessor landowners that may not consider the conservation programs simply because they do not “farm”.



Drinking Water

Drinking Water

Goal: Maintain and or improve water quality in regard to drinking water sources and future water sources by identifying potential non-point sources of pollution.

Establishing the Priorities

Drinking Water-Top Three Priorities Identified

1. Developing a comprehensive inventory list of abandoned wells and developing a community plan to apply for well plugging grants to fill/plug abandoned wells.
2. Offering educational workshops or Lunch and Learn programs on loan and grant programs for the repair and replacement of failing on-site septic systems.
3. Offering educational workshops and Lunch & Learn programs on illegal dumping, what are the ramifications and recycling as a better option. ***



Habitat Restoration

Habitat Restoration

Goal: Increase awareness and implementation of habitat restoration programs and activities as well as promoting preservation of current natural habitats.



Establishing the Priorities

Habitat Restoration-Top Three Priorities Identified

1. Offering educational workshops and Lunch & Learn programs on illegal dumping-how to combat the problem and what are the ramifications legally and financially. ***
2. Offering educational workshops or Lunch & Learn programs on water sampling and analysis in the Niangua River Watershed.
3. Offering educational workshops or Lunch and Learn programs on recycling-how to encourage this as a better option.



Identify Volunteer Groups

Since the implementing of the “Healthy Watershed Plan” is completely voluntary it will take people, groups, organizations, and agencies that will consider the actions that we have identified as part of their mission, and or an opportunity to participate in a project that will have a benefit to our watershed, community and our future.

Since most of the actions that we have established are really encompassing the entire watershed we are less focused on the location but rather the most potential for implementation.



Identify Volunteer Groups

Breakout Session to Discuss Possible Volunteer Groups

1. List of actions
2. List of volunteer groups



What is your biggest concern?

Think about what would be your biggest concern with water quality in your life personally.

Not being able to drink your water (Flint, Michigan)

Having limited or no water (Lubbock, Texas)

The economic impact because of poor quality water (Tainter Lake, Wisconsin)

Timeline to Completion

May – August 2016 Complete the “Healthy Watershed Plan”

September 2016 Meet with the Watershed Advisory Committee to review the draft copy of the “Healthy Watershed Plan”

September – October 2016 Will be the 30 day public comment period for all to submit comments about the plan

October 2016 – Any final edits to the plan and submission to Missouri Department of Natural Resources



Contact Information

Lake of the Ozarks Council of Local Governments

Phone: 573-346-5692

linda.conner@loclg.org

www.loclg.org

www.nianguariverwatershed.org



Niangua River Watershed

Community Partnership Project
Healthy Watershed Plan

Watershed Advisory Committee Meeting

Wednesday, September 14, 2016

Laclede Electric Cooperative

Lebanon Office Community Room

1400 E. Route 66

Lebanon, MO 65536



Community Partnership Project

The planning process:

Project start date: May 2015

Project completion date: October 31, 2016

Hosted a series of meetings to discuss the project, develop our goals and action items and develop the “Healthy Watershed Plan”

Today, review of the Healthy Watershed Plan



Healthy Watershed Plan

Executive Summary

In a nutshell, it explains the project and the Healthy Watershed Plan development.

It explains the planning objectives.

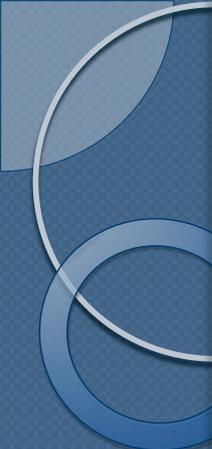
It emphasizes the need for community participation in our planning and implementation process.



Healthy Watershed Plan

Chapter I Introduction

- What is a Watershed?
- Planning Partners



Healthy Watershed Plan

Chapter 2 Niangua River Watershed Characteristics

- Facts about the Niangua River watershed

- General Characteristics

- Public Use Areas

- Land Use

- Water Resources

- Flooding

- Water Quality

- Missouri State Operating Permits

- Permits by County

- Water Availability and Waters Use

- Ground and Stream Monitoring

- Water Usage Today and in the Future

Healthy Watershed Plan

Chapter 2 Niangua River Watershed Characteristics Continued...

- Facts about the Niangua River watershed

 - Demographics of the Niangua River watershed

 - Population (Current 2000 Census Data)

 - Population Projections (ACS and OA)

 - Population Age Groups

 - Population Growth Trends

 - Employment Information



Healthy Watershed Plan

Chapter 2

Why are we looking at population and growth trends?

As population increases the demand for water and wastewater facilities increase.

As population decreases it causes a financial strain on small communities that operate water and wastewater facilities. (Less customers = less income.) So how do they continue to maintain and improve current facilities.



Healthy Watershed Plan

Chapter 2

Why are we looking at employment types?

Are there any large employers that may put an increased need (capacity) on the water and wastewater resources?



Healthy Watershed Plan

Chapter 3 Collaboration in the Niangua River Watershed

Community Projects:

Since the Healthy Watershed is based on voluntary implementation, when the project started we researched and collected information on organizations that were already doing projects within the Niangua River watershed to engage them in the planning process. In this chapter we document all of those projects identified. These organizations will be a valuable resource in putting into practice the goals and actions outlined in the Healthy Watershed Plan.



Healthy Watershed Plan

Chapter 4 Community Engagement

Planning Meetings

Details on each of the planning meetings is put forth in Chapter 4. It explains the planning process and the engagement at each of the meetings. Appendix A will also have a meeting summary from each of the meetings.

Chapter 4 also discusses the development of the Watershed Advisory Committee and developing the Healthy Watershed Plan.



Healthy Watershed Plan

Chapter 5 Niangua River Watershed Priorities and Actions

This chapter describes the issues and concerns and how the goals and actions items were developed during the planning process.

On page 63, there is the initial full list of potential action items and then on page 67 the top three actions identified and then on page 68 the final list of actions identified at our last planning meeting.



Healthy Watershed Plan

Chapter 6 Partners and Resources

In Chapter 5 resources are identified to help with the implementation of the Healthy Watershed Plan.

First, there is a list of potential volunteer organizations.

Second, there is a list of potential financial assistance and funding opportunities available.



Healthy Watershed Plan

Appendix A

Includes all the meeting information:

- Agendas

- Sign-in sheets

- Presentations from the meetings

- Meeting summaries



Healthy Watershed Plan

Appendix B

Includes all the meeting media and marketing information:

- Press Releases

- Newspaper Articles



Healthy Watershed Plan

Appendix C

Other Materials:

Watershed Advisory Committee Brochure

Survey Information

Meeting Hand-outs

What Happens Next

Comment Period

There is a 30 day comment period on the Niangua River Watershed Healthy Watershed Plan.

Please email linda.conner@loclg.org your comments.

You can also submit your comments on the comment page on our website:

<http://www.nianguariverwatershed.org/Submit-Comments.html>



What Happens Next

Watershed Advisory Committee

Please also submit your comments on the future of the Watershed Advisory Committee.

Does the committee want to identify specific action items they would like to work on in the near future?

How often, to be effective do you feel the Watershed Advisory Committee should meet? Annually, Semi-annually or quarterly?



What Happens Next

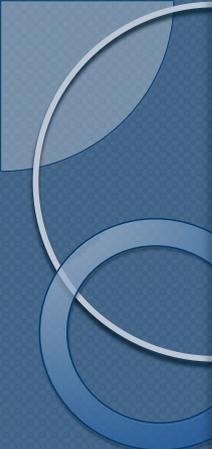
Healthy Watershed Plan

The final copy of the plan will be submitted to the Missouri Department of Natural Resources by October 31, 2016.



Thank you!

Thank you to all for your participation and valuable input in developing the Healthy Watershed Plan.



Remember to send your comments...

Comment Period

There is a 30 day comment period on the Niangua River Watershed Healthy Watershed Plan.

Please email linda.conner@loclg.org your comments.

You can also submit your comments on the comment page on our website:

<http://www.nianguariverwatershed.org/Submit-Comments.html>



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Linda Conner

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www.nianguariverwatershed.org

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING SUMMARY**

Tuesday, January 26, 2016

3:00 p.m.

Central Bank Public Meeting Room

1197 Spur Drive

Marshfield, Missouri 65706

I. CALL TO ORDER

Linda Conner, Director of Lake of the Ozarks Council of Local Governments, (LOCLG) introduced herself, called the meeting to order at 3:05 p.m., and thanked everyone for attending the Niangua River Watershed Community Partnership Project meeting.

II. INTRODUCTIONS AND SIGN-IN SHEET

Gwenda Bassett introduced herself as the Southwest Regional Watershed Coordinator working with Our Missouri Rivers Program.

Andy Thomason introduced himself as Regional Planner at LOCLG. Pam Gilbert and Terre Brown introduced themselves as Administrative Assistants at LOCLG.

III. RESPONSIBILITIES OF THE WATERSHED ADVISORY COMMITTEE

Ms. Conner reviewed what had taken place so far, explaining the project was a collaborative effort between LOCLG and the Missouri Department of Natural Resources (MDNR). She explained that since the project reaches outside of LOCLG's region, there were two other planning councils involved, Southwest Missouri Council of Governments, represented this evening by Jason Ray, and Kaysinger Basin Region Planning Commission. No one was in attendance from Kaysinger Basin Planning Commission at the time of introductions, but two representatives of Kaysinger arrived later.

a. Volunteers Interested in the Future of the Niangua River Watershed.

Ms. Conner explained that the Niangua River Watershed Planning area encompasses Dallas, Laclede, Hickory, Webster and Camden Counties. The goal was to have a meeting in each of the counties to make sure everyone has an opportunity to be engaged in the process. She added we are in Marshfield today, located in Webster County, which is the largest population density of all the communities within the Niangua River Watershed, with 6,633 from the census data. Ms. Conner said that previous meetings have been held in Hickory,

Dallas, and Laclede. She said that at each of the previous meetings, we have asked volunteers to participate in the Watershed Advisory Committee (WAC) and many in attendance at this meeting have volunteered to be on the committee.

b. Willingness to Share Time and Participate in the Planning and Implementation of the Niangua River Healthy Watershed Plan.

Ms. Conner explained that an important part of the planning framework is to get local input, which is why we are here today. We are looking to develop the WAC. We will discuss the responsibility of the WAC, how often they will meet, and what we hope to accomplish at each of the meetings. The WAC requires interested, engaged community leaders, people who can share information on the watershed, promote watershed protection, preservation, enhancement, and inspire others to do the same.

IV. DEVELOPING THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED

Ms. Conner told the group we want you to help us develop a list of priorities, and we will go into those in detail at the next section of the meeting. Then we'll develop a ranking system to establish those priorities. We will develop action plans to implement the priorities. Ms. Conner again stated that this is strictly voluntary.

a. Review the List Identified from the Last Public Meeting.

Ms. Conner said we will host four additional meetings. At the last meeting, in which Bob Broz facilitated, we gathered a list of priorities, and Ms. Conner took copious notes concerning issues and concerns so that we could develop the action items needed. She said today we will continue developing that list of priorities. We have a list, and we will ask those attending to give their opinions on how to move forward, and if you feel it is a valuable action item that should be included in the watershed plan. She said at the next meeting, we will try to finalize the list and implementation of those key areas. We will determine the next steps at the next meeting because, again, it is all voluntary.

b. Identify the Probability of Each Action being Feasible.

Ms. Conner stated that we may need to engage other groups in the planning process in order to move certain priorities forward. At the last meeting, we will finalize the plan, share the final review with the committee, and make sure we have included what you feel is important.

Ms. Conner said we need people to be involved who are interested in developing shared priorities. We want to make sure everyone feels comfortable with what the process and can stand behind it. It's important to have a clear path to

change. We may have a grandiose idea, but if we don't know how to get there and accomplish it, it's just a grandiose idea.

We also need to support science-based decisions for the watershed. We have reviewed all the information collected at the previous meetings. We reviewed the areas of interest and discussed challenges and looked for opportunities. Based on the surveys, these were the three top areas from the previous meetings that need to be addressed:

- Water Quality
- Education and Public Outreach
- Habitat Preservation and/or Restoration.

We wrote it down because when we listened to what you had to say, these were areas that rose to the top. There were water quality issues, but there were water quality issues in several categories. We had water quality in 1) tourism and recreation, 2) agriculture and landowners, and 3) water quality in specifically drinking water.

Concerning water quality under tourism and recreation, these were the items that rose to the top from what was given to us at the last meeting:

- Large amounts of trash at the Niangua River after a holiday weekend
- Fish guts being thrown back into the water at Bennett Spring
- Lagoons at Bennett Springs are undersized for the number of users, which we understand has been addressed, but I wanted to document everything.
- Onsite water systems are failing
- Goodwin Sink Hole, the water runs directly into Ha Ha Tonka State Park

Water quality under agriculture and landowners, these are the items mentioned:

- Cattle in the river
- Soil erosion
- Pesticide, fertilizers and other pollutants

As far as drinking water, the following was mentioned:

- The number of abandoned wells
- The number of new wells coming on line
- Surface water protection

Linda stated again, these were the three main areas of interest, so when we put together these action items, we grouped them under each of them, so we could determine within those areas which might be the priorities.

Ms. Conner moved the meeting to the next slide show, which concerned the list of action items. Remote data collection devices were given to attendees as they signed in, and she asked Ms. Bassett to demonstrate how the remote data collection devices worked.

Ms. Bassett explained that by using the remote data collection devices, we can capture the group's responses to questions asked via the PowerPoint. Gwenda said we won't know the individual responses of the group; those are anonymous, but would know the results only. We can then crunch the data and look at what are the top priorities. She explained the power button is in the center of the circle of the remote. After everyone powered on, she asked a test question, indicating responses would appear and the attendee could select A, B, or C using numbers that correlated with the letters. She explained if someone answered with the wrong number, the slide would be reset and the question asked again. After everyone entered their answer, the resulting data would be displayed.

Ms. Conner explained that the first series of questions would be what those attending thought personally.

How important do you feel water quality is to you personally and to your family?

Attendee asked, "In relation to what?" Ms. Conner answered it was how he felt. Attendee asked, "In relation to what the Chinese are doing to the Yellow River?" Ms. Conner replied we were here to talk about the Niangua River water.

Results:

A) Very important 75% B) Somewhat important 25% C) Not important 0%

How important do you feel water quality is to our local tourism and recreational activities and the local economy?

Results:

A) Very important 60% B) Somewhat important 36% C) Not important 4%

Ms. Conner explained that once we have the data, it will be printed on the website so everyone could review it at their leisure so, if anyone had questions, they could bring them to the next meeting.

How important do you feel water quality is to the agricultural industry and landowners?

An attendee asked if that meant access to the water, and Ms. Conner replied that water quality could mean access. She then asked if he felt he had adequate, good water. Attendee responded he didn't know what she was talking about because if his cattle didn't have access to the water he didn't care about the water. Ms. Conner told him to just answer the question however he felt.

Results:

A) Very important 60% B) Somewhat important 36% C) Not important 4%

How important do you feel water quality is for drinking water and protecting the drinking water for the future?

Results:

A) Very important 80% B) Somewhat important 12% C) Not important 8%

How important do you feel education and public outreach is to water quality, protection and preservation?

Results:

A) Very important 71% B) Somewhat important 21% C) Not important 8%

How important do you feel preservation and/or restoration is to our communities now and for future generations?

Results:

A) Very important 64% B) Somewhat important 24% C) Not important 12%

V. NIANGUA RIVER WATERSHED COMMUNITY PLAN

a. Community Engagement

Ms. Conner referred to the next set of slides, saying we put together specific action items that correlated to your concerns and/or interests collected from the previous meeting. She said there was a series to the slides. The first question was how the attendee directly felt. The second question would be if you feel the community would support or not support the project because it's not just about us, but also community engagement and involvement.

Under water quality in regard to tourism and recreation: Do you support this action item that we should consider including in the Healthy Watershed Plan?

An annual award or recognition of businesses that support, promote and do environmentally friendly activities.

An attendee asked if that would be a monetary award, and Ms. Conner responded no; it would be recognition that the business was environmentally friendly. If the business uses the recognition as a marketing tool or as a means to promote itself, then it may bring about a monetary award.

Results:
Yes 80% No 20%

Same action item: Do you feel that we can successfully encourage local participation and engagement in this activity? Do you feel that businesses would be interested in receiving this award and do you think we can engage businesses in this process?

An attendee asked what was the definition under businesses and if a farm would be considered a business. Ms. Conner answered yes, that a farm is a business. She added we would love to see farms recognized.

Results:
Yes 48% No 24% Not Sure 28%

Water Quality under Tourism: Again, this is how you feel, personally, as to whether we should include the following as an action item in our plan: Working with local stream teams to schedule volunteer cleanups along the banks of the Niangua on more regular intervals. This is in connection with the concern of trash along the river; do you feel that this would be beneficial? Can we get more volunteers for the Stream Team? Do you feel this is something we should add as an action item in the plan?

An attendee asked how often there was a cleanup along the watershed. An attendee from the Stream Team said it was cleaned weekly during the season, and that was not enough. She said there are two stream teams from the Whistle Bridge at Edith down to the Niangua River boundary that floats into the Lake. Ms. Conner asked if she needed more volunteers, and the attendee responded "Absolutely."

Another attendee added that at the big one at the Niangua River, where everyone floats, there is a huge amount of trash, which is done at least annually. The Stream Team representative said that Carl does the area at least twice annually. She said the team goes from the Whistle Bridge at Edith below Tunnel Dam down to Ha Ha Tonka.

Ms. Conner said again this is how you personally feel, if it needs to be included in our Healthy Watershed Plan.

Results:
Yes 84% No 16%

Same action item-working with the local stream teams to schedule volunteer cleanup along the banks of the Niangua River. Can we get more volunteers to be part of the Stream Team? Do you feel we can engage more people in this process?

Results:
Yes 48% Not sure 44% No 8%

Ms. Conner reiterated the following is how you feel the following would work for a healthy watershed: Working with local organizations and Stream Team volunteers to increase the number of water samples collected on the Niangua River?

Results:
Yes 63% No 38%

Do you think we can engage participation in this activity, such as the local organizations and stream teams, thereby increasing the number of water samples collected on the Niangua River? This would give you a better idea of what's really happening out there if we have the collected data.

Results:
Yes 46% Not Sure 33% No 21%

Do you support this action item to be put into the Healthy Watershed Plan: Expanding the fish cleaning stations to more fishing recreational areas?

Results:
Yes 63% No 38%

We may include the above as an action item but, if we can't get people to use fish cleaning stations, will it do us any good? Do you feel that by expanding the fish cleaning stations to more fishing recreational areas, they be used more people?

Results:
Yes 33% Not sure 42% No 25%

Do you support this action item to be included in the Healthy Watershed Plan: How do you feel specifically? Explore opportunities to use and recycle the fish guts in organic fertilizers.

Results:
Yes 52% No 48%

Do you feel that we can successfully engage other participants in this activity: Exploring the activities to recycle and use fish and fish guts in organic fertilizer?

Results:
Yes 21% Not sure 33% No 46%

An attendee made the comment that people had to work and Ms. Conner explained the recycling is not something you would do specifically, but there are companies that actually make fertilizer out of fish guts or dead fish. So it would be a matter of finding that resource and giving them the fish guts or dead fish to process.

An attendee asked Ms. Conner how many tons of fish guts you could get out of the watershed. Ms. Conner responded that the waste from fish hatcheries would also be included but added that, it may not be feasible.

Do you, personally, support this action item to be included in the Healthy Watershed Plan: Engaging and educating farmers on programs that are available from MDC, MDNR, NRCS and FFA?

Results:
Yes 83% No 17%

Same action item, but do you think we can get people involved, the community, new farmers, and farmers who've been farming for awhile: Do you think we can successfully engage them in educating them on the programs that are out there and new programs as they become available?

Results:
Yes 63% Not sure 17% No 21%

Do you think we can support this as an action item and do you personally think it should be included in the Healthy Watershed Plan: Offering occasional workshops and/or lunch and learn programs on agriculture-related subjects from experts on those subjects and/or programs.

Results:
Yes 68% No 32%

Do you think we can successfully engage local participation in the engagement of this activity: Offering educational workshops or lunch and learn programs on agriculture-related subjects from experts on the subjects?

Results:
Yes 42% Not sure 46% No 13%

Do you think you could support this action item personally: Organizing tours and field trips that demonstrate best practices and where implementation can be successfully demonstrated. This is finding out what your friends and neighbors are successfully doing, and that you can implement yourself.

Results:
Yes 65% No 35%

Again, this is the same action item, but do you feel we can get other people engaged in the process? Do we have farmers that would be willing to have people come out to their farms and look at what they've successfully done? Do you think we can get that engagement-organizing field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated?

Results:
Yes 42% Not sure 42% No 17%

Do you personally support this as an action item that you think we should include in the Healthy Watershed Plan: Developing a comprehensive inventory list of abandoned wells?

Results:
Yes 57% No 43%

Same action item, do you think we could get local participation in identifying those wells that would be a key component in order to create that inventory list?

Results:
Yes 30% Not sure 17% No 52%

Do you personally feel that we should include this item in the Healthy Watershed Plan: Developing a community plan to apply for well plugging grants to fill and plug those abandoned wells?

Ms. Conner added that having an inventory won't do us any good, unless we do something that will fix the problems.

Results:
Yes 74% No 26%

Again, this would require participation by the owners of the wells to be a part of the process. Do you think that developing a community plan, for applying for well plugging grants, would be something we could accomplish?

Results:
Yes 39% Not sure 35% No 26%

Mr. Broz commented that property owners can plug the wells themselves, legally, as long as the well is on his property. If an outside party wants to do it, then they must have a well driller come in. There's a lot more to it than you think.

Ms. Conner said it gets pretty expensive if you have to hire a well digger. Mr. Broz said the cost can range from \$300.00, if you do it yourself, to \$2,000 for a well digger.

Do you personally support this item to be included in the Healthy Watershed Plan: Develop a comprehensive list of abandoned or dilapidated properties and identify them as potential Brownfield projects for possible lead-based paint, or asbestos, for cleanup with grant funds.

Ms. Conner explained that brown field projects are properties that have been abandoned for a long time, whether an abandoned gas station or a building that has been left abandoned. She explained the Brownfield project was something we've had done within our region. We go in, clean it up, and take out the lead-based paint and asbestos, so it gets a clean bill of health. The property owner can then sell the property for development with no issues concerning contaminants.

Results:
Yes 48% No 52%

Ms. Conner went on to the next slide:

We would need participation by the landowners because most of those abandoned properties are privately owned. We can do the grant with them on it, but we need to know if we can get the landowners engaged in the process, which is developing a comprehensive list of abandoned and dilapidated properties and applying for the grant funding.

An attendee asked that if the landowners were so willing, would it even be dilapidated or abandoned, and Ms. Conner explained many times the owners are not aware of the program we offer where we use the grant funds to clean up the properties, so there would be an educational process informing them about the programs.

Another attendee asked what kind of grants, there were and how much the grants would cover financially. Mr. Conner said it would depend on how much cleanup needed to be done. She said it depends on how much is being requested to do the cleanup, but we had 100% grant funds for the one project we did in Eldon.

Results:
Yes 29% Not sure 38% No 33%

An attendee commented that on a cleanup such as the one above, there would be environmental concerns on the part of the landowner as to legalities. He asked if the program provided the landowner with guidance in getting through some of those issues, which would be difficult for the landowner to deal with by himself.

Ms. Conner said we would work him or her through the process and then hire a contractor who does environmental cleanup. She added that they are the experts; we aren't the experts. The contractor facilitates the cleanup process.

Results:
Yes 29% Not sure 38% No 33%

Do you support this action item for the Healthy Watershed Plan: Exploring ways for the local community and business owners, within a relatively close distance to the Bennett Spring State Park, to connect to the wastewater treatment facility?

Ms. Conner explained this was something that was brought up and we have tried to encompass everything. Again, is it even feasible? We are just exploring ways to see if it may be a direction we should go.

Results:
Yes 39% No 61%

Same action item: This is about the participation of the residents and the local community around Bennett Spring State Park. Do you think they would be engaged in the process of exploring connectivity to the wastewater treatment facility?

Results:
Yes 8% Not sure 38% No 54%

b. Identifying groups interested in implementation of Projects.

Ms. Conner moved the meeting to education and public outreach, which was the next category to cover.

Do you believe, personally, in working with local 4-H programs, FFA and the Missouri Extension programs, local schools, MDNR, MDC, NRCS, and FSH toward water quality, water protection and preservation?

Results:
Yes 83% No 17%

In order for this to be successful, we need to engage local participation. Do you think the 4-H groups, FFA; Missouri Extension and other organizations would be involved in the process? Do you think we can work across these different organizations to make this happen?

Results:
Yes 67% Not sure 21% No 13%

Do you personally support this as an action item that should be included in the Healthy Watershed Plan: Offering educational workshops or lunch and learn programs on water sampling and analysis in the Niangua River Watershed?

Results:
Yes 67% No 33%

Again, we would need to have the engagement of the community. Do you think they would come out and actually participate in some of these programs to understand more about the sampling process?

Results:
Yes 30% Not sure 52% No 17%

How do you personally feel about this particular action item: Offering educational workshops or lunch and learn programs on loan and grant programs for the repair and replacement of failing onsite septic systems?

Ms. Conner added that we offer programs where homeowners can borrow money to repair or replace septic systems. Many times, they are not aware of those programs. It would be an educational component in teaching them to understand what happens when a system is failing and the opportunity to fix that problem when they have it.

Results:
Yes 70% No 30%

Again, this part of the question is how much participation do you think we can get from the local community and the people who actually have the failing systems. Will they come to a workshop to understand how they can fix their system?

Results:
Yes 46% Not sure 29% No 25%

Personally, how do you feel about the following being included in the Healthy Watershed Plan: Offering educational workshops or lunch and learn programs about illegal dumping, how to combat the problem, and what the ramifications are legally and financially.

Results:
Yes 78% No 22%

Same action item: Do you think we could get people to participate in this particular lunch and learn program on illegal dumping, how to combat the problem, and what the ramifications are legally and financially.

Ms. Conner added that she lives on a gravel road in Miller County and, personally, she would love to see people attend the workshops and understand what the legal ramifications are as sometimes she has trash at the end of her driveway.

Results:
Yes 50% Not sure 38% No 13%

Next action item: Again what you feel, personally, and if we should put it in the Healthy Watershed Plan: Offering educational workshops or lunch and learn programs on recycling, how to encourage this as a better option.

Results:
Yes 75% No 25%

Same action item: Do you feel we could get people to come out to the workshops and then, after the workshops, engage in and become a part of that recycling community.

An attendee asked how well the workshops have worked in the past, and Ms. Conner responded she thought they had worked well in many areas, and noted getting participation is the key.

Mr. Broz commented that lot of it depended on convenience. If it's convenient to take the recycling someplace, you will see more participation. Ms. Conner said she was aware of many towns that were offering it as a curb pickup; Camdenton is doing this in some areas.

Results:
Yes 39% Not sure 39% No 22%

Ms. Conner moved on to the next category, Habitat, Preservation and Restoration. Do you support this as an action item that should be included in our Healthy Watershed Plan: Engaging and educating landowners on programs available from MDNR and MDC on habitat preservation and/or restoration.

Results:
Yes 67% No 33%

Same action item: Engaging and educating landowner on programs available from MDNR and MDC on habitat preservation and/or restoration: Do you think we can get local participation in this action item? Would landowners participate and actually move forward with the programs as well?

Results:
Yes 38% Not sure 38% No 25%

VI. OPEN DISCUSSION

Ms. Conner said the above were activities/actions gathered from all prior meetings and that now would be a good time for someone to put forward any additional activity that had not been considered. She said we wouldn't be able to vote on it but could take down the information, prioritize, and bring it back to the next meeting if it's something

you would like to see included in the Healthy Watershed Plan and in engagement within the community.

Ms. Bassett distributed note cards to the group, so they could write down any comments or questions and give the cards to LOCLG representatives before leaving. Ms. Conner reiterated we wanted to make sure we engage everyone's comments in the planning process.

VII. CONCLUSION

Ms. Conner expressed her appreciation for everyone's attendance this evening and informed the group the next meeting would be in March. She said to make sure we have contact information from everyone so that we can engage everyone in the meeting and planning process. She asked everyone to print their names on the sign-in sheet if they had not already done so.

She said the next meeting will be held in Camden County as it was the only county within the watershed where we had not yet met.

VIII. ADJOURN

Ms. Conner adjourned the meeting at 4:05 p.m.

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT**

MEETING SUMMARY

Wednesday, August 19, 2015

3:00 p.m.

Preston Community Center

120 W. Hwy 54

Preston, MO 65732

I. CALL TO ORDER

Linda Conner called the meeting to order at 3:00 p.m.

II. INTRODUCTIONS AND SIGN-IN SHEET

Ms. Conner thanked everyone for coming and mentioned that there are snacks and beverages and to help yourself to those.

Ms. Conner introduced herself and stated that she is the Executive Director of the Lake of the Ozarks Council of Local Governments, and we are conducting the planning project in conjunction with the Missouri Department of Natural Resources.

Ms. Conner introduced LOCLG's Regional Planner Andy Thomason and Administrative Assistant Pam Gilbert.

III. PURPOSE OF MEETING

Ms. Conner said that the purpose of this meeting is to discuss the importance of the Watershed to the attendees individually as well as to the region as a whole. Many of the attendees are small business owners and community leaders who understand how valuable water is as a resource.

Ms. Conner mentioned that she attended a meeting last week in St. Louis wherein there was a gentleman there from California, and he said that he only has water every third day. She was glad she did not live there.

Ms. Conner then introduced Gwenda Bassett, who is the Regional Watershed and Community Service Coordinator with the Missouri Department of Natural Resources and the Southwest Regional Office in Springfield. Ms. Bassett will help us understand the purpose of the project.

Ms. Bassett gave a powerpoint presentation which is attached to this summary and therefore made a part thereof.

Gwenda mentioned that yes, she is pregnant and the baby is a boy, and she may be using the sign in sheets for a possible name, so please remember to sign in.

Gwenda said that she wanted to provide some background and context as to where this project is coming from and also DNR's Missouri Waters effort. The Niangua River Watershed along with two other Watersheds in the Southwest Region is the focus watershed in their departments program right now. The Statewide effort began in about 2012, and one of the primary goals of this effort is to work more closely with local watershed residents and communities and to have them play a more active role in helping to determine priorities and target programs and resources with regards to the funding of watersheds. DNR also has some internal department efforts that they have been working on as well to have more of a watershed based approach, which will better coordinate programs within the department to identify better ways of using their resources. As most, everyone is aware, budgets, finances and grants have been dwindling over time, so they are trying to find ways to adapt to those changes and to find ways to use the resources that they have for a better environmental benefit.

Ms. Bassett directed the attention of the attendees to a statewide watershed map and said that they are targeting every watershed within the State. There are 66 watersheds that are similar in size as the Niangua River Watershed throughout the State. The goal is to engage residents within each of the 66 watersheds. In the Southwest Region not only, is the Niangua River Watershed located but also the Spring River Watershed and Ms. Bassett has been working with those residents since about 2012. Other watersheds throughout the State that are going through the same process are the Big & Meramec River Watersheds in the Southeast and in the Northeast the Fault River Basin and in lower Missouri, the Cricket in the Northwest.

A question was asked if those watershed planning projects are going on right now. Ms. Bassett responded by saying that they are, but they are all at different stages right now. Ms. Bassett also said that she would be happy to answer questions along the way.

Ms. Bassett gave some background information on the watershed that we are talking about today and said that the Niangua River Watershed is basically at little over 1,000 square miles in size and actually in Preston, they are right on the watershed line so probably the water goes east onto 65 and to the west, the water would flow to Pomme De Terre basin. Therefore, we are right on the line in this area.

Ms. Bassett added that Preston is pretty much a rural area as everyone is probably already aware and the watershed includes portions of five counties.

An attendee stated that he disagrees with her in that they are an urban area, and the Niangua River system drains into the largest city in the State of Missouri every weekend. The attendee added that is the Lake of the Ozarks. Ms. Bassett responded by saying that if you look at the map, it does not really include Lake of the Ozarks. Ms. Bassett added that actually the largest population center is the Marshfield area if you actually look at where the water flows. The water does go to the Niangua arm of the Lake of the Ozarks, but it is just not technically part of the watershed.

Another question was asked if what Ms. Bassett is actually saying is that the water that flows into the lake is not part of the watershed. Ms. Bassett responded by saying that it is part of a larger watershed and that watersheds come in different sizes, but if you take a look at the map where it shows cities on them you can tell that this watershed actually splits Camden but doesn't actually include Osage Beach or the Lake of the Ozarks as in the City of the Lake of the Ozarks. Ms. Bassett added that there are maps that can be looked at further if he would like to. Ms. Bassett added that if you are talking about the lines technically, the Marshfield area is actually the highest density for population and overall 6% is urban area, and over 90% is forest and pasture land.

Another attendee said that he thinks that there is more population around Lake Ozark than there is in Marshfield. Ms. Bassett said that there are not really cities in the watershed, but he is welcome to take a look at some of the maps.

It was mentioned by an attendee that he is looking at one of their maps, and that she is concluding that the Niangua River Watershed includes Lake of the Ozarks and the Little Niangua of the Lake of the Ozarks. Ms. Bassett agreed that the Little Niangua Branch is included. The attendee asked if the Lake of the Ozarks is part of the watershed, to which Ms. Bassett agreed and pointed out the line on the map showing where it is located. The attendee then said, in other words, the Big Niangua arm and the Osage arm of the Lake of the Ozarks is included in the watershed of the Lake of the Ozarks. Ms. Bassett added that the State watershed maps which are difficult to see on the screen are actually color coordinated, and you can see where the Niangua River Watershed is located a little better.

Ms. Bassett said that Bob Broz with MU Extension is going to talk a little more about how you define a watershed boundary, and that may help a little more.

Ms. Bassett made a couple of other points about the Niangua Watershed and said that this area is known for its Karst topography and there are numerous sinkholes and caves in the area and if you attended the last meeting, a presentation was given that will actually be given again tonight with regards to the Goodwin Sinkhole, which will give a classic example since Goodwin Sinkhole is actually located in Laclede County and is also part of the cave system and has a surface runoff from that cave which has been dye tested to Ha Ha Tonka Springs in Camden County. Ms. Bassett added that there are a lot of underground water connections as well as numerous recreational resources and two major State Parks that are very popular across the State and the Lake of the Ozarks at the end of the watershed and the fishing industry, canoeing and other conservation areas that are recreation resources.

Ms. Bassett also stated that, for the most part, there is excellent water quality here; however, there are some impairments such as the map of the Niangua River shows red where there is bacteria or e-coli present. And the Little Niangua has an impairment for low dissolved oxygen.

A question was asked if the impairment goes down to Bennett Springs but not below, is that correct? Ms. Bassett responded by saying that is correct and also Dusenberry Creek. The attendee then asked if by DNR's standards, the impairments are above Bennett Springs, but it cleans up by itself below. Ms. Bassett said there is no telling why that is but from

samplings that are what the findings have shown, that the impairments are almost to that location.

A question was asked what the specific impairment with regard to that waterline is. Ms. Bassett responded by saying that it is bacteria. The attendee asked what type of bacteria. Ms. Bassett said that it is e-coli, and that they used to sample for chloroform bacteria, and now they sample for e-coli bacteria because it is more specific and has a more defined water quality standard.

Camden County Presiding Commissioner Greg Hasty said that he has been a surveyor for 41 years and during that time he has walked the backs of those coves where no one else wants to go, and he has walked the streams, and the reality is that there are so many deer, raccoons, possums and all types of other wildlife that go to the back of the coves, whether it be a stream or whatever and there is no avoiding negative bacteria test results with the amount of wildlife that we have. Camden County Presiding Commissioner Greg Hasty also mentioned that if you test for this, it will be there, and it has always been there. Commissioner Hasty added that when he was a kid people told him not to swim in the creek when the water is up, and it is just a common thing so the only way that you can make the water totally clean is to eliminate the wildlife.

Ms. Bassett said that those are big issues that can be discussed at a later meeting, but that is just what they see right now and the only reason that DNR samples for bacteria is for the protection of the public's health in recreational areas. Therefore, streams that have been frequented by the public such as swimming holes and the like, if they have samples that come back a certain number of times for e-coli over a given year above the threshold that is okay for the public, then it gets listed as impaired. Ms. Bassett added that it is part of the process, and she is not pointing fingers at anyone rather it is just making a statement that it is impaired for that particular pollutant.

A question was raised as to the e-coli testing that was conducted in those areas and which standards were used because two sessions ago the standards were changed to agree with the EPA limits versus limits that DNR had established, particularly those that are used at two of the beaches that are frequented at the Lake of the Ozarks. The attendee said that he didn't know which standards were used to determine the impairments. Ms. Bassett responded by saying that there is only one water quality standard that is used for the protection of public health, and it is 126 for whole body contact streams.

A gentleman commented that he hasn't seen too many bathrooms along the rivers for the people who are canoeing.

Ms. Bassett said that we can discuss impairments more if they would like and DNR has a lot of information with regards to that, but it is basically a whole different presentation and meeting by itself as to how you get to that point.

A comment was made that it should be pointed out that the standard used to be 236, but it was changed to meet the whole body contact of 126 about two and a half years ago. Ms. Bassett explained that prior to that it was just fecal chloroform, which was a much higher

number because it is a broader group of bacteria, therefore, there would be a higher number. Since e-coli is more specific, it would be a smaller number.

A question was asked if DNR has done any DNA source tracking to see if the e-coli is coming from a particular warm blooded animal. Ms. Bassett responded by saying that DNR has not but there may be other organizations that have.

Another gentleman commented that his neighbor said that the person who goes up and down the river checking it said that the Little Niangua is the cleanest water that goes into the Lake of the Ozarks.

Ms. Bassett said that this is good water quality here but there are certain standards that if you have so many samples throughout the year and if the samples exceed the magic number, then it gets put on the impaired list, and it is not always impaired technically but rather a snapshot in time.

A comment was made that if it is the cleanest water that is going into the Lake of the Ozarks, then it doesn't seem as though they would be bothering with it very much.

Ms. Bassett explained that they are trying a local engagement effort, and it's not based around that at all. And that DNR has sampled the streams for recreational purposes to keep the public safe across the entire State.

An attendee asked what her purpose of coming today is. Ms. Bassett responded by saying that she is here for the community partnership project, and that she wants to talk a little bit about the Niangua River Watershed, and that she will get into that in just a bit. Ms. Bassett also said that it is a watershed based project that they are trying to do and are trying to focus on a geographic area. One of the major goals of the project is a local engagement part of the Our Missouri Waters effort because they want this to be locally driven, and they have partnered with local groups such as the Lake of the Ozarks Council of Local Governments to take the lead on this project, as well as the other Watershed groups across the State and the locals are the lead groups on these projects.

The three main goals that DNR wants to accomplish over the next several months are, the fact that they want to build a local understanding of water resources in this area, and they want to enable local citizens and watershed groups to lead the effort and to find local solutions to watershed priorities and concerns whatever those might be and they also want to build on current partnerships that already exist.

Ms. Bassett then explained how we get there. The first part of that process is through these open houses that Linda has been hosting across the watershed and there will be another meeting such as this one coming up, which will be held in Buffalo.

Through the open house meetings, they want to learn about the concerns that the local citizens have in their particular areas and what projects they think should be tackled. Ms. Bassett also said that the citizens should look at this as an opportunity to look at partnerships that are already established within the watershed and figuring out how we can build on those.

Ms. Bassett noted that the last meeting had already uncovered some problems of local concern: erosion, illegal dumping, trash in streams and abandoned wells remaining unplugged.

An attendee asked what the watershed committee will be doing overall and how it will be administered. Ms. Bassett said that it won't really be administered, but they want a group of 20-25 individuals who are interested in looking at what the concerns are and then finding solutions for those problems.

Ms. Bassett and Linda Conner explained to a questioner that the advisory committee has no policymaking power and will likely exist for a year to 18 months, and will be composed of volunteers; they would not be elected or appointed to this committee and will serve as an advisory committee to the Department of Natural Resources.

The attendee asked if, then it would become a DNR controlled situation. Ms. Bassett said that it would not, but they are in hopes that the group will remain intact and take off on their own.

Linda Conner mentioned that there are already groups in our area, which are completely volunteer such as LOWA. And we are looking for volunteers and partnerships so that we can promote the projects.

Ms. Bassett also mentioned that we need a diverse group of people on the committee such as business people, city and county officials, land owners.

The attendee said that there are a lot of people that have a vested interest in this that live along the river and not in the city and their business is the farm, and they need to be contacted as well.

Greg Hasty introduced himself as the newly elected Presiding Commissioner of Camden County and that a part of his job is to sit on the Lake of the Ozarks Council of Local Governments Board of Directors and explained that at the beginning of the year LOCLG was basically given an opportunity through DNR for the watershed project and to lead this effort for our area. Presiding Commissioner Greg Hasty said that the Miller County Presiding Commissioner Tom Wright is the Chairman of the LOCLG Board and several Board Members from our four county area were present and were in agreement that they would a lot rather have us as a local entity be able to see what is going on with this program rather than to hand it off to some unknown entity. Camden County Presiding Commissioner Greg Hasty added that he wants to let everyone know that the LOCLG will be watching out to see what goes on with this endeavor. And that he has an interest as to what goes on with this project and wants everyone to know that up front. Presiding Commissioner Greg Hasty expressed his support of the project, emphasizing the benefits of a local, grassroots effort.

Ms. Bassett clarified for a questioner that no projects were yet planned, and that they were still trying to identify the most pressing concerns of the local residents, and that there has only been one meeting thus far in which the same information was given.

One attendee wondered why erosion would be a problem; it was noted that, e.g. some area landowners are losing property over time to erosion. In addition, she mentioned that she thinks it is just a natural process and therefore, a part of life.

Ms. Bassett said that for some, it might be more of an issue than for others, and it was something that was brought up at the last meeting. Bob Broz said that the person who brought the subject up at the last meeting was a landowner who was losing property, and they were looking for assistance in helping to stop erosion along their fields.

An attendee then asked where the money is going to come from. Ms. Bassett responded by saying that there are several different agencies that have cost share programs that work on stream bank stabilization, etc. and DNR has funding through the Soil and Water Conservation Department, and they have other programs as well and so does NRCS.

The attendee then asked how you are going to involve the Soil & Water District if the landowners weren't advised about the meetings. Ms. Conner said that everyone should have received a mailing, and that they are on our list.

Another attendee mentioned that if he understands what Ms. Bassett is saying they are more concerned about the bacteria and e-coli in the streams rather than the erosion part. Ms. Bassett responded by saying that is not the case, and that she is sorry if that is the stance that was taken but rather she wanted to give some background information. Regarding the e-coli and bacteria issue, the attendee mentioned the hundreds of thousands of mansions that are homes around the Lake of the Ozarks, and they are dumping their sewage around the laterals. He added that you can't convince him that the Hicks out here trying to make a living out on the farm is polluting the water more than those homes surrounding the lake that are dumping millions of gallons of pollution into the ground. The attendee also commented that Ms. Bassett bypassed that part of the chart, and he feels like it is because of the tax dollars, and the amount of money that the tourist bring in. Ms. Bassett said that this watershed incorporates more than the Lake of the Ozarks, and she was hoping that they would be happy about that, but she is kind of hurt because this is the Niangua River Watershed. The attendee said that the lake is part of the Niangua River Watershed. Ms. Bassett said that we would talk a little bit more about the boundaries later.

Ms. Bassett explained that the committee would basically be volunteers who see a need for this type of project and who want to get involved, and move goals forward and find solutions to the concerns. Ms. Bassett also mentioned that this committee would be much like the committees that LOCLG already works and coordinates with. The findings would ultimately be recorded in a document containing recommendations for establishing a clean watershed. She also explained where to go for more information.

Ms. Bassett explained that a healthy watershed plan needs to be able to document everything that they have learned through these meetings and be able to reference them at a later date in order to address the areas of concern. Solutions can be building on partnerships or applying for grants for funding down the road which will enable us to tackle the problems. The plan will contain background information as well as what was learned at these public meetings and where the priorities are for the local residents and with the help

of the local watershed advisory committee, what they see as possible solutions to these concerns.

Ms. Bassett stated that the benefits of going through this entire process include having the information documented and going through the process will give business owners, land owners and local residents the opportunity to share their concerns and voice their opinion and resource concerns and by hearing from a diverse group of people it will provide a shared vision for the watershed community moving forward, which will provide guidance and help provide advice for future financial and technical resources that may become available. So if an action item or goal has already been identified and documented you will know how you can get there such as if a partnership or funding opportunity becomes available you could put those two together in order to get the project done.

Ms. Bassett added that by having a plan together you can identify existing partnerships and projects that may be helpful to your future projects. And overall you will be working to protect your local waterways.

Ms. Bassett also mentioned that DNR's website contains background information with regards to the Our Missouri Waters program. LOCLG will also have information on their watershed at www.Nianguariverwatershed.org.

Ms. Bassett said that if there are no more questions, she will turn it over to MU Extension.

An attendee mentioned that he is a non-resident land owner in Dallas County, and he owns a half mile of creek that runs into the Little Niangua at one of the red points, and he is the only one on that creek and he has worked with the Department of Conservation, and his land has been reclaimed from agriculture, and he has brush that is growing back and it holds the water better than what was there and upstream from him has been cleared, and the trees are gone and the brush is gone, and it is used for cattle and pasture land. The attendee said that he is doing his part, and he has people who trespass on him, and they let cattle graze on his property illegally, and they hunt on his property illegally and he thinks he is doing his part but the thing that scares him about this word watershed is that there is a shading lawyer in Kansas in the flat hills and when he is using the term watershed, he goes in later with agricultural funds and builds a dam. The attendee then asked if any of that possible here?

Ms. Bassett responded by saying no, in fact, DNR is quite different in that they are surrounded by states that have water rights, and we are a riparian state, so we don't and what they are probably trying to do there is that they are probably trying to secure water.

The attendee agreed and said that they are trying to secure water for the farmers downstream and in this case, it is for cattle grazing in Kansas. Ms. Bassett said that the only reason they have to mention the word watershed is because her department has started to focus on the watershed basis because for them; it saves staff resources because when they permit things and when they look at pollution in a waterway they have to consider everything that is draining into that waterway. Therefore, one of the big things they started doing internally, was permitting things like water treatment plants on a watershed basis and having reviewed all the permits in a watershed all at one time and in doing, so they are

saving staff resources and time because they can review all of the watershed area at the same time. Ms. Bassett added that there are no hidden contacts behind the watershed but rather the natural processes, and they are trying to think more in those terms in the department.

Linda Conner said that Bob Broz will now give his presentation on watershed planning 101, and he will also share some details about the Niangua River Watershed. Ms. Conner introduced Bob Broz with the University of Missouri Extension.

IV. EDUCATIONAL COMPONENT

a. Watersheds 101

Mr. Broz gave a powerpoint presentation which is attached to this summary and therefore, made a part thereof.

Mr. Broz gave some of his background information and addressed the items that we will be learning about today. Mr. Broz also defined some key terms: watershed, hydrologic unit code, point source vs. non-point source.

Mr. Broz asked how many people have ever gone into the bank and asked to borrow money. He then asked if the bank loaned them money without having a plan. In most cases, they do not as they want to know what you plan to do with the money.

Mr. Broz said this is the same principle as what we are looking to do here is to keep our watershed as pristine as possible, whether we live along the creek and there is soil erosion, or you are trying to let your land be reclaimed; we all live in this watershed, and therefore, we all have a responsibility. Mr. Broz added that some of the things we are trying to do is to discuss the water resources and why it is important that we have good water and will try to introduce the concept of watershed and in the bigger picture, the Lake of the Ozarks is part of this bigger watershed. But it is not the part that we are going to focus on, and they are going to have their own list of troubles when they start talking about that particular watershed.

b. Importance of watershed planning

Mr. Broz said that we are going to provide an overview and what Missouri Hydrologic Units look like and are going to discuss cause and effect and what causes water quality aggregation and what can be done to help prevent that from occurring. We will look at the value of watershed planning, and we will suggest how to identify planning partners as well as resources. Also, how to develop a group of people that are willing to work together in a cohesive manner to get something done.

Mr. Broz gave the definitions of the Hydrologic Unit Code as well as point source and non-point sources and said they are terms that we need to know and how they affect us.

Lewis & Clark found that where the water falls and ends is our land, and that defines the watershed; there was no sign that said the Continental Divide in the Rocky Mountains at that time and since then we have made smaller units to make it easier to work with.

Mr. Broz added that a point source is something we can see, and it is usually something that is coming out of a pipe, and a non-point source is something that cannot be defined where it is originating from. Mr. Broz said that soil erosion along the creek bed if it continues 4 or 5 miles down the creek then it is difficult to determine where it came from, and it is considered a non-point source, and they do this with nutrients and bacteria, pesticides and a lot of those types of things. Mr. Broz added that it is going to have multiple contributors in most cases, and that is what we have to work voluntarily to see what we can do to help correct that issue.

Mr. Broz pointed to a slide which shows a picture of a non-point source in which you can't see what is occurring but in the picture on the right, you can see that there is a brown tint in the water, and if you look between the 2 buildings in the background you can see a brown fence. So what has happened is the person painted the fence and then cleaned the paint brushes and now the brown dye is traveling through the storm drain and the first time it rained it shows up way down the road.

Mr. Broz added that point sources would be pesticides, nutrients or soil erosion and are things that we need to be aware of and what is going on with them and what we might be able to do about it.

The value of water is that all of us depend on good clean abundant water. Mr. Broz said that 66% of Missouri's citizens use surface water, which is water that comes from a stream or a lake, and that is where they get their drinking water from. Mr. Broz added that 34% get their water out of the ground and that the people, here are fortunate in that there is good ground water. However, north of the interstate there are a lot of problems. Healthy protected clean watersheds can prevent those problems and part of the problem that we do have here is a lot of fractured limestone as well as caves and sinkholes, and in many cases can act as direct conduits to allow pollution to get into our drinking water supply so what we do on the surface affects what is going on underground. Mr. Broz added that everything we are doing affects the water quality within the watershed, whether it is good or bad. As an example, Mr. Broz said that on his way to the meeting today he put his brakes on, so it is likely that there is some metal on the roadway and when it rains, it is going to wash down into the surface water. So everything that we do is going to affect what is going on in the watershed. Mr. Broz added that it is a natural process, and most of it is not going to be harmful.

Mr. Broz said that the Mississippi River Basin contains about 166 different Hydrologic Units but that this can be divided into 12 smaller units. Therefore, there are opportunities to work in different areas on a lot of different things. Mr. Broz then asked why we wouldn't want to work in an area as big as the Mississippi River Basin. An attendee answered by saying that there would be too many different points of interest. Mr. Broz agreed and said that he also doesn't think someone in Montana cares about what is going on in Missouri. Therefore, they have tried to identify an area that they think is reasonable that they can work with and in turn to get residents of the entire watershed to work as a full unit.

Mr. Broz mentioned that the Lake of the Ozarks is in the very upper tip (on the map) but that what we are focusing on is how we get good representation from all the areas.

Mr. Broz stated that 93% of all the land in the State of Missouri is owned by private citizens; therefore, the attendees have the capability to do something with that land. He can't come over and tell everyone what to do because he would get ran off.

Some of the basic characteristics that we are going to look at within the watershed are geology, soil type and the slope of the land which has a lot to do with how fast things run off, climate as well as rainfall amounts. Mr. Broz added that Northwest Missouri averages 31 inches of rainfall a year and Southeast Missouri averages 51. In this area, they average about 40 inches per year. Mr. Broz added that they are going to look at land quality, and one of the reasons that the water quality is so good here is because a lot of this land is permanently covered, and you don't have as much soil erosion or pesticide use as areas where they are raising sorghum and corn.

Mr. Broz mentioned that we will also be looking at the types of industries and what is going on with those industries and how that affects the watershed. We will also be discussing population growth, which also affects what happens within the watershed. Also to be discussed are watershed stressors and point source activities that directly discharge to the water.

Mr. Broz said that in 1972, they came out with the clean water act, and they said that they were going to clean up a lot of those, and they have to be permitted.

Non-point source is the sediment, nutrients, bacteria; pesticides and are all done on a voluntary bases.

Population growth can lead to more storm water runoff which in turn leads to more problems, and new industry can lead to more demands on the water supply. As an example, Mr. Broz used the poultry processing plants down south and said that they use enough water that it is probably limiting some other industries from coming to that area.

Mr. Broz asked his colleague Bob about the population growth in Knoll, Missouri, which is the fastest growing community in the State and the average age of the residents, there is 68 years old, which means that there is more medication that comes out in the wastewater, and they have to have a bigger infrastructure. Therefore, all these things play a role in what is going on within the watershed.

With regards to cause and effect, Mr. Broz said that just listing the problems is not going to give a real clear picture. If he said that we have a soil erosion problem, the question would, then be raised as to what that does and the answer would be that it causes habitat destruction.

Nutrient runoff causes more algae, and algae is nothing more than a plant and plants thrive on nitrogen and phosphorus and when the algae dies off it causes low dissolved oxygen which in turn kills the fish, and we have control over all of these things.

Mr. Broz said that once we have identified possible pollution sources, then we need to identify possible solutions that will help to minimize the impact.

Mr. Broz asked if anyone in attendance has worked with the Soil and Water District or the NRCS. Mr. Broz then mentioned that if you go to talk to them and tell them what it is that you want to do and ask how they can help they will say that they have a cost share program to do these kinds of things so again you have to have a plan.

Mr. Broz added that prior to starting to implement these things they want to have a list of resources that are available. We want someone who will listen to us as we try to give input and who can provide the technical, educational and financial assistance. NRCS can provide technical and financial assistance, and we have to find the people that can help us move forward with their expertise. One thing that we don't want to do is to give them a list of five practices and say we want these things done, but rather we want to know what each individual person is willing to do. As an example, Mr. Broz said that there are calves in the creek and you want to keep them out and are willing to put in an alternative watering system or maybe you want to limit their access somewhat but not entirely. Then they will ask you what it is that you want to do that is going to help the bigger picture but not just you individually but everyone within the watershed.

Mr. Broz reiterated by saying that it is going to be a local effort and not the kind of thing where Linda is going to make all the decisions, she will want everyone's input so anyone who has that interest make sure to talk with her about it.

Mr. Broz also mentioned that there is a lot of planning and that if you have a population of over 10,000, they have to have a storm-water plan as well as a source water protection plan. Nutrient management plans are required if you work with the NRCS chances are that you have a Soil & Water plan as well. Schools also have emergency management plans, and these are all different plans that are out there and are available. Mr. Broz added that what they are wanting to do is address how we can obtain local input to the local plan of action.

Regarding partnerships, Mr. Broz asked to what extent the current partnerships that we have are assisting with the things that you want to get done. Examples of partners are agency partners, watershed groups, industry, local businesses and interested citizens and all of these people become part of our partnerships. Mr. Broz added that we have cooperation, coordination and collaboration. And all three of those require a high level of communication, i.e. not just him talking to the attendees but the attendees giving him their input as well and letting him know what it is that they want him to know.

Mr. Broz said that we are going to focus on collaboration to establish common ground for sound strategic watershed planning and management and to contribute input into the decision-making process and to strengthen the implementation process, and it should provide more eligibility for State and Federal funding.

Mr. Broz asked if anyone remembers when the Soil and Water District used to have the SALTS (Special Area Land Treatment), you had to have a plan, and you received more money if you had a good plan of action. Mr. Broz said that he used to grade them, so he remembers them very well.

Part of what we might have to do is to respond to a Federal Mandate, such as if they say you have bacteria, and then we need to know what we can do to help reduce that. Right now, we want to address conflict over specific issues, and if you start bringing in all the partners or somebody who represents all the different groups, you will probably get somebody who you didn't really think should have any input. It could be an absentee landowner, or it might be somebody from business, and you wonder why they are in attendance. Mr. Broz said that we need to look at all these different people such as the landowners, renters, the residents and everyone who is affected should have some voice but the people that own the majority of the land are the ones that they really want to be talking to because they are the ones who can actually make the decisions and move things forward.

Mr. Broz said that all opinions are valued and that all participants should listen respectfully, and everyone is equal when we are talking and everyone is invited to participate in the open discussions and the interactions, and no one should dominate the entire conversation. Mr. Broz said that if we have a good facilitated process, it will work fine. Attendees can respectfully disagree and that is fine, and it may be necessary to move ahead. Not everybody is going to get everything they want but what they feel is important so that we can keep moving ahead, and we will focus on the common ground which in this case is having good clean water and keeping it that way.

State and local partners were shown on the next slide, and Mr. Broz mentioned that there are a ton of them out there and since the attendees live here they know them better than he does.

For a successful watershed plan, it has to be a voluntary approach and incorporates local input, which is the most important thing that we can get. We need local buy in, and the property owners are the ones that are the most capable of getting things done.

Mr. Broz addressed changes as new information becomes available in that as we in turn learn more things or do more things you are going to come to a point where you decide that you want to change what you originally thought because now there is an issue that is more prevalent.

Mr. Broz added that it is going to be as successful as the attendees want it to be. If they decide that they are not interested it will never move forward.

Mr. Broz asked if there were any questions.

V. Overview of the Niangua River Watershed

Mr. Broz pointed out a photo so that everyone can recognize where we are talking about, starting way down with the Niangua River, and there is a watershed by Marshfield, and it weaves its way up to the Lake of the Ozarks. The area surrounding that is the eight digit hydrological unit which we call the Niangua River Watershed.

Mr. Broz added that there are some basic watershed characteristics that can help us to identify specific areas.

Mr. Broz then asked if anyone knows what the official nickname of the State of Missouri is. Several answered by saying the Show-Me State. Mr. Broz said that is our un-official nickname, but the official name is the Cave State. Mr. Broz then asked why we are known as the Cave State.

A comment was made that the state is very porous. Mr. Broz agreed and said we have a lot of limestone under a large portion of this state and as water runs through that limestone, it dissolves it and provides us with caves and springs that pop up all over the place, and it also provides us with sinkholes, which is not always a good thing but what that tells us is that we have an area that is very vulnerable and sensitive to what goes on. An example was used that if you are out spreading manure from a dairy farm, and you are right next to a sinkhole, then you are probably going to create some problems. Another example was given if you build a brand new house and decide you are going to put the septic system over here that might not be a good idea because even though we see the water going into the ground, the chances of it being good because of the number of springs that we have in the State of Missouri, it might show up somewhere, and it may show up in your well because all of that ground water goes into all of those aquifers, and that is where we get our drinking water. Mr. Broz added that if you have a private well that's all part of it.

Camden County Second District Commissioner Cliff Luber said that he has a question that is probably more directed to DNR, but that it is in regard to Missouri Statue # 644.058 which states:

Water quality standards revised, when--evaluation to be conducted, when.

644.058. *Notwithstanding the provisions of section 644.026, to the contrary, in promulgating water quality standards, the commission shall only revise water quality standards upon the completion of an assessment by the department finding that there is an environmental need for such revision. As part of the implementation of any revised water quality standards modifications of twenty-five percent or more, the department shall conduct an evaluation which shall include the environmental and economic impacts of the revised water quality standards and criteria on a sub basin basis. This evaluation shall be conducted at the eight-digit hydrologic unit code level. The department shall document these evaluations and use them in making individual site-specific permit decisions.*

Camden County Second District Commissioner Cliff Luber said that he was at the meeting last month, and his question is that he has still not received a clear answer as to what the problem is with the Niangua watershed and what he is reading now in the State Statue is that this is what is being done now before any changes greater than 25% can be done. Camden County Second District Commissioner Cliff Luber added that his concern is that we are going to go through this voluntary thing now and then once the study gets submitted, we are going to have big changes once this statue is implemented.

Ms. Bassett responded by saying that first of all she thinks that the statue he is referring to is referring to point sources and that is the only thing that they can regulate and actually attach water quality to such as a waste-water treatment plant so that would not involve things that DNR regulates. Ms. Bassett added that this is a local engagement effort, and it is completely separate and has nothing to do with water quality standards, so she isn't certain how to separate those. Ms. Bassett added that on a department level, they are

planning and trying to focus more on a watershed level because it makes more sense financially with resources and staff time within the department. Ms. Bassett added that internally she has already mentioned that they are doing things such as permitting as well as compliance assistance and inspections because it makes more sense to focus on a geographic area which will make more of an impact. It will help people and address pollution loads from their permitting discharges. This is kind of getting back to that statue.

Camden County Second District Commissioner Cliff Luber said that he had a conversation with the author of this bill at the time; which is Rocky Miller and Mr. Miller made it clear when they were discussing the watershed project that this is something that had to be done before DNR could make any permanent changes. And Mr. Miller doesn't think that the two are not related.

Ms. Bassett responded by saying that our Missouri Waters effort started in 2012, and it is different than that in that it doesn't really have anything to do with a regulated entity, other than they do want businesses that need to be regulated to be involved, but it doesn't have anything to do with their permit limit. Therefore, it is separate in that respect so in this healthy watershed plan that we are talking about it is not a scientific document such as a watershed management plan where you have monitoring for two years, and they are not paying someone to do all of the background analysis.

Ms. Bassett added that this is a much higher level healthy watershed plan, and it is basically a document that will say this is what we have found out through all these public engagement processes through the priorities and concerns that came out, and they will have issues with illegal dumping and people who have stream bank stabilization problems, and these will hopefully provide some solutions as to how to get those people help.

Ms. Bassett reiterated that it is strictly a voluntary process and a local grassroots engagement process and is an effort that the department started to gain insight as to what the locals think are the problems with their watershed and if there are any issues that they can help them with.

Ms. Bassett said that it was a very good question, and she hopes that her answer helps but you have to look at it from two different avenues because they are looking at HUC 8's in the department, but it is because of the permitting aspect.

An attendee made the comment that there have already been voluntary problems with the Salt River to pay for the fencing, and they only provide so much for barriers for years so why is this necessary. What are you going to do about all the oil that runs off the roads if this is all voluntary?

Ms. Bassett stated that the Soil & Water Conservation Department works directly with land owners and farmers, but this project that we are talking about is everybody in the watershed. It is urban, rural, cities, counties and businesses. It is not singling out agriculture, farms or anything else so that is why they are trying to make it so that everyone has a voice at the table, and everyone can talk about their concerns. A farmer may have concerns about some city practice or people dumping their oil in the stream. Ms. Bassett said that she wants to stress that this is about the entire watershed.

Another comment was made that the land owners have more land than the people in the city do and they are the problem and they don't have any problems out in the country. Ms. Bassett said that she thinks everyone in the entire watershed has something that they would want to voice a concern about. And this is not about cost share programs even though they do have a great cost share program.

An attendee mentioned that he is trying to get a clear understanding of the charge here because he is hearing that there will be an attempt to assemble an advisory committee through this meeting process and once that committee is determined by whatever means through the LOCLG, and it will be primarily composed of a committee such as those that have facilitators who bring in people to facilitate and generally there is a direction that the facilitator is trying to lead that group because you have that diversion of interest, so the question is who will actually facilitate this committee and then at the end of the 18 months. What is the ultimate outcome of this committee? In addition, the attendee asked if it is going to be a written document or just an identification of areas of concern or what is the committee actually going to do because you can't expect the committee to come to conclusions and solutions of what needs to be done because you first have to identify the problem and then the problems have to be analyzed before you can arrive at any kind of solution. The attendee then stated that it is really a three-step process and which step are we actually in now, are we in step one and then the advisory committee will identify the problems in 18 months?

Mr. Broz said that he wanted to clear one thing up in that he mentioned 18 months, but Linda will ultimately be the one that will determine how much time it is going to take. The attendee then asked what the end point is for this first step and what the goal is.

Ms. Conner said that the Regional Planning Commissions do a lot of planning and facilitating for several different entities. Ms. Conner stated that we would have a document at the end which will identify the priorities that the watershed group identified.

The attendee asked Ms. Conner to specify what types of priorities. Ms. Conner said that it would include areas of concern and how we can best address the priorities. Ms. Conner added that with all of the funding agencies today, struggling to have funds to fund every project is difficult, so they are going to ask the advisory committees what their priorities are within their region so that if a grant application does become available, then they can check to see if it has already been identified, and if we have the local support to move forward with the project. That way, there won't be money thrown at a project, unless we have identified it as a problem within our region.

Another question was asked as to how much of this money is going to go to administration. Ms. Conner responded by saying that is further down the road and that right now we want to know what the priorities are within our region.

A comment was made that this is going to be like everything else in that you don't really want to know that answer.

Another attendee mentioned to Mr. Broz that earlier in his presentation, he mentioned fertilizer and calcium and nitrogen being a big problem with the algae growth in the streams. The attendee added that he owns $\frac{3}{4}$ of a mile up the bank of Macks Creek where it dumps into the Niangua $\frac{3}{4}$ of a mile to the west, and he lime and fertilizes his hay fields in order to get a decent crop. The attendee then asked if they might be asked to not lime and fertilize the fields. Mr. Broz responded by saying no but that something they might want to look at is how far back they stay away from the creek bed itself. The attendee mentioned that he has quite a distance but when we get rains such as, we had 5 or 6 weeks ago the fields look like the Missouri River, and a lot of the brush and trash might have come from 7 miles upstream. Mr. Broz responded by saying that the attendee might decide that he is doing a good job, so he isn't going to make any changes, but he might look at it overall and decide that he has 200 feet lea way here but only 10 feet there then he might want to move the location that only has 10 feet to have 50 feet but here again, it is a totally voluntary thing.

Another comment was made that this was all hashed out in the late '60's or early '70's in which there was a big commission who conducted a study about the river. It was then asked if anyone has looked at the study that was conducted then. Mr. Broz responded by saying that they didn't go back that far, but they did look at data collected from 1988 through 1996, they had what was called the Niangua Hydrologic Unit Area, and they did a lot of work then and have went back and looked and said what has changed in that period of time, such as, we have a lot less dairy farms now than what we did then. Mr. Broz added that those that are still here and those that are still out here producing cattle have either taken the cattle out of the creek or they have left a wider buffer and have let the Riparian grow up, so they did go back to see what effects have taken place.

Camden County Presiding Commissioner Greg Hasty said that as time goes on we are going to be more and more regulated, and this was something that was laid in the laps of the LOCLG to either take it or don't take it, and we have some really good people on the Lake of the Ozarks Council of Local Governments Board that care about personal property rights and there will be a committee and we have to get people involved in whatever takes place. The time for sitting back and just letting things happen and then finding out what happened and finding out we have a problem is over, but rather we need to address these issues before it's too late. Camden County Presiding Commissioner Greg Hasty added that the attendees need to get involved in this committee, and we've got to get started right away. Commissioner Hasty also said that this is your territory, and you have to protect it and look at it the way you want to look at it. In addition, Presiding Commissioner Hasty stated that he sits on the Lake of the Ozarks Council of Local Governments because he got elected Commissioner to the County, and it is part of his job, so when LOCLG had to make a choice in that is LOCLG going to sit there and just pass this off on someone else or are we going to take care of it ourselves; the Board decided that they were going to take this project on because we have the opportunity to be involved in this process and protect our rights, and that everyone here also has the opportunity to be involved in the process to protect your rights, and he would like to see everyone really involved. In addition, when we get ready to ask for committee members to be paying attention every second as to what is going on right now.

Mr. Broz added that one of his favorite sayings was when Eisenhower was President, and they were trying to come up with a farm bill, and he looked at what they were writing and said it is really easy to form with a pen when you are 1,000 miles away. Mr. Broz added that they don't want that kind of representation, but rather they want people out here to be able to have input in this process. Mr. Broz added that we may not get everything that we want, and it may end up taking a completely different turn than what we originally thought and it is going to be driven locally, and you are the ones that are going to drive that.

Ms. Conner said that she feels the communication between everyone is extremely important and sometimes those things aren't brought out until the people are brought into a room together. Ms. Conner mentioned that Bob had given an example about two farmers and asked Bob to give it again. Mr. Broz said that years ago they were working with a watershed project in Northeast Missouri and there is a lot of corn and soybeans in that area and there was a drinking water reservoir that had high levels of pesticides, after they started working with them and were trying to figure out what was going on. They met with the farmers at the local restaurant, and the farmers started talking, and they discovered that the two largest farmers that owned the most land in this watershed started talking and found out they were on the same corn and soybean rotation, so they are using the same pesticide and in higher quantities one year and then the next year almost none so one of the farmers decided he would just change his rotation by one year, and they could reduce their pesticide load by 30%. Mr. Broz added that they incorporated some other things as well but haven't been out of compliance since 1998, and it is because the farmers talked to each other to decide what they could do to help the whole thing work out together. Mr. Broz encouraged everyone to talk to their neighbors, people at church, extension councils, and soil & water district boards. Mr. Broz added that is how we are going to figure out what needs to be done and how we need to do it.

A question was asked as to how much the landowners' input was going to be worth and is it all going to be discussed and then someone tells them that they hear them but decides it is going to be done a certain way anyway. Mr. Broz responded by saying no, in that we could say that, but they have control of the land. If someone else tells the landowners what they want them to do it will never work. The first two watershed plans that were written in this state are sitting on a shelf, one in Higginsville and one in Concordia, and they have never been implemented because somebody sat at a desk and wrote down all the good practices that we should be doing and the farmers had no input. They brought it out and gave it to the person that oversees the local water plant, and he gave it to the farmers and told them they need to look at it, and the farmers wanted to know why because they didn't have any input into it. Mr. Broz reiterated that they all have control of this and like the Commission was saying it is better for you all to have input and to be willing to work with this than to be confronted by someone who wants them to go along with the entire plan at a later date. Mr. Broz added that it will never work that way, and DNR recognizes that as well so that is why they have invited everyone to these meetings.

Mr. Broz added that his boss used to be a Regional Agriculture Engineer in Southwest Missouri, and he had worked in the business for 30 years, and they went out and told people that he had all the research as to the best practices which showed what everyone needed to be doing but people weren't doing it and that it finally occurred to him that

they needed to ask people what they were willing to do and what they would like to do and then let the department help them figure out a way to make that happen. The engineer had the numbers and had the same information for 30 years and wasn't receiving public participation. Therefore, they have determined that the best way is to ask the local people what it is that they need and what the various agencies can do to help them.

Dan said that he, and Bob wanted to mention that they have been working on watersheds together for about 20 years, and he wanted to bring up a couple of points of clarification. The first is a couple of people wanted to know where the money is coming from and where is the money going to be spent. Dan stated that there are not any new pots of money out there either from tax increases or from the Federal Government, but this plan is intended to serve as a guidance document in which to focus the existing money where there will be the most bang for the buck, so we are not talking about setting up new administrative structures to handle a new pot of money but rather how to use the existing money the most effective way possible with as much input as possible from the attendees and for them to help write the document, especially with regards to the prioritization process.

Mr. Broz added that by Dan bringing that up to, they can't say that there won't be new regulation because they know that sooner or later, there will be more regulation, and they also know that the money is getting a lot tighter, and they have to figure out where to put that money, whether it is through the NRCS, or the Soil and Water District or the Department of Conservation. Mr. Broz added that by having a plan in place that says what the people think needs to be accomplished within that particular area it will be easier for them to say that this is what the people within that watershed think is important then it will be easier to present and hopefully be able to keep the funds that they have and other counties may lose some of their funding, but if we can show why we need it here for a viable reason it is more likely to happen.

Another question was asked if the Commission from Hickory and Dallas counties were invited. Ms. Conner stated that they were. Ms. Conner also mentioned that Austin Mount from Kaysinger Basin has left but that he was also in attendance earlier and he helped with the mailing list for Hickory County. Ms. Conner said that LOCLG also worked with SMCOG in Springfield for Dallas and Webster counties.

Ms. Conner stated that when we started this project back in April, we didn't want to make assumptions that nothing was being done in the watershed, so we did a lot of research to find out what was already being done within the watershed that are already environmentally friendly projects because we can capitalize on these things being a priority because someone was already working on them. LOCLG contacted a lot of organizations to better understand community projects and what was already being done. All of the community projects have been posted on our website, which can be found at www.Nianguariverwatershed.org.

Ms. Conner mentioned that during the research process, we met two extraordinary individuals with very different projects, and we want to highlight those projects today so that you can get a better understanding of what we are talking about with regards to the prioritization process. Ms. Conner added that these gentlemen have put together their projects and have a passion for their projects, and those are the types of people that we

want to sit on our watershed advisory committee and who understand that they personally can make a difference in our environment and in our clean water.

VI. COMMUNITY PROJECTS

a. Discuss current environmental activities

Ms. Conner introduced Klaus Leidenfrost and he is with Missouri Caves and Karst Conservancy.

Klaus Leidenfrost gave a powerpoint presentation which is attached to this summary and therefore, made a part hereof.

A question was asked about the idea of recycling the tires. Mr. Leidenfrost said that they do recycle the tires. The question was then asked if that doesn't help to provide funds back into the effort. Mr. Leidenfrost said that it does help but that large equipment is about \$4,000-\$5,000 per day.

An attendee asked how many more caves and sinkholes he is thinking about working on. Mr. Leidenfrost said that they have been working on this one for 3 and ½ years, and they would like to finish it. The attendee then asked if there were any in this area. Mr. Leidenfrost stated that there are plenty of dumps and sinkholes around but that if anyone knows of a particular location to please let him know.

Another attendee asked if the dumping has quit. Mr. Leidenfrost said they have had one case of dumping since they started, but the plan is that they will have to put up an 8 foot fence to stop it when they are done.

Another question was asked as to the current fine for dumping in the State of Missouri. Mr. Leidenfrost said that it depends what the item is and what county it is located in. Mr. Leidenfrost said that it can be very low or it can be up to \$20,000.

An attendee mentioned that when he was a kid in Minnesota the fine was \$500.00 regardless of what the item was. On this same note, Mr. Leidenfrost said that Oregon has a bottle bill and it makes a big difference. Another comment was made that Iowa has a deposit on their cans which helps as well.

b. Impacts of those environmental projects

Ms. Conner introduced Craig Fuller with the Missouri Department of Conservation.

Mr. Fuller gave a powerpoint presentation which is hereby attached and therefore, made a part thereof.

An attendee asked Mr. Fuller if he would go back to that last slide in that it looks as though the trees are growing in the gravel as the bank erodes instead of going to the side where it used to go. Mr. Fuller said that a lot of people would say that but his perspective is that it is doing that because the bank is eroding and moving away, and it allows those trees to grow in that gravel.

Another comment was made that back in the '80's the attendee went to a big meeting on conservation, and they told the attendees then that if they plant trees along the bank that will stop the erosion. The attendee said that instead what happens is the river flows along and pulls the trees out and it causes huge places of erosion where the tree roots were.

Mr. Fuller said that may happen on occasion but at this particular location, he can tell what happened because he saw it happen over time. What happened was there were some trees along the bank and the landowner used the land for a hay field and left a few individual trees on top of the bank. Mr. Fuller stated that is the key a few individual trees on top of the bank. Mr. Fuller added that the terms Riparian habitat or corridor or buffer width, erosion is a natural process but when you are thinking about Riparian corridor, etc. it is his belief from what he has seen over the past 25 years that a few scattered trees is not enough to stop erosion and its' not since erosion is a natural process, therefore, what happens is there will be a tree that is undercut, and that tree falls in. Mr. Fuller added that most of the time when the tree falls in some of the roots are still hooked to the bank, and the next time, there is a lot of water that root ball falls in and catches debris and causes a massive scour. In that case, it does cause more erosion at that particular time. It then causes massive erosion along the entire bank because the water gets behind that one tree and therefore, causes more erosion in that the remainder of the scattered trees just starts peeling off.

Mr. Fuller said that is not what he or his agency promotes for long term erosion prevention and control. They promote lots of trees. The attendee said that she is speaking of lots of trees. Mr. Fuller said that there will be places where that takes place as well. Erosion along a stream bank is the result of many different factors and there might be other factors in play at those particular locations. Typically, there has to be one of three things present for massive erosion to take place along a stream bank. The first being there has to be a change in the discharge such as the volume of water that is coming down the channel, and that can happen if a Wal-Mart or massive housing development has been constructed, and it changes the amount of water that the stream receives. The other thing is that something can change in the channel itself which would change how the water and sediment flows such as a stream flows back and forth, and then it is straightened even in areas where there is a good Riparian habitat along the stream. Third and most common is the corridor has been cleared from alongside the stream and the bank has lost its protection of a thick layer of root mass alongside the stream.

An attendee mentioned the amount of rain that we have encountered this year. Mr. Fuller said that it can be the change in the discharge, since we had three 100 year floods this year.

Another attendee said that what is happening on his land is in the middle of the river, there is still gravel and Sycamore trees have taken root and now water is now running on both sides of his Sycamore trees and is eroding the banks on both sides, and eventually it will start shooting through the fields. The attendee then asked what he is going to do about that since he can't remove the gravel anymore. Mr. Fuller asked who told him that. The attendee said that he called Jefferson City, and they told him that he can't remove

the gravel because of the possibility of grease flowing out of this equipment. Mr. Fuller said that he would help him get a gravel removal permit if he would like to.

Mr. Fuller said that a lot of times people think that it is the Department of Conservation that won't allow them to remove the gravel, but that is absolutely wrong. They have no jurisdiction over gravel removal. Mr. Fuller handed the gentleman a business card and then several others wanted one as well.

Mr. Fuller reiterated that the Department of Conservation does not have regulatory authority over gravel removal in the State of Missouri and that between 1992-1996, it became the most restrictive and since then different agencies have had authority. The two entities that have had regulatory authority over gravel removal or in the stream activity is the U.S. Army Corp of Engineers and maybe the Department of Natural Resources. Ms. Bassett added that it would only be DNR under certain circumstances. DNR might have authority if the gravel is sold because sand and gravel is a mineable commodity in Missouri just like lead or any other mineral in Missouri.

A comment was made that people have been resisting this kind of thing for over 50 years because of all the regulations, and it makes things difficult.

There was much discussion regarding erosion and removal of gravel and how fill is defined by the U.S. Corp of Engineers.

A comment was made that the bottom line is that the farmers can't afford to participate even if there is a cost share program involved because they are supposed to maintain it for a period of time, and something could destroy the work they did the very next week, and they don't have the money to make the necessary repairs.

Ms. Conner stated that we will document the concerns of the landowners and while we can't make the recommendations, we will be able to convey the concerns.

A question was asked about where the erosion was taking place in the last photo of Mr. Fuller's presentation. Mr. Fuller stated that Ozark streams move sand, gravel and woody debris and works like a conveyor belt. It is accumulating on the gravel bar, and that is why there are gravel bars. The attendee then mentioned that when they see a stream, they see the places where it got cut out, and then they see a big gravel bar. The attendee then said that they kind of lose what they are seeing here because of the big picture in front of them. It was also mentioned that although it looks like they are losing all kinds of soil, they are also gaining some in the bottom of the stream, so while the river bank itself is eroding they might actually be gaining far more soil than they lost up on top. Mr. Fuller said that they potentially could have. The attendee then said that it is the same with the gravel bar because that is how the river bottom gets made in the first place. Because it is a gravel, bar and then soil starts to soak in and plants start to grow there, and the stream moves somewhere else and so on. But one of the things that does get missed in these pictures is that there actually is soil being caught in large amounts, and we focus on the small things and so that is actually part of his problem with the riparian corridors in that it actually helps channel the stream whereas in a flood, these can slow down the water flow because the wider it is the slower it moves.

Mr. Fuller agreed but said that he would throw the extra caveat in there that the Riparian corridor is not a barrier but rather like a sponge. Mr. Fuller used the example that if you take a sponge and hold it under the faucet, there is some water that goes through it. Mr. Fuller added that what the attendee is saying is exactly right, but he would also say that when the water does get out of the bank and spreads over the flood plain, the riparian corridor is not a barrier; the water flows through it, and it is actually a benefit by slowing the water down.

Mr. Fuller added that he would like everyone to think about this and those that have property along the river have probably seen this in certain areas, but you have a field that is essentially flat in the bottom next to the river, and if you have an area where you have a thin stand of trees between your field and the riverbank you should walk through it and look for this, and you might even notice that it is there. You walk out of the field and through the timber towards the river, everything in your mind says that you should be going downhill because you are following the river but what actually happens is you walk out of your pasture into the timber and the closer you get to the river you actually raise a little bit. Mr. Fuller added that it is silt and sand, and that is exactly the sediment that the attendee is talking about that has dropped. So when you talk about soil and sediment moving down the river that is the sediment that is being brought by the flood water and when it spreads out over the bank and runs through that stand of timber then it slows down, and that is exactly why in a lot of locations where there has been an established corridor along the river for many years, you will actually rise going through that stand of timber before you get to the bank.

Mr. Fuller added that the other identifiable characteristic that is going on is to look at the trees. If you cannot see a root flare on your trees, then that is an area where you are depositing sediment. It also depends on the quality of the trees and how much underbrush you have, and it may be scoured out around there, but if you are in an area where you have thick underbrush and good standing trees, particularly on the inside of a curve or the bend in a river, if you look at the trunk of the tree, and the root flare where the tree gets bigger right at the ground you won't have one it will just be a solid trunk of tree going into the ground. That is because that root flare is buried in the ground somewhere under that deposit of materials.

Mr. Fuller said that he will be staying after the meeting to answer any further questions.

Ms. Conner thanked Mr. Fuller and all of the presenters with a round of applause. And told the attendees that she appreciates them all staying for the entire meeting.

VII. PROJECT TIMELINE

a. Future meetings

Ms. Conner stated that we will be hosting a series of additional meetings, which will probably be in September, November, January and April. Ms. Conner said that the attendees will be notified of those meetings.

b. Surveys

Ms. Conner mentioned that we have provided a short survey and asked if everyone would take a few minutes to fill out the survey so that the next meeting can be targeted to the items that they feel are important.

Ms. Conner said that if there are no other questions, we will be adjourned.

VIII. OPEN DISCUSSION

There were no other questions.

IX. CONCLUSION

Bob Broz suggested that if the attendees are interested in being a part of the committee, if they would put a contact number or put a “yes” beside their name on the sign-in sheet that will help ensure that those that are really interested will not be left out.

X. ADJOURN

Linda Conner adjourned the meeting at 5:34 p.m.

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**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING SUMMARY**

**Tuesday, August 25, 2015
5:30 p.m.
O'Bannon Bank Community Room
1347 South Ash
Buffalo, MO 65622**

I. CALL TO ORDER

Linda Conner, Executive Director of the Lake of the Ozarks Council of Local Governments called the meeting to order at 5:30 p.m.

II. INTRODUCTIONS AND SIGN-IN SHEET

Linda Conner introduced her staff; Andy Thomason is the Regional Planner, and Pam Gilbert is her Administrative Assistant. Ms. Conner said there are also several planning partners in attendance; Jason Ray is with SMCOG from Dallas County. Jason brought with him some other planning partners. Stacey Armstrong is with the Watershed Committee of the Ozarks, and she stated that they are doing a similar process in the SAC River Basin. Rhonda Headland is the Community planner for the Missouri Department of Conservation.

Ms. Conner thanked everyone for coming tonight and said that we will start out with the educational component that way everyone will have an idea of what the watershed is and how it works.

Ms. Conner introduced Bob Broz from the University of Missouri Extension, and he will be explaining watershed planning and why it is important.

III. EDUCATIONAL COMPONENT

a. Watersheds 101

Mr. Broz said that there are three things that you need to know about him that will explain partially what he does. First, he comes from a family of 9 kids and because of that he has a tendency to be loud. Second he used to work with a livestock auction, so he has a tendency to get a little fast sometimes. Third thing is that he used to teach and as a teacher sometimes, he will ask a question and when he asked a question, he expects an answer. In the event, he does not receive an answer he will ask what everyone thinks about the topic. Mr. Broz then asked if there were any questions. There were none. Mr. Broz stated that anywhere through the presentation if anyone has a question to please feel free to stop him.

Mr. Broz said that we are going to talk about the value of water resources and introduce the concept of a watershed and provide an overview of a watershed to Missouri's Hydrologic Units and discuss cause and effect and what are some of the issues that we see that affect

water quality, and we are going to examine the value of watershed planning and look at how to identify partners and how to work in the planning and implementation process.

Mr. Broz said that first he will give a few basic definitions, and that you will hear this off and on for the next couple of years, especially tonight.

A Hydrologic Unit Code is a term used when we talk about a watershed, or it might be referred to as a HUC. This is a classification system that has been developed that is utilized throughout the world and the more digits that are used the smaller the area. It is very similar in ways to the way five-digit zip code works. They have five digits in your zip code, and that gives the town or area that you live in, and then they put four more numbers on it, and those four numbers actually identify a much smaller area which is the same as the HUCs or Hydrologic Codes. If we are looking at an eight-digit area, we may be talking about this (pointed to the map), but if we put more digits behind those, then all of a sudden they are at a much smaller area that they are looking at. The watershed that we are going to be talking about is the 8 digit HUC.

In a watershed basin, the terms can be used to determine the way the land area drains to a common waterway such as a stream or lake.

An attendee asked if he could be a little more specific as to what we mean by Hydrologic.

Mr. Broz responded by saying that hydro basically means water and what we are looking at is any place where the water lands and runs to any given point would be the Hydrologic area or unit. The attendee then asked if that is synonymous with watershed. Mr. Broz said that is correct except that by doing the numbers what they have done is developed a classification by giving a series of numbers such as your zip code. They give you that set of numbers so that they can start identifying basically all these different areas by a number, sort of like a social security number and everything else.

Mr. Broz said that point source is an easily defined area in that it is where we can actually see where something is being discharged as opposed to a non-point source which is a source that cannot be identified readily because the origin is not readily seen or known. Many times there will be multiple contributors that we can't identify and the work to address non-point sources is almost always voluntary. A lot of the point sources such as a waste-water treatment plant there will be a permit process but when we talk about the non-point source that is almost always done on a voluntary basis. NRCS, the Soil and Water District, Department of Conservation all work a lot with non-point source, and they do it trying to work on a voluntary basis with people.

Mr. Broz showed a couple of pictures for an example, the photo on the far right; one can see a brown fence way back in the back. And if you look at the bottom portion of this picture, you will see brown paint in the water. Mr. Broz said that he had his camera with him at the time and when they pulled up, they saw where that brown fence was located between 2 buildings. They could see where the person had taken his paint and brush that he had used for the fence and had washed the paint out without realizing that it was going to show up down there and go into the stream. Mr. Broz said that it can come from a wide variety of areas, and we don't always know where at times.

Mr. Broz added that the value of a watershed is that all of us depend on clean, abundant water in that it affects our health, industry, commerce and everything that we want to do as far as recreation, and it all depends a lot on the water that we have.

Approximately 66% of all Missouri Citizens use surface water for their main water source. The majority in this particular area the water comes from the ground in that you have ground water but when we get up into different parts of the State, we see a lot more surface water being used. Mr. Broz added that 34% of all the people in the State use ground water for their main water source, and the two main industries in Missouri are agriculture and tourism, and both are dependent on clean abundant water. We have to have clean abundant water to keep our economy moving forward. Mr. Broz asked what this has to do with why watersheds matter. Healthy protective watersheds can protect clean abundant water for drinking, irrigation, industry and recreation. The condition of the watershed is directly affected by the quality and the quantity of the water that is in our lakes, our rivers, our streams and our wetlands and even that is underground.

Mr. Broz reiterated that a watershed is the area of land that drains to a common waterway such as a stream or lake. Everyone lives in a watershed. We might live in a community or a rural area, but it is still in a watershed. Mr. Broz added that when Lewis & Clark were asked to go find the boundaries of the Louisiana Purchase, does anybody have any idea how they knew where to look. Mr. Broz then asked what the western boundary is. An attendee responded by saying the Mississippi River. Mr. Broz stated that is the eastern boundary. Mr. Broz stated that it is the Continental Divide. Mr. Broz then asked if when Lewis & Clark got out there in the middle of Colorado did they find a sign that said Continental Divide? No, what it says in that document is wherever the water lands and runs to the Mississippi is your land, and they were describing a watershed. Mr. Broz added that is literally what we are looking at in that we are talking about a watershed that is just a much smaller one. The Mississippi Watershed is the third largest watershed in the Continental United States.

Mr. Broz said that all of our activities affect what is in the watershed. And it impacts the water, and the water resources that we have.

The term watershed basin kind of like Hydrologic Unit is sometimes used interchangeably, and you can call it one thing or the other. Watersheds come in different sizes. We can talk about the big ones like the Mississippi River Watershed that takes in part of 31, or maybe it is 36 States but watersheds can be something that is extremely small, and it depends on what our focus is.

Our focus for this particular project happens to be the 8 digit Hydrologic Unit that we are going to call the Niangua River Watershed. Mr. Broz added that it can be as large as the Mississippi or as small as these. There are 66 of these 8 digit Hydrologic Units, but if we go down to the 10 digit level or the 12 digit level, there are over 1,600 in the 12 digit level so each one of these watersheds is made of much smaller watersheds and as the number gets longer then we get smaller and smaller watersheds.

Mr. Broz said that he put the map up so people can identify where they live, and this particular one goes all the way from Marshfield to Camdenton.

Mr. Broz added that this is the 3rd meeting that we have done just like this one and part of the reason is to get people here to hear what people are saying that live at the top of the watershed, (or he should say bottom since this one happens to run to the North). This will give everyone the chance to start at the same place, and we are all talking about why it is important to have good clean water.

There are some basic watershed characteristics that help them to identify sensitive areas, and they look at the geology and soil type and the geography as well as climate and rainfall as well as land use and land cover and types of industry in the area as well as population and if it is growing or shrinking because all of these things affect what is going on in that watershed and whether or not it is something that needs to be protected or whether or not it is something fairly safe.

Common watershed stressors for point source are any activity that has a direct discharge to the water with pollution or is a stressor to the water, and then we have non-point source such as bacteria, pesticides and a whole series of other things. Population growth in urban areas can lead to more storm water runoff, which then increases more heavy metals and sediment and nutrient and all kinds of other issues. New industry can change the demands on the water supply as well.

Mr. Broz added that when we start asking what the things that are being affected and how are we individually doing to contribute to what is going on, we have to understand cause & effect. Algae blooms, blue & green algae are caused by excessive nutrients of suspended solids. Lower amounts of oxygen can be caused by too much shade or not enough algae. Algae is a plant and plants live on sunlight and water, and they live on nutrients. So the more nutrients we have in the water the chances are the more we are going to have algae and the more algae we have creates other issues.

Once we have identified possible pollution sources, we need to identify practical solutions that can help minimize the impact. One of the things that we will be doing and planning as we look around the watershed is to inventory the human resources available. Who are the people who are the movers and shakers and are coming to work with us to do some things? We need to identify who the people are that can provide technical, educational and financial assistance. We will look at the different agency groups, watershed groups and local citizens as well as people that are in the know that have an idea of what is going on and how they need to be able to work together and to find the resources to develop solutions for areas of concern. We need to identify the factors that will reduce the potential pollution sources. Mr. Broz said that we have a large number of people in the community already. If you work with the NRCS, the Department of Conservation, the Soil and Water District, County Extension Office, or County and City storm water people. These are all people that have certain skills that can really help us when we talk about watershed planning.

Mr. Broz said that the key person in all of this process is the local citizen. In Missouri, 93% of all the land is owned by individuals so the government can hardly do anything without getting local people to come up and say here is what we are willing to do or here is what we can do. You control the land. Mr. Broz added that when we talk about planning at the watershed level, someone asked at one of the other meetings why we are even talking

about planning. If you start looking around your community, a lot of communities have a source water protection plan if they have ground water, or they may have a storm-water plan, the local soil and water district is probably saying that we need to have a nutrient management plan if you want to receive certain funding from them. Mr. Broz also mentioned conservation plans, emergency management plans and human service transit plans. All of these are plans that are developed to help provide us with the input we need in the event, we want to improve something or find more funding for it or something else. Mr. Broz added that there are a lot of plans already out there that are part of our community process already. Many of these plans are voluntary, and they need the local input and collaboration.

In talking about partnerships and local participation, partnership is where individuals and groups are working together around a common goal or cause. You can probably think of people that you are working with that are part of a partnership that you have in some organization. It may be the local Farm Bureau or your local church. You have people that are partnering with you to help get things accomplished, and that is what we are trying to do here. They may be agency partners or watershed groups or industry or business people or interested citizens, or it could be a series of people, and they all have something that they can bring to the table. You may not want to use everything that they have to bring but you at least need to hear what they have to say.

There are different types of partnerships; we have cooperation, coordination and collaboration. All three require a high level of communication and something that you really need to be able to get across, whether we do that through meetings like this or whether we do it through email or newsletter, we need to keep that line of communication open, so we can get information back and forth to each other.

We are going to focus on the collaborative partnerships. We do this to try to establish common ground for sound strategic watershed planning to contribute influence into the decision-making process. If we want to strengthen that decision-making process and to be eligible for State and Federal funds, we need to know what the things are that we can identify where we might be able to actually find some extra funding. Mr. Broz added that we look at collaborative partnerships to follow a recommended guidance and give us a plan of action. As an example, Mr. Broz said that if you go to the bank and say you need to borrow money, do they just give you money? No, they say that they need to know what you are planning to do and want you to give them a plan. And then you can go ahead and do what you need to do to get the funding. It may be that you need to comply with new legislative requirements, or it may be that you need to respond to particular mandates or state mandates or it may be to address conflict over specific issues. All of these things are why we look at a collaborative partnership. We ask ourselves who are our partners, and they are everyone who lives, works or recreates in the watershed. It will be the landowners, renters, residents, or it may be the absentee landowners it may even be non-residents such as those who come and float the river one weekend, and they are gone but they have some input as to what is going on. Mr. Broz added that business as well as industry, everyone that is affected is part of the watershed community.

Mr. Broz added that the ground rules apply to everyone and that all opinions are viable and participants should listen respectfully, and everyone is considered equal. No one person is

seen as having more power or authority than anyone else. Everyone is invited to contribute to the discussion and the interaction, and no one should be allowed to dominate the discussion. Respectful disagreement is okay and may be necessary to move forward. And we need to focus on the common ground, what it is that we are all here looking for. If one of the options is making sure that the water quality, we have to maintain itself to do whatever we can to make sure we don't have an issue with water quality, then those are our focus and common ground and what we are here to do.

There are a lot of State and local partners, and the list on this slide is just some of them. Mr. Broz named the ones that are on his powerpoint presentation. And reminded everyone that to be successful with a watershed plan there has to have a voluntary approach. It has to have input from each individual who is here. And it has to be able to say that the people that are involved in making this decision are the people that are actually going to be implementing it later and helping us write a plan so that what they want to do is identified. We want to incorporate that local landowner and involve different interest within the watershed. We need the buy in order to make it successful if 93% of the land is owned by private individuals. Mr. Broz added that if he walks out to your property and says this is what we need to have you do what you are going to do. The comment was made that they would run him off the property. Mr. Broz said that if he is lucky that is all that will happen.

Mr. Broz added that his boss used to live in this area years ago, and he told him when he started working for him that they have had the same information available for people for 30 years on manure management, and we are still giving that very same information to people that they gave them 30 years ago. He (the boss) added that he walks out from the University and tells people what it is that they need to do but never once in 30 years did he ever ask a farmer what it is that they would like to do. What would you be willing to do if we could help you find the funding or find the technical assistance to do it. When they started asking that question, they started seeing people do things that they never expected, and they came up with better ideas because they live and work on the land, and they know what is best for them and that is what we need to make it successful, we need local residents who want to be here doing this with us.

Mr. Broz asked if there were any questions. Mr. Skelton asked what is the problem with the Niangua River. Mr. Broz responded by saying with the majority of it, there is very little but there are some bacteria that has been identified in a couple of areas of it. And overall, because of the fact that the Niangua has a large amount of grass, there are not a lot of pesticides and not a lot of trouble with nutrient levels or sediment but there are a few little things.

Mr. Skelton said that according to your paperwork, the bacteria may or may not be natural, is that correct. Mr. Broz said that it would be natural. Mr. Broz added that it may be coming from nature or onsite sewage systems, or it could be from a series of different things that fall into the non-point source system.

Mr. Skelton said that Mr. Broz mentioned the non-source management plan and asked where that came from. Mr. Broz responded by saying that the State has a non-point source management plan that they have out and what we are looking at in this watershed plan, is focusing on the non-point source. Mr. Skelton said that according to the non-point source

plan in the State of Missouri, you are required by the EPA to get any of their funding to do it the way the EPA wants you to do it, isn't that correct? Mr. Broz said that for the non-point management plan that the State has to develop, yes. Mr. Skelton said that the EPA is driving the non-point management plan, isn't that correct. Mr. Broz responded by saying that he wouldn't say that they are driving it, but they have to look at what we are doing. Mr. Broz said that our State DNR is actually an arm of the EPA. Mr. Skelton said, "there you go folks." Mr. Broz asked if he ever does anything with the soil and water district. Mr. Skelton said that he is now. Mr. Broz commented that the Soil and Water District is part of DNR.

Mr. Broz asked if anyone has ever used the technical assistance program from DNR when it was out there. He added that it was one of the best things they ever had and guess what, we cut funding on it. Mr. Broz added that they were not an inventory agency they were here to provide education for us.

Another question was asked as to how often the water was tested to get that bacteria test, was it one test or was it over 15 years or 2 years or what. Mr. Broz said that it is a series of tests that are done and asked Gwenda Bassett if she would like to answer that question.

Ms. Bassett said that to classify a stream as impaired, they look at the last 3 years of viable data that is for the stream reach and for e-coli, in particular, which they sample for to be protective of public health in a whole-body contact stream such as the Niangua and if those entered samples over a 3-year period are above the water-quality standard for e-coli, then it is deemed impaired. The attendee asked how many samples were impaired on the samples that they took. Ms. Bassett said that it has been sampled since the early '90's. The attendee asked if they took samples at PB2 where all the geese are and everything as well as samples where the water is not moving. Ms. Bassett said that she doesn't think you can find a place in the Niangua where the water is not moving.

Mr. Broz added that you can find places where the water is not moving in the Niangua, but they have tested it and that they don't test the whole thing because they don't have the funding to do the whole thing or rather DNR doesn't so they asked themselves what are the areas that we can get to that will be able to be tested that we can look at. In the last 5 years, they have more per geometric than it used to be and from what they now say is safe for full body contact, fishing and that kind of thing.

Mr. Skelton said that there are actually hundreds of different types of e-coli is that not correct. Mr. Broz stated that is correct.

Mr. Skelton then said that they don't really know if e-coli is going to harm individuals or not. Ms. Bassett responded by saying that they use that as an indicator. And what they are really concerned with is the pathogens that are present and e-coli will tell you if the pathogens are present, and it is the e-coli and the viruses that are there that could potentially harm a person. Mr. Skelton said that e-coli is a word that has been thrown out by various agencies for many years, especially when it comes to different viruses and so forth and so the public has just been kind of conditioned to the fact that when they hear the term e-coli, they automatically think it is bad. Ms. Bassett said that they don't teach that e-coli is bad. Ms. Bassett added that you have e-coli in your gut, and that is where it can come from. Mr. Broz said that it is kind of like talking about snakes or spiders. Mr. Broz used the example and

asked how many people would say that they will let a spider crawl on their arm; a lot of people do but some people won't because they have seen somebody get bitten. Same with a snake, he is not afraid of snakes but his wife is scared of them. Mr. Broz added that there are thousands of different varieties out here and very few are harmful to the public but as Ms. Bassett mentioned, they can be harmful to the public, and if they see e-coli, then they know that more than likely, there is something else in there that they should be looking at.

A question was asked as to where the tests were taken. Ms. Bassett said that she doesn't have that information with her, but that she can get the attendee that information.

Along those same lines, another attendee asked, if they test in the middle of the stream, or if they go to the end of a cove where it is kind of fishy, so every where they touch can be representative of the entire stream or just a representative of the selected locations.

Mr. Broz added that what one must know about water is that it is constantly moving even if it is in the back of the cove. Mr. Broz added that he did a lot of testing in the Lake of the Ozarks and where they tested in just 5 minutes of each other, some samples came up with high levels of bacteria and others none. Mr. Broz added that it doesn't mean that there is not bacteria in that area but rather that the area is constantly moving. Regardless of where the test is completed, the water is still moving somewhere regardless if it is moving out into the main stream where we want it or whether they took a sample back up in a cove somewhere where there may have been a higher level there, at least showed up bacteria within the cove itself.

Mr. Skelton said that according to Section 303D of the Federal Clean Water Act, you are required to take testings so that you can get funding from the EPA and if the water isn't impaired you don't get any funding do you? Mr. Broz responded by saying that only if they are on the 303D list and at this point if we in turn as a group decide that because the plan, we are looking at here is just a healthy watershed plan. But if you want to do a 9 element watershed plan that in turn can qualify you for potentially receiving 319 funding.

Ms. Bassett said that we should back up quite a bit because we are getting into a State non-point source management plan and that is not what this is the focus of. It is not e-coli or stream impairment but rather what we are trying to get at is a healthy watershed plan which would encompass projects that you want to do and to get feedback on concerns that the landowners feel like are watershed priorities and things that we can work on as a community so it doesn't have to be focused on agriculture or impaired water bodies. Therefore, that is not what we are going for here.

Mr. Skelton said that the reason he brought up e-coli is because it is in the Niangua River Watershed information. E-coli is one of the first things that is mentioned. Mr. Broz stated that e-coli has been identified. Ms. Bassett said that is something that their department does, and they have to sample waterways statewide to make sure they are safe for the public. Mr. Skelton asked if that was a Missouri Statue that they have to sample statewide. Ms. Bassett responded that it is but also EPA recommends it. If you are in a State like we are in that EPA is not actually here, but rather you have a State organization, then yes, they are charged by the EPA to protect the public health.

Mr. Broz asked if there were any more questions for him and if not, he would turn it over to Gwenda and let her do her dog and pony show. Mr. Skelton said for everyone to remember that is what this is, a dog and pony show.

b. Importance of watershed planning

c. Overview of the Niangua River Watershed

IV. PURPOSE OF MEETING

Gwenda Bassett introduced herself and said that she would start by telling them a little bit about herself. She is obviously pregnant and she is having a boy, so she may be using those sign in sheets in the back of the room for ideas for names.

Ms. Bassett stated that she is the Southwest Regional Community Services Coordinator based out of the Department of Natural Resources in Springfield. And she wants to provide some background information on Our Missouri Waters efforts and what promotes this watershed planning that we are working on now at the local level and how the community partnership project fits into this program and the purpose of the project itself.

Ms. Bassett said that the department statewide with the Our Missouri Waters effort actually began in 2011 and overall the purpose of the program is to bring a more focused watershed planning approach to the department's mission, to protect our air, land and water resources while providing technical and financial assistance to our State's communities and businesses to protect public health. Ms. Bassett added that internally the department has been busy trying to find ways to cross coordinate their program and use their staff resources to better serve watershed residents, and they have also found ways to work more collaboratively with other organizations and agencies across the State with similar missions and funding streams such as the NRCS and Department of Conservation.

The most important part of this program is to seek local participation for watershed planning and decision making. So for instance, her department has several programs, some for water pollution, others for soil and water conservation to public drinking water and with each program comes opportunities for financial assistance and technical support. The department wanted a way to work with the local citizens and organizations to have them play a more active role in helping them to coordinate the programs and activities at the watershed level.

Ms. Bassett referred to a map and said that for them, it makes better sense to work on a watershed level because it is a smaller geographic area, and that is basically the whole point of this. This will allow them to engage with local citizens and focus on their priorities that will ultimately work to protect or restore the Niangua River water body.

Ms. Bassett added that there are 66 watersheds of similar size across the State, which is what this map shows. Ms. Bassett said that they have grouped all the 66 HUC 8s across the State into 5 larger groups so that they could do this process throughout the State, and they will be working in approximately 13 watersheds per year. Ms. Bassett added that she is currently working in the Southwest Region, SAC River, Niangua River and also the Spring River. Ms. Bassett noted the bright green color on the map and said that those are the other watersheds that have the same process going on right now across the State.

To elaborate a little more, each year a new watershed group will become part of the effort and they (DNR) will run through these year by year and begin the same process again so this whole thing will take about 5 years to complete across the State at this level and the hope is to eventually have a local watershed advisory committee (WAC) established in each one of the watersheds. After that has been completed, they will begin the process again and engage the local watershed advisory committee, and it will work on a 5 year rotation approximately.

A question was asked if what Ms. Bassett is saying is that after the watershed is developed, they will be forming a watershed committee of locals to advise DNR. Ms. Bassett responded by saying that this effort right now is to try to develop the watershed advisory committee.

The attendee then asked how they are going to arrive at the committee members. Ms. Bassett said that is why they have partnered with the Lake of the Ozarks Council of Local Governments, and Linda will be putting together the local watershed advisory committee. The attendee then asked whether it will be a short or long term committee. Ms. Bassett said that it all depends and that currently it is set up to be short term, but the hope is for it to be long term; however, it is like any committee in that it will keep going as long as there is active people involved in it. Ms. Bassett said that Linda may be able to elaborate on that in that she does work with similar committees.

Linda Conner stated that we hope to have members from each of the counties represented, and we also need to make sure that we have land owners, and business owners engaged in the process as well.

Ms. Conner also said that she would like to see a show of hands as to how many people have attended this same meeting previously. Several people raised their hands, and Ms. Conner said that there are several that have shown an interest in it already.

An attendee asked why Miller and Morgan Counties are in the LOCLG, but they are not in the watershed. Ms. Conner responded by saying that our (LOCLG's) designation as a Regional Planning Commission were assigned by the Governor in 1969, and the watershed is designed by God and the way the water flows. Ms. Conner added that the overlapping does not impact our ability to plan. We have partnered with the Regional Planning Commissions that are outside of our counties so that we have full coverage within those counties, and they are represented.

The attendee said that he would rather not have Miller or Morgan County telling Camden or Dallas County what to do. Ms. Conner responded by saying that we are going to make sure that the members on the watershed advisory committee only represent the counties that are in the watershed. It was then asked how long of a term the people on the watershed committee will be involved. Ms. Conner said that it depends on how engaged the watershed advisory committee is, and if they have projects that are ongoing we can certainly keep moving forward with those projects and look for additional funding for those projects. Ms. Conner said that it just depends because this is the first time they have ever done this so we don't know what the interest or participation is going to be and how long term those projects will be that will be identified through the process. A comment was made that it is

kind of like anything else, once you get it started it is just going to be there forever. Someone commented that hopefully it would.

An attendee said that what he thinks everyone wants to know is if they (DNR) is going to tell them what they can and cannot do. Mr. Broz responded by saying that is the reason for these meetings, and the advisory committee is to identify what it is that they are willing to do and to let them know. Mr. Broz said that they are probably not going to get everything that they want but the government is not going to be here to tell you what you need to do either.

The comment was made that they don't understand the NRCS and the Soil and Water District being involved in these voluntary programs and what is the Council of Local Governments going to do about the residents up and down the lake that the sewer water is running into the streams. The attendee added that they need to start there and not worry about the other because it is all voluntary money anyway and if all this is made mandatory where is all the money going to come from. In addition, he commented that the Soil and Water District is going to need more money for more help in all the offices so where is that money going to come from.

Ms. Bassett responded by saying that first off there is no additional money and that is actually quite opposite of the full purpose of all of this. More of the purpose of this is to find resources generally across the board to organizations and agencies that had declined so they are trying to find a better way to target their resources as opposed to putting up more money so they want the communities input.

The attendee then commented that it will be like just what they did with the Well situation except that basically, the Soil and Water District didn't have any money. Mr. Broz responded by saying that he sits on the Well Commission and that the attendee is right in that it should have never been done the way that it was done.

Ms. Bassett also mentioned that this is not a focus for agriculture, but rather the entire watershed. You might have communities within this watershed that may have issues and concerns that they are dealing with that you aren't aware of that will be a part of this watershed planning process as well. As an example, Ms. Bassett said that the Village of Phillipsburg may have a mandate for their wastewater treatment plant that they can't afford down the road or other issues coming down the pike that they need to deal with within their community that eventually do impact water quality, but it is not necessarily Soil and Water Conservation money. Ms. Bassett stated that their department has many different programs as well as many different financial and technical support tools available so the point of this is to take all of that information and see what can be done.

An attendee commented that Ms. Bassett just got through saying that they didn't have any money. Ms. Bassett responded by saying that what she said was that they have a lot of different programs to help provide financial assistance, but those individual different pots of money have declined over time, so they are trying to find a better way to put those into the community, and they want to work with the committee better by them letting DNR know where the biggest impact is for everyone. Ms. Bassett added that it is not a focus on the Soil and Water Conservation Department or NRCS or agriculture or just a focus on one

community for a wastewater treatment plant for Conway or Phillipsburg, but rather it is more than that, and they want to take everything into account since the Department has all of those different programs available.

Ms. Bassett said that she wanted to go over the benefits of working on a community watershed partnership program, using this type of framework that we are talking about allows the department to better manage their activities and resources, both staff and monetary. It also allows watershed residents to know in advance of certain activities going on in the watershed and when they might occur. The department can also help to provide compliance assistance to be used for regulated communities and by providing technical support for non regulated communities. Ms. Bassett added that it also provides an opportunity to leverage various resources that are available and partnerships within the watershed more effectively and efficiently. As an example, Ms. Bassett said that we know that the Department of Conservation has a project in their area and that if they work together they can get the biggest bang for the buck, so essentially that is what this is about.

Ms. Bassett pointed out the map of the Niangua River Watershed and Buffalo actually lies right on the boundary of the Niangua and the Pomme De Terre Basin. Ms. Bassett added that the watershed covers over 1,000 square miles and includes portions of five counties so it doesn't obey manmade drawn lines and there is little urban area. The largest population is actually in the headwaters in the Marshfield area.

Ms. Bassett also said that there are numerous mapped caves and sinkholes, and the attendees will hear about the Goodwin Sinkhole tonight as well as at the last meeting. The Goodwin Sinkhole is located in Laclede County, but the surface water from the sinkhole has been linked to Ha Ha Tonka Spring in Camden County and is actually the 12th largest spring in the State, so there are a lot of benefits to keeping our surface water clean.

Not only is the headwaters of the Niangua Arm at the Lake of the Ozarks, it has two State Parks and a pretty big fishing industry and recreation areas but it is also home to the Niangua Darter and other important aquatic critters that Craig Fuller will talk to you about later. The Niangua Watershed has some good water quality but some impairments as well and technically on the impaired list for bacteria and e-coli and Dusenberry Creek as well. The Little Niangua is on the impaired list for dissolved oxygen.

Ms. Bassett said that the community partnership project is a local engagement that is a part of DNR's Our Missouri Waters effort, and because they want this process to be locally driven they have been working with LOCLG as the lead partner on this project and there are three main goals they want to accomplish through this effort.

First, they want to build knowledge on the water resources in this area through the public meeting process. They also want to enable local watershed citizens and find solutions and support or build on partnerships that already exist in the watershed so efforts are not being duplicated.

Ms. Bassett said that the way to accomplish all of this is through the open-house meetings that LOCLG is hosting in order to find out how local residents feel so that they can voice their concerns here. What projects the locals want to tackle, and it is also about important

partnerships that are already going on here, as well as a network that will work to improve local water resources. Ms. Bassett added that the more we all communicate and talk to each other across the watershed the more you find out who is doing what and who can possibly help you with a project later on down the road.

Ms. Bassett mentioned that at the last meeting, some of the concerns that were voiced were, stream bank erosion, illegal dumping and trash in the streams. Also abandoned wells since abandoned wells can lead to ground water contamination.

Ms. Bassett then mentioned how to move priorities forward, basically with a local watershed advisory committee that they want to have established. Ms. Bassett said that it is similar to what LOCLG is already working on with such other committees such as transportation and emergency management. This group will be very similar, but they will be focused on water or natural resources. Ms. Bassett also said that since they want to be able to reference back to everything that they have learned through the process, they will document everything into a healthy watershed plan.

The basic framework for the healthy watershed plan will essentially be a working document and provide a summary of what has been learned through these meetings and recommended solutions. Ms. Bassett added that solutions can be anything from building on more partnerships or applying for grants or other types of Federal funding for down the road that apply for certain projects for people, and it will essentially be organized like what you might know about the watershed, background information and whatever information was learned or exchanged through the public meetings and what are the priorities of the local residents as determined by the local watershed advisory committee which will use the information from these meetings during that. Also what are some of the solutions to these concerns that came up during the public meetings?

Having things documented in the plan has its benefits, local watershed residents from urban to landowners to city and county managers to business owners all have an opportunity to share their natural resources concerns. Ms. Bassett added that by hearing from a diverse group of watershed residents and listening to each other's concerns this is an opportunity to have a shared vision for the watershed, a plan to provide guidance for future financial and/or technical support and to make the most of existing resources. It will also help to discover existing practices and partners who are out there that might be helpful for a future project. Overall, the benefit is that you are actively working to keep your local watershed clean.

Ms. Bassett said there is more information on DNR's website, and they will be posting information on the website for the Statewide program and the efforts that are taking place. There will be meeting information, maps and general information. Ms. Bassett added that LOCLG is actually keeping a website as well, and it is www.nianguariverwatershed.org there will be a lot of background information there, and it will help to make it easier to follow along as the project moves forward.

Ms. Bassett referred to her contact information on the powerpoint presentation and said that if anyone has any questions or comments to please let her or Linda know as this is a really important project for the department, and the community input is very valuable.

Mr. Skelton commented about something that he found on DNR's website, which states, "that as population increases a need for statewide water planning has emerged." Mr. Skelton then said that, in reality, our population has gone down since we lost a Congressional District. Ms. Bassett responded by saying that if you look at the Niangua River Watershed, it has actually increased. Mr. Skelton asked if this is for our watershed only and this isn't a concern for all watersheds, just ours. Ms. Bassett asked if he means the population increase. Mr. Skelton said yes. Ms. Bassett said that it can be, but it is just a piece of information, and she knows that this watershed has increased by approximately 3%. Ms. Bassett also said that when they look at population increases they usually look at county level and isn't exactly sure about Statewide since they focus on a little bit smaller scale than that.

A question was asked if they are getting any direction from EPA at this point regarding a new ruling for the State. Ms. Bassett said that there has been no direction to them. The attendee then asked if that has nothing to do with what we are trying to do here. Ms. Bassett said that is correct. Ms. Bassett said that there might be Kitchen Cabinet meetings at some point in Jefferson City, but that is more of a regulatory framework that they might have to work through eventually, but it is not something that is on their radar at all.

Mr. Skelton asked Ms. Bassett the question regarding the fact that since she brought up, funding and grants a couple of times, has she explained to these folks that when you get funding or these grants from the Federal Government what different Memorandums of Understanding and Memorandums of Agreement, which have all the different strings attached to that money, and that they will be required to follow Federal EPA regulations. Ms. Bassett said that it depends on the funding stream, so she would think that once we get down to the level of projects then if it does have to do with an EPA grant, then that would probably be applicable but that not all grants are from EPA. There are some grants that are State level from taxes and there are some grants that are the non-point source grants that are from EPA, and they have been given down to the State level, and they are definitely not the only funding stream that they work with and it is something that would be addressed at more of a specific project level once we get to that point.

Mr. Skelton also asked if they were going to go over exactly what the ground source water management plan is so that these folks actually know what you are implementing. Ms. Bassett responded by saying that they won't because they are not implementing a non-source water management plan, but rather we are trying to implement a healthy watershed plan which is completely different. Mr. Skelton said that the non-source water management plan is Statewide so it has to be implemented. Ms. Bassett said that the non-source water management plan is directly tied to EPA non-source grant funding. This is not only about non-point source; this is about a healthy watershed plan and is completely separate from that so the other meetings will not really be talking about that because it is not applicable. Mr. Skelton said that it is not completely separate, but if you have a non-point source of pollution, you have to implement the non-point source management plan, isn't that correct. Ms. Bassett responded by saying not necessarily. Mr. Broz added that there has been a non-point source management plan for the last 15 years. Mr. Broz also said that he has sat on that committee, and that he knows it has been in place for years. Mr. Skelton said that it has recently been updated and changed. Mr. Broz said that it is updated every 5 years, and it is

like any other plan in that they change things. As an example, Mr. Broz said it was just like getting married in that you said this is what I am going to do, and that is the way life works. A comment was made that is what they are afraid of. Mr. Broz said that you change things based on the new information that you have, and we may divorce you but let's hope not. Mr. Broz added that what they are trying to do here, and this is the whole concept, is that if they receive voluntary input the chances of them keeping EPA from coming down here with something is much better. Mr. Broz added, will it completely stop them, probably not. Mr. Skelton said that you (DNR) are the arm for the State of Missouri for the EPA.

Another comment was made that if we get into a water-management plan, and you put this document together and say that you are willing to do some things, that is what this is about, the local communities generating information together and expressing your concerns and your interest and feeding that into the system if you will and it will provide DNR with the changes that they want to see. This is not an EPA thing.

Another comment was made that you have to have somebody on board though that will convey that they want to be left alone.

An attendee said that he has dealt with EPA and DNR over the years, and he understands that DNR is an extension of the EPA for managing what is going on at the local level, but the difference is that if you don't want DNR involved you will have EPA involved, and EPA has a whole different approach. If something is wrong, they come out and fine you, and they don't tell you how to fix it. DNR is the buffer zone in here that kind of keeps you away from EPA, and they have a lot more flexibility in allowing you to do what you want to do that helps the watershed stay clean. And if you have a choice between DNR and EPA, you want DNR.

Another attendee said that EPA and DNR are fighting fire between themselves because one wants to be bigger than the other.

DNR has to follow through with making sure that certain EPA specifications are met, but they have more flexibility to do that. Ms. Bassett agreed and said that since DNR is not EPA that is one of the reasons why they are here because they are not EPA. Ms. Bassett added that the department has been around since 1974, and you can have EPA here but there is so much that has to be done with the EPA and that someone has to protect the Clean Water Act so someone has to do that job State by State, and that is across the board. In Missouri, DNR is doing that across the State, so she thinks that they will know what to fight for, and they will go to bat for industries and the people here before EPA does.

Mr. Skelton mentioned a factory up in Northern Missouri that took months and months trying to get a permit, and they never received their permit, so they left the State of Missouri. Ms. Bassett said that she is not to blame for that.

Ms. Conner stated that Gwenda will remain after the meeting if there are additional questions for her, but we need to move on with the presentations. Ms. Conner also said that we are going to take a five-minute break while the next speaker is getting set up. Ms. Conner suggested that now is a good time to stretch your legs and get some refreshments.

V. COMMUNITY PROJECTS

Ms. Conner said that when we started this project back in April, we wanted to make certain that we identified any environmentally friendly activities that were already being done in the watershed, so we did some research to find out what was already being done within the watershed, and we contacted a lot of organizations to better understand the community projects because those community projects help identify those priorities for those particular communities.

Ms. Conner added that we have identified all of these projects on our website and there are pictures if you want to look at those. Ms. Conner also mentioned a watershed organization in the Lake of the Ozarks area which is the Lake of the Ozarks Watershed Alliance, and they have done quite a few projects in the lake area. But we wanted to do the entire watershed region. Ameren also does activities in the lake area, but many cities handle recycling and household clean-up events, and many of the sheltered workshops throughout the counties do recycling. Ms. Conner also mentioned the Missouri Master Naturalists who also have community events and programs. Ms. Conner said that during the process of contacting and talking to all these groups, there were two particular projects that were of interest because the size of the project and the impact of those projects.

Ms. Conner said that first we will hear from Klaus Leidenfrost from the Missouri Cave and Karst Conservancy with the Goodwin Sinkhole project. Ms. Conner added that Klaus has been working on this project for a long time, it is a massive project, and we appreciate the fact that he is doing this all on a voluntary basis but it also demonstrates the fact that there are people doing things within the watershed voluntarily, and that was one of the reasons that we asked Klaus to come and demonstrate this for us today.

a. Discuss current environmental activities

Klaus Leidenfrost introduced himself and said that he is with the Missouri Caves and Karst Conservancy, which is an all-volunteer organization in the State of Missouri.

Mr. Leidenfrost said that a local landowner contacted him because the landowner, and his parents have been dealing with this dump since the 1950s and they couldn't get it stopped or find any help stopping it so the dumping occurred from sometime in the 1950s until 2011.

Mr. Leidenfrost gave a PowerPoint presentation and is attached hereto and therefore, made a part of this meeting summary.

Mr. Leidenfrost referred to a picture that was taken in 1980 where you can see Lancaster Road and the county road and there is stuff blocking the cave entrance.

Mr. Leidenfrost said that DNR did two dye traces, and the stuff comes out at Ha Ha Tonka Spring.

Mr. Leidenfrost added that you have heard some of them talk about Karst and this picture is a diagram of Karst, which is basically dissolved limestone and when the water comes down the problem is that anything that goes into the Karst can come out anywhere and a lot of times it comes out in people's wells. So anything such as

dumping in sink holes or any problem eventually comes out in the water table, and that is what the big concern is.

The area is about 24 feet deep and a ½ acre in size. Mr. Leidenfrost showed a photo of flooding that occurred in 2009, and it is already starting to recede. Mr. Leidenfrost pointed to the edge of the county road. Also in 2009, there were plenty of tires and a pig which was thrown down there. Mr. Leidenfrost mentioned again that the previous landowner couldn't get any help to get this stuff out of there so he donated it to the Conservancy, and they started the clean up shortly thereafter.

Mr. Leidenfrost showed different views and all the tires that were removed at that time. Mr. Leidenfrost reported that they removed over 7 tons of tires. And he is not sure how the boat dock foam got from the lake and dumped there.

The biggest challenge was they had to drop straight down and then bring trash back up in buckets by forming a human chain; however, that is a slow process as well as dangerous, especially when it is big items such as a washing machine. Because of that they ended up putting a road that goes into the bottom. They did some test pits, and you can see stray things such as gravel, dirt and then gravel again with more tires.

Mr. Leidenfrost showed a photo of the first entrance into the cave that they had to climb down a rope to get in. They found a different entrance and opened it up, and they found more tires, a washing machine and everything else you can imagine.

A question was asked about the side with the tire where it looks like the tire is propped up, and it also appears to be limestone. The attendee asked if the lime formation had actually grown around that tire. Mr. Leidenfrost responded by saying, no that the tire had just gotten wedged in over the years.

In the drought of 2012, it never dried out there and Mr. Leidenfrost referred to a photo that showed them having to pull out a mini excavator which was stuck.

Mr. Leidenfrost said that they have had many volunteers, some from the Green Gable Lodge as well as Fort Leonard Wood.

One of the big problems was once they got the surface trash cleaned up, they ran into the "out of sight, out of mind" situation, but it is not anywhere close to being done. In 2012, DNR brought their geoprobe which is a hydrologic probe, and they only took one core sample but they still found trash 12 feet below the surface. They hit rock at 13 feet, and the deepest spot was 64 feet, but they ran out of pipe before they hit rock at 64 feet.

There was a photo of work being done in February in which a silt fence was also present. Also photos of household trash, including prescription bottles. Another photo showed all the rain coming in, and the tires buried in there.

Mr. Leidenfrost said that to get the cave open, first they had to bring in a chain and bring the trash up buckets full at a time. Another problem is that when it rains, the water comes down the base of Lancaster road and would erode at the edge of the road.

They installed two game cameras, just so they could see what was going on, and you can tell that the water comes in then recedes and a couple of hours later it does it again. And the water went right through the silt fence so that didn't help much.

They also dug a sediment trap, and it looks clean in the photo but after a rain you can see all the different trash in there. Mr. Leidenfrost mentioned the scouring action from a heavy rain and estimates that it is about five feet deep in places. In August of 2013, they had over 12 inches of rain, and the sinkhole filled up totally once and three different times about ½ way up. They were getting photos that they weren't sure what were and then realized that the game camera was under water.

An issue that they have is what to do with all of the material but fortunately there was a farmer down the road who was interested in the clean fill. They also installed a Woodrow which isn't as effective as a silt fence, but you don't have to worry about it later.

There isn't much room to work safely so they had to move some trees in order to gain better access.

They have noticed that anything that can float ends up in the cave; therefore, they have to keep removing the debris, or it will just plug it up again. In March, they were able to get a bigger excavator, but it only had about 4 inches of clearance to get through the gate.

The silt fence is definitely working at catching trash, but they still have problems with a neighboring field that the debris clogs the cave up again as well as the gravel that comes off of the county road.

Mr. Leidenfrost showed some comparable photos of all the trash that they have excavated out and the difference in how it looks before and after, but they don't know how many hundreds of tons of trash is out there.

The volunteers couldn't afford to take all the trash to a landfill, so they had to separate out what they could for clean fill, and the rest had to be taken to the transfer station. They went through a four-step process in order to arrive at "clean fill" which essentially meant that they went through a section of the trash four times and removed as much as they could until the trash was gone.

In July, they were able to get an excavator into the cave. The next photo shows mud and gravel, which had all washed in. They also found another entrance into the cave, but it is acting as a sediment trap and is catching a lot of material.

Mr. Leidenfrost also said that when water runs into the cave, they have to pump it out so they can work.

Volunteers also put 200 dump truck loads of dirt filled with trash.

When they started to open up a new area, they had to remove everything around it because otherwise if it floats it will get in there and clog everything up again.

There is still gravel coming from Lancaster road and debris from the neighboring land which still clogs the cave up, and they are still finding items such as a washing machine and more and more tires.

In July the game camera captured photos of a PVC pipe where lines were drawn every foot, a photo of the 14-foot line and the 20-foot line and in less than 18 minutes it was gone, which means that basically this ½ acre sinkhole when it is really running fills about six inches per minute. There was a photo of Mr. Leidenfrost, and you can see all the gravel that has washed in from the rain behind him.

A dump truck holds about 15 tons, and since they have started this project, they have gotten over 300 tons of clean fill, 142 tons of really bad trash, 30 tons of trash, which was some metal, 30 tons of tires and all done in 760 work days and all done by volunteers. Mr. Leidenfrost added that they will know when it is finally free when the tires start coming up at Ha Ha Tonka Spring.

Mr. Leidenfrost said that their biggest challenge and one that nobody saw or remembers the cave and how it looked before the dumping started, so they are just using their best guess and will see later what is going on there and aren't sure if it is from the rain, snow, ice and extreme heat. Another challenge is that the equipment is expensive and so is hauling trash away.

Mr. Leidenfrost also mentioned that finding and retaining volunteers is difficult and that a lot of people want to help, but they do it once or twice and that is all. And another challenge is getting everything to come together.

An attendee asked if the issue with the trees, sediment and the natural stuff is the biggest issue with them being able to get in and clean up all the stuff that shouldn't be there. Mr. Leidenfrost responded by saying that some of it is but the trash does as well and added that right now a two liter pop bottle will plug it up. In addition, they don't know for certain but according to some people, 100 years ago they could drive a wagon through the cave. They aren't sure but at some point the trash just flushed on through by itself. They don't know when or exactly how it got clogged up, but the cave was still open in the 1940s so they are trying to open it up again.

A photo was shown of a lot of people who have volunteered and names of people who have donated or helped out in some way.

Mr. Leidenfrost asked if there were any questions. Mr. Skelton asked if they did this without DNR, and they didn't know they were doing it. Mr. Leidenfrost said no that DNR helped in the beginning.

Mr. Skelton said that it was fascinating that it has been filling up since the 1950s; you would think that the contamination in the water supply, there would make it be undrinkable. Mr. Skelton also asked what kind of water contamination, there is there. Mr. Leidenfrost said that as far as he knows there has been no direct testing. Mr. Leidenfrost said that the thing is (in the Karst diagram) where stuff is underground then you know that stuff is coming up into people's wells. Mr. Skelton said that is what he figured and the drinking water, and the water table would have to be contaminated but he (Mr. Leidenfrost) doesn't know if there is anything in there. Mr. Leidenfrost said that he is sure that there is but where it goes is another big challenge because nobody knows where it goes. Mr. Skelton then mentioned the dye traces that lead to Ha Ha Tonka Springs. Mr. Leidenfrost said that there have been two dye traces that lead to Ha Ha Tonka.

Ms. Bassett suggested that Mr. Skelton contact Ha Ha Tonka State Park because she knows that they did some testing and mentioned that Mr. Skelton was at the first meeting when that was discussed. Mr. Skelton said that Mr. Leidenfrost had said that they didn't actually do any testing so that is why he is wondering. Ms. Bassett said that they did some testing and that contamination is a very broad term, so they have to know what they are looking for, but they did some testing, so he should contact them. Ms. Bassett added that they did some testing at the Spring itself. Mr. Skelton asked who manages that Park. Someone stated that the manager is Nancy Masterson.

Mr. Skelton asked if it was DNR or MDC. Ms. Bassett said that DNR is over State Parks. Mr. Skelton then said that she (Ms. Bassett) would know if there was some contamination at the State Park. Ms. Bassett said that it falls under the division of State Parks. Mr. Skelton then asked if Ms. Bassett knew what type of contamination is at Ha Ha Tonka Spring. Ms. Bassett said that she is a smart girl, but that she doesn't know everything. Mr. Skelton asked if she could find out. Ms. Bassett said that Nancy Masterson is the Park Superintendent.

Mr. Broz interjected and said that the Center for Disease Control did a study several years ago on private wells and Statewide, one out of every two wells tested for bacteria. The worst was in the North part of the State and was 81% of the wells, and the best was in Southeast Missouri. Mr. Broz added that this area through here and in Webster County, they did something several years back.

Mr. Broz called on Dan, who said that he remembered one time they tested 25% and another time 50%.

Mr. Broz added that there have been studies done and a lot of things can affect them. Mr. Skelton repeated 50% of the wells. Mr. Broz said yes that they showed chloroform bacteria.

It was also added that it doesn't mean that it is making people sick but what they see happen is there are people that find coli form bacteria in their well is that the parents when they first settled there they said it was okay for the kids, and if they got a little sick, it doesn't matter; they should tough it out, walk it off and that type of thing. Then the kids moved away, and they had kids and now the grand kids come back to visit, and

they all get sick because they have been drinking clean water and now they come back and drink their grandparent's water, and they all get sick. Then the grandparents start thinking that they need to get their well fixed because the kids won't bring the grandkids back if they don't.

A comment was made that it is entirely up to the private citizen.

Ms. Conner interjected and said if there weren't any other direct questions for Klaus, we are going to move on to the next speaker.

Ms. Conner thanked Klaus Leidenfrost for the presentation. There was much applause.

b. Impacts of those environmental projects

Ms. Conner introduced Craig Fuller from the Missouri Department of Conservation in regard to landowner projects that he has completed within the Niangua River Watershed. Ms. Conner also mentioned that at the previous two meetings, he received the most questions.

Craig Fuller introduced himself and said that he is a Fisheries Biologist and said that the first question the attendees might have is why he is here. Mr. Fuller said that it has to do with being a Fisheries Management Biologist, and that he has been with the Department of Conservation for 25 years and that most of that time has been in Lebanon. The areas that Mr. Fuller works are Dallas, Laclede and Hickory Counties and mentioned that all of those counties are within this watershed.

Mr. Fuller stated that his main duties as a fish management biologist are to manage the fisheries resources for people to use and anglers to fish. Mr. Fuller added that some of the places that he works are places like the Gasconade River, the Osage, the Niangua River, Bennett Springs State Park and the Lake. Mr. Fuller said that he manages all of those fisheries.

An attendee asked if Mr. Fuller could be more specific when he said that he manages fisheries and if Mr. Fuller is the person who decides what length the fish has to be to keep or where does he fit it. Mr. Fuller stated that he is not the person who decides that and that the people who do decide are citizens of the State, and they work for the Department of Conservation as the Conservation Commission. Mr. Fuller added that he is the person. However, that makes those recommendations for the Commission to consider as well as the citizens. Mr. Fuller added that typically when they set regulations, they ask for citizen input in much the same way as this particular meeting is being conducted, a public meeting.

Mr. Fuller added that as a fish manager biologist, what he does to manage the fish is he recommends that there needs to be a minimum length as well as a daily limit. Mr. Fuller added that another part of his job is to try to manage the habitat in which those fishes live and the habitat in which people use to fish, recreate and so forth. Mr. Fuller said that his role coincides with the mission of the Department of Conservation in that the mission is to manage the forest, fish, and wildlife resources of the State and the citizens of Missouri. Back in 1936 it was decided that we needed to have in our State somebody

that is responsible for managing the forest, fish and wildlife resources of the State and that is when the Department of Conservation was created. Mr. Fuller said that is his mission today, and that continues to be the mission of the Department of Conservation. Mr. Fuller added that part of doing that is managing the fish and wildlife and forest resources of the State, and it is also trying to manage or sustain or improve the habitat in which the fish and wildlife live. Therefore, water quality is one of those things that they have a vested interest in.

Mr. Fuller stated that the Department of Conservation has worked for a long time to maintain quality habitat, including water quality and as Bob mentioned 93% of the State is in private ownership, and they are responsible as an agency for managing the forest, fish and wildlife resources of the State and 93% of those resources fall on private citizen's property of the State. So the department has the opportunity, in their mission to manage those resources to work with landowners together to manage those resources.

Mr. Fuller said that is really what we are doing here tonight, and that he is excited that we are going through this planning process, and it has already been stated a time or two that there are a variety of programs out there such as NRCS, DNR, MDC that have worked on these similar issues for a long time. Mr. Fuller added that he has worked on the Niangua River Watershed for over 20 years. All of the projects that they have been able to complete with landowners have been and will continue to be on a voluntary basis.

Mr. Fuller added that he is excited because we all kind of work at our own pace, and at our own policies and own rules and regulations, and that part of this planning process is that it brings us all together, coordinates all of the efforts and coordinates the funding streams to get a bigger bang for the buck.

Mr. Fuller then mentioned some existing conservation efforts that are already going on in the Niangua River Watershed and produced a map on his powerpoint presentation. Mr. Fuller mentioned that Gwenda had said that it covers over 1,000 square miles and for those that are more in tune with acreage, that is about 659,000 acres over the five-county area and there is about 1,800 miles of streams that flow within the watershed. There are more streams than just the Big & Little Niangua. There is about 120 miles of the Niangua River itself before it goes into the Lake of the Ozarks and about 65 miles of the Little Niangua before it also goes into the Lake of the Ozarks. The lower eight miles or so is impounded by the Lake of the Ozarks, and about 16 miles of the little Niangua is impounded by the Lake of the Ozarks. Mr. Fuller added that there happens to be 42,000 plus acres of Lake of the Ozarks within the Niangua watershed.

An attendee asked if the 42,000 acres is actually in the lake or is that the watershed coming from the lake. Mr. Fuller responded by saying that it is actually in the lake, that it is 42,000 surface acres of water. Mr. Fuller added that is not just surface acres of water because the Lake of the Ozarks is 55,000 acres in size and 42,000 of it is not just in the Niangua Arm.

Mr. Fuller mentioned that Bob talked about the HUC codes and the smaller the area is and this is the HUC from Climax Springs to Ha Ha Tonka in Camden County, and it does also include the surface area of the lake so it is that lower portion of drainage area.

Mr. Fuller mentioned that to basically take a step back, as the goal of the Department of Conservation is for the Niangua Watershed. Their goal is to restore, enhance, and maintain an Ozark stream and surrounding watershed to improve the water quality and habitat for a wide range of fish and wildlife and people. People that live there and recreate there. Mr. Fuller added that when we are looking at habitats in and alongside the River, the habitat that is along the river is referred to as the Riparian area so some of the common wildlife that you will see in a riparian area along the Niangua and are very popular, wild turkey, white-tail deer along with another kind of "class" of animals that the Department of Conservation refers to as the fact that they could be an endangered species or just species of concern for other reasons. Mr. Fuller mentioned the bald eagle and the grey bat which of course lives in the riparian area. As for those that live in the river itself, there are also a couple of species of concern in the watershed, the Niangua Darter is a federally threatened state fish and lives in the River and in Missouri and nowhere else in the world and only in a few streams within the state. This is how the fish came to be named the Niangua Darter.

A question was asked if the fish (Niangua Darter) multiplies very fast. Mr. Fuller responded by saying that it does multiply once a year in the springtime just like a lot of other fish.

A comment was made that the Niangua Darter has been endangered for years. Mr. Fuller responded by agreeing and said that the low numbers affect that.

A question was asked what it is good for. Mr. Fuller said that they are hard to keep alive on the hook. Mr. Fuller said that he thinks they are good for looking at and helping them to determine what the quality of the habitat and the quality of the water is.

Mr. Fuller also said that one of the reasons that they are endangered is because a lot of times, there are animals that are tolerant to stressors and pollution and poor quality of habitat and there are those that are more tolerant, but this is a species that is not very tolerant. This species is pretty sensitive, and that is why they don't produce mass quantities of young; therefore, it is a good indicator species to look at to tell whether or not the quality of the water and habitat is poor or good. Mr. Fuller added that it is a good thing to have Niangua Darters in the Big and Little Niangua Rivers because that is telling us that the quality is pretty good. And what we are looking to do is to maintain that quality as time goes by, and more stressors get added to the watershed and water quality, and that is the basic biological reason why Mr. Fuller looks at it, and it is a good indicator by looking at these species and their reactions and once we lose them; we are going to start losing a lot of other things. We will start losing small mouth bass to go fishing and suckers to go gigging, and a lot of other things that we want to keep; therefore, it is in our best interest to keep the Niangua Darter, so we don't lose other things after it. Mr. Fuller said that biologically that is why he thinks it is good, the other reason he thinks it is good even though it is somewhat of a self serving selfish interest

but having an endangered species such as the Niangua Darter makes us eligible for some funding sources, which could enable us to do some good practices.

Mr. Fuller asked for a show of hands if they are familiar with the little Niangua River as well as those that drive across the county roads that go across the Little Niangua River and asked who has gone across a low-water bridge. Mr. Fuller added that they received \$2.1 million dollars for the Little Niangua Watershed to replace 10 low water crossings.

An attendee commented that if they have left them as low water slabs, they wouldn't have flooded either.

Mr. Skelton said that the Niangua Darter is safer though.

Mr. Fuller said that he thinks there are a lot of benefits to doing that work in addition to the benefits for the Niangua Darter, because whatever benefits we gain by allowing that fish to swim down the river without a barrier is the same benefit that we have provided all the other fish that live in the river. So if you are interested in fishing for small mouth bass, there are certainly benefits for that, and if you are interested in providing the natural functions of the stream during a flood that carries debris, gravel and so forth, so there are a lot of other benefits. Mr. Fuller added that if you think, it is important for people to have a safer surface in which to drive across that is a benefit, or if you think, it is better if you happen to live on the other side of the river, and you can cross this crossing now because it is a low-water bridge in a matter of hours after you get a moderate rise versus days when you have to drive 20 miles around to get to your house, then you probably see a benefit. Or if you think, it is a benefit to be able to have ambulance, fire and police and other emergency vehicles to be able to travel around and get to places quickly, and then you probably think there is a benefit.

Mr. Skelton mentioned the \$2.1 million and asked if they have ever done a cost-benefit analysis to see if it benefits our tax dollars. Mr. Skelton added that we are 18 trillion dollars in debt in this country. Mr. Fuller responded by saying that he has been asked that before, and he is hard-pressed to find anything when it comes to an ambulance being able to get to a house when his wife is in labor and is having a baby.

Another comment was made that he agrees with Mr. Skelton in that the way they construct the low water crossing bridges, they sometimes create a bottle neck effect and then sometimes it is three weeks before it is ever open again.

Another person commented that it takes about a month to get all the fence repaired that was torn out.

Mr. Fuller commented that he won't say that they are without problems, but he would say that anytime you have a piece of infrastructure that you put right in the middle of the channel, and you go through flooding events such as those that we have had this year; you are going to have issues to deal with.

Another attendee said that what he is saying is that you can't have a wide opening at one bridge and then a ½ quarter downstream because it doesn't make sense. Mr. Fuller

stated that if the attendee has a particular location that he has an issue with, he would like to talk to him after the meeting is over to see how the issue can be resolved. It was mentioned by an attendee that the other low water crossings on the Little Niangua River work well the exception of that one.

Mr. Fuller went on with the presentation and asked what the landscape challenges as well as the opportunities within the Little Niangua which deal with trying to create that goal of trying to create an Ozarks stream and the areas around it, and that is a key part because we have to take into consideration that the areas that have the quality impact on the stream, habitat, low water crossings and also include areas such as Riparian areas, woodlands, caves, springs and of course the agricultural land that is right close to the area and in the case of both the Little Niangua and the Big Niangua that is primarily cattle and pasture land and agriculture land.

Mr. Fuller then mentioned the particular opportunities that they are looking to address and have addressed over the years. Mr. Fuller said that they have already addressed things such as stream bank erosion, sedimentation, nutrient enrichment and habitat stability of the channel. Mr. Fuller directed the attendees' attention to a map of the whole Niangua Watershed with a few projects that he has worked on with 19 different landowners and 22 projects, throughout the watershed covering over 26 miles of the stream as well as the area alongside the stream, (the riparian area).

One might ask what types of projects are being done or what types of practices are they implementing with the landowners.

An attendee asked if when he is talking about 270 acres of land what exactly does he mean. Mr. Fuller said that it is 270 acres of Riparian land along the river. As an example, Mr. Fuller referred to the current photo on the PowerPoint and said that this particular property is about 300 acres in size and when he came up with the figure of about 270 acres, this particular landowner has 35 acres of his 300 that is in that Riparian area along the river.

Another attendee asked if they put the weirs in on that same property as well. Mr. Fuller said that they did. Mr. Fuller added that they did a stream bank stabilization project on this property with the landowner, and they established the 35-acre buffer of riparian habitat, and they built a well and are building a fence to keep the cows out of the river due to the riparian area, and the well provides an alternative water source for the livestock since there will be a fence they will no longer have access to that water. They are also doing some things with regards to best practices for the hay management pasture land plan as well as some grasses.

The attendee asked what the stipulations are on the 35 acres as far as what the landowner can & cannot do. Mr. Fuller responded by saying that the landowner retains all of his personal property rights; it does not make it open to the public for trespass or hunting or fishing. The attendee then said that obviously he can't graze it. Mr. Fuller said he can't graze it. The attendee then asked if he could harvest timber on it. Mr. Fuller said that he can harvest timber on it when they have a harvest management plan or a timber management plan. Mr. Fuller added that one of the things the landowner has

particular issues with is locust trees so the Department agreed that he could go cut down and harvest every locust tree he wants to. However, the landowner can't go down and harvest all the timber because that is not in the agreement. The agreement says if the landowner does a timber harvest, then they need to have a timber harvest management plan and follow the recommendations set by a forester. Mr. Fuller added that if the landowner wants to go cut firewood, he can cut firewood as he pleases.

Another attendee said that what he thinks that the other attendee is referring to is the \$20.00-\$25.00 fee that the landowner has to pay plus a 60% cost share and then there is a 10-year contract, right? Mr. Fuller said that it depends on the program, and this particular program is not a 10-year contract nor is it a 60% cost share. Mr. Fuller said that this particular project is not and if someone would like to know the specifics of this particular one, and Mr. Fuller reiterated that there are different programs with different limitations and there are different cost share rates. Mr. Fuller used going to the movies as an example and said that when you go to the counter, you can choose from M&Ms, candy bars, soda and all kinds of other stuff. If you want to go the low end, you buy the M&Ms and that's all you got, and you go thirsty the two hours while you are watching the movie. Someone mentioned that is no fun. Mr. Fuller said that you can go and get the "deal" where you get an unlimited bucket of popcorn and two large sodas, which is kind of like practices and programs because you have different deals to choose from.

The attendee then mentioned that Mr. Fuller hasn't said what this particular deal is. Mr. Fuller responded by saying it is actually called the Conservation Easement. But not necessarily a conservation practice like the livestock alternative water practice or a Q10 practice. This particular landowner said that he liked what they were telling him, and he would like to think that he could do something on his 300 acres that will provide quality habitat for deer and turkey that he likes to hunt and also provide quality habitat for the fish with good water quality, and he wants it to stay that way forever.

Another attendee said that to start with there isn't enough water there to fish, and the landowner is not a farmer.

Mr. Skelton said that the landowner is a conservationist, and if you buy that piece of property, you have to deal with those rules. Forever. Mr. Fuller said that is a point, that is the "full meal deal" when you go to the movie, and the full meal deal for him is a conservation easement on that 35 acres in perpetuates, in other words, forever and that is attached to his deed. Mr. Fuller added that there are different levels, and that is the ultimate level as far as commitment on his part and the ultimate level of commitment on the Department of Conservation's part and what the ultimate level of commitment on the department's part is that everything that has been done on the landowner's property has been paid 100%, no-cost share, it is full share.

An attendee asked if the department paid for the whole deal. Mr. Fuller said that is correct. The attendee then asked what happens if the river gets up and tears the fence up, does the department come back out and put the fence back up. Mr. Fuller said that the department does that on a cooperative rate, and it is not on another 100%. The attendee then said that then it would be his money that has to put the fence back up. Mr. Skelton said that it is always your money that has to put the fence back up. Mr.

Fuller then said that he guesses that it depends on what they mean by “your” money. Mr. Skelton said it is your tax dollars. Mr. Fuller said that it is not your tax dollars.

An attendee asked if the department writes them a check for the broken fence. Mr. Fuller stated that it is actually a complicated process, but that he would say that the Corp of Engineers handles it, and it comes from the 404 permitting process and is mitigation money. Mr. Skelton stated that it is still “their” money, it is still tax dollars. Mr. Fuller stated that it is not. Mr. Skelton then asked where the money comes from in the mitigation program. Mr. Fuller said that it comes from people that are working to do projects with the stream. Mr. Skelton then asked if it is all private money and donated money. Mr. Fuller said that it is not donated, but rather it is “in lieu fees” of mitigations. Mr. Fuller added that in the event. At this point, Mr. Skelton interrupted Mr. Fuller and said that it is land banking and so if a company wants to build something somewhere and in the process, they are going to destroy the environment in the process, then (Mr. Skelton told the attendees that this does happen all over the country), then they can give somebody enough money to pay them off, and then they can come along and build whatever they want on this river. Mr. Skelton said that is actually what happens.

Mr. Fuller then said that, in a nutshell, you are correct. Mr. Fuller said that he would describe it a little bit differently. Mr. Skelton said that of course he would.

Another attendee asked about the maintaining of the fence. Mr. Fuller said that the department will cooperatively maintain the fence, so there will be a share rate on the maintenance which would be partly the landowner and partly the department. Mr. Fuller added that the money comes from the mitigation program that the Corp of Engineers administers.

It was then asked if what Mr. Fuller is describing is specific to this project. Mr. Fuller said that it is specific to this project but that there are other programs out there administered by different agencies, and each agency has different levels of practices to implement.

Another attendee asked if they were on a bid process, such as why this landowner’s 300 acres of property would be put before a parcel of 40 acres. Mr. Fuller said that it is not on a bid process. Mr. Fuller added that as you can imagine, there are not many people that are coming to him saying that they are willing to do this forever on their property. Mr. Skelton said thank God.

Another attendee said that he owns the place next to the landowner they are speaking of so he knows what he is talking about.

Mr. Skelton said that it is really extortion.

Mr. Fuller stated that the landowner being able to get the money to do this project is not at all on a competitive level or any other type of competitive process. Mr. Fuller added that all of these practices and programs are voluntary, and quite frankly, they don’t have enough people, so they are not scared of running out of money that they

would have to go through a competitive bid process. Mr. Fuller added that he would love to get into that situation, and he would love for everybody in here that lives on the river or has a piece of property call and say they want to do something on their place to give him a call and say, Craig, I want to do a practice with you on my property.

An attendee asked what that actually accomplishes referring to the slide that Mr. Fuller was displaying on the PowerPoint. The attendee said that he knows exactly where it is located on the watershed, and most of the time it is dry. And there have been deer there ever since there have been deer in this country since 1950. The attendee asked Mr. Fuller what he thinks it is actually accomplishing. Mr. Fuller responded by saying that on that particular site, he thinks it is accomplishing a couple of different things, he thinks that it is improving, maintaining and has the potential to maintain for the future a very quality habitat. The attendee said that he has probably already killed 10 deer in that bottom. Mr. Fuller said that the other answer, and he truly believes this in his heart, if we promote and if we have enough folks that volunteer to do this type of activity in the watershed, there are much more benefits than what you see on these 300 acres, and that is this whole watershed concept, and Bob said it before in that what happens in the watershed is a direct result of quality water in the river not only there but downstream. Therefore, there are a lot more benefits than in just these 300 acres.

The attendee said that 30 years ago when they could take the gravel out of the creek the water ran down all the way through there then, and it was there every summer, and it would stay there all year long. Mr. Fuller said that in 2012, there was hardly any water in there. So how does the Niangua Darter survive on a gravel bar? Mr. Fuller said that he doesn't so that is why it is particularly important to have replaced those low-water crossings up and down the river so that when it goes dry like in 2012, they have a place to go and then when we have a year like this year when we do have water, down further where this is water maintained and that population is maintained they have a barrier-free passage to get back up to this habitat that is now available and reoccupy it. Mr. Fuller added that is how you maintain populations in the long run. You allow those individuals and wildlife and fish population to have someplace where they can survive so when conditions change they can come back and re-occupy.

An attendee asked if Tunnel Dam is a good thing. Mr. Fuller responded by saying that there are a whole lot of other things with regards to Tunnel Dam. The attendee said that he doesn't see them swimming alongside the Dam.

Another attendee asked if the boundaries are marked with GPS quadrants or marked off by the center of the river or how are you coming up with your boundaries. Mr. Fuller said that the original boundary is marked with GPS coordinates and was surveyed so there is a metes, and bounds survey boundary related to that boundary.

Another attendee asked that it might not happen in this project, but if they do this on other projects, they will find out that the river moves and if it cuts across where does that boundary go. Mr. Fuller said that the boundary is set. The attendee then said that if the boundary is set, then they can have the habitat right in the middle of the river can't they. Mr. Fuller responded by saying that the boundary is set.

Another attendee asked what the offset is for this project for the riparian habitat. Mr. Fuller responded by saying that it is 100 feet from the bank, but as you can see in the photo, the stand of timber was about 400 feet wide. The attendee then asked if that would vary on a case by case basis. Mr. Fuller responded by saying that it depends on the negotiation of the agreement.

Another question was asked if the purpose of that was to keep the bank from washing away. Is that correct? Mr. Fuller said that the purpose of the bank stabilization project was to keep it from washing away. And that one of the purposes for doing this whole project, and they completed the bank stabilization on this site where there are no trees. Mr. Fuller added that one of the purposes for doing this whole project is to establish a stable stream bank situation.

An attendee asked Mr. Fuller if he remembered about 10 years ago when he showed him that the soil was going right down the river, and nobody got back with him to do anything. Mr. Fuller asked the attendee if he still wants to do something there. The attendee said that he would love to see it stop washing down the creek. Mr. Fuller said that he will contact him, and that he remembers coming out and that he will stay after the meeting to talk to him.

A question was asked if that changed his property tax statement in any way. The response was that it does not. Mr. Skelton said that he pays all the taxes on it. Mr. Fuller said that is correct because he still owns the land. Mr. Skelton said that he can't use the land, but that he still has to pay the taxes. Mr. Fuller said that the landowner can use the land any way that he wants. Mr. Skelton interjected and said not without their permission. Mr. Fuller said that he doesn't have to have his permission to go down there and set up a lawn chair and kill a deer. Mr. Skelton said that yes, he does because he has to have a permit.

Mr. Fuller said that there is another way to describe a conservation easement; they did buy the property but what they did through the cooperation agreement and the negotiation of what practices we would install, and how much they would cost and all that sort of thing. The landowner said that when you buy a piece of property, you are not just buying a piece of property. When you buy a piece of property, you buy a whole list of personal property rights, including the right to build a house on the property wherever you want, you bought the right to take your household garbage out and put it in a barrel and burn it if you want to, you bought the right to say that this is your private property, and I don't want you trespassing and there are a whole lot more private property rights and through negotiations of this contract, he gave up some of those personal property rights. Mr. Skelton interrupted and said that he gave up those rights for everybody and forever as well as anybody who buys that property. Mr. Fuller said that he gave up the right to plant corn, for instance, in a row, or in other words, he can't row crop, and he gave up the right to pasture cattle in that area, and he gave up the right to put up a billboard. In this particular case, it is not likely that he would do that anyway, but that is kind of a list of private property rights and what a person does when they negotiate a contract is to go down through that list and pick those things out that they can both agree on. Mr. Skelton added that to kind of elaborate on what Mr. Fuller said a minute ago so that everyone understands where he is coming from, Mr. Fuller

had said that he hopes that a whole bunch more people come to him and do this exact same thing. Mr. Fuller said no that he doesn't think that he did, Mr. Fuller said that he thinks he said that he would think that it would be great if a lot of people called him and said Craig I would be interested in working with you and establishing some conservation practices on my property. Mr. Fuller added that this particular project is one tier, and it is the highest tier and the biggest commitment but there are a lot of whole other tiers that a person could select from to implement a conservation practice on their property in a quality operative way either with himself or the soil and water conservation district or the NRCS.

A comment was made that on the place they are discussing, it is all bluff on one side. Mr. Fuller said that is correct. Another comment was made that if he went down there with a bulldozer and cleaned it out and put all that gravel, etc. back on the bank over there where it is supposed to be, then you wouldn't have to spend all that money and all that time doing all that stuff. Mr. Skelton said that they have it to spend.

Mr. Fuller said that he respectfully disagrees that it would only last until the first flood. The commenter said that no it wouldn't because the water would go straight instead of around the field. The attendee added that he doesn't think that the gravel piled up high would force the creek to go around it, and it changes it. Mr. Fuller responded by saying that it is natural for streams to change their course for millions of years and neither you, nor I am going to stop it. Mr. Skelton then asked why we are spending money to do it then, and you are showing us a picture of where you are spending money to do that. Mr. Fuller responded by saying that they have already discussed the money portion. Mr. Skelton said that it is paid for with money that the government has extorted from factories.

Mr. Fuller said that if he wanted to discuss stream dynamics, we can certainly do that after the meeting.

Mr. Fuller added that the photo is only an indication of what they did on that particular property with that particular project, and it was a stream bank stabilization project which is a rock weir to stabilize that bank, but does it mean that is where they want it forever? No they are just trying to stop a natural process which is bank erosion, which is taking place at an accelerated rate.

Another comment was made that why don't they just move the river over to the other side so that it won't cut the field out. Mr. Fuller responded by saying that if he would like to be a part of the stream bank stabilization discussion to please stay after the meeting. The attendee said that he would but that water seeks a straight line. Mr. Fuller stated that he respectfully disagrees.

The question was asked if the picture is showing the weir that has already been installed. Mr. Fuller said that it is and that in both of the pictures, the weirs have been in for a while, and they have some gravel caught in a big rock but in the top photo you can see the weirs more easily. Mr. Fuller added that the photo is actually one of the establishing a riparian corridor.

A question was asked that they never wash off, do they? Mr. Fuller said that they sure do, but it is a natural process but in the end, they are trying to reduce that natural process from such an accelerated rate to something more acceptable.

Mr. Fuller also mentioned the livestock exclusion of fencing and the provision of providing an alternative water source for the livestock.

Mr. Fuller added that funding is available from a variety of agencies and that the purpose is to bring the funding partners together and focus the efforts and money to have a more successful program.

Mr. Fuller referred to a slide and said that this is his vision of a desired future plan which is not greatly altered and that on the left, side is the current condition, and the right side is what he sees and would like to promote as a desired future condition. There is still agriculture production being done as well as a riparian corridors along the stream to try to manage erosion and water quality issues.

An attendee asked about the row of trees going up the side of the ditch and would they be offset as well. Mr. Fuller said that yes, it is but again it is his desired future edition as he sees it but it doesn't necessarily have to be yours and in a voluntary based program with different levels of involvement, somewhere it is likely that we can come to some sort of agreeable medium.

An attendee mentioned the riparian corridors along the river and all these trees that are planted, and it will work well for the first 20 years while the trees are young, and all the vegetation is healthy and growing fast but as the trees get large and get large canopies and start shading out all the vegetation is there a harvest plan involved to keep the trees from getting so big and overbearing that they would actually destroy the undergrowth because it really needs to be harvested on a regular basis in order to keep everything vibrant. Mr. Fuller said that it is not mandated, but it is certainly an option. Mr. Fuller added that it is just like he said when someone asked if they could harvest timber and the answer was that yes, they can with a management plan. Mr. Fuller said that by doing exactly what he is talking about in that stand of timber to be a quality riparian area can be done with a management plan which certainly includes going in and cutting trees.

Another question was asked what they plan to do when all of those trees fall out into the river. Mr. Fuller said that he isn't going to do anything with the trees. The commenter then said that is right and somebody else is going to have to, aren't they? Mr. Fuller said that if anybody does anything with the tree, he guesses so. The commenter said that he would take a bulldozer and get rid of it. Mr. Fuller said that there are a lot of people that do.

Another question was raised about the trees that overhang so that it doesn't pull out a 50-foot hole. Mr. Fuller said that after the conversation that they just had, do you want to cut the tree down and let it go over on the neighbors place so that he has to get his bulldozer out and remove it. The commenter said that he was just asking. Mr. Fuller said that he might not understand the question, is it that is it okay or is it against the law or

against any rules for him to go cut a tree up. The commenter replied by saying that is his question. Mr. Fuller responded by saying not that he is aware of.

A question was asked if it is against any rules to remove that tree out of the river. Mr. Fuller once again said not that he is aware of.

It was asked if it is recommended that they cut off the tree. Mr. Fuller said that it can be in certain circumstances such as if the tree is big, and it is growing over the top of your bank, and it is starting to lean out over the river and when it falls in it is going to take the whole root ball and two tons of soil with it then it would need to be cut off, that is what he would recommend if someone asked him.

Mr. Fuller said that he is almost done and in wrapping up the bottom line, here is those are the habitats that he is interested in working in and so is the Department of Conservation, in the streams, riparian areas and all the habitats that he talked about before and the bottom line with this slide is that these conservation practices at whatever level needs to meet the needs of the landowner if they are going to have folks like them volunteer to implement conservation practices. Mr. Fuller added that he realizes and the folks in this room realize that, quite frankly, that is why we are here tonight because we know that the needs of the landowners need to be met if we are going to work on a voluntary basis and move forward.

Mr. Fuller added that the obvious and long-term benefits are improved water quality, reduced erosion and all the other things they have been talking about and to go along with his vision of that future condition it is also his vision to work together for a high-quality Ozark stream with clean water surrounded by healthy habitat with abundant and diverse wildlife both plants and animals.

Mr. Fuller stated that he is finished unless anyone has any specific questions and those that want to talk to him afterwards to please form a single file line.

Mr. Skelton asked how many species of fish we had lost because of our impaired water. Mr. Skelton said that the reason he asked this again is because of the impotence of this entire statewide plan. Mr. Skelton added that they have 66 watersheds, and the Niangua River watershed is not impaired even though it might be a little bad bacteria wise even though he doesn't know what levels they are. Mr. Skelton added that he sees the expansion of the Department of Natural Resources and what they are doing, and he sees this expansion of them trying to get on landowner's property and whether it is voluntary or not they have already had people sticking their nose in everybody else's business because that is what they do and then when some government agency gives them the quasi authority to do it, it will be even worse. Mr. Skelton then suggested then why don't we just identify the very bad areas within the State of Missouri and leave the rest of us the hell alone.

Mr. Fuller asked Mr. Skelton where he lives. The reply was that he lives in Lebanon. A comment was made that Mr. Fuller also works in Lebanon. Mr. Fuller stated that he does not live in Lebanon, but that he does live in the Niangua Watershed. Mr. Fuller said

that he can't give him a good answer to his question because that is outside of his knowledge, and he might think that he is the smartest person but that he is not.

Another comment was made that Nazism was a voluntary organization when it started, and we all know that World War II was the outcome of that. So to put that in your mind because voluntary is not always a good thing.

Ms. Conner asked the attendees to give Craig a round of applause and thanked him for his presentation.

PROJECT TIMELINE

c. Future meetings

Ms. Conner said that as we develop the Watershed Advisory Committee, we will continue to host a series of additional meetings. Ms. Conner added that we are looking for people to provide us with information of what they feel they would like to hear at the additional meetings.

d. Surveys

Ms. Conner stated that there is a survey if everyone would complete those and give us ideas as to what you think the priorities should be within the Niangua River Watershed. Ms. Conner repeated that again it is voluntary, and we don't want them to feel forced to fill it out, but we request that they provide us the information.

VI. OPEN DISCUSSION

Mr. Skelton said that he has another question that probably she (Ms. Conner) can't answer but the lady from DNR probably could. Mr. Skelton said that the Niangua Watershed is not very impaired but if at all and bacteria may or may not be present, we haven't lost any species of fish, there are not a bunch of people dying and trash floating all down the river, although there are some problems in the State of Missouri, and he will agree with that. However, with this huge watershed approach, you are actually stretching your resources very thin and getting resources from everywhere you can to make your agency a little bit larger and more important, and he gets that but if we were really going to fix the problem. Why can't we just focus on the areas within the State of Missouri, who actually have a problem instead of implementing an entire watershed approach?

Ms. Bassett said that back to the whole, Our Missouri Waters and the effort and the basis behind it is to get this local engagement process going. Mr. Skelton said that we don't have a problem here so how about, we focus on the areas that have a problem.

Ms. Bassett asked if Mr. Skelton wants them to wait until there is trash floating down the streams. Ms. Bassett added that they work in every watershed across the State, and their goal is to engage local citizens in every watershed across the State over a five-year time frame, frame so they are dividing it out, and they are not spreading themselves too thin as they have coordinators across the State, and they are approaching 12-14 watersheds per year ideally. Ms. Bassett added that it may not work out like that it might be more like a year and a half timeframe in each watershed, and the idea is to develop a momentum for

later on in which they can engage local citizens who are excited to let them know what their concerns are and to help them to determine how to spend funding in that area.

Mr. Skelton said that there are some real problems in the State up north so how about, we take all of your resources and use them in an area where there is really a problem and fix those first. Ms. Bassett said that she is not certain how to answer that because she is not sure what a problem would be.

Mr. Fuller said that he believes he has an answer for Mr. Skelton if he understands the question of “why” and the answer to that question is that it is much easier and much cheaper in the long run to protect and enhance what you have in the way of water and habitat quality rather than saying it’s okay and pretty good right now so let’s devote all our efforts to somewhere that is just going to rot, and it is very expensive to go over there and fix those problems and in the meantime we are over there spending time and money and effort to fix those problems we haven’t spent a little bit of effort or money and a little bit of volunteering to maintain what we have. Mr. Fuller reiterated that in the long run it is much easier to protect and enhance than to restore.

VII. CONCLUSION

Ms. Conner told the attendees that if they are interesting in participating in the watershed committee to put a “yes” next to their name on the sign in sheet.

Mr. Skelton said that if anyone is interested in stopping the watershed approach they can come see him.

VIII. ADJOURN

Linda Conner adjourned the meeting at 7:58 p.m. and said that she appreciates everyone coming out tonight.

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**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING SUMMARY**

**Wednesday, October 21, 2015
5:30 p.m.**

**Bennett Springs State Park dining Lodge
26262 Highway 64a
Lebanon Missouri 65536**

I. CALL TO ORDER

Linda Conner called the meeting to order at 5:30 p.m. and thanked everyone for attending the Niangua River Watershed Community Partnership Project meeting.

II. INTRODUCTIONS AND SIGN-IN SHEET

Ms. Conner introduced herself and her staff who attended, Pam Gilbert and Terre Brown, and our planning partners, Jennifer Hoggatt from Missouri Department of Natural Resources, and Cassie Sanders from Kaysinger Basin RPC.

Ms. Conner also asked everyone in attendance to please remember to sign in.

III. REVIEW OF PLANNING ACTIVITIES TO DATE

a. Recap of the first three meetings

Ms. Conner stated Lake of the Ozarks Council of Local Governments ("LOCLG") had hosted a series of meetings throughout the summer, July 23 in Lebanon, August 19 in Preston, and August 25 in Buffalo. She said we discussed the project and developing a Watershed Advisory Committee. At each of these meetings, we asked who would be interested in participating on the advisory committee, and wanted to make sure they were included in the planning process. She stated attendance was good and many expressed interest in the project at all meetings. The Lebanon meeting was our largest turnout with 53 people; at Preston, we had 49, and at Buffalo, we had 30.

b. Discuss the survey results

Ms. Conner said that there was a survey distributed at all meetings, and we asked everyone to fill one out so we could gauge the interest and determine areas of most interest. Of the survey, more than 75% were completed by those attending the first meeting in Lebanon. In Preston, the completion rate was 13%, and in Buffalo it was 10%.

Mr. Skelton asked for copies of the surveys, and Ms. Conner said they are available, and to contact her for a copy.

Ms. Conner continued by saying the first question asked was:

- **What type of introductory information should be discussed at the next meeting?**

The highest number of answers was the scope of the healthy watershed plans, and second was the overview of the healthy watershed planning process. There was another item, with four responses-the Department of Natural Resources needs more explanation; you need to spend more time talking about the item, you need to explain how all species are dependent on each other and EPA overlap if there is any.

The second question:

- **What developmental concerns related to water quality are you most interested in discussing at the next meeting?**

The highest one was distinguishing the source of pollution; the second highest was lack of spending for implementation; tied for third were increased wildlife preservation and septic tank wastewater. The others are impacts to agricultural productivity and to recreational opportunities. There were two items added; they were more habitat enhancements and abandoned wells.

We will make sure that the plan we develop for the watershed is what the people have expressed the most interest because we found that in other planning activities, if people are truly engaged in the planning process; they are more likely to implement those activities.

The third question:

- **What resources are you especially interested in learning more about during the next meeting?** There was a tie for highest-technical resources for small communities, habitat restoration resources, technical resources for agriculture and volunteer resources, peer-to-peer, and one other comment, best practices for landowners.

The fourth question:

- **Please rank six of the following components of the healthy watershed in order of importance.** We numbered the components one through six and those answering could only use a number once. These were the results, and they were fairly even all around. Private wastewater

management was 8%; habitat restoration and maintenance was 11%, surface water quality was 10%; wildlife diversity was 10%; ground water quality was 10%; public education was 8%; recreational use was 8%; pasture management was 9%; public waste water management was 9%; cropland management was 8%; urban resource management was 9%, and private wastewater management was 9%.

The fifth question:

- **Please leave comments in the box.** 1) would like more information on the meeting in the newsletter; 2) thank you for your efforts; you are patient; 3) what's the purpose? 4) very informative; 5) endangered species are all dependent on others; please explain so everyone understands that all are dependent on each other; 6) kill all of one species and others follow; 7) public water supplies and rural private wells are at risk when community groups fail to be proactive and address serious issues related to saving clean water supplies.

Copies of the survey results are attached in the PowerPoint presentation from the meeting.

c. Volunteers for the Watershed Advisory Committee

Ms. Conner stated that as an important part of the framework, we will be establishing a watershed advisory committee. We will discuss the responsibilities of the watershed advisory committee, including how often it will meet and what we hope to accomplish at each meeting. Planning involves a number of interested and engaged community leaders, people who can share information on the watershed, promote watershed protection, preservation enhancement, and inspire all those with an interest in the watershed to become more involved in activities that have a positive impact on the watershed. The responsibilities will be to help develop a list of priorities within the watershed, help develop a ranking system for establishing those priorities, and help develop initial plans that will help us move forward with implementation of those priorities.

Ms. Conner explained we will be hosting five more meetings. She said our goal tonight is just to make a laundry list of activities that we feel needs to be accomplished and what you feel you can be involved in.

At meeting number two, we will continue to develop that list of priorities and narrow it down. Ms. Conner said we know we won't be able to accomplish everything, but we want to make sure that we can accomplish what is on the list of activities we put together.

At meeting number three, we want to finalize the list of priorities and begin a discussion on items we can implement in the key priority areas.

The 4th meeting will be continued discussion on the action items and determining the next steps. There will be discussion as to who, on the committee, will be able to continue the roles and responsibilities, and who are the volunteers willing to continue with the project implementation in the watershed.

Our fifth meeting will be to finalize the plan, share it with the committee and hold a discussion on the roles and responsibilities. Again, those involved are volunteers, and we are asking for volunteers who are willing to participate.

IV. DEVELOPING THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED.

Ms. Conner then turned the meeting over to Bob Broz with MU Extension.

Attendee stated to Ms. Conner, that although she had gone through all the survey results, he had gone to all three meetings, and now he is wondering where those surveys came from, as he was not aware of them. He said he was curious as to how we got all the information was provided tonight.

Another attendee said he was worried that all this stuff was being crammed down our throats.

Ms. Conner responded that all the surveys were accessible at the previous meetings and were anonymous.

Another attendee asked if she had asked anyone if they wanted this done, and she replied there has been interest expressed in the project and yes; it was more than one person. Linda continued on to say just because you have no interest doesn't mean others don't.

Greg Hasty, Presiding Commissioner of Camden County, said he wanted to address everyone at this point. He said he has been a surveyor for 41 years and went into politics last year.

Mr. Hasty said that as Presiding Commissioner, he has an automatic membership into Lake of the Ozarks Council of Local governments (LOCLG), and pointed out that the membership includes the presiding commissioners from Laclede, Miller, and Morgan Counties. Mr. Hasty said that at one of the meetings, this was presented to them, and then they voted on this project. LOCLG was given the opportunity to lead the project, or it would be given to someone else. He explained that it was apparent to him and the

other Presiding Commissioners; there was one of two things to do. They could vote and have some control, or pass it to someone else and have no control.

Mr. Skelton said that he, and many others had led a concerted effort to stop this exact thing from happening from the federal government in 18 counties in southern Missouri, the Whitewater River Natural Waterway. He said they stopped it dead in its tracks, and that they will stop this at the state level.

Mr. Hasty said that as he pointed out in his campaign, people start throwing maps at other people's land and putting zones on it. He said the impression he had and, maybe DNR could shed some light on this, either the state of Missouri does something to take active control, or the EPA will do it for them. An attendee responded that DNR doesn't have the manpower to do it, and this is called commandeering our state resources for their effort. He stated that this is not about clean water; it's about controlling our property. Mr. Hasty said he agreed.

Ms. Conner said she disagreed with that because it's not about controlling property, and is about water quality.

Another attendee asked who is Lake of the Ozarks Council of Local Governments?

Mr. Hasty responded this was an entity that he sits on the Board of Director. The attendee then asked if LOCLG had been in trouble before and Mr. Hasty said yes.

The attendee asked if the Missouri Attorney General has been involved in the project, further stating our Attorney General and 30 other Attorneys' General across the country basically told the EPA to get the hell out of our business at the state level. Mr. Hasty said he wanted to emphasize that we are in this position now, and if you want to have a say in how this comes out; you need to get very active now. He reiterated that LOCLG could either vote for this or give it to someone else.

An attendee responded that he would ask Mr. Hasty to repeat that later in testimony in the House because this has to stop. Another attendee asked who was the someone else the project would be given to.

Ms. Conner answered that on our Board, water quality was something the majority of the people are interested in. She went on to say that Lake Ozark is a huge economic driver in the area, so we have to take on the responsibility to protect those waters through the entire watershed because, as farmers, it is part of your livelihood as well. She then asked how are you going to water your cattle and hay if there is no good water. Our goal is quality water through the entire State of Missouri. Linda also gave an example of a gentleman from California, and he only had water every three days. She asked the audience if they could live like that.

The attendee asked Ms. Conner is she knew part of the reason for that is because of government regulations saying those little damn fish are more important than human beings. Ms. Conner questioned if we are talking about the endangered species.

Mr. Hasty stated he just wanted to let everyone know why the LOCLG is involved; and another attendee stated, "You are a local buy-in, Sir." The response was why isn't DNR doing this?"

Another attendee said that there were meetings in Buffalo, Preston, and Lebanon; however, Lake of the Ozarks is the biggest area within the watershed. She wanted to know why there hadn't been a meeting at Lake of the Ozarks, or somewhere in Camdenton, Osage Beach, Lake Ozark, pointing out this would impact them too. She continued to say they were not part of that survey and that a meeting needed to be held there; there are a lot of people who did not go to Lebanon or Preston because they didn't know about it, she continued by saying she lives in Linn Creek, Missouri, and realized real quick this could apply to her, and she thinks there are a bunch of opinions out there you don't have.

Ms. Conner explained that the first survey was for the people who attended the meeting, and that there will be additional surveys that will be sent out during the planning process. They are going out to people who live in the area, so you will have more than one opportunity to fill out the survey and let your opinion be known.

An attendee referred to a young lady who directed the meeting in Preston and when he asked her if the project included the arms of the Little and Big Niangua arms, which are part of the Niangua River Drainage System, and she emphatically stood up and said no.

Another attendee said that this was exactly what she said, but what she should have said was the areas should have been divided into two areas, with only part of the Lake area in this watershed.

Another attendee said we don't want your watershed program; it was not even on the survey; and did you ask the people if we want this at all?

Mr. Broz said he thought everyone was telling him they want to have more input into what is going on with your property. He asked how many people went to a meeting and filled out the survey, because they were made available as you walked through the door. He said he has been working off and on in this watershed for several years, and if anyone wanted to have more input, if they come up to you and say do you have a problem with this? No they never did. That is the bad news, but the good news is the way our system is set up today; you have input to say what you are willing to do and if that takes care of the problem, they are going to leave you alone.

Attendee said, "It is you do this or else."

Mr. Broz said further that if you can do whatever it takes to improve the water quality, get it to the level they want, what they feel is necessary for all these reasons, drinking, fishing, body contact, whatever the water is for; you have the chance to have input. However, if you are going to have input, you (referring to an attendee) need to be well-read, and you are well-read on this and understand what is happening, but we also need to recognize that the water does not just stay right here. The water you get today is going to be somewhere downstream tomorrow and what happens when that guy down there says, "My kids are sick because of bacteria." What we are doing is finding out what is good with this watershed. You have some of the best water in the state, and we want to keep it that way.

Attendee said the map on the Internet and the website and the streams, the Big and Little Niangua, are in red, which means they are in danger, according to someone out there.

Mr. Broz said the testing has been done, and the test says we have found this. Believe it or not, they can write a water report, saying it's too hot because we have taken all the trees away along the water and all of a sudden if you have four or five 95 degree days in a row, we might see that. They don't do this in Missouri; but there are other states where they are doing that.

Attendee asked how far north Mr. Broz went, and if he had been in Linn County. He said they have had watershed meetings since the 70s and there is a creek called Locust Creek. He said he lived there 61 years, and had farmed there. He said they had never seen a flood until 1993. They tried for years; people donated money, wanted to bulldoze, and clean out the mess and you people would not let them clean it out.

Mr. Broz stated he was in Kirksville on Monday night for a watershed meeting, Shelbine the night before that he is here tonight and will be in Kansas City next week.

Attendee asked if they are ever going to do anything through McPherson Park as that is where the problem is and Mr. Broz said he agreed that is where a lot of the problem is.

Attendee said he had a question in that LOCLG was given the opportunity to take on this project or give it to someone else and he wanted to know where did that come from. Where is this mandate coming from?

Mr. Broz stated that the mandate itself is coming from the state of Missouri. The Department of Natural Resources said we have to have a plan of action to protect the entire state. The question was asked as to why that plan of action is needed. Mr. Broz stated there are two or three reasons. First, if you're going to receive federal funding, you have to have a plan. Mr. Broz asked how many people had worked with Soil and

Water District; how many had put in terraces; how many people have put in pasture improvement, explaining that's federal money.

An attendee said a lot of that money, Soil and Water Service, for example, comes from sales tax.

Jennifer Hoggatt, Statewide Coordinator for Missouri Waters, addressed the issue. When their Director Sarah Parker Pauley brought this idea forward, it wasn't because someone was behind it. It's because Sarah feels local folks need to be making decisions about their local resources. Ms. Hoggatt said she was asked, as Statewide Coordinator, to set up a series of engagements with the local people. We do have state government; we do have local government. There are good people with good ideas that put those things into place for a reason. We are entrusted by you; you are who I serve and, as a department to understand those resources, try to keep those resources intact and available for all the folks that want to use them for generations to come. Not just water. The Department works on land resources and geologic resources. We also have the Soil and Water Conservation Program. We work on agriculture resources. We have great people who try every day to make sure all those interests are balanced so that we can have water for agriculture, industry, and for people who want to recreate on those waters and use the streams such as Bennett Spring, the Spring Branch, the Niangua, or Lake of the Ozarks. So when Sarah came to me with her vision and asked me to take these resources forward; if we're going to best protect them, and make sure everyone can use them beneficially and in a balanced way, we need to talk with the local folks. This is not funded through federal dollars. It's purely State of Missouri, Department of Natural Resources' dollars. She continued saying that we have to have planning. Even if things are going well, you need to have planning to keep them well. If you have a car or a tractor, you don't stop maintaining them, because you know that eventually you're going to run out of gas, or oil. We have to work every day to make sure we're balancing the right things, and so the thought was to go out and talk to the local folks through a series of meetings about water. There's no ulterior motive behind this; there's no plan that's already on the table. This is truly a plan that you are going to write, and the plan may say things are good; let's keep doing what we're doing; we like the local groups we work with; we like the Soil and Water. Ms. Hoggatt added that she has a job she does every day, and she tries to do it with the best interests for you and the rest of the citizens of the State of Missouri.

An attendee commented that Ms. Hoggatt referred to a move from the top of the Department of Natural Resources, at the state level, in regard to setting up some sort of management plan for the watersheds of the State of Missouri. He asked if that was related to actions taken by the federal government, because everybody knows the Obama administration has told the EPA and the Corps of Engineers that they control every drop of rain that falls in the State of Missouri. To me, that is a huge grab for land, and my feeling is the reason, there are so many upset people sitting in this room is

because they have to produce the food that we eat in this country. If they are severely impaired in their ability to do so, we have a problem.

Jennifer Hoggatt asked if he was referring to Waters of the U.S., which is a hot topic, and said this has nothing to do with Waters of the U.S. We want to make plans, so we continue things in a beneficial way for everybody, so we have come to the local folks. We are asking what local water resources do you have. How do you use them? How do you envision their use in the future? What kind of water do you want to leave for your children, your grandchildren? You guys enjoy a lot of things right now and, from my standpoint, when I think about future generations, I want them to catch a trout from this stream; I want them to be able to farm, if they so desire, the way my family does. I want those things to happen, and that is why we have to plan. If we feel like we are going down the wrong path, then we have to make a plan to get back on the right path. That is what you guys have the power to do. This is really a position of empowerment, so you should be thinking about what you want us to do. In some way, you are going to tell me and my coworkers what you want us to do with your resources.

An attendee asked that since there are groups all over the state, was there a plan to pull together one big committee to make this decision?

Mr. Broz responded that no, there will actually be 66.

An attendee commented that ultimately someone will have to make the decision.

Ms. Hoggatt said each community and each watershed will have their own.

An attendee asked what if we decide it's best to clean the creeks out, but we are not allowed to do that.

Mr. Broz stated that the Corps of Engineers has the responsibility. We enforce this because at the federal level, somebody said we need to be able to do certain things. We don't all agree with that. You mentioned Linn County and Locust Creek. I got word this week that they finally bought the last piece of property to put in a 1,640-acre lake.

An attendee said they wanted to put in bars and gravel to make it a meandering creek. Locust Creek was known as a meandering creek for years. He said his grandfather was on the steering committee to straighten West Locust south of Browning. DNR told us not to straighten it, but I want to know how he's going to pay for his farm.

Mr. Broz stated he went to a meeting up there two years ago, and the first comment was that we needed to get rid of all the dikes and terraces and allow the area to flood again. Mr. Broz said that will not work. The attendee said that is because there are people like Russ out there, who has a brother in Columbia that is a doctor; he has political pull.

Mr. Broz replied this is why we are asking for what is good; and we are asking for local input as to what needs to be done. We will probably end up bringing in other resources; Soil and Water might decide they want to do salt projects again. We can use that \$700,000 over seven years down here to do more practices to keep things the way we want them.

Attendee said that back in the 50s numerous terraces were put in, then in the 80s and 90s, they said they should have built ponds--all that money for terraces just blown.

An attendee asked why they are picking on farmers and big landowners and not Ha Ha Tonka where all those houses are up and down the waterway. He said that is where the problem begins; it's not here in the country. Mr. Broz responded we know most of the problem is not in the country, but we also recognize that you guys are doing good stuff, and we want to know what it is and how it can be repeated in other places. If you are fencing the cattle out of the creek, and it's working, then let's hear about it. If you are not fencing them, and you are still getting along, let's hear about that.

An attendee asked what should be done about the canoes that go up and down the river.

Another attendee said that right here in the park, why are people still allowed to fillet fish? That is a pollutant. He added that his dad wrote a letter before 2000 to a state official about it and was told that it was okay. Six years later, they said anything in the water that adds extra nutrients. Mr. Broz commented that yes, it provides nutrients for algae, plants, and dissolves oxygen.

The attendee added you should start right here at Bennett Spring State Park.

Mr. Broz asked if anyone at the meeting was a member of the Conservation Federation, a group that likes to shoot deer, turkey, etc., and explained they are the strongest opponent and are saying the practice should continue. We want to identify any problems we see like this and figure out how to address those concerns. The attendee said he had been coming to Bennett Springs since 1958 to trout fish and when they started filleting fish, he knew his dad about rolled over in his grave. Mr. Broz added that his dad had come down one time and never came back.

Mr. Broz then referred to agenda item IV (a-c) and said Ms. Conner would be taking notes as far as concerns of the group. We want to try to identify some priorities, some areas of interest, what things are good and what things need improvement. If you look around and say your farm looks good, but your neighbor has a problem with soil erosion, tell us. We want to know what we are doing that is good. We have good water in this area, but there are two or three areas where there are some issues, such as types

of bacteria, and dissolved oxygen. We want to know from you what are the things you see as a good practice or, if there are five bad things, then give them to me.

a. Areas of Concern

Mr. Broz then asked for comments and, specifically, what was good going on the area.

An attendee commented that DNR is not messing with us now.

Another attendee commented that she is a kayaker and believes we have some of the cleanest, prettiest water anywhere.

Another attendee said it was dirtier than it was 40 years ago.

Mr. Broz said we need to be specific; what makes the water dirtier?

An attendee said he thought human waste. He continued explaining that after a weekend down here, on a pretty gravel bar, it is full of trash, beer cans, etc. He further said he knew people who worked the river everyday that complained it smelled like a sewer after a weekend.

Mr. Broz asked for comments as to what else is good down here, and commented that his department looked at agriculture production. We have some of the best grass area around for raising cattle. People complain about the poultry all they want, but if we didn't have poultry litter, we wouldn't have the grass we have.

Another attendee commented he thought there were serious problems needing to be dealt with elsewhere in the state. He said we have it good here, so leave us alone. If there's a problem, we'll contact you. He said we should take those resources, combine them and go clean up the area this gentleman is talking about. If things get nasty down here, someone will probably call you. You can spend hundreds of millions of dollars trying to bring in all these preventive measures. Take some of those resources and spend them where it is bad. Now, we have someone else who is taking money that was to be used for lead cleanup, and they're going to buy a state park. Until they start doing things smarter in Jefferson City, I don't think you're going to get a lot of receptions down here.

Mr. Broz responded that this is one of the reasons they are asking the local people instead of the people in Jefferson City.

An attendee asked if after you find out what's good, bad, indifferent from all 66 places, and you put the plan together, will everyone be treated equally. Will all of us be under the same rules and regulations?

Mr. Broz responded that it depended where you lived. For instance, if everyone in northeast Missouri decides to keep the cattle out of the creeks, we would not have to do that here, unless we wanted to. Attendee responded she is concerned that regulations will go into effect statewide. Mr. Broz said we are not looking at regulation. Research has shown that if you bring an alternative water system out, cattle will go there instead of the creek, unless there is a problem with flies or it's too hot. Then it becomes a management issue.

An attendee said that if you have cattle and keep them from the water, they will go through whatever fence or barrier you've put up to keep them from the water, and Mr. Broz responded "Unless you have a good alternative source". Mr. Broz said we have done the research in southwest Missouri, and North Central Missouri. We put a GPS on cattle and lost one in the pasture. You know how long it took us to find it; that sucker was \$3,000. It told us something important though. It told us we didn't need to have up a fence to keep the cattle out of the creek. It told us that all we needed to do was give them a better source of water, and most of the time it was close to the shade; that's where they went.

An attendee wanted to know what would happen if so many wells were drilled that the water tables dropped.

Mr. Broz responded that this is another political decision, and if they would have taken to all the commissions, they have, they would have been told not to do it, but if I was that livestock farmer and I needed that well, you better believe I would vote for it. I was going to go to my Soil and Water Program and say build me a pond or dig me a well. Mr. Broz asked if anyone sold cattle in 2012-2013. He said he sits on the Well Commission and understands ground water. The Commission says that, here, in the lower half of the state we have enough ground water to cover 33' of the whole state. You go to Northeast Missouri, and they have enough to cover about 1/2" over a football field. They do not have water, and that is why they build lakes up there, and we do not have to worry about that here.

An attendee responded that if we keep building wells in this area, it will lower the table.

Mr. Broz said the city of Warrensburg has a well, those are 800 feet deep. For 35 years that pump was at 400'; they dropped it another 200' in the last five years. Here is the other side of it. I hate to get off on these things, but I think it's

important that you understand a lot of these things. On average, we put in 5,000 new wells each year for private citizens, and each person uses about 100 gallons a day. The average family is four people. That is if they don't have dogs, cats, etc. Start figuring out how many gallons that is a year, and I am surprised, we have this kind of good water here. We are forgetting we have a good karst; we have natural limestone topography that does a good job of replenishing.

Another attendee asked how many gallons a beef cows drinks in the summertime. Mr. Broz answered 12 gallons if the temperatures are reasonable. If the humidity and temperature are high, you will double that. At the ideal 50 degrees, a cow can maintain itself at 12 gallons.

c. Areas Already Identified

Mr. Broz then asked for comments as far as issues, problems and improvements are concerned.

An attendee said she remembered when DNR shut down Public Beach #2, and it took the law to get that changed. She wanted to know that since Mr. Broz was saying there would be a plan, and these plans are implemented, and then they become regulation, will it take another law to reimburse the victims for what was done. Mr. Broz responded that the reason the beach was closed was because of high levels of bacteria. He asked how many kids are going to be out there playing on that bee tree. The attendee said the reason Rocky Miller got the law passed was because DNR was using a flawed e coli testing system. She stated that the results in that cove would not have been the same five or six hours later.

She added that the sewer system was changed down there because it was running into the Lake.

Mr. Broz said the largest problem at the Lake five years ago was that during a study, one of the coves indicated 80,000 colonies of e coli because there are plants draining raw sewage into the lake. There is a law against that and people have a tendency to break it. Attendee pointed out that was DNR regulated.

An attendee said that beach #2 is not owned by an individual or the city. It is actually part of the state park system, but she pointed out that rather than getting better testing equipment, they shut down that beach for a full week. But it took a law by Rocky Miller to get that changed. She said that her fear was that all these plans will be made and somehow become regulation and the very thing we thought was helpful would make us victims.

Mr. Broz pointed out that if we do end up with some sort of regulation, and he was not saying that would happen, wouldn't you rather have some input? If you

say you don't want to fence your cattle out of the stream, and then put it in there. You need to tell us the kinds of things you feel are good, the kinds of things you think need improvement.

Then Mr. Broz asked if anyone thought we had a problem with soil erosion. If we have a problem, what should we do to prevent it? The problem with rivers and he said he knew because he tried to put up an abutment to keep his creek from turning into my pasture. His neighbor did not do anything and after two years, it washed out. Talk to your neighbors. Find out what you need to do to work together. You will run into many people who say they bought the land, pay taxes on it, and don't care what you do because the water is just going through there.

An attendee pointed out that it could be state land.

Attendee pointed out Judy Higgins on Higgins Ditch, and how Higgins Ditch has cut over the last 22 years. The attendee continued by saying that we have been fighting this, and some people named Forrest have a suit against the State of Missouri, and they can't get it through the court. The Judge won't even accept it.

Mr. Broz said he had to admit there are some things we can't do anything about, but one of the things we can do is develop a healthy watershed plan. He is asking what practices are beneficial for you if you have cattle, or if you have row crops. Maybe it's something as simple as changing the location where you run your four-wheeler through the creek; maybe you cross in a place where there is more rock. He said there are many simple things we can do that are effective in helping to control flukes.

An attendee referred to the map of the Little Niangua River, and said it showed low oxygen levels. He pointed out, that evidently, the government did not take into account that this is a very slow moving river compared to the Big Niangua River, which runs from Bennett Springs on to the north, which is a very fast river. He suggested they should look at why they get those readings and understand the dynamics of the river system. They need to think about what they are writing before they say anything.

Mr. Broz said there are many people doing this-University people, USGS, Corps of Engineers, and the Department of Conservation. A lot of times these different groups only understand one part, which is why there are different groups, so we can have an understanding of all different areas.

An attendee said, "So, if you are having trouble with these various agencies and there is no focus, maybe we could eliminate half of the DNR, roll it into the Department of Conservation, and make just one agency, save money and efforts."

Mr. Broz asked, "Why don't we get rid of the Department of Conservation and roll it into the DNR was that your question?"

The attendee said that would be fine with him too as they cost a whole lot more in tax dollars.

An attendee said, "Supposedly when I was very young I overheard the Superintendent and another fellow talking one-on-one with another fellow, and he said the lagoons for this park were woefully undersized-400,000 visitors per year; a few years later a million visitors. They upgraded about 10 years ago, but how much undersized is it now for the capacity of the people that come here."

Mr. Broz responded that the formula for determining this is based on average. So, there aren't too many visitors in the winter months, but we average that in. He said that doesn't make it right, but that's what helps to decide the size it needs to be. So is it undersized? There has been such a huge increase in the last 10 years; I would almost guarantee it is.

The attendee said that what he wanted to know was how far undersized the park was.

Mr. Broz stated he could not answer that.

Craig Fuller, Missouri Department of Conservation, said he had an answer. He stated: "I have something you can put on your list, Bob, as a positive practice, that is in the works currently, and that is to upgrade the wastewater treatment facility in Bennett Springs State Park, as it is woefully undersized."

An attendee asked if it was legal to spread the manure and Mr. Fuller responded that it is.

Then the attendee asked why that wasn't done, as there was plenty of ground here that could use it.

Mr. Fuller responded that as it pertains to the Bennett Springs Wastewater Treatment Facility, part of the process of treating the waste is to spray it on vegetation and land, so it is being used. The other important part of that is currently they do have a discharge permit; it will no longer be a discharge.

Attendee asked how high it was above the level.

Mr. Broz asked if he meant as far as the lagoon itself and the attendee said that it used to be about one foot.

Mr. Broz said the rewritten permit will be a no discharge permit, and added that if we have one of those 12" rains, like we have been seeing every other year- those 100 year rains, we will have to work with what we have.

Mr. Hasty said he wanted to clarify that the Head of the DNR has put together all these watersheds, and there are public meetings at various locations on the Niangua Watershed. He said he wants to be on that watershed committee and if we are in a position to control our watershed, he said he needed folks to step up and be active. Mr. Hasty said he is a dog fighter and is interested in what is best for the local people.

Mr. Broz said that someone mentioned why we plan to stop this watershed where it goes into the Lake. He gave a prime example as to why the lake was not included. He said that 92% of the Meramec River Watershed is in rural area. It goes all the way to Licking, Missouri. They held their first meeting at Powder Valley Conservation Center which is right in the middle of St. Louis County, and it was a very well attended meeting. He didn't think there were but one or two landowners at the meeting. Of course, the purpose of the meeting was to get input. They had the second meeting in St. James on the other end of the watershed, where the demographic is mostly rural and agricultural. Most of the people at the St. James meeting did not fill out the survey, as they thought it wasn't important, but guess how many people on the far end, which represented 85% of the entire population of that watershed but owned less than 2% of the land, filled out that survey. So when someone like Ms. Conner reviews the surveys to see what people consider important, if she doesn't have input from that rural segment, we can't help you with what you need to do. If we get 80 responses and of these completed surveys and 70 are saying the same thing, we have to go with the majority.

An attendee said so you are going off a flawed input to begin with, and Mr. Broz said that was right. The attendee asked how this thing can move forward.

Mr. Broz stated we have to do what we think is working, so if we get 80 responses and 70 are saying the same thing, we have to go with the majority.

The attendee pointed out that if we legislatively ended the watershed project in the State of Missouri, that would handle it, wouldn't it?

Mr. Broz responded that it probably would, but that he seriously doubted the legislature would let that happen.

- V. COMMUNITY PROJECTS WITHIN THE NIANGUA RIVER WATERSHED**
- a. Building on Projects Already Being Done Within the Watershed.**

Mr. Broz then asked what else do we have about the watershed.

Attendee said there are a lot of people in the Adopt a Shoreline program and that was a good thing.

The attendee went on to explain that as a master naturalist, as an employee of Extension, we are educating people about the watershed and what good practices are and how to be proactive. This meeting is all about being proactive, so we have control over our property and our watershed.

Mr. Broz after we bring the plan together, no one person is going to get everything they want, but what we will come up with is something that almost everyone can live with. Now there will be two to three bad actors over here that will be upset because their neighbor will be asking why they are still doing whatever they are doing. We are looking for the individual who knows his neighbor's plan is working and then is asking why they, too, couldn't do the same.

An attendee asked who will finally pull the plan together, and Mr. Broz stated, "You are." It will be your input, mine and Ms. Conner's. Ms. Conner will set up the meetings.

An attendee asked if Mr. Broz had started forming this committee, or selecting the people, and asked if he could put his name in the hat. He wanted to know how the members would be decided upon.

Mr. Broz said at two of the three meetings, they asked people to let them know if they wanted to be a part of the committee.

An attendee pointed out that this was not done at the meeting in Lebanon.

Mr. Broz said they forgot to do this at the first meeting, and then realized they should go ahead and ask at the next meetings while everyone was together.

The attendee if the people who volunteered had been contacted. Mr. Broz stated that they had not contacted those people, but had informed them that if they wanted to do this, they should plan to show up at each meeting, if possible. Mr. Broz stated that when we see an area of the region that has no representation, we will figure out who we do know in that region, and talk with them.

VI. OPEN DISCUSSION

An attendee said one of the issues of concern for many people running cattle were having fences to keep the cattle off the river. His feels that if the public wants him to keep his cattle out of the river, for which his family paid dearly for those river rights, don't give us 50% payback. Pay us the entire amount we are losing. You smile at that, but it is a reality. If the public doesn't want that pollution from the bank wash, pay for it. My thought to Ms. Conner is that this needs to be included on the list she is keeping. The funding needs to be commensurate with what they are asking because we are losing, even with a 50% pay back.

Mr. Broz agreed that if what we are doing is benefiting this huge group of people, and we are being asked to put our money into this, this and this; we need to make sure the compensation is there where we need it, to do the practices we need.

Another attendee commented that if the state pays for the fence, which she thought would be fine, as long as the federal government doesn't try to come in with their regulations from the EPA and say they are going to own that land, the rivers, the streams, the creeks.

Mr. Broz said that one of the things in Missouri in fighting the Waters of the U.S., Missouri used two laws, the Right to Rain Law, the water rights, and the Reasonable Use Law. Mr. Broz asked if the group knew what it would have meant if the Waters of the U.S. had prevailed; it would have wiped out our current law. He said that not everything can be stopped but, on the other hand, if we can give our input, the chances are better that we will have a good idea what practices, they are allowing us to accept, or they are accepting our practices and saying they will leave us alone, as long as things look right. If they don't look right, they will come back and tell us what else do we need to do. Mr. Broz said that where he's from, if we put in terraces, they don't always control erosion, so we have to do other things. We are looking at field borders, grass filter strips, and we are looking at putting in cover crops. We do several things to deal with one issue, and it is working. It costs me \$42.00 an acre to put in cover crops this year. The research I've seen indicates I'll not see a positive effect from the soil for the first three to 10 years, but it is probably worth it to do it at least a few years. I have helped farmers do their books. I know the average farmer, if they don't have a profit in three years; you throw it out and do something different.

Mr. Broz asked for further comments from anyone who had not had an opportunity to express an opinion.

An attendee said if the government controls your water and food, you've had it.

Another attendee said that he is a big proponent of rotational grazing for erosion control, and flood control if we rotate our cattle and do not graze the grass so short. He explained that soil absorbs about one-half-inch of rain per hour. So, when we get these hard rains, the rest runs off unless we can slow the water down. A good thick sod, leaving some grass behind after you graze it, slows the water down and more goes into the ground, which means less flooding, less run-off with your soil nutrients, less manure from your livestock; all that stuff stays in the field instead of the stream. It means cleaner water. These are some of the benefits of rotational grazing.

He continued that, by the same token, if not so much is going into the creek; you don't have to buy as much fertilizer. If you do the math, it makes your money. A lot of guys don't want to embrace it because it looks too complicated, but it works. The water-quality issue, fertility issue, it saves money. It makes more grass; you have more drought resistance because it holds more water; the ground is shaded so the soil temperature comes through cooler; it allows a slower evaporation rate. This is beneficial. You can carry more livestock so it pays. We don't have to have a government program paying you to do this. To me, the biggest benefit would be convincing people to see that it does work. From an agricultural standpoint, this river supports the livestock owner.

Mr. Broz said it is kind of like Keith said, education will be key to a large part of this. Look at the kind of management you have; what works well; what doesn't work well; what to change even if it's minor. Now I have been farming for 50 years, but if someone has been farming 70 years, it's hard for me to tell that farmer to listen to what I have to say but, if he can come to my place and see what we are doing with rotational grazing or some other practices, the chances are better that he will take it home and try it; and he can take all or part of it. Again, this plan does not include a lot of "what if" thinking, but we can ask ourselves "What kind of educational programs do we need"? "What kind of assistance do we need to make these things happen"?

An attendee said that the rotational grazing typically requires water. If you have your land on the river, or it borders the main streams, using rotational grazing is a good thing. But you have got to put in a pond system, and it costs money to do that. If you are paid 100%, it encourages you to do it.

The attendee said that was not necessary.

An attendee said that he waters his cattle out of the river like everyone else does, but you can get creative and a lot of people don't get creative. Build ponds in strategic places where you can run fence across and water more than one pasture. He said he waters three pastures out of one pond. Even your pond water is far superior when they are only using it a few days and then move to the

next pond. With continuous grazing they are dumping into the pond day after day, month after month, and it gets filthy. People talk about how dirty pond water gets; if you do rotational grazing, pond water is good, and they don't have much preference to well water and, many times, will not have any preference to well water over good pond water.

An attendee told Mr. Broz that he may not be getting to where he wanted with this meeting, but he is having a good meeting.

Mr. Broz said we are getting a lot of good comments, maybe not what we had anticipated, but that the attendee was right in that this is the kind of thing we need to hear. Mr. Broz said that Ms. Hoggatt may go back and say, "Once we said there was going to take two years to complete"; and then went to explain that he was in a much smaller watershed, and it took three years just to get people to quit pointing fingers and started trusting each other. He said there were only 1,600 people in this small watershed, so it might take us longer than we thought for this watershed. We need your input. We need to know what you think is good or what we need to work on.

An attendee said that one thing she heard out of this meeting that makes a lot of sense, and there is a plan to fix it, was the problem with Bennett Spring's Sewer Treatment. She said she thought there should be a plan to find out where the problems exist, suggesting more testing along the river because there are farmers who are practicing good management and don't need to have fencing because the river is not polluted where they are. But there might be others that are not being run as well and if there is no water testing, it's hard to know where the problems are. You might be forcing something on someone who doesn't need it and not addressing the problem where it exists.

Attendee said he knew there are fewer farmers raising beef cattle. He said there was a little batch of cattle by the campground just below the bridge in the 1980s, and now there are only three full time farmers of which he was aware in the first 12 miles along the river. Demographics favor fewer farmers on the river. Everyone else is retiring or dying off. The land is too valuable for other things besides farming.

Mr. Broz said because of your proximity to Lake of the Ozarks, Jefferson City and Springfield, many people are moving in who want to own 10-20-50 acres, mini farmers.

An attendee asked if anyone knew about the nine-point source management plan and Mr. Broz said that at this point, it is a stand-alone plan. It will utilize aspects of the state plan; this plan is your plan. We cannot say we are going to do this practice when we know the practice will cause harm to someone else.

Mr. Broz said that as he mentioned earlier, he tried to fix the creek on his property, but if my neighbor upstream doesn't do anything, mine still washes out. It takes everyone within a watershed to say, "What can we do a little different"? Maybe he was foolish to think he could protect that ground and not let it wash away but, on the other hand, it was important to him to hold that ground.

Attendee said if we don't enforce that on this level, it is going to be mandated.

Mr. Broz said that sooner, or later, it will be, which is why we need for you, as a group, to let us know what you feel is important. I am a believer in personal property rights and 93% of the land in Missouri is owned by private individuals. That doesn't mean the government can't come in and do something. But they don't have the personnel, or the money, except to give a plan of action as to what you are going to do.

An attendee said you are asking people what the best practices are for their farm; then some government entity or scientist will tell us we're wrong; then where are we? We're wrong, and you are going to do it your way.

Mr. Broz asked the attendee how many scientists told him what he was doing was wrong.

The attendee then asked if Mr. Broz believed in climate change, and Mr. Broz responded that he does; the climate changes every day.

Ms. Conner provided her email and phone number to the group and told them to contact her if they were interested in participating on the watershed advisory committee. An attendee if her phone number was on the Niangua Watershed Site, and she said it was.

Attendee provided the watershed website information to the group: www.nianguariverwatershed.org, and said all information from previous meetings was on that site.

An attendee asked what the administrative costs would be on this and if Ms. Conner was getting paid, and she replied yes LOCLG is being paid to do the project.

An attendee said that in one, brochure said the cost of putting these meetings on was \$35,000. Mr. Broz explained there are more expenses than Ms. Conner's salary, as there is the cost of someone keeping the books, doing audits, etc.

Attendee said that in the past, all administrative costs have been whatever the project is for 66 2/3%, which doesn't leave much to go out and do these things. He thought that the person in charge was making a killing.

VII. CONCLUSION

Mr. Conner told the group that if anyone has an interest in being on the Watershed Actions committee, please email or call her.

Ms. Hoggatt was asked the time frame to get this done, and she said we would like to look at 15 to 18 months in terms of gathering initial ideas, but not implementing the plan. She pointed out that this is really about getting input from folks and documenting that information.

An attendee said you need to sit down and read the reports from the University of Missouri. Three or four different studies done much earlier that already covers all of this that we are trying to accomplish today.

Ms. Conner said the next meeting would be in January 2016 sometime. She will type up all the notes taken tonight and make a list of items the group indicated were important. She said we will look at that list at the next meeting and determine priorities and what we believe can be accomplished.

VIII. ADJOURN

The meeting adjourned at 7:09 p.m.

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING SUMMARY**

Tuesday, January 26, 2016

3:00 p.m.

Central Bank Public Meeting Room

1197 Spur Drive

Marshfield, Missouri 65706

I. CALL TO ORDER

Linda Conner, Director of Lake of the Ozarks Council of Local Governments, (LOCLG) introduced herself, called the meeting to order at 3:05 p.m., and thanked everyone for attending the Niangua River Watershed Community Partnership Project meeting.

II. INTRODUCTIONS AND SIGN-IN SHEET

Gwenda Bassett introduced herself as the Southwest Regional Watershed Coordinator working with Our Missouri Rivers Program.

Andy Thomason introduced himself as Regional Planner at LOCLG. Pam Gilbert and Terre Brown introduced themselves as Administrative Assistants at LOCLG.

III. RESPONSIBILITIES OF THE WATERSHED ADVISORY COMMITTEE

Ms. Conner reviewed what had taken place so far, explaining the project was a collaborative effort between LOCLG and the Missouri Department of Natural Resources (MDNR). She explained that since the project reaches outside of LOCLG's region, there were two other planning councils involved, Southwest Missouri Council of Governments, represented this evening by Jason Ray, and Kaysinger Basin Region Planning Commission. No one was in attendance from Kaysinger Basin Planning Commission at the time of introductions, but two representatives of Kaysinger arrived later.

a. Volunteers Interested in the Future of the Niangua River Watershed.

Ms. Conner explained that the Niangua River Watershed Planning area encompasses Dallas, Laclede, Hickory, Webster and Camden Counties. The goal was to have a meeting in each of the counties to make sure everyone has an opportunity to be engaged in the process. She added we are in Marshfield today, located in Webster County, which is the largest population density of all the communities within the Niangua River Watershed, with 6,633 from the census data. Ms. Conner said that previous meetings have been held in Hickory,

Dallas, and Laclede. She said that at each of the previous meetings, we have asked volunteers to participate in the Watershed Advisory Committee (WAC) and many in attendance at this meeting have volunteered to be on the committee.

b. Willingness to Share Time and Participate in the Planning and Implementation of the Niangua River Healthy Watershed Plan.

Ms. Conner explained that an important part of the planning framework is to get local input, which is why we are here today. We are looking to develop the WAC. We will discuss the responsibility of the WAC, how often they will meet, and what we hope to accomplish at each of the meetings. The WAC requires interested, engaged community leaders, people who can share information on the watershed, promote watershed protection, preservation, enhancement, and inspire others to do the same.

IV. DEVELOPING THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED

Ms. Conner told the group we want you to help us develop a list of priorities, and we will go into those in detail at the next section of the meeting. Then we'll develop a ranking system to establish those priorities. We will develop action plans to implement the priorities. Ms. Conner again stated that this is strictly voluntary.

a. Review the List Identified from the Last Public Meeting.

Ms. Conner said we will host four additional meetings. At the last meeting, in which Bob Broz facilitated, we gathered a list of priorities, and Ms. Conner took copious notes concerning issues and concerns so that we could develop the action items needed. She said today we will continue developing that list of priorities. We have a list, and we will ask those attending to give their opinions on how to move forward, and if you feel it is a valuable action item that should be included in the watershed plan. She said at the next meeting, we will try to finalize the list and implementation of those key areas. We will determine the next steps at the next meeting because, again, it is all voluntary.

b. Identify the Probability of Each Action being Feasible.

Ms. Conner stated that we may need to engage other groups in the planning process in order to move certain priorities forward. At the last meeting, we will finalize the plan, share the final review with the committee, and make sure we have included what you feel is important.

Ms. Conner said we need people to be involved who are interested in developing shared priorities. We want to make sure everyone feels comfortable with what the process and can stand behind it. It's important to have a clear path to

change. We may have a grandiose idea, but if we don't know how to get there and accomplish it, it's just a grandiose idea.

We also need to support science-based decisions for the watershed. We have reviewed all the information collected at the previous meetings. We reviewed the areas of interest and discussed challenges and looked for opportunities. Based on the surveys, these were the three top areas from the previous meetings that need to be addressed:

- Water Quality
- Education and Public Outreach
- Habitat Preservation and/or Restoration.

We wrote it down because when we listened to what you had to say, these were areas that rose to the top. There were water quality issues, but there were water quality issues in several categories. We had water quality in 1) tourism and recreation, 2) agriculture and landowners, and 3) water quality in specifically drinking water.

Concerning water quality under tourism and recreation, these were the items that rose to the top from what was given to us at the last meeting:

- Large amounts of trash at the Niangua River after a holiday weekend
- Fish guts being thrown back into the water at Bennett Spring
- Lagoons at Bennett Springs are undersized for the number of users, which we understand has been addressed, but I wanted to document everything.
- Onsite water systems are failing
- Goodwin Sink Hole, the water runs directly into Ha Ha Tonka State Park

Water quality under agriculture and landowners, these are the items mentioned:

- Cattle in the river
- Soil erosion
- Pesticide, fertilizers and other pollutants

As far as drinking water, the following was mentioned:

- The number of abandoned wells
- The number of new wells coming on line
- Surface water protection

Linda stated again, these were the three main areas of interest, so when we put together these action items, we grouped them under each of them, so we could determine within those areas which might be the priorities.

Ms. Conner moved the meeting to the next slide show, which concerned the list of action items. Remote data collection devices were given to attendees as they signed in, and she asked Ms. Bassett to demonstrate how the remote data collection devices worked.

Ms. Bassett explained that by using the remote data collection devices, we can capture the group's responses to questions asked via the PowerPoint. Gwenda said we won't know the individual responses of the group; those are anonymous, but would know the results only. We can then crunch the data and look at what are the top priorities. She explained the power button is in the center of the circle of the remote. After everyone powered on, she asked a test question, indicating responses would appear and the attendee could select A, B, or C using numbers that correlated with the letters. She explained if someone answered with the wrong number, the slide would be reset and the question asked again. After everyone entered their answer, the resulting data would be displayed.

Ms. Conner explained that the first series of questions would be what those attending thought personally.

How important do you feel water quality is to you personally and to your family?

Attendee asked, "In relation to what?" Ms. Conner answered it was how he felt. Attendee asked, "In relation to what the Chinese are doing to the Yellow River?" Ms. Conner replied we were here to talk about the Niangua River water.

Results:

A) Very important 75% B) Somewhat important 25% C) Not important 0%

How important do you feel water quality is to our local tourism and recreational activities and the local economy?

Results:

A) Very important 60% B) Somewhat important 36% C) Not important 4%

Ms. Conner explained that once we have the data, it will be printed on the website so everyone could review it at their leisure so, if anyone had questions, they could bring them to the next meeting.

How important do you feel water quality is to the agricultural industry and landowners?

An attendee asked if that meant access to the water, and Ms. Conner replied that water quality could mean access. She then asked if he felt he had adequate, good water. Attendee responded he didn't know what she was talking about because if his cattle didn't have access to the water he didn't care about the water. Ms. Conner told him to just answer the question however he felt.

Results:

A) Very important 60% B) Somewhat important 36% C) Not important 4%

How important do you feel water quality is for drinking water and protecting the drinking water for the future?

Results:

A) Very important 80% B) Somewhat important 12% C) Not important 8%

How important do you feel education and public outreach is to water quality, protection and preservation?

Results:

A) Very important 71% B) Somewhat important 21% C) Not important 8%

How important do you feel preservation and/or restoration is to our communities now and for future generations?

Results:

A) Very important 64% B) Somewhat important 24% C) Not important 12%

V. NIANGUA RIVER WATERSHED COMMUNITY PLAN

a. Community Engagement

Ms. Conner referred to the next set of slides, saying we put together specific action items that correlated to your concerns and/or interests collected from the previous meeting. She said there was a series to the slides. The first question was how the attendee directly felt. The second question would be if you feel the community would support or not support the project because it's not just about us, but also community engagement and involvement.

Under water quality in regard to tourism and recreation: Do you support this action item that we should consider including in the Healthy Watershed Plan?

An annual award or recognition of businesses that support, promote and do environmentally friendly activities.

An attendee asked if that would be a monetary award, and Ms. Conner responded no; it would be recognition that the business was environmentally friendly. If the business uses the recognition as a marketing tool or as a means to promote itself, then it may bring about a monetary award.

Results:
Yes 80% No 20%

Same action item: Do you feel that we can successfully encourage local participation and engagement in this activity? Do you feel that businesses would be interested in receiving this award and do you think we can engage businesses in this process?

An attendee asked what was the definition under businesses and if a farm would be considered a business. Ms. Conner answered yes, that a farm is a business. She added we would love to see farms recognized.

Results:
Yes 48% No 24% Not Sure 28%

Water Quality under Tourism: Again, this is how you feel, personally, as to whether we should include the following as an action item in our plan: Working with local stream teams to schedule volunteer cleanups along the banks of the Niangua on more regular intervals. This is in connection with the concern of trash along the river; do you feel that this would be beneficial? Can we get more volunteers for the Stream Team? Do you feel this is something we should add as an action item in the plan?

An attendee asked how often there was a cleanup along the watershed. An attendee from the Stream Team said it was cleaned weekly during the season, and that was not enough. She said there are two stream teams from the Whistle Bridge at Edith down to the Niangua River boundary that floats into the Lake. Ms. Conner asked if she needed more volunteers, and the attendee responded "Absolutely."

Another attendee added that at the big one at the Niangua River, where everyone floats, there is a huge amount of trash, which is done at least annually. The Stream Team representative said that Carl does the area at least twice annually. She said the team goes from the Whistle Bridge at Edith below Tunnel Dam down to Ha Ha Tonka.

Ms. Conner said again this is how you personally feel, if it needs to be included in our Healthy Watershed Plan.

Results:
Yes 84% No 16%

Same action item-working with the local stream teams to schedule volunteer cleanup along the banks of the Niangua River. Can we get more volunteers to be part of the Stream Team? Do you feel we can engage more people in this process?

Results:
Yes 48% Not sure 44% No 8%

Ms. Conner reiterated the following is how you feel the following would work for a healthy watershed: Working with local organizations and Stream Team volunteers to increase the number of water samples collected on the Niangua River?

Results:
Yes 63% No 38%

Do you think we can engage participation in this activity, such as the local organizations and stream teams, thereby increasing the number of water samples collected on the Niangua River? This would give you a better idea of what's really happening out there if we have the collected data.

Results:
Yes 46% Not Sure 33% No 21%

Do you support this action item to be put into the Healthy Watershed Plan: Expanding the fish cleaning stations to more fishing recreational areas?

Results:
Yes 63% No 38%

We may include the above as an action item but, if we can't get people to use fish cleaning stations, will it do us any good? Do you feel that by expanding the fish cleaning stations to more fishing recreational areas, they be used more people?

Results:
Yes 33% Not sure 42% No 25%

Do you support this action item to be included in the Healthy Watershed Plan: How do you feel specifically? Explore opportunities to use and recycle the fish guts in organic fertilizers.

Results:
Yes 52% No 48%

Do you feel that we can successfully engage other participants in this activity: Exploring the activities to recycle and use fish and fish guts in organic fertilizer?

Results:
Yes 21% Not sure 33% No 46%

An attendee made the comment that people had to work and Ms. Conner explained the recycling is not something you would do specifically, but there are companies that actually make fertilizer out of fish guts or dead fish. So it would be a matter of finding that resource and giving them the fish guts or dead fish to process.

An attendee asked Ms. Conner how many tons of fish guts you could get out of the watershed. Ms. Conner responded that the waste from fish hatcheries would also be included but added that, it may not be feasible.

Do you, personally, support this action item to be included in the Healthy Watershed Plan: Engaging and educating farmers on programs that are available from MDC, MDNR, NRCS and FFA?

Results:
Yes 83% No 17%

Same action item, but do you think we can get people involved, the community, new farmers, and farmers who've been farming for awhile: Do you think we can successfully engage them in educating them on the programs that are out there and new programs as they become available?

Results:
Yes 63% Not sure 17% No 21%

Do you think we can support this as an action item and do you personally think it should be included in the Healthy Watershed Plan: Offering occasional workshops and/or lunch and learn programs on agriculture-related subjects from experts on those subjects and/or programs.

Results:
Yes 68% No 32%

Do you think we can successfully engage local participation in the engagement of this activity: Offering educational workshops or lunch and learn programs on agriculture-related subjects from experts on the subjects?

Results:
Yes 42% Not sure 46% No 13%

Do you think you could support this action item personally: Organizing tours and field trips that demonstrate best practices and where implementation can be successfully demonstrated. This is finding out what your friends and neighbors are successfully doing, and that you can implement yourself.

Results:
Yes 65% No 35%

Again, this is the same action item, but do you feel we can get other people engaged in the process? Do we have farmers that would be willing to have people come out to their farms and look at what they've successfully done? Do you think we can get that engagement-organizing field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated?

Results:
Yes 42% Not sure 42% No 17%

Do you personally support this as an action item that you think we should include in the Healthy Watershed Plan: Developing a comprehensive inventory list of abandoned wells?

Results:
Yes 57% No 43%

Same action item, do you think we could get local participation in identifying those wells that would be a key component in order to create that inventory list?

Results:
Yes 30% Not sure 17% No 52%

Do you personally feel that we should include this item in the Healthy Watershed Plan: Developing a community plan to apply for well plugging grants to fill and plug those abandoned wells?

Ms. Conner added that having an inventory won't do us any good, unless we do something that will fix the problems.

Results:
Yes 74% No 26%

Again, this would require participation by the owners of the wells to be a part of the process. Do you think that developing a community plan, for applying for well plugging grants, would be something we could accomplish?

Results:
Yes 39% Not sure 35% No 26%

Mr. Broz commented that property owners can plug the wells themselves, legally, as long as the well is on his property. If an outside party wants to do it, then they must have a well driller come in. There's a lot more to it than you think.

Ms. Conner said it gets pretty expensive if you have to hire a well digger. Mr. Broz said the cost can range from \$300.00, if you do it yourself, to \$2,000 for a well digger.

Do you personally support this item to be included in the Healthy Watershed Plan: Develop a comprehensive list of abandoned or dilapidated properties and identify them as potential Brownfield projects for possible lead-based paint, or asbestos, for cleanup with grant funds.

Ms. Conner explained that brown field projects are properties that have been abandoned for a long time, whether an abandoned gas station or a building that has been left abandoned. She explained the Brownfield project was something we've had done within our region. We go in, clean it up, and take out the lead-based paint and asbestos, so it gets a clean bill of health. The property owner can then sell the property for development with no issues concerning contaminants.

Results:
Yes 48% No 52%

Ms. Conner went on to the next slide:

We would need participation by the landowners because most of those abandoned properties are privately owned. We can do the grant with them on it, but we need to know if we can get the landowners engaged in the process, which is developing a comprehensive list of abandoned and dilapidated properties and applying for the grant funding.

An attendee asked that if the landowners were so willing, would it even be dilapidated or abandoned, and Ms. Conner explained many times the owners are not aware of the program we offer where we use the grant funds to clean up the properties, so there would be an educational process informing them about the programs.

Another attendee asked what kind of grants, there were and how much the grants would cover financially. Mr. Conner said it would depend on how much cleanup needed to be done. She said it depends on how much is being requested to do the cleanup, but we had 100% grant funds for the one project we did in Eldon.

Results:
Yes 29% Not sure 38% No 33%

An attendee commented that on a cleanup such as the one above, there would be environmental concerns on the part of the landowner as to legalities. He asked if the program provided the landowner with guidance in getting through some of those issues, which would be difficult for the landowner to deal with by himself.

Ms. Conner said we would work him or her through the process and then hire a contractor who does environmental cleanup. She added that they are the experts; we aren't the experts. The contractor facilitates the cleanup process.

Results:
Yes 29% Not sure 38% No 33%

Do you support this action item for the Healthy Watershed Plan: Exploring ways for the local community and business owners, within a relatively close distance to the Bennett Spring State Park, to connect to the wastewater treatment facility?

Ms. Conner explained this was something that was brought up and we have tried to encompass everything. Again, is it even feasible? We are just exploring ways to see if it may be a direction we should go.

Results:
Yes 39% No 61%

Same action item: This is about the participation of the residents and the local community around Bennett Spring State Park. Do you think they would be engaged in the process of exploring connectivity to the wastewater treatment facility?

Results:
Yes 8% Not sure 38% No 54%

b. Identifying groups interested in implementation of Projects.

Ms. Conner moved the meeting to education and public outreach, which was the next category to cover.

Do you believe, personally, in working with local 4-H programs, FFA and the Missouri Extension programs, local schools, MDNR, MDC, NRCS, and FSH toward water quality, water protection and preservation?

Results:
Yes 83% No 17%

In order for this to be successful, we need to engage local participation. Do you think the 4-H groups, FFA; Missouri Extension and other organizations would be involved in the process? Do you think we can work across these different organizations to make this happen?

Results:
Yes 67% Not sure 21% No 13%

Do you personally support this as an action item that should be included in the Healthy Watershed Plan: Offering educational workshops or lunch and learn programs on water sampling and analysis in the Niangua River Watershed?

Results:
Yes 67% No 33%

Again, we would need to have the engagement of the community. Do you think they would come out and actually participate in some of these programs to understand more about the sampling process?

Results:
Yes 30% Not sure 52% No 17%

How do you personally feel about this particular action item: Offering educational workshops or lunch and learn programs on loan and grant programs for the repair and replacement of failing onsite septic systems?

Ms. Conner added that we offer programs where homeowners can borrow money to repair or replace septic systems. Many times, they are not aware of those programs. It would be an educational component in teaching them to understand what happens when a system is failing and the opportunity to fix that problem when they have it.

Results:
Yes 70% No 30%

Again, this part of the question is how much participation do you think we can get from the local community and the people who actually have the failing systems. Will they come to a workshop to understand how they can fix their system?

Results:
Yes 46% Not sure 29% No 25%

Personally, how do you feel about the following being included in the Healthy Watershed Plan: Offering educational workshops or lunch and learn programs about illegal dumping, how to combat the problem, and what the ramifications are legally and financially.

Results:
Yes 78% No 22%

Same action item: Do you think we could get people to participate in this particular lunch and learn program on illegal dumping, how to combat the problem, and what the ramifications are legally and financially.

Ms. Conner added that she lives on a gravel road in Miller County and, personally, she would love to see people attend the workshops and understand what the legal ramifications are as sometimes she has trash at the end of her driveway.

Results:
Yes 50% Not sure 38% No 13%

Next action item: Again what you feel, personally, and if we should put it in the Healthy Watershed Plan: Offering educational workshops or lunch and learn programs on recycling, how to encourage this as a better option.

Results:
Yes 75% No 25%

Same action item: Do you feel we could get people to come out to the workshops and then, after the workshops, engage in and become a part of that recycling community.

An attendee asked how well the workshops have worked in the past, and Ms. Conner responded she thought they had worked well in many areas, and noted getting participation is the key.

Mr. Broz commented that lot of it depended on convenience. If it's convenient to take the recycling someplace, you will see more participation. Ms. Conner said she was aware of many towns that were offering it as a curb pickup; Camdenton is doing this in some areas.

Results:
Yes 39% Not sure 39% No 22%

Ms. Conner moved on to the next category, Habitat, Preservation and Restoration. Do you support this as an action item that should be included in our Healthy Watershed Plan: Engaging and educating landowners on programs available from MDNR and MDC on habitat preservation and/or restoration.

Results:
Yes 67% No 33%

Same action item: Engaging and educating landowner on programs available from MDNR and MDC on habitat preservation and/or restoration: Do you think we can get local participation in this action item? Would landowners participate and actually move forward with the programs as well?

Results:
Yes 38% Not sure 38% No 25%

VI. OPEN DISCUSSION

Ms. Conner said the above were activities/actions gathered from all prior meetings and that now would be a good time for someone to put forward any additional activity that had not been considered. She said we wouldn't be able to vote on it but could take down the information, prioritize, and bring it back to the next meeting if it's something

you would like to see included in the Healthy Watershed Plan and in engagement within the community.

Ms. Bassett distributed note cards to the group, so they could write down any comments or questions and give the cards to LOCLG representatives before leaving. Ms. Conner reiterated we wanted to make sure we engage everyone's comments in the planning process.

VII. CONCLUSION

Ms. Conner expressed her appreciation for everyone's attendance this evening and informed the group the next meeting would be in March. She said to make sure we have contact information from everyone so that we can engage everyone in the meeting and planning process. She asked everyone to print their names on the sign-in sheet if they had not already done so.

She said the next meeting will be held in Camden County as it was the only county within the watershed where we had not yet met.

VIII. ADJOURN

Ms. Conner adjourned the meeting at 4:05 p.m.

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT
MEETING SUMMARY**

**Thursday March 31, 2016
3:00 p.m.
Laclede Electric Cooperative
Camdenton Office Community Room
2620 S. State Highway 5
Camdenton, Missouri 65020**

I. CALL TO ORDER

Linda Conner, Director of Lake of the Ozarks Council of Local Governments (LOCLG), introduced herself, welcomed everyone to the sixth meeting concerning the Watershed Planning Project, and called the meeting to order at 3:12 p.m.

II. INTRODUCTIONS AND SIGN-IN SHEET

Ms. Conner then asked the rest of the staff members present to introduce themselves. Taylor Schlueter introduced himself as Planning Technician, and Andy Thomason introduced himself as Regional Planner at LOCLG. Pam Gilbert and Terre Brown introduced themselves as Administrative Assistants at LOCLG.

III. WATERSHED ADVISORY COMMITTEE

A. Discuss How the Watershed Advisory Committee (WAC) has been established

Ms. Conner explained that at each of the previous meetings we asked for volunteers to participate in the WAC. We have reached the point where there has been enough participation and volunteers that we see a real committee starting to form. She asked if everyone had received one of the handouts, which listed those who have participated and are now members of the WAC.

Ms. Conner said we tried to divide the lists into three categories: (1) people who are actually sitting on the WAC as members; (2) project planning partners; (3) technical and resource committee; and our ex-officio's, to make sure we have representation from all counties. She explained the handout provided a list of the WAC and the counties they cover; the planning project partners which would be DNR, LOCLG, SMCOG and KBPRC, and a list of those with expertise in a particular field. Those are people we would utilize in answering technical questions, so we can make educated decisions on action items for the project. Of course, we want to make sure we have representatives from all counties. It is important that we try to obtain equal representation from businesses, agricultural groups and agencies that can help to implement the plan. Ms. Conner emphasized that working together is extremely important because everyone owns land, a business, or has some reason to be interested in this project. We want to make sure

there is full representation, and everyone has an opportunity to voice their opinion on the project.

B. Discuss the Role of the WAC in Developing the Healthy Watershed Plan

Ms. Conner referred to a handout explaining what we are looking for in the WAC. The role of the WAC is to provide in the development and implementation of the Healthy Watershed Plan. From all previous meetings and your input, we compiled a list of actions based on issues or concerns discussed in those meetings. These actions also need to be feasible and be able to be accomplished using the resources that are already available. Ms. Conner said she was referring to volunteers when she said "resources." She said there was no money in this, but we are looking for voluntary help to implement these action items. Many of the actions are educational and community-based activities that will encourage all to be engaged in the implementation. She asked for a showing of hands as to those who had attended the last meeting, and said tonight we would review those lists of actions again and go into more in-depth conversations to determine what is or is not feasible. We will also discuss different volunteer groups that will be interested in participating. Ms. Conner said they would not assign these actions to any particular group, as we are looking for interested volunteers who feel they can accomplish the task.

IV. REVIEW THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED

Ms. Conner asked Bob Broz to explain the breakout sessions to the group and what they hoped to accomplish.

A. Review the Action Items and Ranking of Actions from Previous Meeting

Mr. Broz introduced himself and said he worked with the University Extension and had responsibility throughout the state for watershed planning.

He said the group would go to different tables, (1) one being the water quality as it relates to agriculture, (2) water quality as it relates to tourism and recreation, (3) water quality as it relates to drinking water, and (4) water quality in regard to habitat and restoration. With each of these topics, besides having that area of expertise or that area of concern, there was also have a list of the educational activities or educational information, we think people need. As an educator, when people say they need more education on "this," we need to understand what is "this." Is "this" the cave system? The karst? Does "this" deal with hydrology of water? So when you talk about education, if you are discussing drinking water, what do you need to be educated on? If it's abandoned wells, we can do that. If it is understanding how the different aquifers are connected, we can help with that. But, we need more specifics when we talk about the educational plan.

At each table, there will be a list of key issue and action items, along with a list of resource people for the different areas.

B. Review Questions Submitted from Previous Meeting

Mr. Broz said only two questions, and four statements had been received under this section. He said he would review them closer to the end of the meeting, as he wanted to make sure plenty of time was allowed to go through the table subjects.

Mr. Broz then asked for questions.

An attendee referred to the term "Total Maximum Daily Load" ("TMDL") that is used by the EPA. He said EPA just finished a watershed survey at the Chesapeake Bay Area, and found that the TMDL exceeded whatever standard they used. So, 600,000 acres of agricultural land were closed down because, from the agricultural aspect, they felt it polluted the water.

The attendee asked, since we are dealing with the Niangua Watershed, what is the TMDL for that watershed?

Mr. Broz replied that the EPA looks at different criteria. They can have one for bacteria, for nutrients, for temperature.

Jennifer Hoggatt replied that a TMDL had not been written for the Niangua River.

Mr. Broz stated that if there is a TMDL, you are required to move forward and do something about it.

The attendee said his concern was that the EPA already has a TMDL.

Ms. Hoggatt stepped up to answer the question in more detail and introduced herself and said she was the statewide coordinator for Our Missouri Waters.

Leslie Holloway asked about the proposed delisting of the Little Niangua from the Impaired Waters List, which would mean that it would not be under planning for a TMDL because it, apparently, had improved based on DNR's information. She said there was a TMDL on West Fork Niangua, and Ms. Hoggatt asked if there was a date for that, and Ms. Holloway said it had been approved by the EPA 2010. Mr. Broz asked if that was for phosphorus, and the Ms. Holloway replied that it was for low dissolved oxygen.

Ms. Hoggatt gave a little background on TMDL studies, and said that Ms. Holloway mentioned impaired waters. Our Department ("DNR") is required by statute, by clean water regulations, to look at the streams around the state and see if they have what we consider "impairments." DNR bases that on if the streams are not meeting the uses for which people have used those streams. For instance, if you swim in a particular stream, or fish in a particular stream, DNR classifies those streams for certain uses. If they are not meeting those uses because of low-dissolved oxygen, bacteria, etc., then we define them as "impaired." But there is a large methodology that goes on. Many samples are

taken, and they have to be analyzed to make sure standards are met to be on that list. Once that happens, EPA asks for a TMDL study. That study tells us how much low-dissolved oxygen in that stream can be there before fish start dying off, or until it becomes unsafe for other things. Is it unsafe for people to swim in because of bacteria?

Attendee said that was his point; that it was very difficult to address a problem, unless we know where we are. So, if we have that information, that the TMDL is too high for swimming, then we could address that. But if we don't know, we're just floating around in the wind.

Ms. Hoggatt said that at the core of it, that's what a TMDL study tries to do; it tells you where you are and where those levels should be, then it assigns for those sources in those watersheds, so point sources, people who have a wastewater treatment plant, what it should discharge to be in compliance.

Attendee said he was fearful the EPA would come down and force their standards on us because we don't have a standard yet.

Ms. Hoggatt replied that our state has standards, and is in conversation with EPA all the time about those standards, to make sure they are in the right place. In many ways, DNR acts as advocates for the landowners and those standards, re-enforcing that they are protective of the uses for our waters.

Attendee pointed out that once there is a known standard, and the state sets up a plan to maintain that standard, then if the EPA comes in, the State can point to that standard which may be below EPA's standard, but it can be improved on if needed.

Ms. Hoggatt commented the attendee had made a great point, and this is why we need a committee of local folks, such as the WAC. If, as Mr. Broz said, education is needed about current standards, it can be provided. She continued saying there are standards for the streams in this watershed. Ms. Holloway was alluding to the fact that many of these streams have been measured, and they are meeting the standards, or have been measured in the past and they weren't but maybe they are now; and DNR is trying to get the EPA to sign off, saying the standards are being met.

Ms. Hoggatt continued and said we have standards set in the state for all streams that meet those classifications. We can provide more education so you can make, as Mr. Broz said, good decisions based on your knowledge of the standards of the watershed. We believe that, based on that knowledge, we are meeting those standards voluntarily.

An attendee asked if Ms. Hoggatt would provide those standards to the group, and Ms. Hoggatt said yes, and that this was part of the continuing discussion.

Attendee pointed out that in order to form a committee; the committee needs to know if the watershed is average, above average, good, bad, whatever. Otherwise, what will they do?

Mr. Broz said what we can do is ask, "What can we do a little better?" You may already have your cattle fenced out of the stream and have put in grass buffer strips. But what else can we do to improve the overall situation? Then, we can say we are being as proactive as possible and its working. If EPA does come down, knows that DNR is testing and not seeing any problems, they can report it accordingly.

He referred to the farmers in Des Moines, Iowa, saying they are doing everything that is required, and what RCS and other groups' request, but they were still seeing too much nitrogen in the water. Now there's a lawsuit. They were doing the practices we have always thought should work, but now they need to see what else they can do.

Mr. Broz said he had worked in the northeast part of the state where there was a problem with Atrazine, an herbicide, in the drinking water. So, if everyone was using the right practices, according to research that had been done, why was there still an issue? Sometimes we think we are doing all the right things, but maybe instead of a 40' buffer, we should cut it to a 25' buffer. Maybe instead of using two pounds of herbicide to destroy a particular type weed, perhaps a pound and a half would work. In other words, we may be doing the right things, but there are times when we are not following the exact path needed.

This Committee is going to look at how we can be proactive regarding our property. We'll list the things we are doing right. Once a TMDL is set, we are under EPA's watchful eye. We don't want that to happen, so we are going to be proactive. The first step towards a TMDL is to be on the 303D list. We want to stay below that level, if at all possible.

Ms. Hoggatt pointed out that the TMDL is a study, because people ask if it means they will be regulated. The short answer is no for agriculture; those are still voluntary practices. For permanent facilities, their limits may change based on that TMDL. There will be a load assigned to rural or nonpoint source runoff, but it does not make farmers regulated.

Mr. Broz referred back to the case of the Chesapeake Bay explaining that, because of a certain term pertaining to that watershed; it allowed the EPA to come in with stricter regulations. The EPA did not actually take the farmers out of production, but they did regulate the practices that must be used in order to continue farming. They went from having 100,000 acres of covered crops to over 600,000 in one year, which is phenomenal. EPA told them they needed to reduce soil runoff and nitrogen loading; they asked EPA what would work to address those issues, and this is one of the methods that would work.

Mr. Broz said he had been told there was a new article on Chesapeake Bay, and he intended to look it up to see what else was going on.

Attendee stated he had not read the court report yet but when the EPA wins, we lose.

Mr. Broz agreed and said that if you follow what went on in Des Moines, Iowa, we have a water facility wanting to sue a group of agricultural drainage districts.

In looking at Toledo, Ohio, they wanted to sue farmers in two or three different watersheds because they are not doing a good enough job. But, if you go to Beaver Lake, where they are doing voluntary action that is working. It is not perfect, but it is working. If we go to Raspin Lake in Iowa, voluntary actions are working. It's not perfect but because they've made great strides, the EPA is leaving them alone, and it is voluntary, so they can still make decisions as to what happens on their property.

An attendee explained that "TMDL" means samples have been taken, and the results don't meet state-DNR standards. Then, EPA becomes involved and they set TMDLs. DNR has state standards, such as dissolved oxygen's criteria is 5 ppm. Part of the Little Niangua was on the Impaired Rivers List because we didn't exceed 5 ppm dissolved oxygen but, now, it sounds like there may be new data to take it off the list. There haven't been many samples taken throughout most of the Niangua, so we don't know about it meeting state standards. Parts of the Little Niangua that didn't meet low DL; probably a stream team took some data, and you have data to compare with a standard. For most of the Niangua and throughout Missouri, the resources haven't been available to take all that data. Now, do you really want to take all that data? You may find answers you don't want to know. But you can implement many measures to improve the water quality without knowing where you started and where you ended.

Attendee commented that we can start out with ideas on how to improve the watershed, but it will cost someone something, whether a landowner, or a business owner.

Attendee commented that most of these programs are great, but the costs still come out of my pocket, and I can't afford it. So my view is that if it is so critical, the cost-share needs to be twice as much as 50%, which means 100%.

Attendee said we can go into these committees and come up with recommendations, but who it impacts, and how much it will cost folks to take certain actions, if we don't know what is the baseline; we may be asking people to take actions they can't afford.

Attendee said we have to make some assumptions and Mr. Broz agreed. If we think, the watershed quality is good, then that is our assumption. Right now, we think it is good;

then we form a committee and discuss how, by taking a certain action; we can make it good-plus. Or, if we take another action, it may make it good-minus.

Mr. Broz commented that anytime we decide to implement a practice, the chances are good it will improve, or maintain, water quality. Mr. Broz said we are asking you to identify what is being done now that is good and, then, identify what we would be willing to do if necessary. We don't want the EPA, or anyone, to tell us we have to do something. However, we would like to say we are willing to take certain actions, particularly if they're cost-effective, not time consuming, etc.

An attendee referred to Mr. Broz' remark about who would pay for these actions. She continued saying that three months ago, we had a catastrophic flood in this watershed, which cost everyone in this room untold amounts of money. These practices need to be proactive; no one could have prevented that type of flooding, but we need to hold that soil any place possible, so it doesn't cost us in the future.

Mr. Broz said someone had sent him an article from Northern Missouri, referring to a six-inch slice of soil or one acre of about 960 tons. So when we talk about losing two, three, or four tons an acre, then we ask ourselves how much is that land worth? Is it worth \$1,000, \$2,000 per acre? Then you put a value of production on that soil? Of course now, how deep is the soil down here? A comment was made by one attendee that he had soil 25 feet deep, and he lost 15 feet for a quarter mile. Attendee further mentioned that Missouri Department of Conservation would not allow him to put in rip-rap to prevent more loss.

Mr. Broz replied that he thought this would be more of a Corp of Engineers issue than Conservation.

Attendee replied that Conservation told him he was not allowed to make any changes to the river. He said he had lost 100 yards of river front, 25 feet deep of topsoil, and said where he had huge trees, he no longer has trees.

Mr. Broz said they had an experience with a fellow in a similar situation in Gasconade County, and it was estimated he lost more soil off his river bank than the rest of the county.

Attendee asked about water quality and how it varies from day-to-day. If we happen to have a big rain when someone is spreading turkey manure, and a couple hundred acres up the river someone is testing, it is going to look bad. Then if we wait a week, and we don't have a torrential rain, it'll look different. So how do they determine when and how often to take those samples, and then are they averaged?

Ms. Hoggatt responded that people can be brought in from her department to do the monitoring and assessment. She explained there is a methodology, and there are rules about how many samples must be taken. Normally, one bad sample will not put you on

an impaired list. There are a certain number of samples, certain times, and these are different for bacteria, dissolved oxygen, etc., because the various categories require different tests.

Craig Fuller brought up some additional information, stating that Ms. Hoggatt is correct concerning protocols for water testing and sampling. He referred to people doing macro invertebrate sampling, which is looking at the aquatic insects that live in the river. If we do that one day after a big rain, it may look bad. It does depend on when you sample the water. But, those critters we're sampling live there full time, through good times and bad. If you sample them, they can tell you, over the long term, how bad or good things are. If it's bad, there are certain classes of insects and macro invertebrates that won't be found because they are not tolerant to a lot of those pollutants. If you get good diversity of the right type of bugs, then you can infer there was no event that took place the day you didn't go. Or, maybe the day you did go, it was bad and there wasn't one of those events that took place that killed a certain type of critter. So, overall the water is of a high quality for certain parameters.

Mr. Broz said we needed to move forward into the groups, but he had received a question regarding abandoned wells from the previous meeting, which he wanted to answer ahead of time.

Whether the well is drilled or hand-dug, it is a straight conduit for contaminants to leak into the ground water, or drinking water, and this is why we talk about plugging them.

There is a regulation that describes what qualifies as an abandoned well. Many areas use cost-share to plug them.

There is also another side. If you have a 10-foot fence around the well, and signs all over, and a child, under 12 gets in there, you can be sued for everything you have, and you don't have a leg to stand on.

So, this is an environmental issue, but it's really an economic advantage to you to take care of it. If you own the property, and it's an old hand-dug well, cost would be around \$300.00 to fix it, and likely you can do it yourself.

If it is a drilled well, it needs to be plugged right, and you might need to hire a well driller. There is a cost-share program available through DNR.

Mr. Broz wanted to bring up this issue because it related to the water quality table.

Mr. Broz then turned the meeting over to Ms. Conner.

Ms. Conner explained we would be breaking out into four different groups: water quality in regard to agriculture and landowners; water quality in regard to tourism and

recreation; water quality in regard to drinking water; and water quality in regard to habitat restoration and preservation.

She explained those attending could select whichever group they prefer, but there would be an opportunity to move to another group. There would be a 20-minute time limit at each round, so there would be time to go to your top three choices.

She said at each table, the group would discuss the goals and action items that we discussed during the last meeting, and today we would prioritize them.

**V. NIANGUA RIVER WATERSHED HEALTHY WATERSHED PLAN
(At this point all attendees broke into groups)**

A. Timeline to Completion

Ms. Conner said there would be one more meeting at the end of April, and she would make sure everyone was notified of that meeting. At that meeting, we will go over all the information gathered today and share it with the Committee.

Between April and August, the Committee will meet and put together the Healthy Watershed Plan. In August, we will meet again and review what has been put together to ensure we encompass everything the Committee has put forward during the seven meetings. We will have a 30-day window within which to review that information and make any updates before we share it with DNR.

Attendee brought up erosion issues on the Niangua River from running big boats up and down the river. He commented that one boater had 100 horse jets running up and down the river and though he realized that 10 horsepower is not realistic today, neither is 100 horsepower.

Another attendee said people want to fish for walleye, and they can't get into the river to prop up the boat, so they put in up the river with a jet boat, and it works the banks hard.

Because of the time limit on the meeting room, Mr. Broz had to call an end to this discussion.

B. Review Period and Public Comments

Ms. Conner pointed out comment cards on the tables and containers in which to put them if anyone had further comments or questions.

Mr. Broz discussed comments received from the last meeting; one was the abandoned well issue which he had covered earlier.

Another comment/question asked was if we could have a workshop regarding property owners' rights along the streams and river, and we can do that.

Another comment was "We don't want to put a bunch of restrictions on our agricultural industry, as it hinders our profitability and livelihood."

Mr. Broz agreed with this comment and said we want to make this as voluntary as possible and profitable.

Another comment concerned two good ways to show off the watershed, connection to the watershed by doing watershed tours-visual tours looking at the good, the bad, and the ugly. Look at practices for all industries. The public needs to be made aware of what grants are available to implement some of these practices.

We need to clean up our local dumps, not just the river.

VI. ADJOURN

Ms. Conner adjourned the meeting at 4:56 pm.

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT**

MEETING SUMMARY

Tuesday, May 10, 2016

2:30 p.m.

**Laclede Electric Cooperative
Camdenton Office Community Room
2620 S. State Highway 5
Camdenton, MO 65020**

I. CALL TO ORDER

Lake of the Ozarks Council of Local Governments Executive Director Linda Conner called the meeting to order at 2:38 p.m. and suggested that everyone could move up closer since there are some committee members absent today, and more seating is available up front.

II. INTRODUCTIONS AND SIGN-IN SHEET

Ms. Conner welcomed everyone to our watershed advisory committee meeting and said that everyone should have three items in their handout. First is the agenda, then there is the list of action items that were discussed at our last meeting in which each of the breakout groups were asked to identify three action items that they were willing to move into the Healthy Watershed Plan and there are also some notes. If it wasn't a direct action item that we had not already discussed previously we will discuss this further as we move into the breakout groups. There is also a list of potential groups that would help implement a Healthy Watershed Plan.

Ms. Conner reminded the attendees that this is all strictly voluntary, so they are looking for organizations that believe in this and would want to do it as an action item for their group.

Ms. Conner gave a PowerPoint presentation which is attached hereto and therefore, made a part thereof.

III. ESTABLISHING THE PRIORITIES FOR THE NIANGUA RIVER WATERSHED

Ms. Conner stated that at our last meeting, we had four areas in which we discussed and identified actions in regard to water quality. Each group discussed the top three actions that they would like to move into the Healthy Watershed Plan, and the breakout groups discussed the focus areas of: Tourism and recreation, agriculture and landowners, drinking water and habitat restoration.

- a. Review the action items identified from focus groups from previous meeting in regard to water quality:

- i. Tourism and recreation

For tourism and recreation, the goal was to maintain and improve water quality in regard to our rivers and lakes within the watershed that see a high volume of tourism and recreational activities. The top three items that came out of those breakout sessions was working with local stream teams to schedule clean up along the banks of the Niangua River on more regular intervals.

Also, offering workshops or Lunch and Learn programs on illegal dumping and how to combat the problem and what are the ramifications legally and financially. The three stars mean that three of the other breakout groups also identified that as an action item that they wanted to move forward with.

In addition, Ms. Conner said that additional action items that were discussed but were not on the initial list of action items, but they would like to see an economic impact for the region to share with the public so conducting an economic impact study within the watershed should be conducted and sharing the economic impact with the public and more public awareness activities as well as water sampling and water testing by agency groups.

Ms. Conner also said that when the attendees get into the breakout sessions, they can discuss whether these are actions that they really want to move forward with under the tourism and recreation heading.

Ms. Conner also mentioned that there were some questions at the meeting because some were unclear as to what the economic impact would be if we didn't have the quality water that we do.

- ii. Agriculture and landowners

Working with local 4-H programs and FFA programs as well as the Missouri Extension programs and local schools as well as DNR, MDC and NRCS and SSH to promote water quality protection and preservation and that was also identified by two other breakout groups.

The goal was to maintain and/or improve water quality in regard to our rivers and other water sources within the watershed that see a high volume of agricultural use.

Ms. Conner added that we only had two breakout sessions because we didn't have anyone attend the last session. But the top priorities that were identified by the second group were: organizing field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated. Engaging and educating farmers on programs that are available with MDNR,

MDC, NRCS and FSA. This is a duplicate from the previous breakout group which suggested working with the 4-H program, FFA program and the Missouri Extension, local schools and again MDNR, MDC, NRCS and FSA to promote water quality and water protection and preservation.

Ms. Conner continued by saying that the first breakout group identified additional actions that they discussed because their actions were not actually on our list. Erosion control was the biggest problem that they wanted to discuss, including what can be done for the stream bank stabilization using rip rap, using vegetation and gravel removal. As well as educational information from State and local government as to what landowners can do, including gravel removal and erosion control.

Ms. Conner also mentioned that the information and education from State agencies could easily fall into the educational component that we have already discussed but just making sure that we cover that particular topic in one of the educational groups.

Encouraging individual landowners to proactively use best management practices and that is exactly what the healthy watershed plan is all about, voluntary implementation on your own property and activities that can be done.

An educational workshop on the riverfront with regards to landowners' property rights can definitely be added as an action item as well. Ms. Conner added that Gwenda has indicated that there is someone who can provide us with that information.

Ms. Conner stated that there was also discussion for additional consideration as some of the participants thought that we would get a better response for several reasons if we used the term "landowner" more consistently throughout the plan rather than identifying farmers or agricultural activities, and some felt that it would increase the participation in certain programs for large landowners, absentee landowners and or lessee or lessor landowners who may not consider the conservation program due to the fact that they do not farm.

iii. Drinking water

With regards to drinking water, Ms. Conner stated that our goal was to maintain or improve water quality with regards to drinking water sources and future water sources by identifying potential non point sources for pollution.

Ms. Conner added that this group also made some changes to the action items because they thought they would work better together.

The top three priorities were: Develop a comprehensive inventory list of abandoned wells and develop a community plan to apply for well plugging grants and plug the wells.

Ms. Conner added that the group didn't feel that the comprehensive list was going to do any good unless we had a way to address the issue as well. So just having a list doesn't do any good so they put those two action items together.

Offering educational workshops and Lunch & Learn programs as well as loan and grant programs for the repair and replacement of failing onsite septic systems.

Also, offering educational workshops and Lunch & Learn programs on illegal dumping, and they combined this with another action item, which was recycling as a better option. So it was a combination of the two actions.

iv. Habitat restoration

With regards to habitat restoration, Ms. Conner said that the goal was to increase awareness and implementation of habitat restoration programs and activities as well as promoting preservation of current natural habitats.

The top priorities that came out of the focus group included: Offering educational workshops and Lunch & Learn programs on illegal dumping and how to combat the problem and what are the ramifications legally and financially, which is the same as three other groups, which said that they identified that as a priority as well.

Offering educational workshops and Lunch & Learn programs on water sampling and analysis in the Niangua River Watershed.

Offering educational workshops and Lunch & Learn programs on recycling and how to encourage this as a better option. This was also a part of the previous one as well as the drinking water and the recycling one as a component that they want to include in the plan.

Ms. Conner added that since the implementing of the healthy watershed plan is completely voluntary, it will take individual people, groups, organizations and agencies that will consider the actions that we have identified as part of their mission or as an opportunity to participate in a project that will have a benefit to our watershed, our community and our future.

Since most of the actions that we have established are really all encompassing and they are not really targeting any specific area within the watershed but rather it is more of an overall reaching educational component we are really focused on not the location but the potential of the implementation of the action item so what we want to do today is break out into two groups. One half of the room go to one side and the other half of the room go to the other side and LOCLG's staff; Andy Thomason and Taylor will be helping the groups by facilitating the discussion.

Ms. Conner stated that what we are looking for specifically is to take the sheet that they have as the top three actions that were identified, and we want the groups to talk about who would be the best fit to implement these actions. What types of groups do you feel would be the best fit, and if you know of something, specifically whether it be your church youth group or a local 4-H group or a group that would be interested in doing these items.

Ms. Conner added that included in the packet is a short list of potential groups that could help us implement these items, but we are relying on the committee for additional resources to help us implement these items. Jennifer will be with one of the groups and Gwenda with the other group, and they will be able to help answer questions about some of these organizations and exactly what they would be able to help us with specifically.

An attendee said that we should put the State Treasurer on the list. Ms. Conner asked it if would be for the money. The attendee responded by saying absolutely because we can't get anything done if we don't have any money. Ms. Conner said that a lot of these groups have funding whether it is the church group or a 4-H group that has money to do activities, also MDC has funds to implement certain activities, so there are funding opportunities to do some of these activities, and we just need to identify who they are and what grant could they apply for in the future to implement some of these action items. The attendee said that they have used the landowner for years because the landowner is the one who takes the shots every time. He or she is the one who spends money along the river with cable and logs to try to stop erosion, and he is the one that puts up the fence, and the flood comes and washes it away and then he puts it up again, and that has been going on since it's been idle, but they don't get any money for it. Ms. Conner said that there is funding available, and it is a question of how much can you put into the project. The attendee then said that he hasn't seen a dime.

Ms. Conner said that we are going to break out into two groups, and we will split the room right in half and if Andy will facilitate one group, and Taylor will facilitate the other group. Ms. Conner added that they have 20 minutes in each group.

b. Identify the possible volunteer groups to help implement actions

The attendees broke up into two groups, and one group discussed the identification of volunteer groups to address the issues of water quality in relation to tourism and recreation as well as agriculture and landowners while the other group will be identifying possible volunteer groups to help with issues regarding drinking water and habitat restoration.

IV. NIANGUA RIVER WATERSHED HEALTHY WATERSHED PLAN

a. Timeline to completion

After the breakout session, the group reconvened and completed the rest of the meeting.

Ms. Conner said that she would like to go over the time line real quick and that May through August, we will be completing the Healthy Watershed Plan and then in September, we will meet again with the Watershed Advisory Committee and share the draft copy of the Healthy Watershed Plan.

b. Review period and public comments

Ms. Conner stated that September through October will be a 30 day public comment period for everyone to submit comments on the plan and then the end of October, we will be submitting the final plan to the Missouri Department of Natural Resources.

Ms. Conner also mentioned for everyone to check their emails and make sure that if there is anyone today that did not get notified of the meeting individually to please make sure to give us their contact information as well as the best way to contact them so that we can make sure that everyone receives the agenda as well as any other information that is necessary.

V. OPEN DISCUSSION

There was no additional discussion

VI. CONCLUSION

Ms. Conner stated that if there is no further discussion we will conclude the meeting and thanked everyone for attending today.

VII. ADJOURN

Ms. Conner adjourned the meeting at 4:27 p.m.

**LAKE OF THE OZARKS COUNCIL OF LOCAL GOVERNMENTS
NIANGUA RIVER WATERSHED
COMMUNITY PARTNERSHIP PROJECT**

MEETING SUMMARY

Wednesday, September 14, 2016

2:30 p.m.

Laclede Electric Cooperative

1400 E. Route 66

Lebanon, MO 65536

I. CALL TO ORDER

Linda Conner called the meeting to order at 2:35

II. INTRODUCTIONS AND SIGN-IN SHEET

Linda Conner thanked everyone for coming to our final watershed meeting.

Next Ms. Conner introduced herself as well as the staff of LOCLG, which includes Taylor Schlueter, who is our Planning Technician, Pam Gilbert, who is an Administrative Assistant and Terre Brown, who is also an Administrative Assistant. Ms. Conner then asked Gwenda Bassett to introduce herself.

Gwenda Bassett stated that she is with the Missouri Department of Natural Resources. Ms. Conner then asked for a show of hands as to how many attended our first watershed meeting in this very room. Everyone raised their hands with the exception of Terry Halleran. Ms. Conner said that she is very glad that they all have participated in the process and came back.

III. OVERVIEW OF THE ENTIRE PROJECT

Ms. Conner said that first we would go over the planning process. This project started in May of 2015, and we will complete it by the end of October of this year. We have held a series of meetings to discuss the project to develop our goals and action items and then to develop the Healthy Watershed Plan.

Ms. Conner asked if everyone received a draft copy of the Healthy Watershed Plan as they walked in. Everyone had and Ms. Conner stated that is what we will be looking at today.

IV. HEALTHY WATERSHED PLAN

a. Review the draft copy of the Healthy Watershed Plan

Ms. Conner said that first you will see the Executive Summary which, in a nutshell explains the project and also explains the objectives of the project and emphasizes the need for community participation in our planning and implementation.

Ms. Conner directed the attendees to look at Chapter 1, which is the introduction and said it explains what a watershed is and who our planning partners are. Ms. Conner added that specifically if the attendees find there is someone who has attended the meetings, and we have not recognized them, then we would like to make sure that we do, so to please let us know.

With regard to Chapter 2, Ms. Conner mentioned the characteristics of the watershed are addressed, and we looked at the general characteristics as well as the public use areas, the land use overall, the water resources, flooding, water quality and then we went into in depth with regards to Missouri State Water Permits. Ms. Conner then noted how many permits there are per county. This information will give everyone an idea of where the larger concentrations of those permits are located.

Also reviewed is the ground and stream monitoring as well as the water usage today and in the future. We also look at the demographics of the watershed which is an extension section of the population as we look at the population projections up to 2030. Also included in the demographics are the age groups and growth trends, and we also look at the employment information. Ms. Conner added that they are probably asking themselves why that is important. Ms. Conner continued by saying that as the population increases it also puts a demand on the water as well as the wastewater facilities, so she has received the information with regards to the increase in population so that we can know how to accommodate these types of facilities but on the other hand, if we have populations that are decreasing, and we are seeing this in some very rural areas; it causes a financial strain on those small communities to operate water and wastewater treatment facilities because they have fewer customers they have less income. So how would they continue to maintain the facilities? Mr. Conner also mentioned that we looked at the employment types because there may be large employers who put an increased need due to large capacity for the water and wastewater resources.

With regards to Chapter 3, Ms. Conner stated that we look at the collaboration within the Healthy Watershed. Since the Healthy Watershed is based on voluntary implementation, when the project started we researched selected information from various organizations that are already doing projects within the watershed, and we wanted to engage them in the planning process. This Chapter documents the issues that they have identified and have shared with us. In addition, these organizations will be a valuable resource in putting in the practices of the goals and action items outlined in the Healthy Watershed Plan.

Chapter 4 addresses community engagement which talks about the planning process, the planning meetings in detail and all of the meetings that we had as well as what was discussed and then the appendix A. Ms. Conner mentioned that she would like to

apologize as we did not include those pages today as it is very large and consist of copies of the meeting summaries that we have. When we post this on the website it will have all of the appendix pages as well as documents all of the press releases, the agendas as well as any kind of press information that we had, and we will go into detail with regards to those at the end.

Chapter 5 looks at the watershed priorities and actions, and the last 3 meetings that we had is where we started to develop those priority lists and actions, and we had an initial list that we started with and on the second meeting they were discussed once again and on the third meeting, they were kind of narrowed down to the items that the committee all agreed to. Therefore, this Chapter discusses the interests and concerns and how the goals and action items were developed.

Ms. Conner directed everyone's attention to page 63 and said that you would find the initial list of potential action items and on page 67, the top three actions and most will remember the meeting where they were asked to identify the top 3 action items that they would like to move forward with and incorporate into the watershed plan. So those were the top 3 and then on page 68 is the final list that we put together at the very last meeting and we kind of started with a large pot of action items and then narrowed it down to actions that we felt like we could accomplish and move forward and that everyone agreed up on.

Chapter 6 also looks at the partners in the region and the resources. The resources are identified to help with the implementation of the Healthy Watershed Plan. Ms. Conner added that first we have a list of potential volunteer organizations; secondly, we have a list of potential financial assistance organizations and opportunities that are available.

First, we need to find an organization that is willing to take on the project and if the Watershed Advisory Committee wants to take on a project for themselves, then LOCLG will apply for funding through one of those resources so that they can do that.

Appendix A will include the agendas, sign-in sheets, all of the presentation materials as well as the meeting summaries. Appendix B will include all the media and the marketing information such as the press releases and the newspaper articles.

Appendix C will cover the other materials that we used whether it be the watershed advisory committee brochure, the surveys that we used and the handouts that we passed out.

Ms. Conner then asked what happens next. We will have a comment period of 30 days on the plan itself, and you can email the comments to linda.conner@loclg.org, we also have a page on our website that you can actually submit your comments directly through the webpage wherein you just fill in the box and hit submit and send it right to her. For those who do not have either email or access to the internet you are welcome to visit her office, and she will be happy to discuss it with you.

Albert Hempel asked if there is an address where they can send comments to by mail as well. Ms. Conner replied by saying that the address is located on the bottom of the

agenda. Mr. Hempel asked if it is P.O. Box 3553. Ms. Conner said that is correct, and if they want to take an extra copy with them and make comments right on the page that they want to comment on to feel free to do so.

Ms. Conner then said that she has a question for all of them as far as being the Watershed Advisory Committee. The question is, does the committee want to identify a specific action item that they would like to work on in the near future. Ms. Conner directed the attention back to page 68 and said that there are 9 action items that they had moved forward that they wanted to move into the action items list and implementation part of the project.

Ms. Conner then stated that we would now go through all nine of them.

Number 1 refers to working with the local stream team to schedule a volunteer clean up along the banks of the Niangua River on more regular intervals, so if there are specific times of the year that they think needs to be looked at and discussed, we can certainly do that.

Number 2 is the organization of field trips and tours that demonstrate best practices and where implementation can be successfully demonstrated. Ms. Conner mentioned that she is aware that Craig Fuller has conducted field trips previously, and they have been successful so it is something that we do have the resources in the room if it is something that the committee is interested in doing we want to know a specific practice. Or if the committee has an interest in finding out who does what we can organize that as well.

Number 3 is educating and engaging farmers on programs available from MDNR, MDC, NRCS and FSA. Ms. Conner added that USDA and NRCS have also offered to provide educational programming and are very interested in doing it. They haven't been able to make it to our meetings, but they have followed the plan itself as well as the development of it and are definitely interested in hosting something in the region.

Number 4 is working with the local 4-H program, FFA program, the Missouri Extension programs, the local schools as well as DNR, MDC, NRCS regarding water quality and water preservation.

Ms. Conner also mentioned that Gwenda had talked about working with program WET through the school districts, so she is going to be having a schedule that she can send out and then Linda will send it out as well. Gwenda stated the WET is Water Education for Teachers. So when she looks at our priority action items, they are bigger arching goals, and she thinks that project WET is something that will fall under the umbrella because it is basically a training class that has been specifically designed for teachers to promote water/science education in the classroom, and they have had some interest from teachers in the Camdenton and Osage Beach area as well and are pleased with that, and it is just one example of what can be done.

Ms. Conner said that Number 5 is education and outreach with regards to hazards of abandoned wells and well funding grants to fill the abandoned wells. Ms. Conner added

that it was a big concern for some, not necessarily trying to get them filled but trying to educate people as to why an abandoned well is going to affect your drinking water. Ms. Conner added that she thinks education and outreach in that area is also beneficial in our region.

Outreach, education and lunch and learn programs with regard to grant programs for the repair and replacement of onsite septic systems is Number 6. Ms. Conner added that Terre had been working on mailing out brochures to all of the installers that would be installing onsite systems because we want to educate them with the fact that we do have a loan program that is available, so they can share the information with their customers. The program is structured to allow up to a 50% grant and a 50% loan to replace a failing system. The number 1 reason people don't fix or replace their failing system is because they cannot afford it. So we want to make sure that we get the information out to everybody.

A question was asked if that is one of the action items. Ms. Conner replied by saying yes that is correct. In addition, Ms. Conner stated that we are sending out the brochures and then if we have enough interest, we could host a workshop and tell them how the program actually works in greater detail. Ms. Conner added that she had already given a presentation to the Board of Realtors in the lake area because it was a big concern for people who are trying to sell their properties, and they have a failing system, so they need to get it repaired and/or replaced before they can sell it. Ms. Conner added that the unique part of the program is that it is a grant/loan program and most of the homeowners who live on the lake have a higher income, so they won't qualify for a 50% grant, but everyone gets a small portion of the grant up to \$1,000.00, and it encourages them to take steps to replace their system by being a financial incentive.

Number 7 consists of hosting educational workshops or lunch and learn programs regarding illegal dumping and how to combat the problem and what are the ramifications legally and financially. And how to encourage recycling as a better option. Along those same lines, Ms. Conner mentioned that sometimes recycling is very limited in certain areas, and if we can encourage the municipalities to offer recycling that is also helpful.

Number 8 is offering educational workshops or lunch and learn programs on water sampling in the Niangua River Watershed.

Number 9 is developing educational materials that demonstrate the watershed is a place that we live and enjoy and want to protect for future generations. Ms. Conner added that not everyone was aware that we actually live in a watershed and that everyone lives in a watershed and while this project was specifically for the Niangua River Watershed, everyone lives in a watershed, and we can demonstrate the natural resources that we already have and that we need to protect.

Ms. Conner stated that those are the top-priority action items that we had agreed on at our last meeting.

b. Public Comment Period-30 Days to Send Comments to LOCLG

Ms. Conner also stated that we are not going to go over page by page but rather by Chapter because everyone can take their copy with them, and they will have 30 days to read it and make their comments so that we can get their feedback.

Ms. Conner stated that she would like to open the meeting up for comments and/or concerns if there are any.

Klaus Leidenfrost said that he does have one question, there are 9 items listed here, and he is just picking a number out of the air but let's just say that we have \$10,000. How are we going to put it towards these items? Also, are we going to fund number 1 first and then 2,3,4,5 in that order or how do we decide. Ms. Conner replied by stating that there is currently no funding available. Therefore, what would happen is that if there was an action item that the group wanted to select, then we would seek funding to do that item, specifically. Ms. Conner added that we don't have a pool of money to divide among the action items, but rather we would actually identify an item that we wanted to accomplish & seek funding for that specific action item or project.

Gwenda Bassett added that once you have this list of action items you can also be looking for funding opportunities as they become available because sometimes things become available that we don't know about now, but they may be there in the future. So we have this list that serves as a go to, and even though it may not be your number one it is something that maybe could be funded under this heading. Ms. Bassett added that is another way to look at it and even though it is not perfect having the priority list is a great start.

An attendee asked if all of the funding comes from DNR. Ms. Conner responded by saying that is not necessarily so, and we have funding that comes through LOCLG, and we receive notifications everyday that the Federal Government has funding for various types of projects. Ms. Conner added that there are also funds that come by way of non-profit organizations that have funding for projects that fit with their specific scope of what they want to accomplish. So we can look for funding for a specific project. The attendee mentioned that he didn't have anything specific but mentioned that when we get into this there are several agencies that offer several programs.

Ms. Conner suggested that it might be useful if we had a meeting where we had all of the agencies sitting together at the head table and talking about their programs and where they cross over and where you can use this program in conjunction with another program. So that is the case, in that we have a number of programs but which one is going to fit your need the best.

Another attendee mentioned that MDC will have a program that comes out, but they run out of money quick. They don't budget enough, and they spend it on other things.

Ms. Conner responded by saying that from the grant writing perspective, it is extremely helpful to know exactly what the projects are that we are looking for. As an example, Ms. Conner mentioned that when MoDOT comes out with a grant for sidewalks, she already knows which communities want sidewalks, and she can tell them that this grant

funding is available for sidewalks. So if there are projects that we want to implement she has a marker board in her office, which contains a list of all the projects that we are looking for funding for. Then when the funding becomes available, she can call the community and let them know that funding just came through for this project. Ms. Conner added that it is not all the time, for example, MoDOT has funding almost every 2 years for the sidewalk program. Ms. Conner added that it is not instant funding, and it is not something that we are going to do tomorrow but having a list of projects that you want to implement helps us to seek funding in the future as it becomes available.

Another question was asked as to where the administrative costs come from. Ms. Conner responded by saying that it depends on the funding agency as some do not allow for administrative costs at all, and some of them do. The attendee then commented that, in other words, we are not getting paid. Ms. Conner responded by saying that it depends on the project. If it is an educational workshop project, we probably won't have any administrative costs that we would be able to cover, but if it is an infrastructure project where we are replacing a low water crossing and we have to be working with the engineer, MDC, the Corp of Engineers, etc., then a lot of times we would actually bid to do the administrative costs in those cases, but it is not something that we are just seeking the funding in order to get the administrative costs. Ms. Conner added that we do need to recover some of our costs if we are deeply involved in a project, but again it depends on each of the funding agencies and what they allow. Most of them require that we cap our administrative costs at 10% of whatever the project is.

Ms. Conner asked if there were any other questions in regard to the action items and does everyone feel comfortable with the actions that we have put together.

c. Final copy of Healthy Watershed Plan-Submitted to MDNR October 14, 2016

Ms. Conner also stated that we are not going to go over page by page but rather by Chapter because everyone can take their copy with them, and they will have 30 days to read it and make their comments so that we can get their feedback.

V. OPEN DISCUSSION

Craig Fuller said that he would like to make a comment with regards to Linda's point on items one through nine. These nine items are in no particular order, so they are not in priority rank. Ms. Conner stated that we did not prioritize them as we didn't feel like there were enough projects to spend the time prioritizing and a lot of them kind of overlap in regard to the educational component. If we can combine some of them, for example, having all of the agencies that are on the funding side of things that would cover a couple of these items. Ms. Conner added that Mr. Fuller is correct in that they are not in any particular order with regards to priority, but rather we are just asking the committee members to identify if there is a project that fits in one of these to come see us as we will try to help them get the funding to do it.

Albert Hempel stated that one of the big concerns that he has is that they develop this Healthy Watershed Management Plan, and it is all voluntary and as long as it is voluntary everyone is fine with it but do we have any way of guaranteeing that it is a volunteer program, and it will remain that way. Mr. Hempel added that frequently these voluntary

programs tend to get a little more teeth to them, and they become not voluntary anymore and that is what concerns him.

Ms. Conner responded by saying that she wants to make a correction in that this is not a Watershed Management Plan. It is a Healthy Watershed Plan. The management plan that he is referring to is a completely different animal and that are not what we are working on. Ms. Conner added that when everyone gets a chance to read it, it refers over and over again about the voluntary implementation of the plan itself, and it is going to be extremely important that we have people that are interested in the plan and are able to address those actions and move it forward, but again it is completely voluntary.

Ms. Bassett said that she wanted to add that some watershed committees such as ours have renamed this document and instead of it being called a Healthy Watershed Plan, some have called it the Healthy Watershed Strategy. And they are looking at those priority items as strategy items that they thought they could move forward to help keep their water clean. Ms. Bassett added that even that term doesn't have to stick, but rather it is literally whatever the local group is comfortable with.

Mr. Hempel said that maybe someone can clarify then because he thought we were actually talking about a watershed management plan, and if we are separating that as a healthy watershed plan, can someone define the differences. Ms. Bassett responded by saying that they tried to define it in the very beginning in this very room at the very first meeting. Ms. Bassett added that a watershed management plan is a huge undertaking in that it is a technical document, and it is typically funded by EPA's non-point source program. They target those to watersheds or whatever size of a waterway that the group is working on the plan. But the plan is targeted to get a stream off the impaired list, and that is the ultimate goal. In order to get a stream removed from the impaired list you have to do water quality samples and look at all the modeling so generally you have to hire someone, so they can look at all the water-quality data. They also model all the soil conditions and look at erosion factors on the land around the area and identify what all the pollutants are in the areas that are causing the impairment. So the management plan is a huge undertaking, and this is not funded by EPA number one, but rather it was funded by their department, which is state funds so EPA has no role in this at all. Ms. Bassett added that whenever you have a watershed management plan that is funded by EPA, there are certain criteria when they give those funds to them (MDNR) to pass down to the local organizations, but they have certain things that they want MDNR to check off whenever they have those documents graded to make sure that since they are giving them money, MDNR has to be held accountable for it. Ms. Bassett also said that by contrast, there is no technical modeling to this but more of a pilot project to try to get local watershed people more involved in letting them know what some of their action priorities are in their watershed to see if they can possibly pair some of the concerns of the committee with some of the programs that may be available and to get more educated and more information out there. Ms. Bassett added that is more the foundation of this, and it is tied more to the Our Missouri Waters program which they started in 2012 with MDNR. Which is more of a local statewide engagement effort that they wanted to start talking to local groups more directly and asking them what some of their concerns are within their local watershed, so they can figure out where they can do the most work and where they can help local organizations the most especially with the limited funds that they are seeing.

In regard to soil and water conservation and non-point source grants. Ms. Bassett added that they have a lot of different programs and funding packages, but they have always had a piece meal approach as to how they looked at things, and they are trying to get more local input on some of these things.

Mr. Hempel said that he might have misunderstood in the beginning but this really was a water management plan in that MDNR had to have a plan for the Maries County watershed because if they didn't get us involved in the statewide plan, then the federal boys were going to set up regulations that would have to be abided by and so the public was encouraged to be involved in this process to basically keep it on more of a State level, so they can control it themselves. Ms. Bassett responded by saying that there is always that fear that things will become non voluntary down the road in anything that we do, in everything in everyday life. Ms. Bassett added that she thinks that some of that was mentioned in the beginning, in that why not talk about this now, that if way down the road anyone does ever question what we are doing at the state level we can show them what we are doing. We are working with the local residents and the local watershed committee to look at some of these things. Ms. Bassett added that she thinks it was more of an answer to address questions that came up at the first meeting when people were thinking that this was part of the statewide watershed management plan, but they were referring to the state's non-point source watershed management plan that was on public notice at the time because this time a year ago, it was and the comments were in reference to that. But this is not a watershed management plan.

Ms. Conner explained that this is a proactive plan, and we want to be proactive in regard to the water quality that is in our region instead of having to be reactive. When you get to the management plan, you are reacting to a problem that you have. And we want to be proactive so that people can take proactive steps in regard to water and wastewater and preserving those.

A comment was made by Eddie Whitworth that early on in some of the documents, there were a couple of streams within this watershed that were "in red" and wondered if this group would, then have no authority over that to really do anything but rather to see what is going on by the testing. Ms. Bassett replied by saying that there are some impaired waterways and there is a map within the plan indicating as much, however, as of 2016 the Little Niangua River has been taken off the impaired list. An attendee mentioned that it is not red anymore. Ms. Bassett said that is correct.

Ms. Conner directed the attention of the committee to pages 16 & 17, which talks about the streams which are impaired, and it mentions that the Little Niangua River has been taken off and the map has been corrected, so it is all documented and they can read about it.

Mr. Whitworth asked if when a watershed is moved to the impaired list does this group or committee have a plan or authority to act upon it. Ms. Bassett responded by saying that there is no authority. However, there is an opportunity if the groups want to take actions. Ms. Bassett added that there might be an opportunity to do something if the committee is unhappy with the classification that it is "impaired" or if they have delved into it and maybe the committee wants to make that their goal that this group starts a stream team and

specifically to try to start collecting more data so that MDNR can get the stream off the impaired list. Mr. Whitworth reiterated that they don't have any authority to force action. Ms. Bassett responded by saying "no" several times and added that there is not a TMDL or a Total Maximum Daily Load plan and those can enforce actions on permitted facilities, and that is something that MDNR writes using stream data as well as data collected from the facilities' discharge.

Ms. Bassett also commented that the committee can produce ideas and actions and ways to move forward that might surround that impaired stream. Ms. Bassett added that in another watershed she was working in they did talk about a stream that was listed on the impaired waterway list and the source was unknown, so they just know that the samples that they collected always showed that the stream had too little dissolved oxygen in the stream and there was also a problem with sediment, which was likely due to natural stream characteristics so the watershed committee decided that they wanted to get more educated with regards to the background sampling that was taking place. They invited the water-quality unit from Jefferson City that conducts that type of sampling, which ultimately creates the impaired waterways list, and they did a special presentation to the group so that they could understand the sampling and the kind of work that goes with the impaired classification. Ms. Bassett added that they rely on other groups to conduct the sampling because you have to be trained, and it has to be conducted in a certified lab, and they have to go through a vetting process.

Mr. Whitworth asked if we know why it was on the impaired list. Ms. Bassett responded by saying that she is thinking that it was because of bacteria. Mr. Fuller interjected and said that he was thinking it was due to DOD. Low oxygen but in the Big Niangua, it was bacteria. Ms. Bassett agreed. Mr. Whitworth asked what the bacteria was from. Mr. Fuller said it was ecoli but he wasn't certain where from. Ms. Bassett said that it was ecoli but it only says from a non-point source which means that it is just coming from somewhere else. Whereas, if they can make an immediate connection from one permitted facility to the stream, and they can determine that is what is causing the problem, then they can put limits on their permit as well as other stipulations on the permit that would correct the issue.

Mr. Whitworth then asked if that would, then clean up the problem. Mr. Fuller indicated that is the solution.

Ms. Bassett also mentioned that what you will find is really on the red section of the Niangua River that is upstream of Bennett Springs where sampling has not really taken place very recently, but they can't just pull a stream off of the impaired list. They have to actually test data to show that it can come off the impaired list. Ms. Bassett added that her department is actually getting ready to do some more sampling on that stream. Mr. Fuller said that they might actually find data that will support taking the stream off the impaired list. Mr. Whitworth asked if they were sampling the flows from this summer. Ms. Bassett responded by saying they look for long-term trends, so even if one sample is good there is a rule that they have to follow that several samples have to be good over so many samples over the past couple of years. Then they place the stream on the impaired list and they same applies that they have to have several samples in order to take the stream off the list. If there are a couple of good samples, then you are on your way to getting the stream off the impaired list, but then you could have one bad one so that just resets "the clock" so to

speak and you have to start the process over. Ms. Bassett added they look at more of the long-term trends so that way, you don't just get mixed up in single events where you have maybe a day where everything is diluted or maybe that source wasn't as strong that day or something, therefore, they monitor the long-term trends in order to justify taking a stream off the impaired list or to add it to the impaired list as well. The lists are updated every two years, and you can pour through the data on their website and on the Niangua River, it is on the USGS page since they were the ones who actually took the samples. Ms. Bassett added that she thinks this is actually part of the problem because they can't sample everywhere they would like to just because the funding is not there for them to do so. But on the Niangua, there are 2 or 3 sampling locations and getting that information out, there is good because they can get the information out there and hopefully find some people to volunteer for the monitoring program so that they can get certified to conduct samplings, and they could also submit data to MDNR if they get a motivated group that gets involved in the Stream Team.

Mr. Fuller added that there is other sampling going on by water quality monitors and the Stream Team but what Gwenda is talking about is the actual water quality samples that are analyzed to determine whether a stream reaches the point where it is put on the impaired list, and those have to be done by certain people with certain protocol so that the data is collected in exact standardized fashion, so other things being sampled now and then since the flood last year, but it is not done "by the right people the right way" and it has to be analyzed the right way to be determined by things like an impaired water status.

Mr. Whitworth asked if they are sampling and submitting the data just as fast as they can. Mr. Fuller responded by stating that both the Department of Conservation and the Department of Natural Resources cooperatively manage a volunteer program. Stream Teams are part of that and voluntary water quality monitoring is also another part of it. In addition, Mr. Fuller said that you don't have to be a member of a Stream Team to voluntarily monitor water, but rather you could be a landowner who is next to the River. Mr. Fuller said that he is curious to see what the water quality is in a stream, so they (Department of Conservation and Department of Natural Resources) train those people through training classes and then give them the equipment to go sample, and then they ask the people to record what they find and then submit that data to the Department of Conservation. In addition, Mr. Fuller said that is the level.

Mr. Fuller also said that Department of Conservation, and the Department of Natural Resources don't have the money or the people to send out to all the places that they would like to see what the water quality is like. In addition, Mr. Fuller said that it is not to the level to where it can be used in some standardized legal fashion such as designating an impaired water, but it does go through a QAQC process and the Department of Conservation can use it to just kind of keep tabs on what is going on and identify hot spots they might have issue with to see if they need to look at them further.

An attendee mentioned that they think the University of Missouri does that voluntary program also. Tricia Barrett mentioned that they work with Bob and make that information available, in case they want to use it.

Ms. Bassett also mentioned that Lakes on Missouri also does water quality sampling, and she has a brochure that she can email to Linda and then in turn Linda can send it out. They conducted a sampling on the Niangua from the Head Waters down to the Lake of the Ozarks. Ms. Bassett added that they conducted Phorous and Nitrogen and e-coli, and they did that over a couple of days. Mr. Fuller added that they tried to get a snapshot of what it looks like pre-test because they think that is used to analyze the status of the water for a variety of uses, including a variety of items, which are variable, such as if they want to look at oxygen in the morning versus the afternoon, and it depends on high water or low water so a lot of these things are variable so a blitz is designed to get a snapshot of what is going on right now, and it might actually take a couple of days to cover everything from Marshfield to the Lake of the Ozarks, but they try to get in and take a lot of samples very quickly so that it doesn't have time to change very much.

Mr. Hempel commented that the testing like the MDC is doing, and if they have a test that comes up routinely, and they think it is too high or too low in dissolved oxygen, for example, then MDC tries to make recommendations further up the line as far as testing is concerned. Mr. Hempel then asked, how does it go as far as the testing is concerned on a specific river since they can't cover everything. Mr. Fuller responded by saying that is exactly how it works. They receive the information that it is pretty good, but it is not valid as far as the standardization and if they see red flags pop up, then they focus on them and suggest that someone that has the funds as well as the expertise follows the standard procedures and goes to look into it further in depth to see if it is really an issue or not and then if it is, it will be determined, one way or the other, what the situation is.

Mr. Fuller added that he does not want to give the impression that is what happens all the time. Mr. Hempel said that the way he understands is that the Healthy Watershed Plan is basically to be proactive about these things. To where the lower jurisdictions such as MDC with its testing can address the problem rather than if you can come to some other organization such as this one, then when they see a potential problem, and they have something to work on but before we get too excited about it and send it up to higher levels of the ladder where we are apt to have authorities coming down and complicating the issue.

Mr. Hempel also said that he isn't certain if that will work into this kind of a plan or if the information will be shared that way so things can be worked out more productively before it becomes a bigger issue. Mr. Fuller responded by saying that he thinks that is a good idea. Mr. Fuller also said that he thinks ideally there are issues here that are identified by the committee, and he doesn't think that it will be to the point where, for instance, MDC has to notify anyone on the committee because he thinks that there are people on the committee that are keeping tabs on what is going on with things like this volunteering water quality monitoring, therefore, there won't be a need for MDC to notify the Niangua Watershed Advisory Committee to let them know something is happening. The information should be coming in that the committee can see for themselves. Mr. Fuller also said that there is an interactive website such as streamteam.org, and if you look at the map, you can see where the water-quality samples are being taken and what the results are. Mr. Fuller added that there are people who are actively watching it all the time to see what is going on. Mr. Fuller added that he sees Mr. Hempel's point, and he thinks that, to some extent, we are doing that right now. In that is exactly what is taking place because you are being proactive to improve water quality not that it is bad overall, and we know that some spots are worse

than others, but we are taking proactive steps to either maintain or enhance the quality of water and habitat throughout the stream system, and the watershed that we have.

Mr. Fuller added that he is going to take a giant step back and wants someone to correct him if he is wrong, but he senses that there is still a little bit of confusion and wants to make a comment in reference to Healthy Watershed Plans and Watershed Management Plans and DNR and MDC and a variety of other agencies that are out there that have conservation programs that have an interest in this watershed as well as other watersheds across the State that address healthy habitats and healthy water quality.

Mr. Fuller said that this is where he is going to take a step back. This is the difference between an official Watershed Management Plan and a Healthy Watershed Plan such as, we are working on and Gwenda explained some of that. MDC is in charge; the people of the State have put MDC in charge back in 1936 of managing the forest, fish and wildlife resources of the State. The people of the nation have said another sideline and said that having good healthy water quality for all uses, and all consumptions is important to everyone who lives in the United States. So the EPA has the water-quality Clean Water Act that has standards, and that is how they are managing to make sure that everyone has good clean water across the nation. They can't go into each individual State and do that on their own, but in some States, they do go and manage the Clean Water Act for the State and in other States they give the authority to a State agency. In Missouri, EPA has given the authority to the Department of Natural Resources. So now you have the Department of Conservation in Missouri, the Department of Natural Resources in Missouri, and they are interested in managing the forest, fish and wildlife all across the State and water quality is part of that. DNR is interested in managing water quality in the State under the umbrella of the Clean Water Act.

Mr. Fuller added that there are some issues out there with poor water quality, and those have to be addressed now under the Clean Water Act that the Department of Natural Resources takes on, that leave for the EPA, and they address those issues. One of the ways to address those issues is the Watershed Management Plan, and that is where the more technical stuff is and where you have designated areas and things are identified, and you have to work on making that better.

Mr. Fuller stated that is not where we are with the Niangua River Watershed, and that is not where we want to be. So DNR plays that role and said we have the entire state to work in, and we have 66 watersheds across the State, and we are responsible for making sure that people have good clean water so how are we going to manage that. Are we going to just sit around and wait until something goes bad, and then we have to focus money and effort on that one issue. No one was the answer DNR decided with regards to that question. They decided to do what they needed to, but in the meantime they decided to do other good things to keep the quality where it is or do things to improve it. Mr. Fuller added that is where we are here. Mr. Fuller added that other people have those same ideas. MDC has those ideas; Missouri Department of Conservation Service has those ideas as well as Soil and Water Conservation Districts.

Mr. Fuller added that is the real benefit that he sees is that part of the benefits of doing a Healthy Watershed Plan, and those are out there but MDNR is ultimately responsible for all

of the watersheds across the State. Mr. Fuller has also suggested that it would be better if they got all of those people together to work together on those Healthy Watershed Plans so that all of those programs work together such as the Soil & Water Conservation District, NCRS programs, etc. Mr. Fuller also mentioned that Linda had said earlier that getting those program leaders together so that we can see what a landowner needs to do on his property if the landowner says that they are interested in working with these different agencies to either maintain or enhance the quality of habitat on their farm and/or the water quality that goes through their place and if there are programs that can accomplish this. It would give them an opportunity to hear from MDC to see what they have to offer as well as SWCD and others. Mr. Fuller reminded the committee that those programs can be dovetailed together, and that is part of what the Healthy Watershed Plan does. It pulls all those people together, gets everyone talking on the same page, gets the landowners in the area interested and communicating with folks that have the technical assistance, and cost share available to address some of these issues. That is all covered in the Healthy Watershed Plan, and some of those ideas are to start working on this now and to start improving what we have rather than to sit around and wait for something bad to happen such as someone coming in and forcing us to do something.

Mr. Fuller mentioned that is where one of the attendees started off in that they were confused as to why we are doing this, and the reason is that it is a good idea because it is more efficient to do it this way because as was mentioned earlier they do run out of money quick and so do SWCD and NCRS. So people get to where if one of the programs still has money, they will go talk to the agency involved.

Ms. Conner interjected and mentioned that as Craig said there are all these different agencies and get their funding cycles at the same time. This is very helpful in that if you have a project you can access both pots of money for that particular project and if all of the other funding cycles were close enough together to where people could access those funds at the same time, it would make the funding go further towards the projects.

Ms. Conner also said that she would like a show of hands as to how many in this room knew another person in the room prior to coming to these meetings. The majority of hands were raised. Ms. Conner mentioned that she has had a lot of people come up to her and say that they have really enjoyed the meetings because it has given them the opportunity to meet people that they would not have otherwise had the chance to meet. They have met new people, which has provided them with the opportunity to network with other people that they would not normally network with. And that has proven to be a plus to a lot of people she has talked to.

Ms. Bassett said that she wanted to add another major difference between the Healthy Watershed Strategy's and a Watershed Management Plan. Ms. Bassett told Mr. Fuller that he did a great job of breaking that all down.

Ms. Bassett mentioned that in the Healthy Watershed Plan as is noted in the priority actions, has items such as education and outreach on well plugging, or they mention that they want to do more field trips and tours. Ms. Bassett then asked the committee to ask themselves if there is a specific pollutant that they can tie to, not only in doing these things but when you do a Watershed Management Plan, you have to always be addressing a

pollutant and what kind of loads or what would get that pollutant out of the environment or the stream so you are talking about things here that are much more general than putting in a stream bank stabilization practice on mile marker whatever of the Niangua River or to specifically target this particular stream bank or that particular stream bank, and you are not talking about anything as specific as that but in a Watershed Management Plan which gets down into the nitty-gritty details because it is a technical document, and that is why it has been looked at by all the modeling and all the data. Rather these are general things that people can do within the Watershed that you identified that would be good to do in this watershed just for education and outreach. And to make sure that you continue to protect the water that you have here.

Mr. Hempel asked if the Watershed Management Plan is a little bit of a misnomer since we are talking about the watershed, and they are talking about a specific area of the watershed and not really talking about the Niangua River but rather a one-mile stretch where you think there is a pollutant problem. Mr. Hempel asked if that is what is being said. Ms. Bassett responded by saying that the Watershed Management Plan is still an okay term to use for the other document because you do talk about it as a watershed because at that point in a stream, everything upstream is going to impact that one point in the stream. So you are talking about a watershed and its land use because everything you do in a watershed all impact the waters and streams in that watershed. Ms. Bassett also mentioned she thinks it is still applicable to call it a Watershed Management Plan, but it does target specific streams though, especially those that are impaired. The whole objective of a Watershed Management Plan is to get that stream off of the impaired list. It does prescribe best management practices, and they are also voluntary. But they do a much more rigorous look at some of the practices that could be applied to a certain stream that may reduce a particular pollutant that needs to be reduced. They may look at practices that are particularly good at reducing phosphorous or nitrogen or reducing sediment, and they may prescribe different things such as 2,000 linear feet of stream bank stabilization practices throughout this watershed would benefit this particular stream. Ms. Bassett added that they have to actually calculate how much sediment would be kept on the land and therefore, out of the streams based on models because that is the data that they have. The load must also be calculated.

Ms. Conner thanked them for the good discussion and said that her question is the committee has identified specific items and she would like to know what they would like to work on in the near future. Ms. Conner added that she does not want this answer today but rather she wants everyone to take the plan back and when they make their comments if they would tell her if there is a specific action item that they want to pursue, we will be happy to help with it.

Ms. Conner also mentioned that when they are sending their comments if they thought about how often they think it would be best to meet as a committee to review what we have been able to accomplish. Do we need to meet annually, semi-annually or quarterly to go over what projects, we have been able to accomplish in the watershed?

VI. CONCLUSION

Ms. Conner stated that the final copy of the plan will be submitted to DNR by October 31, 2016.

Ms. Conner also said that she wants to thank each and every one for coming to our meetings. Ms. Conner also mentioned that as she saw earlier on with the raise of hands, many have been to many of our meetings if not all of the meetings, and she appreciates that because she knows that is their time they have donated to us.

Ms. Conner reminded everyone to remember to send their comments within the 30-day comment period. Comments can be emailed to her or the committee can submit them directly on the website, or you can come by her office, and she will be happy to take them.

Ms. Conner pointed out her contact information on the PowerPoint screen.

Ms. Conner asked if there were any questions before we adjourn.

Ms. Barrett stated that she would just like to make a comment with regard to the question that Linda had asked about what they want to do next. If it is decided we want to do some educational and outreach, she is in hopes that the University Extension Missouri can provide and participate with it as well as get invited to meetings and maybe talk about some 1/2 sessions in areas where they can provide education and maybe include some of the Master Naturalists Groups and/or some of the Stream Team as well as landowners so that they can all communicate such as this group that hadn't met with anyone of these interested parties, so they can get together and start talking and have some good education and good dialog. Ms. Barrett asked everyone to keep that in mind when they send their comments in. Ms. Barrett thanked everyone.

Ms. Conner asked Mr. Fuller if he has additional comments. Mr. Fuller responded by saying that he does not other than to thank Ms. Conner for facilitating this entire process, and multiple planning activities on her part. Ms. Barrett also thanked Ms. Conner, which was followed by a round of applause.

VII. ADJOURN

Linda Conner adjourned the meeting at 3:36 p.m.

APPENDIX B

Media and Marketing

Press Releases

Newspaper Articles

Other Media Coverage

PRESS RELEASE

For Immediate Release



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

Niangua River Watershed Community Partnership Project

Lake of the Ozarks Council of Local Governments (LOCLG) in collaboration with the Missouri Department of Natural Resources (MNR) will be hosting a series of meetings to share information and gather input on the Niangua River Watershed. All watershed residents from urban to rural landowners to city and county officials are encouraged to attend. Our goal is to learn about local watershed priorities, help to identify resources to achieve these goals and build important partnerships between all watershed residents.

The Niangua River Watershed encompasses portions of Camden, Laclede, Hickory, Dallas and Webster counties and includes the towns of Marshfield, Phillipsburg, Buffalo, and Camdenton, among others. Watershed boundaries are not manmade, but rather defined by the land area that all drains into a particular water body, in this case the Niangua River. Crossing over five different counties the planning process will engage county officials, residents, business owners, farmers, and all those interested in protecting and preserving our waterways for our future. We all share in the responsibility to care about the planning process and the protection of the water quality within the watershed.

Meeting Schedule:

Thursday, July 23, 2015 at 6:00 p.m.

Laclede Electric Cooperative Meeting Room
1400 E. Route 66
Lebanon, MO 65536

Wednesday, August 19, 2015 at 3:00 p.m.

Preston Community Center
120 W. Hwy 54
Preston, MO 65732

Tuesday, August 25, 2015 at 5:30 p.m.

O'Bannon Bank Community Room
1347 South Ash
Buffalo, MO 65622

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686

PRESS RELEASE

For Immediate Release



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

Page 2 of 3

The University of Missouri Extension will be presenting information on watershed planning and the unique characteristics of the Niangua River watershed. Understanding how a watershed works and the contributing factors to having a healthy watershed will help us in the planning process to develop effective protection practices that will have long-term results.

In an effort to demonstrate the local conservation activities already occurring within the Niangua River Watershed, we will share local projects that are being done by individuals, groups, and organizations within the watershed. These projects are mostly grass-roots efforts being done by people who appreciate and understand the importance of our Missouri waters. Building on the positive aspects of these already existing projects and programs that are all being done voluntarily will help us share the success stories and the positive impact they have had on the Niangua River Watershed. We will be developing opportunities as we move forward with these planning sessions to look at additional activities that could create future watershed protection and preservation projects.

FACTS about the Niangua River Watershed:

The Niangua Watershed covers an area of 1,030 miles and contributes to one of the major arms of the Lake of the Ozarks. There are 1,796 miles of major streams, 42,454 acres of lake and 88 springs within the watershed. Ha Ha Tonka and Sand Springs are among the largest. Ha Ha Tonka is the 12th largest in Missouri. Bennett Spring contributes 50-60 percent of the flow for the Niangua River. From the spring-fed waters of the Niangua River to the Niangua Arm of the Lake of the Ozarks, there are abundant recreational opportunities throughout the watershed.

Planning Project Objectives:

- Research and provide information about the watershed.
- Assemble a Committee representing a broad cross-section of watershed residents.
- Coordinate and host a series of six watershed advisory committee meetings.
- Document the identified watershed priorities with actions being suggested.
- Assist in compiling information gained during the planning meetings to develop a Healthy Watershed Plan.
- Communicate watershed information; promote watershed protection, preservation and enhancement.

PRESS RELEASE

For Immediate Release



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

Page 3 of 3

A website specific for this planning project has been developed at www.nianguariverwatershed.org where you can stay up to date on the planning process and find out more information on the Niangua River Watershed.

This project is part of the Missouri Department of Natural Resources Our Missouri Waters Watershed Collaborative. The goal of this effort is to engage local residents in identifying water resource related issues within the watershed, then work cooperatively with partners to develop solutions, and focus available resources.

The project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources to support the planning efforts for a period of 15 months from April 1, 2015 to June 30, 2016.

If you need special accommodations for the meeting please contact us at 573-346-5692.

Attached is a copy of the watershed map.

PRESS RELEASE

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The project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources to support the planning efforts for a period of 15 months from April 1, 2015 to June 30, 2016.

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PRESS RELEASE

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Niangua River Watershed Community Partnership Project

Lake of the Ozarks Council of Local Governments (LOCLG) plans to host their next meeting in regard to the Niangua River Watershed Community Partnership Project with the initial meeting of the Watershed Advisory Committee. With the completion of the public engagement meetings on July 19, 2015 in Lebanon, August 19, 2015 in Preston, and August 25, 2015 in Buffalo we have gained valuable insight into the interests, concerns and the need for additional information on the Niangua River Watershed Community Partnership Project. During those initial meetings, we asked for volunteers in attendance if they would be interested in participating in a Watershed Advisory Committee. The response from the attendees was positive with many being interested in participating and volunteering to be on the committee. We all share in the responsibility to care about the planning process and the protection of the water quality within the watershed.

Meeting Information:

Wednesday, October 21, 2015 at 5:30 PM

Bennett Springs State Park Dining Lodge
26262 Highway 64A
Lebanon, MO 65536

Lake of the Ozarks Council of Local Governments (LOCLG) in collaboration with the Missouri Department of Natural Resources (MNDR) will be asking the Watershed Advisory Committee for help in prioritizing watershed activities that will have a positive impact on the Niangua River Watershed. The committee members will represent the watershed residents within the Niangua River Watershed. Our goal is to learn about local watershed priorities, help to identify resources to achieve these goals and build important partnerships between all watershed residents.

The Niangua River Watershed encompasses portions of Camden, Laclede, Hickory, Dallas and Webster counties and includes the towns of Marshfield, Phillipsburg, Buffalo, and Camdenton, among others. In an effort to engage members from all these areas within the watershed, we are hosting the meeting in a central location at the Bennett Springs State Park.

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First, we will review the results from the surveys used during the first series of meetings. Discussing the areas of interest, the areas of concern and how we can incorporate the information into the Healthy Watershed Plan. Second, we will have Bob Broz, with The University of Missouri Extension; facilitate the discussion on identifying priorities. We will also explore resources available in an effort to move those priorities forward.

Planning is an important part of water quality preservation as well as future growth and development within the watershed. As we continue to meet with the Watershed Advisory Committee, we will be working to create the Healthy Watershed Plan.

Planning Project Objectives:

- Research and provide information about the watershed.
- Assemble a Committee representing a broad cross-section of watershed residents.
- Coordinate and host a series of six watershed advisory committee meetings.
- Document the identified watershed priorities with actions being suggested.
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PRESS RELEASE

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SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

Niangua River Watershed Community Partnership Project

Lake of the Ozarks Council of Local Governments (LOCLG) plans to host their next meeting in regard to the Niangua River Watershed Community Partnership Project. At this meeting, we will discuss the responsibility of the Watershed Advisory Committee and how they play an important role in identifying projects and priorities within the Niangua River Watershed.

Meeting Information:

Tuesday January 26, 2016 at 3:00 PM

Central Bank Public Meeting Room
1197 Spur Drive
Marshfield, MO 65706

Lake of the Ozarks Council of Local Governments (LOCLG) in collaboration with the Missouri Department of Natural Resources (MNDR) will be asking the Watershed Advisory Committee for help in prioritizing watershed activities that will have a positive impact on the Niangua River Watershed. The committee members will represent the watershed residents within the Niangua River Watershed. Our goal is to learn about local watershed priorities, help to identify resources to achieve these goals and build important partnerships between all watershed residents.

The Niangua River Watershed encompasses portions of Camden, Laclede, Hickory, Dallas and Webster counties and includes the towns of Marshfield, Phillipsburg, Buffalo, and Camdenton, among others. In an effort to engage members from all these areas within the watershed, we are hosting this meeting in Marshfield, MO a community that has the largest population center within the watershed.

Planning is an important part of water quality preservation as well as future growth and development within the watershed. As we continue to meet with the Watershed Advisory Committee, we will be working to create the Healthy Watershed Plan.

A website specific to this planning project has been developed at www.nianguariverwatershed.org where you can stay up to date on the planning process and find out more information on the Niangua River Watershed.

If you need special accommodations for the meeting, please contact LOCLG at 573-346-5692.

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686

PRESS RELEASE

For Immediate Release



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

Niangua River Watershed Community Partnership Project Final Meeting

Lake of the Ozarks Council of Local Governments (LOCLG) in collaboration with the Missouri Department of Natural Resources (MNDR) will be hosting our final meeting to discuss the draft copy of the Healthy Watershed Plan. This meeting completes a series of meetings that we have hosted to collect information and develop the Healthy Watershed Plan. During the past 14 months, we have learned about the concerns and issues from local residents within Niangua River Watershed. Then with the participation and input from our Watershed Advisory Committee we developed goals and actions that will help define our watershed priorities. We also identified resources to achieve these goals and build important community partnerships between all watershed residents.

The Niangua River Watershed encompasses portions of Camden, Laclede, Hickory, Dallas and Webster counties and includes the towns of Marshfield, Phillipsburg, Buffalo, and Camdenton, among others. Watershed boundaries are not manmade, but rather defined by the land area that all drains into a particular water body, in this case the Niangua River. Crossing over five different counties the planning process has engaged county officials, residents, business owners, farmers, and all those interested in protecting and preserving our waterways for our future. We all share in the responsibility to care about the planning process and the protection of the water quality within the watershed. We thank the Watershed Advisory Committee for their participation and valuable input into the planning process.

Meeting Scheduled For:

Wednesday, September 14, 2016 at 2:30 p.m.

Laclede Electric Cooperative Meeting Room
1400 E. Route 66
Lebanon, MO 65536

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686

PRESS RELEASE

For Immediate Release



SERVING CAMDEN, LACLEDE, MILLER AND MORGAN COUNTIES

Page 2 of 2

We have successfully completed all aspects of our planning project objectives:

- Research and provide information about the watershed.
- Assemble a Committee representing a broad cross-section of watershed residents.
- Coordinate and host a series of six watershed advisory committee meetings.
- Document the identified watershed priorities with actions being suggested.
- Assist in compiling information gained during the planning meetings to develop a Healthy Watershed Plan.
- Communicate watershed information; promote watershed protection, preservation and enhancement.

During this final meeting, we will review the draft copy of the Healthy Watershed Plan. We will then have a 30-day comment period, where the public can submit comments on the plan to Lake of the Ozarks Council of Local Governments, by emailing them to linda.conner@loclg.org or mailing them to LOCLG at P.O. Box 3553 Camdenton, MO 65020.

We plan to submit the final copy of the Healthy Watershed Plan to Missouri Department of Natural Resources on October 14, 2016.

You can find information on all our previous meetings at our website specific for this planning project at www.nianguariverwatershed.org.

This project is part of the Missouri Department of Natural Resources Our Missouri Waters Watershed Collaborative. The goal of this effort is to engage local residents in identifying water resource related issues within the watershed, then work cooperatively with partners to develop solutions, and focus on available resources.

The project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources.

If you need special accommodations for the meeting, please contact us at 573-346-5692.

Lake of the Ozarks Council of Local Governments
P.O. Box 3553 Camdenton, MO 65020
Phone: 573-346-5692 Fax: 573-346-9686

LOCLG to host meetings on Niangua River Watershed project

Lake of the Ozarks Council of Local Governments (LOCLG) in collaboration with the Missouri Department of Natural Resources (MDNR) will be hosting a series of meetings to share information and gather input on the Niangua River Watershed.

All watershed residents from urban to rural landowners, to city and county officials are encouraged to attend. LOCLG's goal is to learn about local watershed priorities, help to identify resources to achieve these goals and build important partnerships between all watershed residents.

The Niangua River Watershed encompasses portions of Camden, Laclede, Hickory, Dallas and Webster counties and includes the towns of Marshfield, Phillipsburg, Buffalo and Camden-ton, among others, according to LOCLG's news release.

Watershed boundaries are not manmade, but rather defined by the land area that drains into a particular water body, in this case the Niangua River. Crossing more than five different counties, the planning process will engage county officials, residents, business owners, farmers, and those interested in protecting and preserving our waterways for the future.

LOCLG said the community shares in the responsibility to care about the planning process and the protection of the water quality within the watershed.

The meetings are as follows:

- 6 p.m. July 23 — Laclede Electric Cooperative Meeting Room, 1400 East Route 66, Lebanon

- 3 p.m. Aug. 19 — Preston Community Center, 120 West U.S. 54, Preston

- 5:30 p.m. Aug. 25 — O'Bannon Bank Community Room, 1347 South Ash St., Buffalo

The University of Missouri Extension will be presenting information on watershed

planning and the unique characteristics of the Niangua River watershed. Understanding how a watershed works and the contributing factors to having a healthy watershed will help us in the planning process to develop effective protection practices that will have long-term results, according to the LOCLG.

In an effort to demonstrate the local conservation activities already occurring within the Niangua River Watershed, LOCLG staff will share local projects being done by individuals, groups and organizations within the watershed. The projects are mostly grass-roots efforts by people who appreciate and understand the importance of Missouri waters. Building on the positive aspects of the existing projects and programs that are being done voluntarily will help share the success stories and the positive impact they have had on the Niangua River Watershed. LOCLG will be developing opportunities as we move forward with these planning sessions to look at additional activities that could create future watershed protection and preservation projects.

Facts about the Niangua River Watershed

The Niangua Watershed covers an area of 1,030 miles and contributes to one of the major arms of the Lake of the Ozarks. According to LOCLG, there are 1,796 miles of major streams, 42,454 acres of lake and 88 springs within the watershed. Ha Ha Tonka and Sand Springs are among the largest. Ha Ha Tonka is the 12th largest in Missouri. Bennett Spring contributes 50-60 percent of the flow for the Niangua River.

From the spring-fed waters of the Niangua River to the Niangua Arm of the Lake of the Ozarks, there are abundant recreational opportunities throughout the watershed.

Planning project objectives:

- Research and provide information about the watershed.
- Assemble a Committee representing a broad cross-section of watershed residents.
- Coordinate and host a series of six watershed advisory committee meetings.
- Document the identified watershed priorities with actions being suggested.
- Assist in compiling information gained during the planning meetings to develop a Healthy Watershed Plan.
- Communicate watershed information; promote watershed protection, preservation and enhancement.

Stay up to date on the planning process and find out more information on the Niangua River Watershed at www.nianguariverwatershed.org.

This project is part of the Missouri Department of Natural Resources Our Missouri Watershed Collaborative. The goal of this effort is to engage local residents in identifying water resource related issues within the watershed, then work cooperatively with partners to develop solutions, and focus available resources, LOCLG said in the news release.

The project is being funded through a Joint Funding Agreement with the MDNR to support the planning efforts for a period of 15 months from April 1 to June 30, 2016.

If you need special accommodations for the meeting, contact LOCLG at 573-346-5692.



LOCLG seeking input for Niangua River Watershed

LAKE OF THE OZARKS – The Lake of the Ozarks Council of Local Governments (LOCLG) in collaboration with the Missouri Department of Natural Resources (DNR) will be hosting a series of meetings to share information and gather input on the Niangua River Watershed.

All watershed residents from urban to rural landowners to city and county officials are encouraged to attend.

“Our goal is to learn about local watershed priorities, help to identify resources to

achieve these goals and build important partnerships between all watershed residents,” a spokesman said.

The Niangua River Watershed encompasses portions of Camden, Laclede, Hickory, Dallas and Webster counties and includes the towns of Marshfield, Phillipsburg, Buffalo, and Camdenton, among others.

Watershed boundaries are not manmade, but rather defined by the land area that all drains into a particular water body, in this

case the Niangua River.

“Crossing over five different counties the planning process will engage county officials, residents, business owners, farmers, and all those interested in protecting and preserving our waterways for our future,” the spokesman said. “We all share in the responsibility to care about the planning process and the protection of the water quality within the watershed.

Meeting Schedule:

Thursday, July 23, 2015 at 6:00 p.m.

Laclede Electric Cooperative Meeting Room 1400 E. Route 66 Lebanon, MO 65536

Wednesday, August 19, 2015 at 3:00 p.m.

Preston Community Center 120 W. Hwy 54 Preston, MO 65732

Tuesday, August 25, 2015 at 5:30 p.m.
O'Bannon Bank Community Room
1347 South Ash Buffalo, MO 65622

Niangua River Watershed meetings to be Aug. 19 and 25

Posted: Tuesday, July 28, 2015 5:47 pm

Lake of the Ozarks Council of Local Governments in collaboration with the Missouri Department of Natural Resources will host a series of meetings to share information and gather input on the Niangua River Watershed.

All watershed residents from urban to rural landowners to city and county officials are encouraged to attend. The goal is to learn about local watershed priorities, help to identify resources to achieve these goals and build important partnerships among all watershed residents.

The Niangua River Watershed encompasses portions of Dallas, Hickory, Camden, Laclede and Webster counties and includes the towns of Buffalo, Marshfield, Phillipsburg and Camdenton, among others. Watershed boundaries are not man-made, but rather defined by the land area that all drains into a particular water body, in this case the Niangua River.

Crossing over five different counties, the planning process will engage county officials, residents, business owners, farmers and all those interested in protecting and preserving waterways for the future. Everyone shares in the responsibility to care about the planning process and the protection of the water quality within the watershed.

Meetings are scheduled for 3 p.m. Wednesday, Aug. 19, at Preston Community Center, 120 W. Hwy. 54, Preston; and 5:30 p.m. Tuesday, Aug. 25, at O'Bannon Bank Community Room, 1347 S. Ash, Buffalo.

The University of Missouri Extension will present information on watershed planning and the unique characteristics of the Niangua River watershed. Understanding how a watershed works and the contributing factors to having a healthy watershed will help in the planning process to develop effective protection practices that will have long-term results.

In an effort to demonstrate the local conservation activities already occurring within the Niangua River Watershed, officials will share local projects that are being done by individuals, groups and organizations within the watershed. These projects are mostly grass-roots efforts being done by people who appreciate and understand the importance of Missouri waters.

Building on the positive aspects of these already existing projects and programs that are all being done voluntarily will help all participants share the success stories and the positive impact they have had on the Niangua River Watershed.

"We will be developing opportunities as we move forward with these planning sessions to look at additional activities that could create future watershed protection and preservation projects," the press release stated.

Facts about the Niangua River Watershed:

The Niangua Watershed covers an area of 1,030 miles and contributes to one of the major arms of the Lake of the Ozarks. There are 1,796 miles of major streams, 42,454 acres of lake and 88 springs within the

watershed. Ha Ha Tonka and Sand Springs are among the largest. Ha Ha Tonka is the 12th largest in Missouri.

Bennett Spring contributes 50 to 60 percent of the flow for the Niangua River. From the spring-fed waters of the Niangua River to the Niangua Arm of the Lake of the Ozarks, there are abundant recreational opportunities throughout the watershed.

Planning Project Objectives:

- Research and provide information about the watershed.
- Assemble a committee representing a broad cross-section of watershed residents.
- Coordinate and host a series of six watershed advisory committee meetings.
- Document the identified watershed priorities with actions being suggested.
- Assist in compiling information gained during the planning meetings to develop a Healthy Watershed Plan.
- Communicate watershed information; promote watershed protection, preservation and enhancement.

A website specific for this planning project has been developed at www.nianguariverwatershed.org to update the planning process and information on the Niangua River Watershed.

The project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources to support the planning efforts for a period of 15 months from April 1, 2015 to June 30, 2016.

Anyone who needs special accommodations for the meeting may contact organizers at (573) 346-5692.

LAKE SUN

BOZS 3/04/2016

LOCLG

PO BOX 3553

CAMDENTON MO 65020-3553

SERVING THE LAKE OF THE OZARKS REGION SINCE 1879

VOL. 136, ISSUE 203

LAKE AREA

Planning a healthy watershed

LAKE SUN

newsroom@lakesunonline.com

After a series of hearings this summer to gather basic information on the interests and concerns communities within the Niangua Watershed have about water quality in the region, the Lake of the Ozarks Council of Local Governments (LOCLG) is holding a meeting this week to create a watershed advisory council and begin the process of creating a Healthy Watershed Plan.

The meeting will be held at 5:30 p.m. Wednesday, Oct. 21 at Bennett Springs State Park Dining Lodge, 26262 Highway 64A, Lebanon.

The Niangua River Watershed encompasses portions of Camden, Laclede, Hickory, Dallas and Webster counties and includes the towns of Marshfield, Phillips, Buffalo and Camdenton.

Officials will review with the public results from surveys taken during the summer hearing series. These meetings were held in Lebanon, Preston and Buffalo.

Identified areas of interest and concern will be discussed as well as how the information can be included in the Healthy

WATERSHED from page 1

Watershed Plan. Bob Broz with the University of Missouri Extension will facilitate the discussion and help identify priorities for the watershed.

Specific projects and resources for accomplishing those projects will also be discussed.

Funded through a Joint Funding Agreement between the Missouri Department of Natural Resources and LOCLG, the project is part of the Missouri Department of Natural Resources Our Missouri Watershed Collaborative. The goal is to engage local residents in identifying water resource related issues within the watershed, then work cooperatively with partners to develop solutions and focus available resources, according to a press release from LOCLG.

The project is a statewide

water policy effort aimed at transitioning the DNR's water resource activities to a coordinated, holistic and collaborative watershed approach.

The Niangua Watershed is among the first few in the state to under go this planning process as the DNR transitions into the new water quality management system.

The state agency is focusing on HUC (Hydrologic Unit Code)-8 level watersheds as a manageable scale to begin working within.

A watershed is simply an area of land where all of the water drains to the same place. There are different levels of watersheds from large basins consisting of medium size rivers draining into one big river to a small creek that is one of many streams feeding a medium-sized river.

The HUC-8 level was chosen as there are 66 of this level within the state compared to close to 2,000 at the next smaller level.

The Niangua Watershed joined the program after a pilot phase — which included the Lower Grand, Spring and Big River watersheds. The first phase now includes the pilot watersheds, the Niangua, Sac and Upper Mississippi-Cape Girardeau watersheds as well as watersheds within the Meramec Basin, the Salt Basin and the Missouri River corridor.

All 66 watersheds that cover Missouri will be phased in over the next few years. The watersheds within each phase will then be reviewed in five-year rotations.

The Niangua River — outside the Arm of the Lake of the Ozarks — landed on the Environmental Protection Agency's list of impaired waters in 2012 for bacteria along with its tributary Dousinbury Creek. The Little Niangua River was on the 2010 and 2012 impaired lists for dissolved oxygen from organic en-

richment.

In addition to its history of water quality issues, the Niangua Watershed was selected for the new state program to coordinate the phasing-in of closely connected watersheds. The program will typically start in HUC-8 level watersheds that are headwaters and then move down the line.

See WATERSHED, page 6

LOCLG to host meeting about Niangua River Watershed Community Partnership Project

Lake of the Ozarks Council of Local Governments (LOCLG) plans to host their next meeting in regard to the Niangua River Watershed Community Partnership Project at 5:30 p.m. tonight at Bennett Springs State Park Dining Lodge in Lebanon.

With the initial meeting of the Watershed Advisory Committee and the completion of the public engagement meetings on July 19 in Lebanon, Aug. 19 in Preston and Aug. 25 in Buffalo, LOCLG has gained valuable insight into the interests, concerns and the need for additional information on the project.

During those initial meetings, LOCLG asked those in attendance if they would be interested in participating in a committee. The response from the attendees was positive with many being interested in participating and volunteering to be on the committee. LOCLG all share in the responsibility to care about the planning process and the protection of the water quality within the watershed, a news release said.

LOCLG, in collaboration with the Missouri Department of Natural Resources (MDNR), is asking the committee for help in prioritizing watershed activities that will have a positive impact on the Niangua River Watershed. Committee members will represent the watershed residents within the Niangua River Watershed.

LOCLG's goal is to learn about

local watershed priorities, help to identify resources to achieve these goals and build important partnerships between all watershed residents.

The Niangua River Watershed encompasses portions of Camden, Laclede, Hickory, Dallas and Webster counties, and includes the towns of Marshfield, Phillipsburg, Buffalo and Camdenton, among others. In an effort to engage members from all those areas, LOCLG is hosting the meeting in a central location at the Bennett Springs State Park.

At the meeting, LOCLG and the committee will review the results from the surveys used during the first series of meetings. Discussing the areas of interest, the areas of concern and how LOCLG can incorporate the information into the Healthy Watershed Plan.

Second, Bob Broz, with The University of Missouri Extension, will facilitate the discussion

See **LOCLG**, Page 4

LOCLG

Continued from Page 3

on identifying priorities. Meeting organizers will also explore resources available in an effort to move those priorities forward, the news release said.

Planning is an important part of water quality preservation as well as future growth and development within the watershed. As LOCLG continues to meet with the committee, they will be working to create the Healthy Watershed Plan.

Planning Project Objectives:

- Research and provide information about the watershed.
- Assemble a committee representing a broad cross-section of watershed residents.
- Coordinate and host a series of six watershed advisory committee meetings.
- Document the identified watershed priorities with actions being suggested.
- Assist in compiling information gained during the planning meetings to develop a Healthy Watershed Plan.
- Communicate watershed information; promote watershed protection, preservation and enhancement.

A website specific for this project has been developed at www.nianguariverwatershed.org.

This project is part of the MDNR Our Missouri Watershed Collaborative. The goal of this effort is to engage local residents in identifying water resource-related issues within the watershed, then work cooperatively with partners to develop solutions, and focus available resources, the news release said.

The project is funded through a Joint Funding Agreement with the MDNR to support the planning efforts from April 1 to June 30, 2016.

To request special accommodations for the meeting or for more information, contact LOCLG at 573-346-5692.

Locals Plan For The Future Of The Niangua River Watershed

Niangua River



Posted: Tuesday, April 5, 2016 6:00 am

by Connye Griffin

CAMDEN COUNTY, Mo. — What's in the future of the Niangua River watershed? For now, that answer is unclear, but local stakeholders and community officials are piecing together a plan.

In 2015, Lake of the Ozarks Council of Local Governments (LOCLG) began collaborating with Missouri's Department of Natural Resources (MDNR) on an MDNR project known as Our Missouri Waters, coordinated by Jennifer Hoggatt. On March 31, LOCLG and MDNR hosted a project meeting with the newly formed Watershed Advisory Committee at Laclede Electric in the Camdenton Office Community Room. The meeting's aim was to identify watershed priorities and suggest reasonable, cost-effective actions.

Initial meetings held in the summer of 2015 gathered information about the Niangua River watershed from stakeholders such as businesses, landowners, and officials from Camden, Laclede, Dallas, Webster, and Hickory counties. These people shared information about the extensive watershed consisting of "1,796 miles of major streams and 42,454 acres of lake... two major aquifers ...: the St. Francois and Ozark [and] ... a total of 88 springs.... Ha Ha Tonka and Sand Springs are among the largest. Ha Ha Tonka is the 12th largest in Missouri. Bennett Spring contributes 50-60 percent of the flow for the Niangua River."

Initial meetings also asked for volunteers to serve on an advisory committee. On March 31, LOCLG's Executive Director, Linda Conner, announced the Niangua River Watershed Community Partnership Project (NRWCPP) had reached a good balance of all stakeholders. In addition to businessmen and women, landowners, and city and county officials, committee members include project planning partners from MDNR, LOCLG, and Kaysinger Basin Regional Planning Commission. Technical resource personnel from the University of Missouri Extension, Missouri Department of Conservation (MDC), Farm Bureau, Missouri Rural Water Association (MRWA), Soil and Water Conservation, U. S. Department of Agriculture Natural Resources Conservation Service, U.S. Geological Survey (USGS), and the Natural

Resources Conservation Council (NRCS) are also on hand to facilitate the collaboration for NRWCPP.

Committee members met in four small groups to identify priorities and begin to discuss actions necessary to fulfill the mission of NRWCPP. It is to offer "guidance and input into the planning process . . . [and] to develop a shared responsibility for the water quality and water protection within the Niangua River Watershed." The four topics under discussion were Water Quality in Regard to 1) Drinking Water, 2) Habitat Restoration and Preservation, 3) Tourism/Recreation, and 4) Agriculture and Land Owners. Over the course of the afternoon, every committee member had an opportunity to meet and discuss each topic while using lists of proposed action items developed from meetings held prior to March 31.

For Water Quality in regard to Agriculture and Land Owners, LOCLG and MDNR were able to provide survey results showing that 83% of those surveyed support an effort to engage and educate farmers on programs available through MDNR, MDC, NRCS, and USDA's Farm Service Agency (FSA). During whole group discussion, however, one landowner, Helmut Von Loewe, voiced concerns about the potential for strict regulation, notably from the Environment Protection Agency (EPA), and potential costs to owners. Jennifer Hoggatt assured landowners that Missouri has in place its own set of standards that meet or surpass those applied elsewhere by the EPA. The goal, according to Hoggatt, is for Missouri to continue using these standards in order to protect Missouri waters and to be sure landowners know the best practices for the best results.

Nancy Von Loewe still wondered if the project could be "asking folks to do stuff they can't afford to do." Linda Conner had noted, as the meeting began, there is no money attached to the project and that one of the committee's tasks is to consider whether action items are feasible and to generate ideas for implementing them without undue burden on anyone. One of the project recommendations, for example, is to plug abandoned wells, a recommendation that has been questioned, in part due to the cost.

According to a 2014 fact sheet, Missouri may be home to 500,000 abandoned wells. Their existence poses potential hazards to groundwater below as unplugged openings can admit contaminants from above, but Water Quality Program Coordinator with the University of Missouri Extension, Bob Broz, emphasized the wells are a danger to human health and financial security in another way. Lives can be lost if someone falls into an unplugged well, and the owners are liable for the loss. MDNR has a grant program to offset the cost of plugging the wells, and this is just one piece of information that committee members could help disseminate.

For landowners, priorities include stabilizing stream banks, especially in light of soil losses after flooding in 2015. The discussion among farmers and landowners on March 31 included clarifying some confusion about what they can and cannot do in light of regulation and best water and land management practices. Those practices will become part of the project's priorities.

In fact, in all four small groups, one theme emerged: how can project participants educate the public about water quality and how it affects them? The answers are the next step beginning with April meetings. Committee members will advise project coordinators on six topics. The first is to narrow the focus by identifying where the work needs to occur. For example, if a segment of a stream is impaired and its impairment affects recreational uses or public perception, then that stream segment would be listed as a priority in need of action.

The second topic for an action plan is to identify stakeholders for the work identified as a need or priority. Third is to list actions that can lead to realizing the goal. Fourth is to list resources such as people, funding sources, and technical expertise to realize that goal. Fifth is to list any information still needed and sixth, gather that information.

Stakeholders have committed to this work with the intention of working "together on water-related concerns [in order to] develop a shared vision for the Niangua River Watershed." Interested people can go to LOCLG's link on its home page titled Niangua River Watershed Community Partnership Project to learn about the place and time for the next meeting. This link will also provide information from earlier meetings and will be updated as meetings progress.

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APPENDIX C

Other Materials

Watershed Advisory Committee Brochure
Survey
Meeting Hand-outs

The Value of Water

Quality of Life

All of us depend on clean and available water in our everyday lives, for drinking, bathing and recreating.

Quality of Place

The region within the Niangua River Watershed has a tremendous amount of water related tourism activities in which we experience an economic benefit that has made our region nationally recognized.

Quality of our Future

Promoting watershed stewardship will help us create an environment in which we will have a sustainable water resource for our future, not only for us but for generations to come.

Water Facts:

66 percent of all Missourians use surface water for their main source of water.

34 percent of all Missourians use ground water for their main source of water.



This project is being funded through a Joint Funding Agreement with the Missouri Department of Natural Resources



Lake of the Ozarks Council of Local Governments (LOCLG)

34 Roofener Street
P.O. Box 3553

Camdenton, MO 65020

Phone: 573-346-5692

Fax: 573-346-9686

www.loclg.org

Niangua River Watershed Advisory Committee



www.nianguariverwatershed.org

Lake of the Ozarks Council of Local Governments (LOCLG) in collaboration with the Missouri Department of Natural Resources' "Our Missouri Waters" program has commissioned a "Watershed Advisory Committee" to assist in the development and implementation of a Healthy Watershed Plan for the Niangua River Watershed.



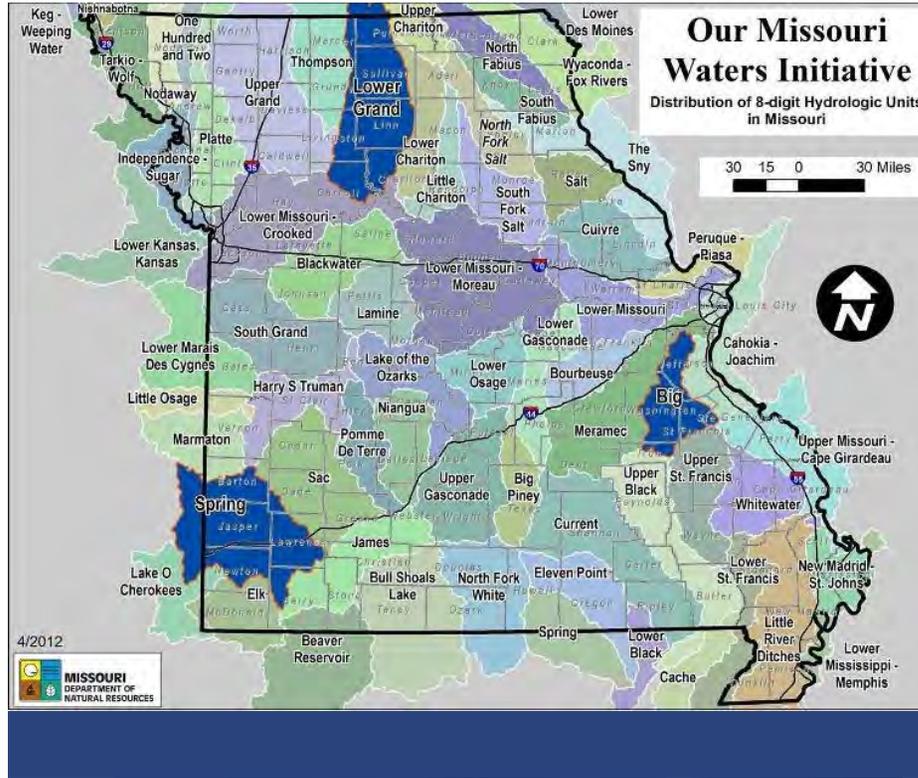
What is a watershed?

A watershed, also called a drainage basin, is an area of land that drains to a common waterway, such as a stream or lake. Unlike city or county boundaries, watersheds are based on the topography of the land. Watersheds come in all sizes, from small to large. Everyone lives in a watershed.

What does HUC mean?

There are 66 HUC 8 watersheds in Missouri. Hydrologic Unit Code (HUC) is a classification system. Similar to a zip code, these units are used to identify watershed areas. The more digits in the HUC, the smaller the area it encompasses.

See the map on the next page.



Niangua River Watershed Advisory Committee's

Vision: Through communication, collaboration and coordination, the residents of the Niangua River Watershed can work together on water-related concerns and develop a shared vision for the Niangua River Watershed.

Mission: Voluntarily giving guidance and input into the planning process, we want to develop a shared responsibility for the water quality and water protection within the Niangua River Watershed.



If you are interested in becoming a Watershed Advisory Committee Member, please call LOCLG at 573-346-5692

The key to a successful Watershed Advisory Committee is in the voluntary efforts of our committee members who are willing to share their time and expertise in developing a Healthy Watershed Plan that will serve as our guide to watershed protection and preservation.



www.nianguariverwatershed.org



Niangua River Watershed Community Partnership Project

First Meeting Feedback Survey

What types of introductory information do you feel needed more discussion at **today's meeting**?

- What is a watershed and how it works?
- Small community success stories
- Agricultural Success stories
- Conservation success stories
- Stream Team success stories
- Scope of Healthy Watershed plan
- Overview of healthy watershed planning process
- Other _____

What areas of common concern related to water quality are you most interested in discussing at the **next meeting**?

- Lack of funding for implementation
- Increase wildlife preservation
- Impacts on recreational opportunities
- Impacts on agricultural productivity
- Distinguishing sources of pollution
- Septic tanks/Waste Treatment
- Other _____

What types of resources are you especially interested in learning more about during the **next meeting**?

- Financial Resources
- Technical Resources (Agricultural)
- Technical Resources (Small Community)
- Volunteer Resources (Peer to Peer?)
- Habitat Restoration Resources
- Other _____

(More on Back)



Niangua River Watershed Community Partnership Project

First Meeting Feedback Survey

What types of introductory information do you feel needed more discussion at **today's meeting**?

- What is a watershed and how it works?
- Small community success stories
- Agricultural Success stories
- Conservation success stories
- Stream Team success stories
- Scope of Healthy Watershed plan
- Overview of healthy watershed planning process
- Other _____

What areas of common concern related to water quality are you most interested in discussing at the **next meeting**?

- Lack of funding for implementation
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- Distinguishing sources of pollution
- Septic tanks/Waste Treatment
- Other _____

What types of resources are you especially interested in learning more about during the **next meeting**?

- Financial Resources
- Technical Resources (Agricultural)
- Technical Resources (Small Community)
- Volunteer Resources (Peer to Peer?)
- Habitat Restoration Resources
- Other _____

(More on Back)

Please rank **SIX** of the following components of healthy watersheds in order of personal importance

- Habitat Restoration/Maintenance
- Surface Water Quality
- Wildlife Diversity
- Groundwater Quality
- Public Education
- Recreational Use
- Pasture Management
- Public Wastewater Treatment
- Cropland Management
- Urban Runoff Management
- Private Wastewater Treatment
- Other _____

Other thoughts or comments:

Please indicate meeting attended:

- Lebanon, Laclede County (7/23)
- Preston, Hickory County (8/19)
- Buffalo, Webster County (8/25)

Please visit our website to learn more about
the *Niangua River Watershed Community
Partnership Project:*
[www. NianguaRiverWatershed.org](http://www.NianguaRiverWatershed.org)

Questions:
Linda Conner,
Executive Director
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Please rank **SIX** of the following components of healthy watersheds in order of personal importance

- Habitat Restoration/Maintenance
- Surface Water Quality
- Wildlife Diversity
- Groundwater Quality
- Public Education
- Recreational Use
- Pasture Management
- Public Wastewater Treatment
- Cropland Management
- Urban Runoff Management
- Private Wastewater Treatment
- Other _____

Other thoughts or comments:

Please indicate meeting attended:

- Lebanon, Laclede County (7/23)
- Preston, Hickory County (8/19)
- Buffalo, Webster County (8/25)

Please visit our website to learn more about
the *Niangua River Watershed Community
Partnership Project:*
[www. NianguaRiverWatershed.org](http://www.NianguaRiverWatershed.org)

Questions:
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Niangua River Watershed

Water Quality Impairments

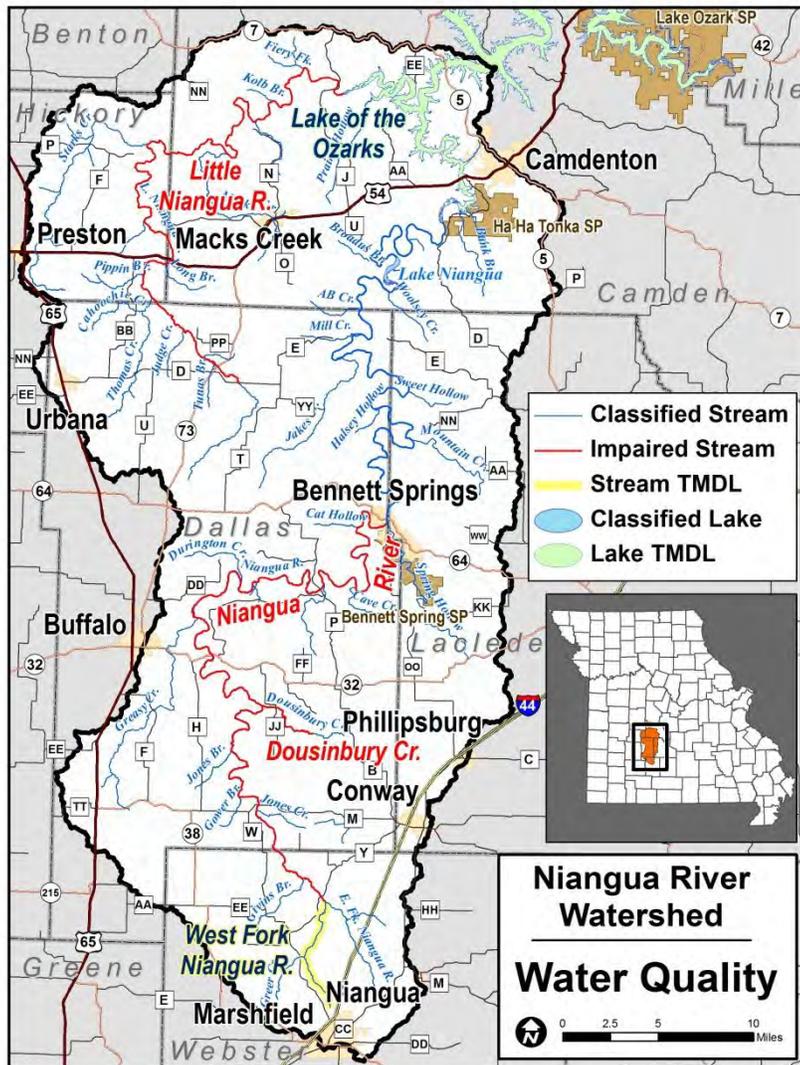
Section 303(d) of the federal Clean Water Act requires that each state identify waters that do not meet water quality standards and for which adequate water pollution controls are not in place. These identified waters are considered impaired. Water quality standards protect beneficial uses of water such as whole body contact (e.g. swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife.

The following lakes and streams within the watershed are listed on the State's 2014 List of impaired waterways and are presented on the adjacent map: Dousinberry Creek (Bacteria), Little Niangua River (Low Dissolved Oxygen), and Niangua River (Bacteria).

Impairments can be caused by known sources like point or nonpoint source pollution, or may be unknown; however, identifying activities near impaired water bodies can provide key information in determining the sources of contamination as well as developing solutions for impaired waters.

The state is required to develop a Total Maximum Daily Load (TMDL) for all waters on the 303(d) list. The TMDL provides a framework for identifying and cleaning up impaired waters. Total Maximum Daily Load Information Sheets are brief summaries of information related to waters listed as impaired. The TMDL is a mathematical calculation of the amount of a specific pollutant a waterbody can absorb and still meet water quality standards. Each TMDL document will include allocations of the acceptable load for all sources of the pollutant. It will also include an implementation plan to identify how the load will be reduced to a level that will protect water quality. TMDLs go through a 45-day Public Notice period for public review and comment.

In this watershed, the West Fork Niangua River in Webster County has a TMDL to address low dissolved oxygen levels in that stream. To address this condition, the TMDL establishes pollutant allocations and reduction targets for nutrients, sediment, ammonia, and biochemical oxygen demand. Reductions are needed from both point and nonpoint sources to restore the designated aquatic life use for the West Fork Niangua River.



Designated Beneficial Uses for Missouri Waterways	
Livestock and Wildlife Watering (LWW)	Protection of Human Health (Fish Consumption) HHP
Protection of Aquatic Life (AQL)	Whole Body Contact Recreation - Category A (WBC-A)
Outstanding State Resource Water (OSRW)	Whole Body Contact Recreation - Category B (WBC-B)
Drinking Water Supply (DWS)	Secondary Contact Recreation (SCR)
Industrial (IND)	Cool-water Fishery (CWF)

Waterbody	County	Pollutant	Impaired uses	Pollutant Source
Little Niangua River	Dallas/Hickory	Low Dissolved Oxygen	AQL	Source Unknown
Dousinberry Creek	Dallas	Escherichia coli	WBC-B	Rural Nonpoint Source
Niangua River	Webster/Dallas	Escherichia coli	WBC-A	Rural Nonpoint Source

Escherichia coli (E. coli) Impairment

The department judges a stream to be impaired by bacteria if the water quality criterion for E. coli is exceeded in any of the last three years for which there is adequate data (minimum of five samples taken during the recreational season).

High counts of E. coli are an indication of fecal contamination and an increased risk of pathogen-induced illness to humans. Infections due to pathogen-contaminated waters include gastrointestinal, respiratory, eye, ear, nose, throat and skin diseases. E. coli are bacteria found in the intestines of warm-blooded animals and are used as indicators of the risk of waterborne disease from pathogenic (disease causing) bacteria or viruses. Most E. coli strains are harmless, but some can cause serious illness in humans and are occasionally responsible for product recalls. Missouri's whole body contact bacteria criteria are based on specific levels of risk of acute gastrointestinal illness. The level of risk correlating to the category B criterion is no more than 10 illnesses per 1,000 swimmers in fresh water (1 percent). The level of risk correlating to the category A criterion is no more than 8 illnesses per 1,000 swimmers in fresh water (0.8 percent). *(Waters designated for the category A use are waters where there are established public swimming areas and existing whole body contact recreational uses. Waters designated for the category B applies to waters designated for whole body contact recreation not contained within category A.)*

Dissolved Oxygen Impairment

A stream is designated as impaired for dissolved oxygen (DO), if more than 10 percent of measurements fail to meet the water quality criterion. Bluegill, Largemouth Bass, White Perch, and Yellow Perch are warm water fish that depend on dissolved oxygen levels above 5 mg/L. They will avoid areas where DO levels are below 3 mg/L, but generally do not begin to suffer fatalities due to oxygen depletion until levels fall below 2 mg/L. The mean DO levels should remain near 5.5 mg/L for optimum growth and survival.

Factors affecting the levels of oxygen in a stream are increased temperature, caused by the lack of shade (bare stream banks), low flows, and nutrients.

- Wastewater effluent that is high in biochemical oxygen demand (BOD₅), ammonia, phosphorus, and other nutrients will lower the dissolved oxygen in a stream and stress, or be lethal to, the aquatic organisms.
- Additional nutrients entering streams from nonpoint sources such as, fertilizers used on agriculture fields or lawns, or waste from humans and animals (livestock, pets and wildlife), can cause an excessive growth in algae and other aquatic plants. Algae, like other plants, produce oxygen during the day when photosynthesis is occurring but at night use oxygen through respiration. During the night, when photosynthesis cannot counterbalance the loss of oxygen through respiration, oxygen concentrations decline. Excessive algae growth in a stream will further contribute to this loss of oxygen and when these plants die, the microorganism responsible for the breakdown of this material, will consume even more oxygen from the water. Dissolved oxygen, which aquatic organisms need just as humans need oxygen from the air, can be completely used up during the breakdown process. When this happens, aquatic organisms die from the lack of oxygen, which can result in extensive fish kills