

6-1-2010

Water Quality Outreach and Education Strategies for Northwest Arkansas and Regional Watersheds

Katie Teague
Cooperative Extension Service, kteague@uark.edu

John Pennington

Follow this and additional works at: <https://scholarworks.uark.edu/awrctr>



Part of the [Fresh Water Studies Commons](#), and the [Water Resource Management Commons](#)

Citation

Teague, Katie and Pennington, John. 2010. Water Quality Outreach and Education Strategies for Northwest Arkansas and Regional Watersheds. Arkansas Water Resources Center, Fayetteville, AR. MSC360. 15
<https://scholarworks.uark.edu/awrctr/25>

This Technical Report is brought to you for free and open access by the Arkansas Water Resources Center at ScholarWorks@UARK. It has been accepted for inclusion in Technical Reports by an authorized administrator of ScholarWorks@UARK. For more information, please contact scholar@uark.edu.



WATER QUALITY OUTREACH AND EDUCATION
STRATEGIES FOR NORTHWEST ARKANSAS AND
REGIONAL WATERSHEDS

Funded by Arkansas Natural Resources Commission
and the Walton Family Foundation through the
Illinois River Watershed Partnership
MSC Publication 360 | Arkansas Water Resources Center

Water Quality Outreach and Education Strategies for Northwest Arkansas and Regional Watersheds

Katie Teague and John Pennington

County Extension Agent-Agricultural/Water Quality, Cooperative Extension Service, Fayetteville, AR 72704.
Corresponding author: kteague@uark.edu

Stakeholders impact water quality and have a responsibility to protect, maintain, and improve water quality throughout northwest Arkansas and watersheds everywhere. But unless the roles of responsibility and stewardship among all stakeholders is communicated clearly and repetitively, there will be little progress made towards maintaining and improving water quality, while lawsuits, blame, and inaction will persist. Thus, the overall goal of water quality education and outreach is to improve the ability of stakeholders to take care of their watershed by teaching them what actions are or are not beneficial for water quality protection, maintenance, or improvements. Specific outreach and education strategies need to be developed for specific stakeholder groups so that they can be educated on what is being done and engaged in what they can do to be part of a solution. This document serves as companion material to MSC Publication 355, Final Report to the Illinois River Watershed Partnership: Recommended Watershed Based Strategy for the Upper Illinois River Watershed, Northwest Arkansas, however the content contained within this document is applicable to northwest Arkansas and other regional watersheds.

Keywords: Stakeholders, Water Quality, Education and Outreach, Northwest Arkansas

Acknowledgements: The authors would like to thank Sheri Herron and the Watershed Advisory Group and Education Committee of the Illinois River Watershed Partnership for reviewing an earlier version of this publication.

THE NEED FOR OUTREACH AND EDUCATION

All stakeholders can positively impact their environment by taking responsibility to protect, maintain, and improve water quality. Education about human activities which impair or improve water quality is the key to empowering the public to take action. Prior to the development of an education strategy for a watershed, it is important to understand stakeholders' current knowledge level. This can be determined through stakeholder interviews, knowledge gap assessments, and surveys.

DEVELOPING THE EDUCATION AND OUTREACH STRATEGY

To enhance public understanding of and commitment to this watershed management plan, the public must first recognize that their decisions and actions affect water quality preservation, protection and restoration. It is not enough to simply pique their interest or raise awareness of water quality issues, but rather, those involved in public outreach should strive to educate and engage watershed stakeholders in implementing prioritized management actions.

Awareness (Outreach) Versus Knowledge (Education)

Awareness means having or showing realization or perception while education is the action or process of learning, gaining knowledge or becoming informed. Increasing awareness of water quality issues among the general public and primary watershed stakeholder interests is an important first step, but awareness alone may not affect decisions and actions. Those who are "aware" or conscious of water quality issues may have the wrong perception and, more importantly, may not know what to do to become a part of the solution. However, awareness combined with education creates informed, responsible, and effective watershed

stewards that implement actions to effect measurable and lasting water quality improvements. When the role of responsibility and stewardship among all stakeholders is communicated clearly and repeatedly, stumbling blocks such as blame, inaction, and legal actions can be overcome.

KEY STEPS TO DEVELOPING AN EDUCATION AND OUTREACH STRATEGY

1) *Identify and describe the concern, need, opportunity and or goal.*

Concern. For an entire watershed, components of the outreach and education program should broadly address general watershed dynamics and water quality concern among all stakeholder groups. However, specific water quality concern and priority management actions might vary among sub-watersheds. A portion of awareness and education efforts should be taken to identify pollutant concern, stakeholder interests, and management actions.

Need. Once a concern is validated through research-based information, water quality monitoring, focus groups, or stakeholder survey information, the specific mode of outreach and education can be identified.

Opportunity. When a water quality improvement can be made by addressing a valid or legitimate concern, or when a program has yet to effectively address a concern, or need there is an opportunity to make progress toward improving water quality in the watershed.

Goal. The goals established serve as the endpoint of what the stakeholders would like to achieve. These will be watershed-wide and sub-basin specific, but the action plans will include the following steps for planning and conducting outreach and education programs to meet the desired goals.

2) Identify the target audience(s).

The first step in creating a successful education and outreach program is to identify and familiarize yourself with the audience(s) that you will contact, collect information from, design educational programs for, foster participation with, and engage in management action implementation. Decide who are you trying to reach: residential homeowners? beef cattle producers? construction contractors? elementary school youth? and assess their level of understanding: what do they recognize? understand? believe? and connect with?

3) Identify the Specific Actions that Stakeholders Need to Take to Accomplish the Goal.

To establish the sense of watershed responsibility and ownership necessary to change behaviors, stakeholders or stakeholder groups must be educated about their individual actions that impact community resources. Focus groups, surveys, interviews, and questionnaires can provide insight into a targeted audience's level of awareness, knowledge, or ability that serve as behavioral obstacles to prevent them from implementing management actions.

4) Package the Message for Various Audiences.

Different stakeholder audiences will have varying levels of awareness and understanding of their roles in water quality protection and improvement. Anticipated outcomes of various public outreach (awareness) and education (knowledge) techniques are presented in Table 1.

5) Distribute the Messages.

Marketing experts emphasize that the most effective outreach messages are clear and very

succinct. Outreach campaigns are more of a shotgun approach where messages are broadly and repeatedly distributed through varied formats. Alternately, traditional educational programs are conducted with captive audiences and can include more and more detailed information, especially when resource materials are provided for later reference.

Tools for targeted public outreach campaigns include:

Media. Creating timely press releases, garnering newspaper and magazine feature articles and photos with captions, acquiring television news coverage and participating in interviews, purchasing public service announcements, distributing newsletters, and using public notices or flyers, and websites all work together to publicize messages and events.

Educational Materials. Brochures, fact sheets and posters obtained from EPA, the state water authority, or developed by other groups can be distributed to schools, civic groups, and businesses can further support your message.

Meetings. Public gatherings, special conferences, and workshops provide opportunities to explain programs that support the WMP's goals, and messages can be customized for the varied stakeholder audiences.

Awards. Annual sponsorship acknowledgments and awards for proactive efforts helps increase the visibility of outreach efforts while promoting outstanding watershed stewardship efforts among stakeholder interests.

Speakers Bureau. Face-to-face communication to a specialized audience provides a powerful opportunity to deliver your message, answer questions, and clarify ambiguities.

ARKANSAS WATER RESOURCES CENTER – UNIVERSITY OF ARKANSAS
TECHNICAL PUBLICATION NUMBER MSC 360 – YEAR 2010

Table 1. Methods of Increasing Public Awareness and Education (Terrene Institute, 1991)

Method	Most Effective Use	Results
Newsletters	Announce meeting times and dates, update information, list issues to be discussed at upcoming meeting	Public awareness
Newspaper Articles	(same as newsletter) – Provide additional detail about local stories, photos of citizen activities, feature articles provide information about problems and solutions	Public awareness
Demonstrations	Exhibit innovative technology, and should be accompanied by signs, brochures or permanent on-site interpretive staff	Public awareness, knowledge, understanding
Printed and Media Materials (e.g., fact sheets, videos)	Explain new technology, describe case studies, provide training information for new employees, outline facts to stakeholders	Public awareness, knowledge, understanding
Signs	Mark watershed boundaries, identify critical areas, promote specific behaviors in specific places, identify cooperators in project, explain demonstration project and its BMPs, provide interpretive natural resource information	Public awareness, knowledge, understanding
Meetings	Share information, plan actions, evaluate process	Public awareness, knowledge, understanding, desire/ability to act
Field Trips	Observe the natural resources to be protected, view installed and functioning BMPs, learn how BMPs operate, monitor BMPs for assessment or compliance	Public awareness, knowledge, understanding, desire/ability to act
On-Site Inspections	Identify problems, recommend corrective actions, evaluate effectiveness of pollution controls, identify noncompliant stakeholders, educate individuals	Action
Training	Provide new skills to stakeholders	Action
Technical Assistance	Identify problems, recommend solutions, assist with installation of BMPs, educate individuals, evaluate effectiveness of solutions	Understanding, desire/ability to act, action

Tools for Targeted Public Education Programs Include:

Develop Displays for Festivals, Fairs, Conferences, and Earth Day and Environmental Events. Educators can take full advantage of local events that attract large crowds to promote activities and opportunities for implementing management actions.

Involve Schools. The water cycle, natural resources, and human impacts on the environment are woven into the required Arkansas curriculum frameworks. Educators can support these frameworks and offer programs for K-12 school teachers and students.

Field Trips. Educators can offer creek walks, field days, and watershed tours. Experiencing the watershed firsthand connects stakeholders to the prioritized impacts on the land, water resources, and wildlife and the ecological services they can provide.

Install and Showcase BMP Demonstrations. Planning and installing public demonstrations is a great way for educators to 1) implement a water quality management action, 2) involve stakeholders, and 3) educate the public on how the action protects/improves water quality, and 4) repeat the demonstrated activity at their home, farm or business. These BMP demonstrations can be conducted in public parks of partnering municipalities, on private lands of partnering stakeholders, or on commercial properties of businesses or corporations. The most effective demonstrations are very visible, replicated in various locations, enhanced by educational signage, and showcase the names or logos of collaborating partners.

Continue/Expand Volunteer Monitoring. Volunteer monitoring engages and educates stakeholders about why monitoring is done and what the results mean, fosters stakeholder interaction, and assesses water quality trends that can serve as the compass for adaptive management in the watershed. Volunteer monitoring also increases public exposure and awareness of the watershed. Whether a monitoring program measures biological, chemical, or physical characteristics should vary depending on the financial resources available, volunteer audience, and overall water quality goal that is desired.

6) Evaluate the Outreach and Education Programs:

Program evaluation will allow educators to determine both the success and cost effectiveness of differing modes of outreach and education and provide guidance into which mess-

ages are or are not clearly understood and how programs may be improved to garner increased implementation of management actions.

Use the Logic Model: A logic model is a common program planning tool that illustrates the sequence of actions for a public awareness campaign or education program – what it will be composed of and how financial, programmatic, and time investments link to desired results (Figure 2). The logic model focuses on:

- ◆ **Inputs.** Resources, contributions, investments that go into the program.
- ◆ **Outputs.** Activities, services, events and products that reach people who participate or who are targeted.
- ◆ **Outcomes.** Results or changes for individuals, groups, communities, organizations, communities, or systems.

UNDERSTAND REASONS FOR BEHAVIORAL CHANGES

To achieve short-, medium-, and long-term outcomes of actual measured improvements in water quality, educators must understand what motivates or controls stakeholders' willingness to make a change. The following potential scenarios should be considered:

- ◆ An exceptional outreach and education program is developed and implemented, but stakeholders are not able to overcome barriers to making positive contributions toward protecting and improving water quality;
- ◆ Resources are wasted on outreach and education programs targeting stakeholders who already possess a strong affinity to change a behavior; and
- ◆ An outreach message or educational program is underfunded or curtailed for a stakeholder audience that actually needs more information, more resources, or

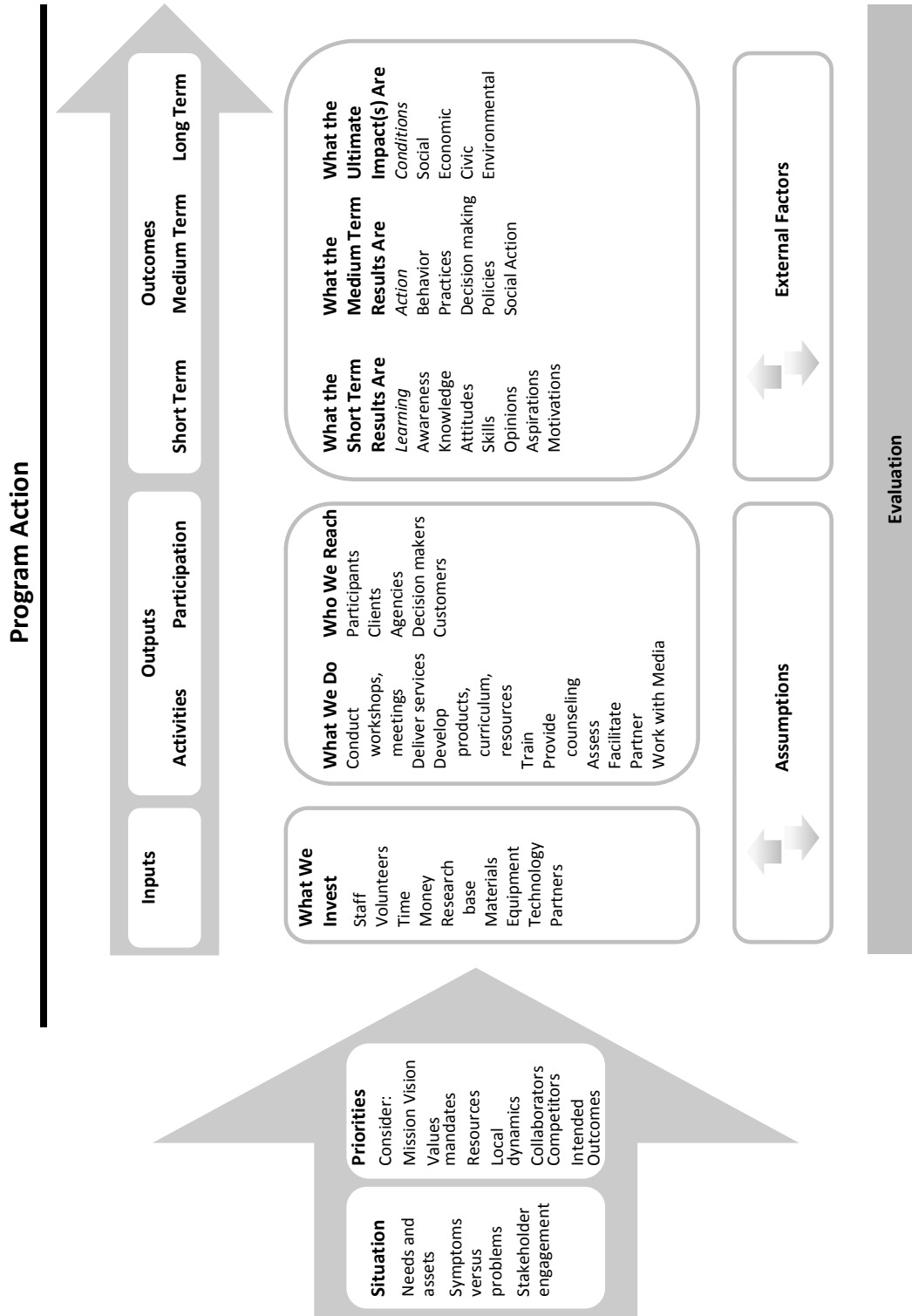


Figure 1. The Logic Method Flow Diagram Adapted from University of Wisconsin-Extension: Program Development and Evaluations

additional assistance to implement behavioral changes.

To effectively plan for measurable outcomes, educators must consider what motivates individual stakeholders or stakeholder groups to adopt behavioral changes. Examples include:

They Have a Strong Affinity to Make a Behavioral Change. Some stakeholders or stakeholder groups willingly change their behavior once they understand the “why” and “how” of personal water quality protection behaviors. Increased knowledge is enough to spark voluntary implementation because they want to help protect and improve watershed water quality. They may not have constraints regarding finances, time, skill, or labor, they simply need more information.

They Are Made Aware of the Issue and Implications of their Actions as Connected to the Issue. Some stakeholders or stakeholder groups will make changes to their behavior only after learning that there are direct rewards or penalties as related to their actions and impacts to water quality.

They Are Shown the Potential Benefits. Some stakeholders or stakeholder groups need to see or hear about potential economic, environmental, and or societal benefits that are related to their behavioral change before they can commit to implementing changes.

They Are Provided or Made Aware of Incentives. Some stakeholders or stakeholder groups may be inhibited by financial, time, or labor-related constraints and will change their behavior only if they recognize the monetary value (tax breaks, or cost-share incentives), time savings, or recognition that accompanies adopted practices.

To assess the potential for behavior change, pose a few key questions:

- 1) *Ask What They Know and Believe about a Specific Behavior.* When stakeholders or stakeholder groups are asked in a survey if they are familiar with a particular management action or BMP, programming can be tailored to fill in knowledge gaps or address common misconceptions;
- 2) *Ask If They have Thought about Performing the Behavior and Why They May or May Not Currently Take That Action:* If it is known that stakeholders or stakeholder groups are already implementing positive actions then resources will not be wasted on addressing a behavior that is already understood and implemented. Alternately, it may possible to address barriers which prohibit the behavior from taking place;
- 3) *Ask What They Believe about Their Ability to Perform a Specific Behavior:* Sometimes stakeholders do not adopt practices because they lack the know how or confidence to take action; and
- 4) *Ask What They Assume about Other Stakeholders Behaviors.* These types of question posed in surveys or interviews highlight differences in perspective among stakeholders. This information can be critical in overcoming stereotypes and misconceptions among stakeholder groups.

TOOL BOX FOR OUTREACH AND EDUCATION

The goals of an education strategy are to 1) connect the issue to the audience, 2) choose achievable and realistic goals, 3) use relevant outreach strategies, and 4) obtain measurable results.

Whether encouraging proactive watershed stewards to maintain and expand their pollution prevention behavior or engaging uninformed stakeholders to adopt new attitudes and actions, the following actions should be considered priorities:

Build Capacity through Expanded Partnerships

Capacity building is an ongoing process connecting individuals, groups, organizations, businesses, and agencies to better identify and address challenges through building and sharing knowledge. Expanding collaborative partnerships will enhance implementation of regional watershed management plans through partnering with entities whose efforts mirror each other's vision, mission, and objectives. Continued efforts to seek out partnerships with organizations engaged in water quality improvement education, BMP implementation projects, and water quality monitoring is essential. Table 2 lists potential partners that may share common goals for water quality in northwest Arkansas.

A community of practice is a process of social learning and socio-cultural practices that occur, emerge, and evolve when people who have common goals interact as they work towards these goals. Foster a community of practice by enlisting the help of local conservation, civic, government, social, and other agencies or organizations in watershed activities. Not only will event participation increase, but combined efforts will be synergized toward a common purpose, and existing watershed and water quality knowledge gaps can be diminished.

Acknowledge Partnerships and Sponsors

When working with other entities in a supporting or lead role there are two common courtesies that will ensure successful collaborations.

- ◆ **Recognize Collaborators:** When an entity is supporting or collaborating on a watershed program or event, the lead entity should publicly acknowledge the supporting entity for their contributions.
- ◆ **Request Acknowledgement:** When supporting an activity of another entity, supporting entities should expect to be recognized as a sponsoring partner.

These approaches will strengthen existing relationships and encourage new partnerships. Additionally, the general public will see a unified water quality protection and improvement movement among many different groups and interests.

Engage Policy Makers

Engaging local, county, and state officials in watershed management discussions can spark support for water quality protection, preservation, and restoration legislation or policy. Partnerships should be rich with diverse board representatives, membership, and network connections that can influence policies that help meet federal and state point and nonpoint source pollution management goals and support components of watershed management plans.

Advertise Opportunities for Involvement and Education

A large crowd of participants at a watershed event enhances opportunities to raise awareness and education. Market events to local conservation organizations and the general public as often as possible at least one month prior to the event so potential partnering organizations or interested volunteers can save the date, increasing the likelihood of their participation. When promoting an informational or educational concept to the public, put the message directly in their path so they can passively see, think about, and absorb the information through indirect contact. Recognize that not all people frequent the same path, so the message or material must be put in a variety of locations and media to reach all stakeholders. Publicizing programs in all possible ways may include inserting messages into utility bill mailings, providing input at public hearings, or developing personal contacts with reporters and being prepared with frequent

ARKANSAS WATER RESOURCES CENTER – UNIVERSITY OF ARKANSAS

TECHNICAL PUBLICATION NUMBER MSC 360 – YEAR 2010

Table 2. Potential Partners that May Share Common Goals for Northwest Arkansas and Regional Watersheds

Organization	Affiliation	Common Goal	Resource
All cities in the UIRW	City government/ departments	Water quality protection, education	Potential grant partners and volunteers
Arkansas Game and Fish Commission/ Stream Team	Government agency	Stream conservation, water quality education, volunteerism	Equipment, potential sponsor and technical assistance
Arkansas Forestry Commission	Government agency	Forest and riparian buffer management, Green Infrastructure, urban forestry	Trees, technical assistance, and potential grant partner
Arkansas Natural Resource Commission	Government agency	Water resources planning, grant funding agency	
Arkansas Water Resource Center	Government agency	Water quality monitoring, research, outreach, and education	Water quality research, monitoring, potential grant partner
Benton and Washington County Conservation Districts/NRCS	Government agency	Natural resource conservation	Technical assistance
University of Arkansas Cooperative Extension Service	Government agency	Agricultural production, forest and riparian buffer management, and urban stormwater programs	Educational assistance
Washington County Environmental Affairs	Government agency	Solid waste management, household hazardous waste disposal	Technical help, potential grant partner, outreach and education activity partner
United States Forest Service	Government agency	Forestry education and management	Technical help, potential grant partner
United States Geological Survey	Government agency	Stream gauging, water quality monitoring and modeling	Monitoring, potential grant partner
Audubon Arkansas	Non-governmental organization	Conservation, education and outreach	Technical and education assistance, potential grant partner
Arkansas Canoe Club	Non-governmental organization	Water conservation and recreation	Volunteer resource and potential sponsor
Boy Scouts and Girl Scouts of America	Non-governmental organization	Conservation, outreach and recreation	Volunteer resource
Farm Bureau of Benton and Washington Counties	Non-governmental organization	Agricultural production and water quality interest	Potential grant partner, outreach and education activity partner and sponsor
Fayetteville Natural Heritage Association	Non-governmental organization	Natural resource conservation and recreation	Potential grant partner and volunteer resource
Illinois River Watershed Partnership	Non-governmental organization	Water quality conservation, education, and outreach	Potential grant partner, volunteer resource

ARKANSAS WATER RESOURCES CENTER – UNIVERSITY OF ARKANSAS
TECHNICAL PUBLICATION NUMBER MSC 360 – YEAR 2010

Lake Fayetteville Watershed Partnership	Non-governmental organization	Water quality protection	Potential grant partner, volunteer resource
Multi-Basin Regional Watershed Council	Non-governmental organization	Water quality conservation, education, and outreach	Potential grant partner
Ozark Society	Non-governmental organization	Conservation and recreation	Volunteer resource
Poultry Partners	Non-governmental organization	Agricultural water quality interest	Outreach and education activity partner and potential sponsor
Sierra Club	Non-governmental organization	Conservation and recreation	Volunteer resource
The Nature Conservancy	Non-governmental organization	Natural resource conservation, outreach, and education	Potential grant partner and potential sponsor
Watershed Conservation Resource Center	Non-governmental organization	Water quality conservation, education, and outreach	Potential grant partner
Businesses In the UIRW	Business	Water quality conservation interest	Potential sponsors, grant partners, and volunteers
Schools in the UIRW	Schools	Water quality education	Potential Grant Partners and Volunteers

story and photo opportunities. Additional promotion examples are listed below:

- ◆ **E-mail:** E-mail news briefs to memberships, sponsors, volunteers, and other outdoor or environmental organizations to announce or remind them of an event and can enhance participation.
- ◆ **Flyers:** Promotional flyers in local businesses, public places, universities, and other locations can draw in more potential volunteer participants. Enlist the help of members, partnering organizations, and other volunteers to help post the information and spread the word.
- ◆ **Internet:** Listing upcoming events or updates on continuing effort on websites is a great tool for those accustomed to surfing the internet for information.
- ◆ **Radio:** Radio air time can be purchased and free public service announcement opportunities can be utilized. Alert local stations

that can provide free public announcements (KUAF, KURM, KEZA, etc.) about event information that they might distribute to their listeners.

- ◆ **Television:** News coverage is free and can help garner further public awareness and viewer participation in events and programs. Local government channels and local community access cable stations also announce events and workshops for free if they are included in their community calendars.
- ◆ **Newsletters:** Newsletters support continued efforts, and keep stakeholders informed on upcoming events and past successes and provide encouragement and tips on proactive BMPs for their land, in their home, community, or workplace to improve water quality.
- ◆ **Newspapers:** Using local, University, and regional newspapers to advertise upcoming

events and share success stories to reach a lot of people can be very cost-effective. Like television, news coverage can be free

and many local papers will list local community events.

- ◆ **Word-of-Mouth:** Presentations and announcements to local civic and special interest organizations about ongoing efforts or upcoming events fosters broad interaction with watershed stakeholders that are likely participate in watershed activities and implement positive management actions.

Continually communicating the importance of maintaining and improving the water quality and getting feedback from the stakeholders in urban and rural communities is critical to actually achieving the maintenance or improvement of water quality.

Collect and Review Stakeholder Information

To ensure outreach messages and education programs are appropriate for targeted audiences, it is critical to assess: 1) stakeholder attitudes, understanding, and actions regarding watershed water quality; 2) how/where they get their information; 3) what they might be willing to do to protect water quality; and 4) what might limit their efforts to do so.

The Watershed Approach. EPA's 'Watershed Approach' uses sound science and adaptive management to address water quality issues through collaborative, stakeholder-driven processes that foster public participation, equal representation of interests, and geographically-relevant management approaches to maintain, protect, and restore watershed water quality.

Surveys. The use of online, phone, or written surveys and polls can greatly aid in gauging stakeholder awareness, beliefs, opinions, knowledge, and behaviors regarding watershed water quality. As stakeholder information is

captured and analyzed, outreach and education programs can be designed to overcome knowledge gaps and misperceptions and facilitate changes in behavior.

Stakeholder Input and Focus Groups.

Stakeholder input helps accurately prioritize local educational needs, design effective resource materials, and enhance program participation. In geographic or interest areas for outreach and education efforts, focus groups provide insight on how to best initiate public contacts, phrase survey questions, promote programs, and garner participation. Use common rules of engagement at focus group meetings, workshops, and activities:

- ◆ Present only factual and non-biased information considering all sides of the issue;
- ◆ Encourage all present to participate
- ◆ Listen respectfully to others and suspend judgments;
- ◆ Let group members speak for themselves based on their own experiences; and
- ◆ Avoid generalizations and stereotypes of groups or stakeholder interests.

Track Program Progress and Assess Program Effectiveness

An interactive review of what works/what is needed keeps outreach and education programs relevant and effective. Annually assess programs by asking the following:

- 1) What were the intended topics, target audiences, and program methods?
- 2) What has been conducted to engage and educate watershed stakeholders (outputs)?
- 3) What has/has not worked in those efforts?
- 4) What measurable goals were met (outcomes)?
- 5) What else should be done to meet missions and objectives and to address stakeholder knowledge gaps?

- 6) What complementary programs exist in the watershed and how can you partner in those efforts?

If educators track measured changes in stakeholder knowledge and actions, and accompanying water quality improvements it will be easier to adaptively manage the watershed, garner sponsor support, and secure grant funds.

Recognize National and State Priorities

Educators should maintain an understanding of federal and state program priorities that align with the mission and objectives of watershed management. The Arkansas Natural Resources Commission (ANRC) has established five priority areas in which education and outreach improvements should be focused in order to attain 319(h) grant funds and to help the ANRC implement its state watershed management plan. Five priority areas are silviculture, agriculture, resource extraction, surface erosion, and household and business activities.

Promote Stewardship Recognition Programs

Watershed stewardship awards serve to publicly acknowledge and thank stakeholders for their outstanding management actions.

STRATEGIES FOR OUTREACH AND EDUCATION ACROSS NORTHWEST ARKANSAS AND ALL STAKEHOLDER GROUPS

Northwest Arkansas is a very diverse cross-section of urban, sub-urban, and rural areas. This diverse watershed landscape and population features many different livelihoods, lifestyles, and levels of understanding for watershed dynamics and water quality issues. Differences among stakeholders can often be related to experiences with career or industry, time spent living in the watershed, connectedness to the issue, and level of education. More often than not, these differences affect

the stakeholders' interpretation of who is responsible for water quality impacts and who is responsible for enacting management actions to protect water quality. When a water quality

message, program, or activity is planned, it is essential to use a mixture of focused messages, programs, and activities so that span everyone, everywhere. There should be a continual effort to provide educational programming, conduct educational activities, and broadcast educational messages across the entire watershed, while also tailoring focused activities, messages, or programs within a particular sub-watershed or stakeholder interest.

Outreach and education programs should encourage the adoption of best management practices or positive management actions for 1) new developments and redevelopments, 2) municipalities and townships, 3) industrial operations and small businesses, 4) agricultural operations and hobby farms, and 5) households and individuals.

Ideas for Working with Municipalities to Improve Water Quality

- ◆ Encourage the development of master park plans or nutrient management plans for city parks;
- ◆ Encourage green infrastructure planning as part of an overall growth or development plan;
- ◆ Encourage preservation or restoration of riparian areas on city or community owned properties;
- ◆ Encourage low impact development for municipal projects;
- ◆ Seek partnerships on projects that are mutually beneficial;
- ◆ Encourage support for county or municipal construction and post construction BMP inspectors;
- ◆
- ◆

ARKANSAS WATER RESOURCES CENTER – UNIVERSITY OF ARKANSAS
TECHNICAL PUBLICATION NUMBER MSC 360 – YEAR 2010

- ◆ Ask an members in local government to coordinate meetings with city and county officials;
- ◆ Hold watershed workshops for municipal officials and planners; and
- ◆ Engage the Norwest Arkansas Regional Planning Commissioners.

Ideas for Working with Businesses and Industries to Improve Water Quality

- ◆ Seek out new sponsorships and partnerships;
- ◆ Encourage existing partners to become leaders in implementing positive management actions;
- ◆ Ask members and or sponsors to coordinate discussions with fellow business owners and contractors;
- ◆ Engage local Chambers of Commerce;
- ◆ Conduct watershed workshops for targeted business sectors and industries;
- ◆ Encourage riparian preservation or restoration on industrial and business properties; and
- ◆ Encourage the implementation of industrial ecology.

Ideas for Working with Farmers to Improve Water Quality

- ◆ Place educational materials in farm supply stores, coffee shops, and sale barns
- ◆ Involve agricultural members in coordinating water quality information meetings for farmers
- ◆ Collaborate with the Farm Bureau in Benton and Washington Counties and at the state level
- ◆ Seek partnerships with the Benton and Washington County NRCS and conservation districts
- ◆ Collaborate with the Conservation District Board in Benton and Washington Counties

- ◆ Collaborate with the County Extension Council in Benton and Washington Counties
- ◆ Encourage the participation in the of the Conservation Reserve Enhancement Program
- ◆ Conduct watershed workshops

Ideas for Reaching and Working with Homeowners

- ◆ Deliver information through Neighborhood Association newsletters and meetings;
- ◆ Target creek cleanups in or near neighborhoods and invite the residents;
- ◆ Initiate neighborhood Stream Teams;
- ◆ Conduct creek walks and invite neighboring residents;
- ◆ Ask current members to engage their neighbors and to encourage membership;
- ◆ Ask current members to coordinate neighborhood meetings; and
- ◆ Hold watershed workshops

Ideas for Reaching Individuals

- ◆ Groom relationships with local newspaper and television media;
- ◆ Utilize local government and community access cable television stations;
- ◆ Ask to present information at a sponsor's or partner's regular meeting or event;
- ◆ Use and maintain your organization's website;
- ◆ Place fact sheets and event flyers in public places such as libraries and coffee shops; and
- ◆ Provide in-school education

FOR ADDITIONAL INFORMATION ABOUT OUTREACH AND EDUCATION VISIT:

Nonpoint Education for Municipal Officials (NEMO): <http://nemonet.uconn.edu/>

ARKANSAS WATER RESOURCES CENTER – UNIVERSITY OF ARKANSAS
TECHNICAL PUBLICATION NUMBER MSC 360 – YEAR 2010

Nonpoint Source Outreach Tool Box:

<http://www.epa.gov/nps/toolbox>

Getting in Step: A Guide for Conducting
Watershed Outreach Campaigns:

<http://www.epa.gov/owow/watershed/outreach/documents/getnstep.pdf>

US EPA Watershed Academy:

<http://www.epa.gov/watertrain/gettinginstep>

US EPA Watershed Approach Framework:

<http://www.epa.gov/owow/watershed/framework.html>

LITERATURE CITED

Terrene Institute (1991). Clean Water in Your Watershed: A Citizen's Guide to Watershed Protection