

Developing and implementing locally led watershed restoration and protection strategies

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Abstract

Sustainable water resources must: 1) provide sources of water for drinking and other domestic uses, recreation opportunities, and sustainable food, fiber, and timber production; 2) support and contribute to a quality environment that includes biodiversity, clean water and air, and productive soil; and 3) minimize damage from flooding, urbanization, and industrial production. Our thesis is that the key to sustainable water resources is watershed restoration and protection strategies that are locally led and driven. Our objective is to develop and facilitate processes that encourage and support locally led watershed protection while providing the necessary science-based information, expertise, and financial assistance to achieve this outcome. Our process is nonlinear, and includes at least six aspects: 1) Local awareness and education; 2) Local engagement and leadership; 3) Watershed assessment; 4) Planning; 5) Implementation; and 6) Monitoring and evaluation. The key inputs from local communities include leadership, responsibility, management, and time and financial resources. The key inputs from universities and government agencies include science-based information, education, and technical and financial assistance. Success depends on: 1) identifying and supporting strong local leadership, 2) integrating local and "outside" inputs, and 3) adequate resources. Necessary resources include knowledge (technical information and how to apply it), infrastructure and organization, finances, and time.

Keywords: river basin planning, watershed planning, strategic planning.



1 Introduction

Sustainable water resources are key not only to providing water for drinking, domestic, and industrial uses; recreation opportunities; and sustainable food, fiber, and timber production, but also to supporting and contributing to a quality environment that includes biodiversity, clean water and air, and productive soil. Additionally, watersheds should be managed to minimize damage from flooding, urbanization, and industrial production. The key to achieving all of these goals is watershed restoration and protection strategies (WRAPS) that are locally led and implemented with stakeholder participation. We define a “stakeholder” as any individual or group who has a “stake” in water quality in the watershed and includes not only the local residents and active groups in the watershed, but also government agencies and non-government organizations who directly impact or are impacted by water quality. The stakeholders are ultimately responsible for implementing management actions or can aid or prevent implementation actions. In Kansas, the state’s objective in promoting WRAPS is to encourage and support stakeholders in watershed restoration and protection, while providing the necessary science-based information, expertise, and financial assistance within the prevailing regulatory and policy framework.

At the heart of this process is the development and implementation of a plan to restore the health of water resources that do not meet water quality standards and protect water resources that currently meet water quality standards, as required by the U.S. Clean Water Act. In response to the requirements of this Act, the state of Kansas has classified and prioritized their streams, published a list of streams that do not meet water quality standards, and established total maximum daily load goals (TMDLs) for the high priority streams to be restored. For further information on how Kansas is responding to the requirements of this Act, see the Kansas Department of Health and Environment (KDHE) website (www.khde.state.ks.us/tmdl/). Thus far, TMDL implementation has been voluntary, but KDHE recommends development and implementation of a WRAPS, as the framework for implementing TMDLs.

A WRAPS can also provide a framework for river basin planning. The Kansas Water Plan is formulated and used for the general purpose of coordinating the management, conservation, and development of the water resources of the state. The twelve major river basins of the state form the planning units for the statewide water plan. (For more on the Kansas State Water Plan, see www.kwo.org) Each basin has an 11-member Basin Advisory Committee that participates in developing basin level plans and provides input and recommendations to state, federal, and local agencies in implementing the plan. A WRAPS can serve as an organizing framework for water quality restoration and protection in each basin.

The advantages to participatory approaches to watershed planning and management are well documented (Hargrove et al, [1], MacPherson and Tønning, [2], and Morton et al, [3]), and can be summarized as follows: 1) Citizen-based efforts can make a difference and have greater impact; building trust and support for the process and product results in shared responsibility for



decisions and/or actions and local ownership of the process; 2) The exchange of information drawn from both science and local knowledge results in creation of better, more cost effective solutions that are more likely to be adopted; and 3) Through collaboration and enhanced communication, stakeholders learn how to collect, evaluate, integrate, and utilize information, improving coordination of resources and more efficient implementation. The stakeholders include all the residents of the watershed that are bound together by the common streams, rivers, lakes, wetlands, and groundwater resources of the watershed, plus the outside agencies, organizations, and groups that also have a “stake” in the water resources of the area. Local efforts are successful when local residents, natural resource professionals, community development specialists, and community leaders act in partnership to address water quality issues. A completed WRAPS is intended to provide a means of focusing resources, both local and non-local that are available through many different organizations, to the water quality needs of a specific watershed. The WRAPS is not owned by a single organization or agency, but is owned by the “community” of stakeholders participating in its development.

Our goal in this work was to outline and implement a process for successfully conducting and developing a WRAPS that: 1) relies on stakeholder participation and local leadership; 2) meets state and national requirements for watershed planning; and 3) provides a framework for collective action that will restore and/or protect water quality. We identify two important aspects of the WRAPS: **the process**, in which stakeholders are better informed, engaged, and motivated to take action; and **the report**, a document produced by the process that summarizes the condition of the water resources, the goals for improvement and/or protection, and the actions needed to meet the goals. We describe a generic WRAPS process, but we have implemented and fine-tuned this process in at least five watersheds in Kansas over the past three years.

2 The WRAPS process

The WRAPS process, as we envision it, is based on local leadership and participation. It provides an opportunity for local residents to voluntarily get involved in developing local policies and actions that will protect their water resources. Our process of developing a WRAPS includes four important phases: 1) Development, 2) Assessment, 3) Planning, and 4) Implementation. The major tasks associated with each phase and the approximate time required to complete each phase are presented in Table 1, and discussed in more detail below.

This is not a simple **linear** process, but an **iterative** process with continuous “looping” back and revisiting roles, responsibilities, information, goals, actions, and progress. A schematic of this process is presented in Figure 1. The ultimate outcome is watershed restoration and protection that is locally led and driven, with stakeholder participation, based on science-based information, and supported by adequate financial resources. It depends on integrating local and “outside” inputs, outside inputs being expertise and financial resources from state and federal agencies and other non-government organizations and private



groups. Each Phase of the process is described and discussed in more detail below.

Table 1: Tasks and time requirement for each Phase of the WRAPS process.

<u>Development</u> (1-3 months)	
\$	Identifying key stakeholders
\$	Evaluation of stakeholder interest, commitment, and needs
\$	Identifying and organizing a local leadership team
\$	Generating public interest and recruiting participation
<u>Assessment</u> (3-24 months)	
\$	Identifying important local water resources and threats
\$	Compiling existing information on water resources and threats
\$	Determining condition of water resources and causes/sources of impairment
\$	Identifying additional information needs
<u>Planning</u> (3-12 months)	
\$	Soliciting stakeholder involvement and input
\$	Identifying water quality goals
\$	Identifying actions/interventions (and even implementing obvious solutions to easy-to-address problems)
\$	Developing an implementation plan, including actions, timelines, and needed resources
\$	Evaluation of stakeholder commitment to implementation
<u>Implementation</u> (1-10 years)	
\$	Maintaining local leadership and interest
\$	Identifying and securing collaboration
\$	Identifying and securing funding sources
\$	Implementing actions
\$	Evaluating progress (in terms of both implementation actions and water quality improvement)

2.1 Development

2.1.1 Identifying watershed stakeholders

A successful effort to develop a WRAPS will involve the input of a variety of stakeholders. Potential stakeholders include rural landowners/homeowners, farmers, ranchers, urban residents, business/industry, civic organizations, a variety of non-government organizations, government agencies representing the federal, state, and local levels, and others. Not every stakeholder will have the time/ability to participate in the process of developing a WRAPS, but many people will have an interest and should be kept informed throughout the process and be provided with opportunities to review draft reports and provide feedback. Educational opportunities such as watershed tours and workshops are an



effective way to involve and inform all stakeholders regardless of their level of participation.

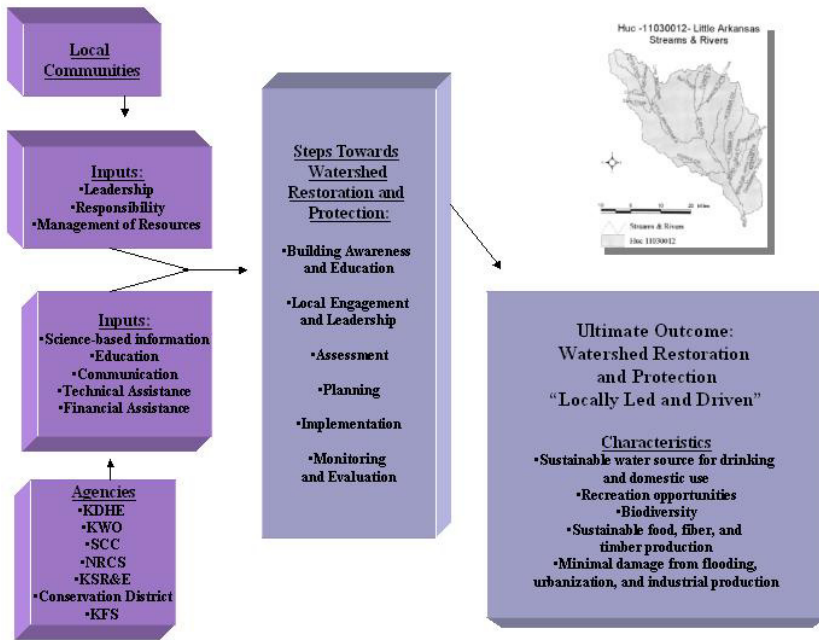


Figure 1: Flow diagram of WRAPS process.

2.1.2 Identifying and recruiting local project cooperators

From among the stakeholders, a group of project cooperators, who will be actively involved and provide local leadership for the process, should be identified. A cooperator could be any agency, organization, or individual that has demonstrated local leadership in community and/or environmental issues. Often, these are people or agencies that are influential and well-connected (“movers and shakers”) within their communities. Examples may include the local Chamber of Commerce, city and county commissioners, board members of the County Conservation District and agricultural associations (Farm Bureau), local civic organizations, Extension agents, and others. Once they have been identified, it is advantageous to meet one-on-one with these individuals/groups, because they typically have extensive knowledge about people within the watershed that should be included in the development of a WRAPS, as well as considerable knowledge about local conditions and activities that may be impacting water quality. Because local leaders generally are trusted and respected by the more general group of stakeholders, they are crucial in being spokespersons for the effort and in motivating others to participate. Often a single person who is: 1) passionate about the watershed, 2) respected and trusted by others in the community, and 3) willing to talk to and motivate others, acts as

a catalyst, a “spark plug” for local action. This element of local leadership and eventually local ownership of the process is key to ensuring the successful development and implementation of a WRAPS.

2.1.3 Establishing a WRAPS committee

Once project stakeholders have been identified and cooperators recruited, it is important to organize a small group or committee to provide a more formalized framework for guiding the development of the WRAPS. The structure, size, and composition of this committee will vary and is best determined case by case with local stakeholders. Such committees are typically comprised of volunteers and range in size from five to twelve members. Committee membership typically includes a mix of watershed stakeholders, project cooperators, and agency staff. The purpose of this committee is to provide oversight and guidance to the overall process and to work with staff who will facilitate the WRAPS process and draft the final plan. Tasks of the committee may include reviewing and providing feedback on water quality monitoring data, watershed modeling scenarios, and other draft reports; identifying local sources of information and expertise; and assisting with public education and participation activities. An organizational structure also provides citizens a way to influence, modify, and support decisions regarding land use and water quality improvements.

2.1.4 Identifying and recruiting a local host entity

A “local host entity” is an organization, office, or agency that provides administrative support and coordination for the development of a WRAPS. Such support may include serving as the official representative on grant applications, accounting and disbursing grant funds, serving as a central point of contact for the project, and providing clerical support such as mailings and workshop registrations, and facility space for meetings. Ideally, the local host will be an entity that has been involved with water quality and watershed issues and enjoys the support of watershed stakeholders and project cooperators. The local host should be selected by stakeholders and report directly to the WRAPS committee. Examples of a host entity include a County Conservation District, county Extension office, Resource Conservation and Development District, public water supply (rural water district), and others.

2.1.5 Generating public interest in water quality issues

Unless there is an immediate or obvious threat or crisis, it is sometimes challenging to generate public interest in water quality and watershed issues. Although everyone enjoys the benefits and uses of water, it is not always clear to watershed residents how water quality is being impacted, what activities have the potential to degrade water quality, and how everyone in the watershed contributes to water quality problems and can be part of the solution to protect and restore water quality. One effective way of generating public interest in water quality and watershed issues is to focus on the uses of water that are highly valued by local residents. Such uses include drinking water, recreation, economic development (commercial and industrial use), wildlife habitat, and quality of life/cultural amenities such as a riverfront park or scenic stretches of a



river. Watershed residents are much more likely to be concerned and involved with restoration and protection efforts when these types of uses are threatened or limited by degraded water quality. Public interest and involvement are always greatest when water quality can be directly linked to the economic livelihood and quality of life of communities and residents.

2.1.6 Educating and involving the public

Effective stakeholder education and involvement provides opportunities for identifying public concerns and values, developing consensus, and producing efficient, effective, and acceptable solutions through an open, inclusive process. There are three general types of stakeholder involvement that are critical to the development of a WRAPS: 1) public education, 2) public participation, and 3) public relations. Public education is focused on building awareness and discussion/interaction among stakeholders about water quality issues and concerns, activities that are or have the potential to impact water quality, and alternative strategies and tools that can be implemented to address water quality issues. Public participation involves creating opportunities for meaningful input into the development of the WRAPS. Such opportunities can range from watershed tours to workshops and other public meetings. The purpose of these participation activities is to gather important information and feedback from stakeholders that will shape the WRAPS. Public relations focuses on building support among residents and stakeholders for the need to develop a WRAPS and to implement the recommended actions to restore and protect water quality. Given that many of these actions will require substantial political support by local decision-makers and funding and technical assistance from local, state, and federal agencies, it is critical that broad public support be achieved for a WRAPS to be successful. Ideally, any event or activity that includes watershed stakeholders should incorporate as many of these types of involvement as possible. There is often overlap between at least two of these. For example, a watershed tour, workshop, focus group, or other public meeting offers multiple opportunities to educate and inform the public, solicit their participation in providing guidance and feedback, and build popular support for the development and implementation of the WRAPS.

For stakeholder involvement to be effective, it must be incorporated into and implemented throughout the entire WRAPS process. A variety of well-established and tested tools and techniques can be utilized to achieve stakeholder involvement. Examples include watershed tours that provide stakeholders with an opportunity to learn more about water resources within the watershed, potential sources of pollution, and existing projects to restore and protect water quality such as streambank stabilization, riparian buffers, and agricultural best management practices. Workshops that feature local speakers, educational displays and demonstrations, and small group discussions are another effective way to educate and involve watershed stakeholders in the WRAPS process. Other tools include press releases, websites, newsletters, public service announcements on radio and television, and presentations to local elected officials and civic organizations.



2.2 Assessment

A successful WRAPS depends on not only stakeholder participation and leadership, but a scientifically sound information base upon which the condition of water resources are assessed, sources of pollution are identified, and strategies are developed for restoration and/or protection. The goal of the assessment phase of a WRAPS process is to collect and compile known information about the condition of water resources and/or to collect experimental data or do additional analytical work, to determine the condition of water resources. This information also needs to be shared and validated with stakeholders. A watershed assessment should include information about: 1) the water resources and their condition; 2) the geography of the area...soils, climate, landforms, land use, etc.; 3) demographics; 4) driving forces influencing the present and future demands on water resources; 5) socioeconomic situation; 6) suspected sources and causes of water quality impairments and watershed threats; 7) biology of the watershed, esp. threatened or endangered species; and 8) projects conducted in the past or ongoing in the watershed. This information can be collected from a variety of sources, including government reports, research reports or other water quality monitoring data, biological surveys or inventories, local plans and documents such as land use plans, source water protection plans, and others. Maps of the local area with sufficient detail that the important water resources and other important features, such as cities, towns, roads, protected areas, etc., are delineated and identified, should be obtained or produced. The condition of water resources should include consideration of the critical uses of the water, such as drinking water supplies, recreation, irrigation, and others, and the suitability of the water supply and quality to meet the desired uses. Additional considerations include critical wildlife habitats, endangered ecosystems, flood hazard, and sustainability. The types, sources, and levels of water quality impairments and the threats to the future of water supply and quality should be identified and quantified. Based on this initial analysis, the water resources can be categorized as in need of restoration and/or protection. Commonly, additional information is needed or desirable. There could be a variety of opportunities for collecting additional information through additional monitoring, surveys, or modelling. Using models, the loss of water runoff, sediment, nutrients, and microorganisms can be simulated and correlated with a variety of watershed properties such as soil types, land cover, etc. These simulations can be used to identify the most significantly contributing areas in the landscape and also can be used to evaluate the impacts of making changes in the landscape such as increasing land cover or changing agricultural management practices.

Additional information needs should be discussed with stakeholders and a plan for collecting the additional information formulated. Every situation is different, and the timeline and available resources will often dictate the extent to which additional information can be collected. The expense and time required for collecting additional water quality monitoring data or for modeling work can vary widely, depending on the size of the area to be studied, the number of monitoring sites, the kinds of constituents of interest, and the timeframe for collecting additional information. Collecting additional water quality monitoring



data need not be expensive; often it is desirable to simply know if a constituent is present or not at various locations in the watershed or in the stream. Likewise, the expense and time required for modeling work can vary depending on whether there is a suitable model that can be used “off the shelf”, the extent of needed testing and calibration of the model, and the types of questions that are being asked. However, collecting additional monitoring data or doing modeling work will usually require from three months at a minimum to as much as three years to complete. But, the importance of such information should not be underestimated. The results from such studies can be used to identify where and how changes in management should be targeted in the watershed to get the most benefit in terms of water quality improvement.

2.3 Planning

2.3.1 Implementing stakeholder education and involvement

Educating stakeholders and creating opportunities for their involvement often takes the form of watershed tours, public workshops, focus groups, and other public meetings, and water festivals. The purpose of a watershed tour is to build awareness and appreciation among stakeholders about: water and other natural resources in the watershed that they depend on for drinking water, economic development, and quality of life; and examples of existing projects and programs to protect and restore water quality. The purpose of a workshop or public meeting is to both educate and involve stakeholders. Education may take the form of presentations about water quality problems/impairments, results of water quality monitoring and watershed modeling studies, demonstration projects and models, and displays offering information and hands-on activities. Stakeholder involvement may take the form of small group discussions to identify and explore local water quality issues/concerns, potential sources of pollution, and best management practices and other actions to restore and protect water quality. Workshops can also be utilized to present draft reports to stakeholders for review and feedback based on their input at earlier meetings. The purpose of a focus group meeting is to bring together a specific group of stakeholders, such as agricultural producers, local elected officials, or urban homeowners, to discuss more specific water quality issues/problems of concern to them, restoration and protection strategies and practices targeted toward these groups, or other issues that may require more in-depth attention or involvement. The purpose of a water festival is to offer a more in-depth and hands-on educational experience targeted at specific groups such as school children or the community as a whole. Such festivals may be organized by a local school district, community organization, and/or government agency.

2.3.2 Setting goals and identifying actions

Through one or more of the activities described above, stakeholder input and feedback are needed in: 1) identifying critical water resources and their uses, 2) formulating water quality restoration and/or protection goals, and 3) identifying and selecting water quality restoration and protection measures. An example of a water quality goal with recommended actions is presented in Table 2.



Table 2: Water quality goal and recommended actions for Big Creek and Middle Smoky Hill watersheds.

Goal 1a: Reduce cropland and streambank erosion to reach water quality goals of DO > 5mg/L, BOD < 3.5mg/L, TDS < 808mg/L, and TSS < 101mg/L in rivers and lakes ■ 786,111 acres cropland in Big Creek and Middle Smoky Hill watersheds that can use additional BMPs ■ 975 stream miles in Big Creek and Middle Smoky Hill watersheds that can use additional erosion protection						
Implementation of BMPs	Actions in support of BMP implementation	Time frame	Estimated costs	Implementation Targets	Percent P, N, and TSS Reduction in Runoff ^a	Cooperating Agencies
1a.1 Establish vegetative buffer strips for general erosion control.	Cost share programs	2005-2015	\$6,288,880.00 (\$80.00 per acre ^b)	Target: Increase use of BMPs by 78,611 acres/year	50% P 35% N 50% TSS	CD, KDHE, NRCS, KSRE, SCC
1a.2 Move seasonal and/or concentrated feeding and watering sites away from streams.	Cost share programs	2005-2015	\$48,000.00 (Average cost per site = \$4,000.00 ^b)	Target: 55 contacts per year resulting in 12 contracts per year	NA	CD, KDHE, NRCS, KSRE, SCC
1a.3 Relocating confined feeding facilities including seasonal sites	Cost share programs	2005-2015	\$372,000.00 (Cost per site = \$12,000 to \$50,000 depending on size of facility to be moved ^b)	Target: 55 contacts per year resulting in 12 contracts per year	NA	CD, KDHE, NRCS, KSRE, SCC

2.3.3 Organizing assessment information and stakeholder input into an implementation plan

Through processes described above, the assessment information can be shared with stakeholders and input and feedback from stakeholders can be gathered. The leadership committee also should review and comment on the assessment information, the identified water quality goals and actions, and other input gathered from stakeholders. This information can be organized into an Implementation Plan. The Implementation Plan identifies and describes the actions necessary to restore and/or protect the water quality of the critical water resources in the watershed. Thus, it is the “meat” of the Watershed Restoration and Protection Strategy. The following elements should be included in the written implementation plan.

2.3.3.1 Causes and/or sources of pollution For each critical water resource, the causes and sources or groups of similar sources of pollution that will need to be controlled to achieve the load reductions estimated in the implementation plan should be identified. Quantitative estimates of the extent of the source and needed controls should be identified, i.e. 100 dairy cattle feedlots, each having between 100 and 500 dairy cows, need upgrading; or 10,000 acres of cropland need nutrient management plans; or 1000 miles of streambank vegetation need restoring.

2.3.3.2 Estimated load reductions The load reductions expected for the management measures described in the Implementation Plan should be estimated, recognizing the natural variability and the difficulty in precisely predicting the performance of management measures over time. Estimates should be provided at the same level of detail as in “Causes and/or Sources of Pollution” above (e.g., the total load reduction expected for dairy cattle feedlots; row crops; or eroded streambanks).



2.3.3.3 Pollution control measures The management measures that will need to be implemented to achieve the estimated load reductions (described above), as well as to achieve any other watershed goals identified by the stakeholders should be identified and described. Using a map or a description, the critical areas of the watershed in which those measures will be needed in order to meet the load reductions should be identified. Responsible parties for implementing management measures should be identified.

2.3.3.4 Technical and financial resources The amounts of technical and financial assistance needed, associated costs, and/or the sources and authorities that will be relied upon, to implement the plan should be identified. Technical and financial assistance can be provided by a variety of government agencies and private groups.

2.3.3.5 Public information/education The information/education plan that will be used to enhance public understanding of the project and encourage their early and continued participation in selecting, designing, and implementing the water quality actions should be identified.

2.3.3.6 Timeline A schedule that is reasonably expeditious for implementing the water quality actions identified in the plan should be developed.

2.3.3.7 Progress benchmarks Interim, measurable milestones for determining progress in implementing water quality actions and/or other control actions should be identified and described.

2.3.3.8 Evaluation criteria A set of criteria that can be used to determine whether load reductions are being achieved over time and substantial progress is being made towards attaining water quality standards should be identified. The criteria for determining whether the implementation plan needs to be revised need to be identified, as well.

2.3.3.9 Monitoring and evaluation plan Describe a plan for monitoring and evaluating the effectiveness of the implementation efforts over time, measured against the criteria identified above.

These elements are those required by USEPA for watershed plans by their Nonpoint Source Program [4]. Some of this information is difficult to develop with precision, but making a “best effort” at estimating the load reductions and costs of implementing management practices will help ensure that water quality impairments are addressed effectively and efficiently.

2.4 Implementation

The WRAPS process provides a platform for stakeholder involvement and leadership, for building public awareness and education regarding water resources, and for development of a strategy for local actions to improve and protect water quality at a local level. But, without implementation, water quality restoration and/or protection will not happen. Implementation should



follow the written strategy and should rely on the responsible action of both local and non-local stakeholders. Successful implementation depends on maintaining local interest and leadership, identifying and securing collaboration, identifying and securing funding sources, local action, evaluating progress, and periodically revisiting the strategy. Some ways of maintaining local interest and leadership include: regular communication among stakeholders, recognizing participants and project progress through local media, celebrating successes, ongoing efforts at public engagement, and sustaining financial support.

A variety of state and federal agencies, colleges and universities, non-government organizations, local government, and private groups and organizations are stakeholders in water quality restoration and protection and are willing partners in implementation activities. These agencies and groups often have extensive experience, expertise, and technical and financial capacity that make them good partners in local level water quality actions. As implementation proceeds, it is advantageous to identify appropriate groups with which to collaborate and to build partnerships in implementing activities. Funding is often the most limiting factor in implementation. Many of the agencies and groups named above either have resources or have knowledge of where to seek financial resources for implementation activities.

Finally, evaluating progress and periodically revisiting the strategy are critical. Benchmarks for progress and specific water quality goals should be identified in the written strategy. Progress towards these benchmarks and goals need to be evaluated from time to time. Additionally, circumstances can change dramatically; the strategy needs to be re-evaluated from time to time to account for changes in circumstances, progress, setbacks, etc. The WRAPS should be a dynamic and not a static document.

3 The WRAPS report

3.1 Contents of the report

The written Watershed Restoration and Protection Strategy is the product of the participatory process and provides the action plan for restoring and/or protecting water quality. It should contain the following elements.

3.1.1 Water quality conditions

Summarize the general watershed setting, including the critical water resources and their uses; describe the water quality condition of critical water resources, including projected trends; and identify causes and sources of pollution/degradation.

3.1.2 Implementation plan

For each critical water resource, identify water quality goals and needed actions, including: causes and/or sources of pollution, estimated load reductions, pollution control measures, technical and financial resources needed, public information/education plan, timeline, progress benchmarks, evaluation criteria, and the monitoring and evaluation plan.



3.1.3 Process description

Include a description of the process used to develop the WRAPS, including: a review of public relations efforts (building “buy-in” and support); a review of public participation (meaningful input); a review of public education efforts (building awareness and understanding).

3.1.4 Appendix

Include supporting materials, such as: identification of participating agencies and organizations, descriptions of past and current projects in the watershed, supporting information from tours, field days, workshops, etc., examples of public information/outreach, such as newspaper articles, etc., research reports or extension materials, and any other pertinent supporting documents.

3.2 Developing, publishing, and publicizing the report

Few local watershed groups are going to have the capacity or personnel to prepare the draft report. More commonly, someone from one of the participating agencies (state/federal agency, university, NGO, or other group) is going to draft the report. However, it is important that the local people have ample input into the written report. It is recommended that at least the local leadership committee if not a wider group review the draft report for comment and suggestions. The local leadership committee can recommend other local stakeholders to review the report as appropriate. Likewise, funding and other participating agencies outside the local watershed should have the opportunity to review the draft report.

After stakeholders have had ample opportunity to review and comment on the report and the final draft is prepared, the report should be produced in some sort of hardcopy and web-based form. Copies of the report should be made available at a local level and to relevant agencies and groups outside the watershed with a plan for announcing and publicizing the availability of the report.

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