

# Watershed Management and Planning

Watershed Management and Planning

## V(A). Planned Program (Summary)

### 1. Name of the Planned Program

Watershed Management and Planning

## V(B). Program Knowledge Area(s)

### 1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	5%			
111	Conservation and Efficient Use of Water	5%			
112	Watershed Protection and Management	40%			
131	Alternative Uses of Land	10%			
133	Pollution Prevention and Mitigation	5%			
608	Community Resource Planning and Development	30%			
723	Hazards to Human Health and Safety	5%			
<b>Total</b>		100%			

## V(C). Planned Program (Inputs)

### 1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	6.4	0.0	0.0	0.0

### 2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b> 422623	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
	0	0	0
<b>1862 Matching</b>	<b>1890 Matching</b>	<b>1862 Matching</b>	<b>1890 Matching</b>
0	0	0	0
<b>1862 All Other</b>	<b>1890 All Other</b>	<b>1862 All Other</b>	<b>1890 All Other</b>
0	0	0	0

## V(D). Planned Program (Activity)

### 1. Brief description of the Activity

Invite people from Missouri watershed communities to participate in workshops to develop partnerships for watershed management as part of the Heartland 406 (b) USDA grant. Facilitate deliberative sessions with agency partners and others to discuss strategies for expanding collaborative efforts and roles each agency might fill in assisting communities in watershed management activities. Continue efforts to assist communities in the development of watershed management plans.

**2. Brief description of the target audience**

Target audience will consist of local watershed community citizens, elected officials, agency leaders and staff members with a concern or a part to play in watershed management activities. Extension state and regional specialists will have opportunities to attend regional workshops designed to keep abreast of the most current and reliable sources of information relating to a process of working with local communities to develop and implement watershed management plans.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1200	7000	1800	3000
2008	1677	17761	1864	742

**2. Number of Patent Applications Submitted (Standard Research Output)**

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2008:	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
2008	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

Two educational classes will be held to help agency and Extension personnel to understand the process for involving local communities in the development and planning of watershed management plans.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	2	5

**Output #2**

**Output Measure**

Four workshops per year will be held at the regional level and at the multistate level on issues surrounding watershed management planning, the social dimension of watershed management and conflict management and deliberation.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	4	6

**Output #3**

**Output Measure**

One-on-one consultations will be given with those clients and agency personnel working directly with watershed planning and management and the selection and implementation of best management practices.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	3500	550

**Output #4**

**Output Measure**

Group discussion will be held with 15 watersheds in the developmental stages of watershed planning.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	15	25

**Output #5**

**Output Measure**

Two demonstrations per year will be held in watershed areas to demonstrate the effectiveness of best management practices for improving water quality.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	2	5

**Output #6**

**Output Measure**

3 studies in MO will be conducted with assistance from Iowa State Univ and with funding through a USDA Water Quality 406 grant to determine the effectiveness of group process in long-term water quality protection by means of local watershed management.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	0	2

**V(G). State Defined Outcomes**

O No.	Outcome Name
1	Each year, three workshops (Watershed Management and Planning) will empower local people and agency personnel to organize watershed advisory groups to begin a process of evaluating, planning and implementing strategies for protecting water resources.
2	Collaborative partnerships will be expanded and strengthened in the development and delivery of science-based watershed information and resources to local watershed communities.
3	Each year, two watershed planning and management educational programs will be developed and implemented in identified watersheds.
4	Five watershed communities each year will be actively involved in the development of watershed management plans in various geographic regions of the state.
5	Three new watershed management advisory groups will be formed each year.
6	Each year, three watershed groups will implement watershed management plans that focus on improving water quality.
7	Each year, three watershed communities will develop watershed management plans that have been approved by the Missouri Department of Natural Resources.
8	Each year, three communities, with approved plans, are using the plans in the development of watershed management plans for total maximum daily loads (TMDLs), source water protection, and other land use planning decisions affecting their watershed.
9	Fifteen watersheds will be targeted for watershed management planning, development and implementation. An advisory committee will select the watersheds for the programming efforts.

**Outcome #1**

**1. Outcome Measures**

*Not reporting on this Outcome for this Annual Report*

**2. Associated Institution Types**

**3a. Outcome Type:**

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
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**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

Natural Disasters (drought, weather extremes, etc.)

Economy

Appropriations changes

Public Policy changes

Government Regulations

Competing Public priorities

Competing Programmatic Challenges

**Brief Explanation**

DNR changes in priority watershed have resulted in a need to re-evaluate which watersheds need to be addressed first. Another key factor is work responsibilities of agency personnel who work directly with local watershed planning efforts. As funding becomes tighter for agency personnel, fewer personnel might be available to assist local communities needing to develop watershed management plans. Funding cycles and the timelines need to be established so that all partners know what to expect. For long-term water quality protection, local citizens who own the land must buy-in to the process and voluntarily work with the agency to address the issues. Buy-in requires the development of partnerships between watershed citizens and agency personnel and local citizens.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

After Only (post program)

During (during program)

Case Study

Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

### **Evaluation Results**

Agency personnel determined a set of criteria for setting priorities among watersheds in which water quality concerns need to be addressed. Extension personnel designed a template for developing a watershed plan. This template was approved by DNR and is currently being used by priority watersheds.

Many of the watershed groups have submitted and received planning grants to develop watershed plans. More than \$125,000 was received for planning by local watersheds.

A template for developing watershed plans that include the nine EPA key elements has been developed and approved by the DNR. This plan is being used by all the watershed groups in writing their watershed plans.

A class has been offered in five locations on watershed planning and development. About 100 people have attended the classes. On a scale of 1-5 participants gave the class a 4.5 in being helpful and being usable in watershed management development.

Numerous meetings were held in different watersheds to increase public awareness, get public input and establish watershed working committees and advisory committees. These meetings led to a working group to develop a plan of action for developing a watershed management plan. These events included displays at local events, presentation and news articles to keep the general public informed of activities for watershed planning. Citizens have become actively engaged in decision making for their watershed and in working closely with agency personnel.

A Web page was developed by the University of Missouri to assist watershed groups in finding data layers for developing watershed plans. The Web link consists of data layers that are necessary to determine critical or priority areas within the watershed.

For those groups that have approved plans, more than \$1.4 million has been received in the past year to implement practices and provide information to watershed residents.

### **Key Items of Evaluation**

Watershed management and planning must incorporate the human dimension throughout the entire process. Without local involvement in the selection and design of the watershed plan long-term water quality improvement may not occur. This may be the single most important criterion in watershed plan implementation. Case studies show that when local groups take ownership and have input, they are willing to continue to work toward water quality goals.

Watershed management development classes demonstrate that access to tools, templates and other resources is key to developing watershed management plans. The classes highlight the importance of local people becoming involved in the decision-making process and through understanding the reasons for the plan.

Science-based management practices are necessary to provide supporting evidence of why specific watershed management practices were selected but local input concerning which practices are most likely to be adopted is critical for implementation of any plan.

Watershed Training Workshops – One indicator of the success of the training workshops will be the number of efforts started and followed through by workshop participants to develop watershed management plans. Additionally, evaluation forms filled out by the workshop participants indicate that the workshops were successful in providing guidance and resources for completing plans.

Watershed groups have secured more than \$125,000 in grants for developing watershed plans. Watershed groups with approved plans in place have secured \$1.4 million in funds for implementing practices to improve water quality.