

# Natural Resources and Environment

Natural Resources and Environment

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

### 1. Name of the Planned Program

Natural Resources and Environment

## 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	20%			
123	Management and Sustainability of Forest Resources	20%			
135	Aquatic and Terrestrial Wildlife	20%			
136	Conservation of Biological Diversity	20%			
605	Natural Resource and Environmental Economics	20%			
	<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>	3.3	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c 120000	1890 Extension	Hatch	Evans-Allen
	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2500	0	0	0

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

### 1. Brief description of the Activity

- Conduct workshops that will address specific topics such as forest stewardship and controlling pests for example for Extension Professionals and clientele. •Provide training so people learn will be able to calibrate spray equipment and making management plans for example. •Work with the media to educate the public on natural resource topics. •Partner with local associations, agencies and organizations with common interests and goals. •Prepare MontGuides (Fact Sheets) on related topics. •Conduct tours and demonstrations when appropriate teaching method for topic. •Conduct workshops on water quality and safety.

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

Private Forest Land Owners  
 Graduates of the Forest Stewardship Program  
 County Weed Boards  
 Farmers and Ranchers – Ag producers  
 Private Land Owners  
 Small Acreage Land Owners  
 Producers who operate Animal Feeding Operations  
 Professional loggers/foresters  
 Vertebrate Pest Control Operators  
 WIC  
 City/County Health Departments  
 Nursing Homes  
 Food Bank  
 St Vincent DePaul

**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>	4000	45000	400	8350
2008	7768	7032	137	1217

**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>	1	0	
2008	4	0	4

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

**Output Target**

**Output #1**

**Output Measure**

I. Forestry

- Number of private forest owners who attend one/two workshops so they will understand the timber sale process allowing them to complete a successful timber sale.
- Number of people attending the forestry mini-college, a one-day educational program that includes 10 forestry related courses that provide attendees with knowledge or sources of assistance necessary to implement their forest stewardship plans.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	500	366

**Output #2**

**Output Measure**

II. Small Acreage Lands

- Number of one-on-one consultation and group workshops for small acreage land owners on pest control, weed management and other topics.
- Number of people who participate in Field Days and demonstration opportunities for land owners to observe techniques and best practices.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	500	3115

**Output #3**

**Output Measure**

III. Environmentally Sensitive Management Systems.

- Provide one-on-one assistance for developing management plans. (Forestry, Animal Feeding Operations, etc.) Number of consultations. Number of demonstrations of sprayer calibrations, GPS usage, and other technical practices that provide environmental protection.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	500	311

**Output #4**

**Output Measure**

IV. Water Quality Number of people starting a file to track water quality Number of people attending "Well Educated" program

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2008	350	2586

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

O No.	Outcome Name
1	<p>SHORT TERM Forestry</p> <ul style="list-style-type: none"> <li>• Participants will learn the necessary steps for selling timber and what resources are available to them for assistance.</li> <li>• Attendees will receive information they can use to meet their individual forest stewardship objectives.</li> </ul> <p>Small Acreages</p> <ul style="list-style-type: none"> <li>• Producers and small acreage landowners will become aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner.</li> <li>• Applicators will learn the risks associated with applying pesticides and safety precautions recommended to mitigate those risks, while at the same time, learn techniques in applying chemical appropriately.</li> <li>• Producers will learn to use the GPS in locating weed or other problem areas. Environmentally Sensitive Management Systems</li> <li>• Producers will understand the current rules and regulations relative to animal feeding operations and how to evaluate their own operation. This also applies to forestry plans, grazing land plans and any other plans appropriate to the individual operation.</li> <li>• Producers will learn to identify and manage their particular IPM issue or natural resource concern. Water Quality</li> <li>• Participants will learn the importance of and steps to do well testing.</li> <li>• Percent of forage producers/participants who learn proper timing and implementation of control techniques and methods appropriate to their operations. MEDUIM TERM Forestry</li> <li>• Landowners will develop a plan and implement activities that will enhance the sustainability of their forests.</li> <li>• Landowners will implement activities for their individual stewardship objectives. Small Acreages</li> <li>• Landowners will implement best management practices in addressing weed issues.</li> <li>• Number of producers/small landowners who have adopted weed, crop, pest and forage management strategies. Environmentally Sensitive Management Systems</li> <li>• Producers/Landowners will adopt practices outlined in their CNMP plans. (applies to other planning efforts)</li> <li>• Producers/landowners will adopt practices that will address their specific IPM problem. Water Quality</li> <li>• People will test their wells regularly and will track the quality of their well water over time using the test information so they can make decisions for their water safety. Long Term:             <ul style="list-style-type: none"> <li>• The number of dollars saved from damage by ground squirrels to forage crops.</li> <li>• Rangeland forage will improve, soils will be protected, run-off will be reduced, and potential hazards from ground squirrel holes will be reduced. LONG TERM Forestry</li> </ul> </li> <li>• Montana's private landowners will be managing their forests to meet their individual stewardship objectives and so the forests lands continue to provide environmental, economic and social benefits to Montana citizens. Small Acreages</li> <li>• Local landowners will become more profitable while protecting the environment. Environmentally Sensitive Management Systems</li> <li>• All operations that develop and implement a CNMP protect ground and surface water, apply manure at agronomic rates, and utilize technologies that allow them to better operate and/or monitor their operation. All operations will remain economically viable and environmentally friendly.</li> </ul> <p>2 FORESTRY - Montana's landowners will manage their forests to meet their individual stewardship objectives and the forest land will continue to provide environmental, economic and social benefits to Montana citizens.</p> <p>3 SMALL ACREAGE LANDS - Number of landowners implementing best management practices in addressing weed issues. Number of producers/small landowners adopting weed, crop, pest and forage management strategies. Local landowners will become more profitable while protecting the environment.</p> <p>4 ENVIRONMENTALLY SENSITIVE MANAGEMENT SYSTEMS - Number of producers/landowners adopting practices outlines in their management plans, including their specific IPM problem.</p>

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5	WATER QUALITY - Number of people regularly testing their wells, tracking well water quality over time thus making decisions for water safety.
6	PEST MANAGEMENT - Number of people using accepted practices and protocols for safely applying pesticides.

**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

Public Policy changes

Government Regulations

Competing Public priorities

Competing Programmatic Challenges

Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

{No Data Entered}

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

**1. Evaluation Studies Planned**

Before-After (before and after program)

During (during program)

Time series (multiple points before and after program)

Case Study

Comparison between locales where the program operates and sites without program intervention

**Evaluation Results**

Programs in this area are connected to research specialists on campus. Specific goals and targets are established through that process along with methods of data collection.

**Key Items of Evaluation**