

## APPENDIX H

### SHIELDS VALLEY WATERSHED GROUP RESTORATION PRIORITIES

The priorities listed within this Appendix are part of the 2008 Shields Valley Watershed Group Work Plan. It contains numerous objectives and tasks that pertain to four overarching goals related to the management of noxious weeds, agricultural land, water resources/irrigation, and wildlife. Restoration priorities directly related to water quality and quantity are not project-specific, but can be used by stakeholders in conjunction with other recommendations from this document to guide prioritization of time and resources for TMDL implementation.

**GOAL 1: Pests:** Reduce the spread of small and large infestations using an integrated management approach.

**Objective A:** Control the spread of noxious and invasive weeds of special concern:

Spotted Knapweed	Saltcedar
Diffused Knapweed	Purple Loosestrife
Leafy Spurge	Perennial Pepperweed
Burdock	Oxeye Daisy
Mullein	Field Bindweed
Musk Thistle	Dyers Woad
Dalmatian Toadflax	Common Tansy
Yellow Toadflax	Common St. Johnswort
Sulphur Cinquefoil	Canada Thistle
Houndstongue	

**Action Item 1:**

- ◆ The Shields Valley Watershed Group will actively support weed control efforts including coordinating herbicide applicator training, delineating priority weed control areas, and organizing integrated pest management (IPM) projects throughout the Shields Valley.
  - Actively address these items through the 2008 Weed Fair.

Timeline: Ongoing & March 2008

**Action Item 2:**

- ◆ Conduct goat/sheep grazing seminars and provide information.
  - Continue to advertise the availability of the electric sheep fence to target grazing noxious weed infestations on small parcels.
  - Make noxious weed grazing information available at meetings and at the Park CD office.

Timeline: Ongoing & March 2008

**Action Item 3:**

- ◆ Promote biological control of noxious weeds.
  - Educate landowners of biological control methods available to them.

- Provide bug nets for landowners to borrow and supply a bug sorter for bug collectors to use.

Timeline: Ongoing & March 2008

**Objective B:** Increase public awareness on the economic and environmental damage caused by the spread of noxious weeds.

**Action Item 1:**

- ♦ Sponsor the Annual Weed Fair/BBQ
  - Agenda Includes: Weed ID, Herbicide Product Selection, grazing management, obtaining a chemical license.

Timeline: March 2008

**Action Item 2:**

- ♦ The Shields Valley Watershed Group will participate in the development of the Park County Cooperative Weed Management Area. This is an intergraded effort from all surrounding federal, state, and private agencies along with the help of landowners in both watershed groups.
  - At lease one representative from the watershed will attend the CWMA meetings and then update the group at the monthly meetings.
  - The coordinator will provide necessary information in order to keep this weed effort ongoing.

Timeline: Ongoing

**Action Item 3:**

- ♦ Combining the locations of weed infestations onto maps of the Park County Cooperative Weed Management Area.
  - Make large maps of the Shields Valley Watershed with ArcView and the help of the Livingston Forest Service.
  - Illustrate and monitor where noxious weeds are on the large maps of the Shields Valley.

Timeline: Ongoing

**Action Item 4:**

- ♦ Disseminate weed control brochures and calendars at local watershed meetings and through the Park CD to encourage small acreage landowners to help in the War on Weeds targeting new and existing subdivisions.

Timeline: Ongoing

**Action Item 5:**

- ♦ Make personal contacts to encourage landowners to participate in educational activities and weed control projects through workshops, public outreach and media.
  - Sponsor a free GIS/GPS training workshop with the purpose of mapping the weeds on landowner's property.

- Insure that all landowners are aware of the two trailer mounted weed sprayers located within the district.

Timeline: Ongoing & summer 2008

**Objective C:** Increase public awareness on the economic and environmental damage caused by the crop consuming insects and rodents.

**Action Item 1:**

- ♦ Schedule a pest education speaker for the watershed meeting or mentoring to inform landowners about the different ways to control pests.

Timeline: Summer 2008

**GOAL 2: Rangeland, Cropland and Pasture.** Promote sound range, crop and pasture management and develop appropriate management goals and practices.

**Objective A:** Conduct range, crop and pasture education and outreach to members within the watershed group.

**Action Item 1:**

- ♦ Educate about proper rangeland monitoring, best management practices and how to become better stewards of the land.

Timeline: Spring 2009

**Action Item 2:**

- ♦ Educate and conduct an outreach to landowners through watershed speakers about animal nutrition and health management for animals that live off rangeland and pastures.

Timeline: Fall 2008

**Action Item 3:**

- ♦ Educate the landowners about fire ecology and its benefits and also ways to prevent forest fires.

Timeline: Summer 2008

**Action Item 4:**

- ♦ Conduct ranch tours as an education outreach to landowners so they can observe other landowners technology and management practices.

Timeline: Fall 2008

**Objective B:** Increase landowners' involvement with programs that help improve their land's natural resources to sustain future generations for production, recreation, and wildlife habitat.

**Action Item 1:**

- ♦ Promote the use of programs that help landowners increase good management goals, planning, and monitoring skills through watershed speakers and workshops.

Timeline: Ongoing

**Action Item 2:**

- ♦ Educate landowners about programs that will help increase their productivity through new or improved operations. Such as, Land EKG, sustainable agriculture, niche markets and alternative energy.

Timeline: Winter 2008

**Action Item 3:**

- ♦ Keep the watershed landowners updated with new and improved ways to live off their land.
  - Continue to offer informational pamphlets and brochures on new and improved programs/operations.

Timeline: Ongoing

**GOAL 3: Water/Irrigation:** Encourage private landowners to make decisions based on maintaining the economic value and ecological vitality of water sources in the Shields Valley.

**Objective A:** Maintain and/or expand existing populations of Yellowstone Cutthroat Trout and other significant fish species in the Upper Shields River Watershed.

**Action Item 1:**

- ♦ Continue to monitor trends of the Yellowstone Cutthroat Trout populations throughout the watershed.
  - Montana FWP will provide an extensive update at least once each year and cutthroat updates when available. Last detailed update: January 3, 2008.

Timeline: Ongoing & August 2008

**Action Item 2:**

- ♦ Identify and prioritize stream reaches in the watershed for fish habitat and spawning improvement projects in both the Shields River main stem and tributaries.

Timeline: Ongoing

**Action Item 3:**

- ♦ Fish Entrainment Prevention Projects.
  - Continue to sponsor and help identify Fish Wildlife and Parks future fish entrainment prevention projects within watershed membership group with the help of the Park Conservation District

- Promote fish friendly structures such as fish ladders, and find funding for those willing to install them.

Timeline: Ongoing

**Objective B:** Improve the health and condition of the stream corridor along the Shields River mainstem and its major tributaries. Direct benefits include increased forage production, improved fishery and wildlife habitat, reduction in the loss of land through bank erosion, wetland enhancement and improved water quality, and higher property values.

**Action Item 1:**

- ♦ Promote necessary bank stabilization projects that will meet landowner objectives while not significantly affecting natural stream dynamics, both on-site and cumulatively.

Timeline: Ongoing

**Action Item 2:**

- ♦ Promote the use of concrete blocks for irrigation diversions.
  - Work with NRCS, Park Conservation District, and other agencies to implement the use of these blocks.

Timeline: Ongoing

**Action Item 3:**

- ♦ The SVWG will continue to evaluate the state of the watershed; identifying areas in need of riparian and/or restoration activities; establishing best methods for improving the identified areas; prioritizing the areas for riparian and/or restoration activities.

Timeline: Ongoing

**Action Item 4:**

- ♦ Continuation of Seal-It project (2004 MACD – LEP funded project). This product will be advertised through the watersheds and Park CD and available for 2008-2009 projects until the entire product is gone.

Timeline: Spring/Summer 2008

**Objective C:** Manage stream flows within the watershed to maximize benefits for the fish, wildlife, and agricultural users.

**Action Item 1:**

- ♦ Promote the efficient use of irrigation water using pivots, water meters, and water-saving techniques.

Timeline: Ongoing

**Action Item 2:**

- ◆ Support the monitoring of stream flows and irrigation withdrawals at locations of concern that support Yellowstone cutthroat trout and development of conservation and better management practices.

Timeline: Ongoing

**Action Item 3:**

- ◆ Increase efficiency and lower costs of energy by promoting and educating landowners about alternative energy using micro hydroelectric plants on their operation with the help of the Park CD and Josh Kellar with RC&D.

Timeline: Summer 2008

**Objective C:** Improve water quality throughout the Shields Watershed.

**Action Item 1:**

- ◆ Update the SVWG on all incoming information from the DEQ and consulting firms about the TMDL process.

Timeline: Ongoing

**Action Item 2:**

- ◆ Provide local coordination of public outreach activities for completion of the Shields Planning Area sediment TMDL.
  - Plan and organize meetings for presentation of the final TMDL document to the public and stakeholders for public review.
  - Distribute the final document to interested parties.
  - Help create and maintain contact with the Technical Advisory Committee.

Timeline: Ongoing

**Action Item 3:**

- ◆ Actively participate in the development of the Water Quality Restoration Plan/TMDL for the impaired stream reaches in the Shields Valley Watershed.

Timeline: Ongoing

**Action Item 4:**

- ◆ The SVWG will continue to evaluate and identify areas in need of riparian and/or restoration activities; establishing best methods for improving the identified areas; prioritizing the areas for riparian and/or restoration activities through the use of the TMDL document and help from the Park CD.

Timeline: Ongoing

**Action Item 5:**

- ◆ Host informational meetings/workshops for landowners in the watershed on non-point water quality issues and laws that pertain to riparian management, concentrated livestock areas, and rural subdivision impacts.

Timeline: Ongoing

**Action Item 6:**

- ◆ Promote best management practices through education, outreach, and restoration projects.

Timeline: Ongoing

**GOAL 4: Wildlife.** Maintain reasonable numbers of wildlife, (game birds, game animals, and native species) without negative impact on the health of the land and livestock.

**Objective A:** Maintain and educate wildlife management practices while collaborating with the state of Montana.

**Action Item 1:**

- ◆ Educate and support the landowners with the troubles of surrounding wildlife that cause damage to their production.
  - The SVWG will continue to educate landowners in the watershed area about deer/elk populations and hunting permits.

Timeline: Winter 2008

**Action Item 2:**

- ◆ Educate landowners about current laws and regulations in regards to wildlife and private/public property.
  - The SVWG will continue to educate landowners in the watershed area about deer/elk populations and hunting permits.

Timeline: Winter 2008

