

Appendix 11

Guidelines for a Management Plan (MP) and an Annual Operating Plan (AOP)

The following prototypes are examples of actual Management Plans and Annual Operating Plans used by the agencies listed under each plan.

Note: Any page or appendix references in the following examples are to pages or appendices within the samples and do not relate to other portions of the Guidelines for Coordinated Management of Noxious Weeds manual.

Remember that in actual weed management situations not all the elements addressed in Section VI, “Management Plan/Annual Operating Plan” will necessarily be addressed in any one plan. Thus, the following prototypes serve only as examples as how completed plans will look in the specific situations described for each plan.

Your WMA objectives should answer the needs of your individual WMA and may not need to address all aspects of noxious weed management listed in the examples. The need for and prioritization of the following objectives will vary between WMAs. It is important to consider each of these core objectives. Success is greatest when an integrated plan is developed and implemented.

- Develop and maintain an inventory.
- Develop and maintain funding and administration.
- Develop awareness, education, and training programs.
- Develop prevention and early detection programs.
- Develop long-term management objectives for weeds of concern, according to the WMA prioritization.
- Develop and maintain monitoring and evaluation.
- Develop and maintain a reporting system.

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I. Prototype Management Plan (MP)

Clarksfork Weed Management Area (CFWMA) Management Plan (MP)

A. Define/Describe the WMA

The CFWMA includes all the land within the drainage area of the Clarksfork of the Yellowstone River, from the headwaters to its emergence from the Clarksfork Canyon near Clark, Wyoming.

Included in the CFWMA are lands within the legal boundaries of the Wyoming county of Park and the Montana counties of Park and Carbon. Legal jurisdiction of public lands include the U.S. Forest Districts of Clarksfork and Gallatin, the Absaroka-Beartooth Wilderness, and the Wyoming Game and Fish Department. Private lands include ranches, tourist facilities, seasonal cabins, subdivisions, incorporated townsites, and private game sanctuaries.

Recreation is the major use of the lands within the CFWMA. Activities include sight-seeing, big game hunting, camping, snowmobiling, back country hiking, and fishing. Agricultural uses include ranching, hay production, and livestock grazing of both sheep and cattle. Commercial uses include tourism, lumber production, and commerce.

The topography consists of mountains and intermountain valleys. The elevation varies from 12,799 feet at Granite Peak to less than 5,000 feet at the mouth of the Clarksfork Canyon. All species of North American wildlife are found in the area. Some of the lower areas serve as a wintering and calving range for the Yellowstone elk herds. Mule deer, moose, and big horn sheep can also be found in the area included in the CFWMA. An abundance of high mountain lakes and streams support many species of fish including arctic grayling and brook, cutthroat, rainbow, brown, lake, and golden trout.

Vegetation is typical to that found in high mountain meadows, and the forests include a variety of pine trees and aspen. Cultivated lands are usually planted to a mixture of grasses and legumes which are either grazed or harvested for livestock and wildlife feed. Irrigation is limited to flood irrigation from water diverted from either streams or rivers.

The CFWMA is heavily impacted during the summer months by tourists entering or leaving Yellowstone National Park

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(YNP) by the Northeast entrance. The town of Cooke City provides commerce for the tourists and residents of the area. Both the Beartooth and the Chief Joseph highways are designated as scenic highways and are recommended tour routes by many private and public information agencies. Small subdivisions have been established on several parcels of private land, and seasonal cabins and houses are found on both private and special use public lands.

B. Define Purpose of WMA Management Plan.

This management plan is established to comply with the concept of a master plan for noxious weed control in the Greater Yellowstone Area (GYA). It is intended to concentrate available resources and capital on the noxious weed problem regardless of political boundaries. Through the cooperation of all agencies and individuals involved, it is the objective of this plan to prevent, contain, reduce, and hopefully eradicate noxious weeds in the Clarksfork Weed Management Area (CFWMA).

C. Define WMA Objectives

1. Objective #1: Develop and maintain an inventory.

Mapping and documenting noxious weed infestations will be executed in the manner described in Section V, "Inventory." (Additional guidelines will be obtained from Noxious Weed Management Planning Guidelines Workbook available from by Ag West Communications, Ft. Collins, CO) The agencies involved will be responsible for furnishing the required topography maps for the lands under their jurisdiction. The maps will be updated on a regular basis, with newly reported infestations and previously treated areas clearly indicated. All agencies will offer input into the location and identification of infestations and the Clarksfork Ranger District shall be responsible for updating and maintaining the maps.

2. Objective #2: Develop awareness, education, and training.

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Concern for the control of noxious weed in the CFWMA has been expressed from several different interest groups. Livestock producers find that weed compete with the more nutritious and palatable plants used by grazing animals. In addition, the movement of weeds onto lands not previously infested is a real concern. Hunters and other people interested in the recreation opportunities found in the CFWMA are concerned about the loss of habitat and feed for wildlife. Because most weeds have no or few natural enemies, they have the potential of rapidly multiplying and disrupting the present ecosystem.

3. Objective #3: Gravel pits.

Two gravel pits within the CFWMA have been identified as having infestations of specific noxious weeds not known to existed anywhere else in the area. Musk thistle was first identified at the temporary gravel storage area at the base of Dead Indian Pass in 1979 and spotted knapweed was known be present in the Pilot Creek gravel pit as early as 1977.

4. Objective #4: Trailheads.

Another source of infestation is near trailheads where horses and other livestock are unloaded from vehicles, held in confinement for a period of time, and fed un-processed feeds, such as hay. Other infestations have been reported along heavily used trails of both live-stock and wildlife. Both the disturbance of soil and the introduction of noxious weeds through animal waste cause an increase in noxious weed infestations.

5. Objective #5: Spotted knapweed.

Because of its potential to spread, spotted knapweed is the weed of major concern. There is a vast seed source of this weed in areas adjacent to the CFWMA which is introduced into the management area by vehicles and man. Failure to control just one infestation within the management area will produce a seed source which will cause an increase in the total number of infested acres in the CFWMA.

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6. Objective #6: Ox-eye daisy and Dalmatian toadflax.

Ox-eye daisy and Dalmatian toadflax are easily disseminated by tourists and residents picking the flowers for their aesthetic value. Ox-eye daisy is found west of the CFWMA and Dalmatian toadflax is a major weed problem in the Mammoth area of YNP.

7. Objective #7 Canada Thistle.

The most abundant weed found in the CFWMA is Canada thistle. However, it has become so established that eradication is no longer a viable option and only containment and reduction should be considered with available methods.

D. Define WMA Weeds of Concern.

Noxious weeds have been introduced into the CFWMA from a variety of sources. The most obvious infestations seem to have started along the highway rights-of-way. This is supported by visual observations of noxious weeds such as ox-eye daisy and spotted knapweed being found along the Beartooth and Chief Joseph Scenic Highways and nowhere else in the CFWMA.

Many other infestations have been identified in areas that have been disturbed by man. Areas where timber sales have occurred are often heavily infested with noxious weeds. The combination of removing the native vegetation for the building of roads, reducing soil compaction by disturbing the soil, and the introduction of noxious weed seeds from contaminated equipment, all enhance the introduction, increase, and spread of noxious weeds.

Noxious weeds known to exist in the CFWMA include:

Canada thistle (*Cirsium arvense*)
Common burdock (*Arctium minus*)
Dalmatian toadflax (*Linaria dalmatica*)
Field bindweed (*Convolvus arvensis*)
Hoary cress (*Cardaria draba*)
Houndstongue (*Cynoglossum officinale*)

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Musk thistle (*Carduus nutans*)
Ox-eye daisy (*Chrysanthemum leucanthemum*)
Perennial sowthistle (*Sonchus arvensis*)
Spotted knapweed (*Centaurea maculosa*)
Yellow toadflax (*Linaria vulgaris*)

E. Define WMA Policy

1. Commitment to use Integrated Weed Management:

A complete integrated weed management (IWM) system shall be implemented in accordance with the guidelines in Section VII. Each infestation will be evaluated based on location, species of weed, non-target vegetation, intended land use, and topography. The actual control method to be used on each infestation will be stated in the yearly action plan. Pesticide application will be in accordance with label instructions and all safety precautions specified in the material safety data sheets (MSDS) shall be followed. A comprehensive safety plan shall be established and followed.

2. Establish adherence to management of noxious weeds in accordance with GYA priorities:

Priorities will be based on two considerations. The first consideration will be the specific weed and its potential of spreading into areas not previously infested. Weeds which have not been previously detected or are found in small, isolated spots within the CFWMA will receive first priority. Attempts will be made to eradicate the new infestation and to determine the source. If possible, control measures will be implemented to prevent re-infestation.

The second basis for priority of weed control practices will be the location of the infestation in relationship to topography and usage by man and livestock. Infestations at the head of water sheds, along trails of high seasonal use, and areas of intense grazing are the types of areas which shall receive first consideration when initiating a plan of work.

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II. Prototype Annual Operating Plan (AOP)

CLARKSFORK WEED MANAGEMENT AREA (CFWMA) Annual Operating Plan (AOP)

A. Define Roles and Responsibilities.

1. Agencies directly involved with the CFWMA by providing funding, resources, or expertise include:

Park County Weed and Pest Control District, Powell, WY
Park County Weed District, Livingston, MT
Carbon County Weed District, Joliet, MT
Wyoming Department of Agriculture, Cheyenne, WY
Montana Agriculture Department, Helena, MT
Shoshone National Forest, Clarksfork Dist., Powell, WY
Gallatin National Forest, Gardiner Dist., Gardiner, MT
Wyoming Game and Fish Department, Cheyenne, WY
University of Wyoming, Laramie, WY
Montana State university, Bozeman, MT

2. Define signatures required.

(Title), Park County Weed and Pest Control District

(Title), Shoshone Nat'l Forest Clarksfork Ranger District

(Title), Park County Weed Control District

(Title), Gallatin Nat'l Forest Gardiner Ranger District

(Title), Carbon County Weed Control District

(Title), Wyoming Department of Agriculture

(Title), Wyoming Game and Fish Department

(Title), Montana Department of Agriculture

(Title), University of Wyoming

(Title), Montana State University

3. Define terms and time of termination.

This management plan shall remain in affect until terminated by mutual consent of the agencies involved.

Agencies that have been consulted and will be included in long range planning include:

Yellowstone National Park, Mammoth, YNP
Custer National Forest, Beartooth District, Red Lodge, MT

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Montana Department of Transportation
Wyoming Highway Department, Cody Maintenance Area,
Cody, WY
Greater Yellowstone Area Coordinating Committee, Billings,
MT
Townsite of Cooke City, Cooke City, MT
Wyoming Highway Patrol, Cheyenne, WY
Montana Highway Patrol, Helena, MT
Wyoming State Extension Service, Laramie and Cody, WY
Montana State Extension Service, Bozeman and Livingston,
MT

B. Define Annual Funding and Resource Availability.

The following agencies agree to provide:

1. Park County Weed and Pest Control Dist. (PCWPCD), Powell, WY.
 - a. The cost of all herbicides used in the chemical treatment of spotted knapweed.
 - b. The administration to implement, coordinate, and carry out the CFWMA management plan.
 - c. Application equipment (under contract to PCWPCD) for the chemical treatment of noxious weeds in the CFWMA. The first 20 hours will be without remuneration. The balance of the application time will be reimbursed at actual cost.
2. Park County Weed District, Livingston, MT.
 - a. Use of their application equipment. The first 20 hours will be without remuneration. The balance of time will be reimbursed at actual cost.
 - b. The cost of all herbicides used in treatment of Dalmatian toadflax.
3. Carbon County Weed District, Joliet, MT.
 - a. Use of their application equipment. The first 20 hours will be without remuneration. The balance of time will be reimbursed at actual costs.
 - b. The cost of all herbicides used in treatment of leafy spurge.

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4. Wyoming Department of Agriculture, Cheyenne, WY.
 - a. Printing, copying and mailing cost associated with the producing both the management plan and the action plan for the CFWMA.
 5. Montana Agriculture Department, Helena, MT.
 - a. The cost of creating, printing and distributing a brochure explaining the concept of a management plan for the CFWMA.
 6. Shoshone National Forest, Clarksfork District, Powell, WY.
 - a. \$3500.00 toward the cost of herbicide control.
 - b. \$500.00 toward the cost of introduction of biological control into the CFWMA.
 7. Gallatin National Forest, Gardiner District, Gardiner, MT.
 - a. \$2000.00 toward the cost of herbicide control.
 - b. \$500.00 toward the introduction of biological control into the CFWMA.
 8. Wyoming Game and Fish Department, Cheyenne, WY.
 - a. \$500.00 toward the cost of herbicide control.
 - b. \$500./00 toward the introduction of biological control into the CFWMA.
 9. University of Wyoming, Laramie, WY.
 - a. One herbicide control research plot.
 10. Montana State University, Bozeman, MT.
 - a. One biological control research plot.
- C. Define Proposed Actions To Meet Annual Objectives.
1. Chemical treatment may include Tordon 22k, Banvel, Transline stinger, or 2,4-D. The selection of herbicide will be determined on-site by using the "Turn Around, Look Around" method of decision making recommended in the video film of the same name. All pesticides will be used within recommended label rates as suggested by the University of Wyoming's Recommended Weed Control Guide.

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Chemical control will continue with emphasis on new infestations or small areas of weeds. Retreatment will be conducted as needed and a variety of approved products will be used to prevent the chance of developing plant resistance.

2. Mechanical control practices will be limited to those areas where single plants or small patches of spotted knapweed are located. After chemical treatment, seed heads will be removed and carried to an area safe for burning. Removal of the entire plant or seed head will be conducted only if it is reasonable for the existing situation.

Mechanical control will be used when seed head removal is a viable control method or non-target vegetation prevents the use of herbicides. Because labor in mechanical control is so costly, hand labor will only be used in areas of high priority and high sensitivity.

3. Preventive plans shall include the adoption of the recommended "Weed Free Certification Program", originated by the Wyoming Department of Agriculture. Specific plans shall be finalized through cooperation with the Forest Service, the Park County Weed and Pest Control District, the Park County Sheriff Department, and the Wyoming and Montana Highway Patrol. All livestock and wildlife feed introduced into the CFWMA shall meet the standards of the "Weed Free Certification Program."

Preventative methods will continue to be implemented whenever possible. The "Weed Free Certification Program" will continue to be enforced and cooperative agreements entered into with enforcement agencies. The Wyoming and Montana Extension Services will present education programs on a regular basis for the private and public sector within the CFWMA. The Park County Weed and Pest Control District will work with the Forest Service to educate both the temporary and permanent employees on noxious weed identification and survey methods.

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4. Biological control will include the introduction of approved insects or pathogens on known areas of Canada thistle. The Montana State Extension Service shall supply the recommendations and the control agent introduction will be made by the Park County (MT) Extension Service.

Biological control will be initiated and monitored throughout the CFWMA. Emphasis will be placed on biological control agents that adversely affect Canada thistle and other weeds which are widespread and prevalent throughout the CFWMA. The University of Wyoming and Montana State University will be the lead agencies in biological control.

5. The first priority will be all trailheads and other disturbed sites with vehicle access. Chemical treatments will start at Colter Pass and continue west along the Beartooth Highway to Twin Lakes Scenic Vista near the summit of the Beartooth Range. Additional treatment will start at the junction of the Beartooth Highway and Chief Joseph Scenic Highway and continue over Dead Indian Pass to the Forest Service boundary and will include those areas associated with the Sunlight Creek Road. Treatment methods for this portion will consist of a truck mounted spray unit with hand held nozzles and two operators per unit.
6. The second priority will be areas such as subdivisions and seasonal cabins. The weed districts will be responsible for enforcing weed control on private land. The cost of treatment will be the responsibility of the landowner but the weed districts can use any cost share program they wish to help defray the expenses. Treatment methods will be left to the discretion of the landowner and the weed district supervisor.
7. The third priority will be along heavily used access trails. Specific trails will be identified by Forest Service personnel during the first months of the summer and incorporated into this plan. Method of treatment for this portion of the program will consist of backpacked or horse mounted units.

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D. Evaluate program effectiveness. Program coordinators will evaluate the effectiveness of each treatment method at the appropriate time of the year.

E. Develop and maintain an inventory.

If additional funds exist, the balance will be used to survey and map areas of suspected infestation. These areas will include wetlands, regions of intense livestock grazing, and areas of intensified concentration of wildlife. Mapping of these areas will conform with the recommendations in Section V.

F. Develop and maintain a reporting system.

A meeting of the involved agencies shall be held annually, during the first three months of the calendar year, to develop and modify the action plan. Such action plan shall be attached to management plan and shall become an intricate part of this document.