YELLOWSTONE COUNTY NOXIOUS WEED MANAGEMENT PLAN

DECEMBER 2018

PURPOSE STATEMENT

Yellowstone County encompasses nearly 2,648 square miles and is home to Montana's largest city. Noxious weeds have a negative impact on nearly all aspects of life in the County from aesthetics to economics. Utilizing the authority granted by the Montana State Weed Law, the County is committed to the effective management of State and County declared noxious weeds. To do this the County assists the general public and landowners in their responsibilities to control noxious weeds. Additionally, the County continually upgrades programs to better manage weed infestations on County, State and Federal lands. This plan identifies the goals and priorities for the Yellowstone County Weed Department in its control efforts.

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EXECUTIVE SUMMARY

Yellowstone County is not alone in its efforts to control Noxious Weeds in Montana. We as the County Weed District Board recognize that we are in an evolving ecosystem that complicates the control and mitigation of noxious weeds. Noxious Weeds have become established and are rapidly spreading in Yellowstone County and the entire state. It is Yellowstone County's intent to comply with the Noxious Weed Law as set forth in the Montana Weed Management Act, Title 7, Chapter 22, Sections 2101 through 2153 of Montana Codes Annotated. (See Attached Montana County Noxious Weed Control Act and Administrative Rules)

The Yellowstone County Weed District has built this plan on four pillars; education/prevention, biological control, chemical control, and enforcement. These four pillars of the plan make up the term we call **Integrated Weed Management (IWM).** With the use of IWM, Yellowstone County Weed District can help control the propagation and spread of Noxious Weeds in Yellowstone County. Noxious Weeds are non-native plants that have become established or are introduced in the state. They render land unfit for agriculture, forestry, livestock, wildlife, commercial development, or other beneficial uses. These plants are designated as "Noxious" by rule of the Montana Department of Agriculture or as a District Noxious Weed by the Yellowstone County Weed Board.

Integrated Weed Management Program (IWM) - Yellowstone County Weed Board recognizes that sustainable and cost effective weed management requires an integrated approach. Integrated weed management includes procedures that reduce weed population numbers, reduce weed vigor, and increases the competitiveness of desirable species. The IWM program will also consider all environmental, public, and other agency concerns.

A synopsis of the four parts of the Integrated Weed Management Plan of the Yellowstone County Weed District are below:

(a) Education/Prevention - This starts with elementary school programs, workshops for small acreage landowners, realtors and city, state and federal agencies. It continues with yearly training programs for commercial applicators. Informational avenues for cultural and mechanical control include a county website, and public access to the **Weed Department** for advice and information. Education/Prevention is the best tool; encouraging landowners to use land management techniques such as domesticated animals, mechanical weed control, herbicide applications, and the use of high percent

pure live seed or certified seed when reseeding disturbed areas or new pastures effectively reduces weed populations. (Please refer to the section on Public Education which follows the four parts of Integrated Weed Management).

(b) Biological control – the **Weed Department** procures insects for noxious weed control for both governmental and private landowners. Workshops are available for teachers and FFA programs for the building of insectaries. Effectiveness with biological control insects depends on herbicide rates and timing of application and size of infestation; also taking into consideration the density of existing competitive vegetation and soil type and temperature.

(c) Chemical control – The **Weed Department** sprays on county roads, with mapping and follow-up for continuous improvement of noxious weed control in Yellowstone County. A cost share program and sprayer equipment rentals are available to the public. The county does not sell nor will it supply landowners with herbicide for control of noxious weeds.

(d) Enforcement – The **Weed Department** identifies Noxious Weed problems, their location, infestation levels and utilizes the guidelines set forth in this management plan to control those noxious weeds. Yellowstone County Weed District has Memorandums of Understanding (MOU's) for noxious weed control with the Cities of Billings, Broadview, and Laurel. Montana State Weed Law requires a three (3) year Noxious Weed Management Plan on subdivisions and gravel pits that are owned privately, or by state and federal agencies. The plan is submitted to the **Weed Department** for approval, and the department follows up with a three year monitoring and inspection program.

A more specific outline of IWM tasks are found in the "Goals and Priorities" section on pages 7 and 8.

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PUBLIC EDUCATION

The Yellowstone County Weed District will continue to develop a coordinated public relations program, including media and other activities to stimulate all residents of Yellowstone County to be able to identify and properly control noxious weeds. Education and involvement of all Yellowstone County residents is crucial. The Weed District must make residents aware of the seriousness of the problem, enlist their support and encourage them to be active participants in the noxious weed control effort. The effort will be aimed both at stopping the spread of noxious weeds and eradicating or controlling existing infestations. The Yellowstone County Weed District will conduct countywide programs targeted to key groups, not just agriculture. Without such an effort, the following problems would arise:

1. Existing noxious weed problem would continue to spread.

2. Noxious weeds will spread by area residents inadvertently.
3. Yellowstone County's natural resource base will erode.
4. An uninformed public could lead to less funding for noxious weed control efforts in the future.

A. SPECIFIC OBJECTIVES

1. Increase awareness of the environmental and economic damage caused by noxious weeds.
2. Educate people on proper identification of noxious weeds.
3. Develop a public interest and assist and support all efforts of weed control, including spray equipment rental, technical advice and the developing of weed management plans.

B. PLAN OF ACTION

1. The Yellowstone County Weed Control District will administer the program. The Weed District will continually evaluate the level of awareness in the county and determine what methods of education are most effective. A budget of approximately one thousand dollars will be set aside annually for the public education effort.
2. Target audiences; while the target audience is everyone in Yellowstone County, the District has broken down the audience into smaller segments so that individual group's needs and concerns can better be addressed.

**Federal, State and local officials – Since public agencies in Yellowstone County are actively involved in noxious weed control, efforts will be directed towards helping them educate their users about noxious weeds. Specifically, efforts will be about preventing the spread of noxious weeds onto public lands.

**Urban residents and businesses – These individuals may have noxious weeds in alleys, vacant lots, yards, etc. without knowing the potential problem of transporting them to other areas. Key subgroups include the construction industry, utility companies and realtors.

**Environmental groups – Because noxious weeds can destroy natural ecosystems, environmental groups throughout the Yellowstone Valley should be encouraged to aid in the battle against noxious weeds.

**Farmers and Ranchers – The very individuals whose livelihood depends on the productivity of the land may unknowingly contribute to the noxious weed problem. They may use contaminated seed, hay or equipment which spread noxious weeds during the course of normal farming or ranching practices.

**School Age Children and Instructors – There is an opportunity to reach both teachers and students by providing audio, visual and other classroom material to this group. This includes 4-H, FFA classes, Boy Scouts, Girl Scouts and grade school biology and science classes. A partnership- program at the NILE has been established with the Soil Conservation District.

GOALS AND PRIORITIES

The Yellowstone County Weed District has developed goals and priorities in conjunction with the County Noxious Weed Control Act, Title 7, Chapter 22 Montana Codes Annotated 2001, Administrative Rules 4.5.201 through 4.5.203 State of Montana, Department of Agriculture.

1. District supervisor and staff shall be available for programs in noxious weed education and IPM (integrated pest management) to all groups in the District.

2. The Weed District shall establish effective weed management criteria for all Priority 1A &1B, 2A &2B, Priority 3, and county designated noxious weeds within the boundaries of Yellowstone County.

3. The Weed District shall enter into written agreements with all state and federal agencies with land holdings in the District. The agreement should include education, mapping and control measures for noxious weeds present on property under agency jurisdiction. MOU's (memorandum of understanding) will be signed by Weed Board Chairman.

4. The Weed District shall continue to chemically control noxious weeds on county rights-of-way.

5. Assist landowners in forming cooperative weed management groups to organize and carry out their plans. This includes weed trust fund applications as weed district resources allow. Landowner involvement is vital to the success of any landowner's group grants and cooperative weed management areas. The supervisor will determine what areas would qualify as a weed management area. The supervisor shall meet with area committees when discrepancies arise.

6. Promote professional, well-educated staff and high quality information and educational materials on weed management, using all available resources.

7. Assist in the monitoring of biological agent release sites for establishment, population increase or decline, potential collection sites and additional release sites. Also evaluate the containment of the noxious weed species and revegetation of desirable plant species.

8. Take all necessary action including weed law enforcement and posting to control the noxious weed spread in Yellowstone County.

9. Attend yearly crew training covering environmental and chemical issues including safety.

10. The Weed District shall continue to contract with the appropriate federal, state, and local agencies for the spraying of the noxious weeds upon its properties.

11. Upon request, if resources are available, the Weed District will contract and carry out work for additional agencies or private landowners under enforcement action.

12. Target eradication for Priority 1A /1B and 2A noxious weeds wherever possible and/or feasible.

13. The Weed Board shall take timely action on administrative hearings and appeals whenever a person is adversely affected by a notice, action or order of the District Board or Supervisor and the Board shall follow procedures set forth in Sec. 7-22-2110.

14. Gravel pits and piles belonging to Yellowstone County and private ownership shall be targeted for noxious weed eradication. The Board, in cooperation with DEQ, requires that all new gravel pits be inspected by Weed Department personnel and a noxious weed management plan completed before gravel is removed. Closures may take effect if compliance is not obtained. (See attached)

15. Abandoned pits shall be reseeded according to a State/District approved revegetation plan. The Department of Environmental Quality will be involved in all revegetation recommendations. Revegetation will be administered under the guidelines set forth in weed law enforcement.

16. Any state agency or local government unit approving a mine, major facility, transmission line, solid waste facility, highway, subdivision, or any other development resulting in significant disturbance of land within the District shall notify the Board to obtain a revegetation and management plan prior to disturbance.

17. All personnel of local, state, and federal agencies operating within the District shall be encouraged to promote noxious weed management and education and devise and implement effective noxious weed management practices.

18. Mapping of noxious weeds shall progress as time and money permit. All agencies as well as Private landowners shall be encouraged to participate in area mapping.

19. The District shall continue to have a licensed Noxious Weed Seed Free Forage inspector on the premises in cooperation with the Yellowstone County Extension Department.

20. By Board approval, alternative management criteria may be set in conjunction with grant involvement or special management zones.

21. All newly developed subdivisions and gravel pits within Yellowstone County will be inspected by weed department personnel and a 3-year noxious weed management plan must be completed and approved by the Weed District Supervisor, prior to said development.

HISTORICAL WEED DISTRICT INFORMATION
Yellowstone County
Billings, Montana

Yellowstone County levied its first budget for weed, rodent and insect control in 1939. Since this time, the weed board deals mainly with noxious weed control and adopted its first weed management plan in 1994, which is on file at the Yellowstone County Weed Department. The weed plan continues to be developed and improved upon.

Yellowstone County is the 23rd largest county in the state of Montana and encompasses approximately 1,695,240 acres of land or 2,648 square miles located in the south central area of the state. It is bordered on the north by Musselshell, Rosebud and Golden Valley Counties, to the west by Stillwater and Carbon Counties, to the south by Big Horn County and Crow Indian Reservation and to the east by Treasure County.

There are three incorporated cities in the county. They are Billings – population 110,263; Laurel – population 6,943 and Broadview – population 196. There are seven towns in Yellowstone County; Acton, Ballantine, Custer, Huntley, Shepherd, Pompey's Pillar and Worden. Total population including rural areas is approximately 157,048. Yellowstone County is currently the largest county by population in the state.

Right-of-Way Statistics - Yellowstone County right-of-ways consist of, county roads – 1,597 miles of roads which consist of paved, gravel, and subdivision roads. State highways encompass approximately 95 miles of 4-lane interstate and 418 miles of 2-lane secondary and Frontage Roads. Montana Rail Link and Burlington Northern/Santa Fe railways have an active weed control program in place for 140 miles of railroad right-of-way within the county.

Soils of Yellowstone County – Soil mapping was completed in the 1972 soil survey by the Soil Conservation Service. Razor Creek area was digitized on G.I.S. in 1991. The rest of the county soils are currently digitized. There are 14 major soil types out of the 166 soil types in Yellowstone County. They include:

1.) Bainville-Elso-McRae
2.) Cushamn-Bainville
3.) Worland-Bainville-Travessilla
4.) Bainville-Travessilla-Rock Land
5.) Wormser-Lavina-Razer
6.) Pierre-Lismas-Kyle
7.) Midway-Heldt
8.) Miggina-Absarokee
9.) McRai-Lohmiller-Keiser
10.) Vanada-McKinzie-Arvada
11.) Halverson
12.) Bew-Allentine
13.) Wanetta-Keiser
14.) Danvers

Weed Management Criteria – The following criteria apply to management of noxious weeds in Yellowstone County. Noxious Weeds in Yellowstone County are those declared "noxious" by the Weed Board and are prioritized accordingly. These weeds will be managed to achieve two effects: 1) limit and prevent the spread of noxious weeds from existing infestations to uninfected sites and 2) to eventually reduce the overall size of the existing infestations. The following weeds exist in the county and have been declared "noxious" in Yellowstone County by the Yellowstone County Weed Board:

Priority 1A	These weeds are not present in Montana. Management criteria will require eradication if detected; education; and prevention. - Yellow starthistle (*Centaurea solstitialis*) - Dyer's woad (Isatis tinctoria) - Common Reed (Phragmites australis ssp. australis) - Medusahead (Taeniatherum caput-medusae)
Priority 1B	These weeds have limited presence in Montana. Management criteria will require eradication or containment and education. - Knotweed complex (*Polygonum spp.*) - Purple loosestrife (*Lythrum spp*.) - Rush skeletonweed (*Chondrilla juncea*) - Scotch broom (*Cytisus scoparius*) - Blueweed (Echium vulgare)
Priority 2A	These weeds are common in isolated areas of Montana. Management criteria will require eradication or containment where less abundant. **Management shall be prioritized by local weed districts.** - Tansy ragwort (*Senecio jacobaea*) - Meadow hawkweed complex (*Hieracium spp*.) - Orange hawkweed (*Hieracium aurantiacum*) - Tall buttercup (*Ranunculus acris*) - Perennial pepperweed (*Lepidium latifolium*) - Yellowflag iris (*Iris pseudacorus*) - Eurasian watermilfoil (Myriophyllum spicatum) - Flowering rush (Butomus umbellatus) - Common buckthorn (Rhamnus cathartica L.)
Priority 2B	These weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. **Management shall be prioritized by local weed districts.** - Canada thistle (*Cirsium arvense*) - Field bindweed (*Convolvulus arvensis*) - Leafy spurge (*Euphorbia esula*) - Whitetop – Hoary Cress (*Cardaria draba*) - Russian knapweed (*Centaurea repens*) - Spotted knapweed (*Centaurea stoebe* or *maculosa*) - Diffuse knapweed (*Centaurea diffusa*) - Dalmatian toadflax (*Linaria dalmatica*) - St. Johnswort (*Hypericum perforatum*) - Sulfur cinquefoil (*Potentilla recta*) - Common tansy (*Tanacetum vulgare*) - Oxeye daisy (*Chrysanthemum leucanthemum or Leucanthemum vulgare*) - Houndstongue (*Cynoglossum officinale*) - Yellow toadflax (*Linaria vulgaris*) - Saltcedar (*Tamarix spp*.) - Curlyleaf pondweed (Potamogeton crispus) - Hoary alyssum (Berteroa incana)

Priority 3	Regulated Plants: (NOT MONTANA LISTED NOXIOUS WEEDS) These regulated plants have the potential to have significant negative impacts. The plant may not be intentionally spread or sold other than as a contaminant in agricultural products. The state recommends research, education and prevention to minimize the spread of the regulated plant. - Cheatgrass-Downy Brome (*Bromus tectorum*) - Hydrilla (*Hydrilla verticillata*) - Russian olive *(Elaeagnus angustifolia)* - Brazilian waterweed (Egeria densa) - Parrot feather watermilfoil (Myriophyllum aquaticum or M. brasiliense)

COUNTY DESIGNATED

Poison Hemlock (*Conium maculatum L.*)
Puncturevine (*Tribulus terrestris L.*)
Common Mullein (*Verbascum thapsus L.*)
Common Teasel (Dipsacus fullonum L.)
Scotch Thistle (Onopordum acanthium L.)

In addition to the State Declared Noxious Weed list, each county weed district can declare additional non-native plants to be noxious within the county. The Weed Board in Yellowstone County declares the above weeds noxious.

COUNTY DESIGNATED POISONOUS PLANTS

Western Waterhemlock (Cicuta douglasii)
Low Larkspur (Delphinium nuttallianum)
Silverleaf nightshade (Solanum elaegnifolium)
Black henbane (Hyoscyamus niger L.)
Meadow deathcamas (Zigadenus venenosus)
Bittersweet nightshade (Solanum dulcamara)
Black nightshade (Solanum nigrum)
Halogeton (Halogeton glomeratus)

The Weed Board in Yellowstone County declares the above weeds to be poisonous and highly encourages landowners to be aware of these poisonous species and take corrective action to limit their spread.

METHODS OF WEED CONTROL

1. **PREVENTION: The practice of not allowing noxious weeds to become established. Prevention is the most effective, economical and desired weed control practice. Practices include the use of certified seed, the of weed seed free hay, the use of clean gravel, soil and fill dirt, maintaining fence rows, irrigation ditches and all non-crop areas weed free. Always reseed areas that have been disturbed.**

2. **CULTURAL CONTROL: The integration of components to minimize the impact of weeds. Selecting manageable fields, rotating crops, disrupting weed life cycles, planting competitive crops, using pure live seed, and altering planting dates.**

3. **MECHANICAL: Using methods to physically remove target weeds. Cultivation, hoeing, hand pulling, and mowing are commonly used. The use of cultivation is usually limited to farm/crop land and must be persistently cultivated to control perennial weed species. Mowing areas of noxious weeds can work but doesn't necessarily always work on certain noxious weed species. Please contact the Yellowstone County Weed District for further information.**

4. **BIOLOGICAL: Involves the introduction and establishment of selected natural enemies of a particular weed species. This may include insects, fungi, and diseases that attack the target weed while not affecting desirable species. Effective biocontrol depends on the use of several insects that attack different plant parts. Effective biocontrol should increase as insects become more available.**

5. **CHEMICAL CONTROL: The use of herbicides to control noxious weeds. Chemical control is the most commonly used method of weed control. If used properly and according to label directions, herbicides are a very effective means of control. Although chemicals can be expensive, they are still one of the most economic methods of control once weeds become established.**

6. **INTEGRATED PEST MANAGEMENT: One control method itself seldom provides complete control. Integrated pest management (IPM), is approaching weed control by combining two or more methods to improve results. IE: A combination of two from the above list, or one of the above and the use of domesticated animals. The Yellowstone County Weed District provides a sound IPM approach, with detailed involvement in all methods of weed control.**

YELLOWSTONE COUNTY WEED DISTRICT
HERBICIDE/BIOCONTROL COST SHARE PROGRAM

The Yellowstone County Weed District has introduced a "Herbicide Cost Share Program".

This program is designed to assist landowners, landowner groups, subdivisions and small acreage owners with the cost of applied herbicides or biocontrol methods for the control noxious of weeds in Yellowstone County.

Those who qualify will receive a 100% reimbursement with a $500.00 cap.

1. The program applies only to noxious weeds that are listed on Yellowstone County and the State of Montana's noxious weed list.

2. There is a reimbursement cap not exceeding $500.00 per applicant/landowner per year (the year beginning July 1st, year ending June 30th).

3. To qualify and be a participant of this program, the landowner shall have a current application, which includes a written weed management plan, on file at the Weed District Office prior to the treatment; the landowner must be a pre-approved existing participant to receive the reimbursement, which is redeemed after proof of the treatment.

4. The landowner must provide noxious weed application records and the herbicide/biocontrol receipt to the Yellowstone County Weed District after the treatment is complete.

5. The Cost Share Program implemented by the Yellowstone County Weed District only applies to the cost of the herbicide/biocontrol. **It will not cover the cost of additives, equipment rentals, contracted application or other expenses such as labor associated with this cost share program.**

STATE LISTED NOXIOUS WEEDS OF MONTANA

Priority 1A Species

YELLOW STARTHISTLE (Centaurea solstitialis): Photo A - It was introduced from Europe.

Growth Habit: Annual, 2 to 3 feet tall.
Leaves: Bluish green, basal leaves are deeply lobed while upper leaves are entire and pointed.
Stems: Has rigid branching, winged stems covered with a cottony pubescence.
Flowers: Flower heads are yellow, located singly on ends of branches, and armed with sharp straw-colored thorns up to ¾ inch long.
Fruit: Ray flowered are dark-colored without bristles, while fruits from disk flowers are lighter and have a tuft of white bristles.
Roots: Taproot.
Other: "Chewing disease" results when horses are forced to eat this due to lack of forage.

DYER'S WOAD (Isatis tinctoria L.): Photo C - Dyer's Woad is part of the mustard family, and was introduced from Europe during colonial times.

Growth Habit: Biennial or perennial up to 3 ft. tall. Spreads by seed. Rosette formed 1st year, flowering stem elongates 2nd year.
Leaves: Basal rosette leaves are long with soft fine hairs. Stem leaves alternate, have short basal lobes clasping the stem and without hair.
Stems: Woody, upper portion is branched.
Flowers: Small, yellow, 4 petals 1/8-inch across.
Seeds: Plant has many, slightly pear-shaped, winged, black seed pods ½ inch long that hang like ornaments. Each pod contains one seed.
Other: Formerly cultivated in Europe as a source of blue dye.

COMMON REED (Phragmites australis): Photo B

Growth Habit: perennial grass, stems to 15 ft., somewhat rough to the touch, lack fungal spots but some mildew may be present.
Leaves: blue green and darker than the native form; elongate, typically 1-1½ in. wide at their widest point; leaf sheaths adhere tightly to stem and persist through the winter; ligule is less than 1 mm long.
Flowers: fruits and seeds: flowers in bushy panicles, usually purple or golden in color; upper glumes 4.5-7.5 mm, lower glumes 2.5-5.0 mm (most <4.0).
Other: Spreads by seed which is dispersed by wind and water; vegetatively through rhizomes and transport of rhizome fragments. Look-alikes - native form of Phragmites; other large grasses with plume-like inflorescences.

MEDUSAHEAD (Taeniatherum caput-medusae): Photo MM

Growth Habit: Invasive grass that grows 6-20 inches in height, dense spike with long awns and are covered in small barbs.
Leaves: leaves have short, soft hairs
Other: Shallow root system, colonizes sites where existing perennial vegetation has been destroyed or weakened. Frequently replaces cheatgrass on heavier clay soils. Matures later than other annuals and is very unpalatable to livestock at full maturity.

PRIORITY 1B

KNOTWEED COMPLEX (Japanese, Giant, and Himalayan not Prostrate Knotweed) (Polygonum cuspidatum, sachalinense & polystachyum): Photo D - It is a native of Europe and Asia.

Growth Habit: Herbaceous, shrub-like perennial that grows to heights in excess of 10 feet. Grows in riparian areas, upland sites, irrigation ditches and road right-of-ways.
Leaves: 6" long & 3-4" wide; broadly oval to triangular; pointed at tip; alternate on stem.
Stems: Smooth (bamboo-like), stout and swollen at the joints where leafs join the stem. Stems are hollow but may be water-filled depending upon soil moisture levels and where it's growing.
Flowers: Small, pale greenish-white flowers.
Roots: Rhizomes may extend 30' in length.
Seeds: Seeds are triangular, shiny and very small (about 1/10" long).
Other: Buds along length of rhizome develop into new stems depending on environmental & cultural conditions. Digging around base of established plants encourages new vegetative buds to develop along rhizome system. It's spread by sprouts from rhizomes of established plants & by sprouts arising from stems that have been severed from mother plant. Seeds aren't viable outside its native range.

PURPLE LOOSESTRIFE Lythrum salicaria): Photo E - Purple loosestrife is an aquatic native to Europe.

Growth Habit: A hardy perennial that can grow over 8 feet in height in height.
Leaves: Are usually opposite, narrow and elongated with smooth edges and attached directly to the stem.
Stems: A stiff four-sided stem.
Flower: Has 5 or 6 purple-magenta petals that develop on a spike closely attached to the stem.
Roots: Woody taproot with fibrous root system that forms a dense mat.
Other: A mature plant can produce over 1,000,000 tiny seeds in one growing season. This weed rapidly displaces habitat and feed for wildlife. New plants can develop from broken off plant parts.

RUSH SKELETONWEED (Chondrilla juncea L.): Photo F - Rush Skeletonweed was introduced from Europe and is primarily spread by wind.

Growth Habit: Perennial, erect to 4 ft. tall
Leaves: Basal rosette leaves – sharply toothed lance-shaped (dandelion like). Upper leaves – inconspicuous, narrow, smooth margins.

Stems: Bottom 4 to 6 inches has numerous, red, downward bent coarse hairs. Stems smooth above, many branched.
Flowers: Yellow, ¾ inch wide, scattered on branches. 7 to 15 strap-shaped petals are flat across the end terminating with distinct lobes or teeth.
Seeds: Pale brown to black, 1/8 inch long, several ribbed, smooth below with tiny scale projections above, terminated by a long beak with numerous soft white bristles. Have potential to produce 20,000 seeds.
Other: Part of the Sunflower family.

SCOTCH BROOM (Cytisus scoparius): Photo G - It is a native of southern Europe and northern Africa.

Growth Habit: Perennial evergreen shrub that reaches heights of 6-10'. Found in places such as pastures, vacant lands, harvested timberlands and along roadsides and right-of-ways.
Leaves: Mostly trifoliate with ½" long alfalfa-like leaflets.
Stems: Stems are strongly angled and dark green; branches spread slightly from the main stem.
Flowers: Flowers are bright yellow. pea-like, 1" in length and borne in seed axils.
Seeds: Brown seed pods are smooth (except for hair along the margin), flattened, and contain several bean-like seeds.
Other: Reproduces primarily by seed; when mature, the seedpods split and eject seeds up to 20' away. Over 10,000 seeds can be produced per plant and they can remain viable in the soil for 5-60 years. Seeds are toxic to humans, horses and livestock.

BLUEWEED (Echium vulgare): Photo N - Blueweed is a native of Europe.

Growth Habit: Biennial, erect, up to 2 ½ ' tall. Spread by seed. Seeds are produced through pollination as this plant has male and female parts.
Leaves: Long, with white spots and long hairs; 2-6 inches long, 1 ¼ - 1 ½ inches wide; leaves become smaller towards top of the stem
Stems: Multiple stems arising from the main one; long hairs present
Flowers: Brilliant blue to purplish color; 7-12 mm long; they are fairly long and resemble funnel; they also have hairs on them.
Roots: Roots grow deep into sandy or disturbed soil and grow in tufts.
Other: Introduced for its medicinal uses (relieves fevers & headaches) and for its pretty flower.

Priority 2A Species

TANSY RAGWORT (Senecio jacobaea L.): Photo H - Arrived via seaports from Europe in the early 1900s.

Growth Habit: Biennial or short-lived perennial, erect, branched near top. Reproduces by seed only.
Leaves: Alternate, deeply lobed with irregular margins, terminal lobe larger than lateral ones, cobwebby hairs in early growth stages.
Stems: Simple, usually single, to 6 ft. tall.
Flowers: Flower heads yellow, numerous, in clusters, about 1 inch in diameter.

Seeds: Small, striped, with a protrusion at one end.
Other: Toxic to cattle and horses producing irreversible liver damage.

MEADOW HAWKWEED COMPLEX (Hieracium pratense, H. floribundum, H. piloselloides): **Photo I -** There are about eleven species of highly invasive hawkweeds that were introduced to North America from Europe about 30 years ago.

Growth Habit: Perennial, erect to 12 inches tall.
Leaves: Lance-shaped, hairy, leaves are basal, occasionally 1 to 2 small leaves on stem.
Stems: Erect, bristly, terminate in an umbel of flower.
Flowers: 5 to 30 per plant, yellow petals.
Other: entire plant contains a milky juice.

ORANGE HAWKWEED (Hieracium aurantiacum): Photo J - Introduced from Europe

Growth Habit: Fibrous rooted perennial herb up to 12 inches tall.
Leaves: Leaves are basal, occasionally with 1 or 2 small leaves.
Stems: Bristly stems. Contains a milky juice.
Flowers: It has 5 to 30 flower heads, each in a compact umbelliform inflorescence. The strap-shaped flowers are red-orange with notched tips. Yellow hawkweed (H. pratense Tausch) is similar in appearance to orange hawkweed.
Roots: Fibrous roots, rhizomes.

TALL BUTTERCUP (Ranunculus acris L.): Photo K - Tall Buttercup was introduced from Europe.

Growth Habit: Perennial forb up to 3 feet tall.
Leaves: Leaves are dense, hairy and are deeply lobed into 3 to 5 segments with each segment lobed again. Decrease in size upward on the stem.
Stems: Branched, hairy stems.
Flowers: Single, glossy-yellow flowers in loose clusters. ¾ to 1 inch in diameter with a greenish center.
Other: Poisonous to cattle

PERENNIAL PEPPERWEED (Lepidium latifolium L.): Photo L - A native of southern Europe and western Asia. Forty percent of its total biomass is underground.

Growth Habit: Perennial, 1 to over 3 feet in height.
Leaves: Lanceolate, bright green to gray-green, entire to toothed, basal leaves larger than upper leaves.
Flower: White, in dense clusters near ends of branches, very small.
Seeds: 2 per fruit, rounded, flattened, slightly hairy, about 1/16 inch long, and reddish-brown.
Other: Deep-seated rootstocks.

YELLOW FLAG IRIS (Iris pseudacorus): Photo M - Only yellow iris in the U.S.

Growth Habit: Perennial , 2 to 3 ft. tall.
Leaves: leaves erect with upper part arching; leaves flattened, arising in a fan from the soil; raised midrib; sword-like, fine-pointed; 3-4 feet in height.
Stems: One to several yellow flowers on a robust stalk.
Flowers: 3 in. wide; large, showy, pale to deep yellow; several flowers on each stem; patterns

of delicate light-brownish to purple veins or flecks.
Other: Fruit is 6-angled, oblong capsule, about 2" (5 cm) long. Roots: Rhizominous. Is spread by broken rhizomes
Roots: Rhizominous. Is spread by broken rhizomes.

EURASIAN WATERMILFOIL (Myriophyllum spicatum): Photo O - Is a submersed vascular plant that has the ability to reproduce from fragments and spread rapidly. Has a high growth rate in a range of temperatures and environmental conditions.

Growth Habit: Tendency to reach the surface and form extensive mats of plant at the surface.
Leaves: Usually closely-spaced leaves attached in whorls of four, but sometimes 3-5, are limp when out of water, typically has 12 to 21 pairs of leaflets.
Stems: Long branching stems near the surface.
Flowers: Small reddish flowers in mid summer.
Other: Can grow up to 15 feet long.

FLOWERING RUSH (Butomus umbellatus): Photo P - Flowering Rush is a native of Europe and Asia.

Growth Habit: Perennial, erect, up to 3' tall. Reproduces by seed and vegetative spread of its rootstock; mainly an aquatic plant.
Leaves: Rise from the base of the plant; about 3' long and ½ " wide; they are triangular and have smooth edges; limp in water, erect on land.
Stems: The stem grows taller than the leaves and is triangular in cross section.
Flowers: They are ½ - 1" long; grow in umbrella shaped clusters and each individual flower has 3 whitish pink petals; fruits are 1/4"' and is the seed capsule.
Roots: Roots are very thick and can break off and form new plants.
Other: It is an aquatic plant that can grow as an emergent along shorelines and as a submersed plant in lakes and rivers.

COMMON BUCKTHORN (Rhamnus cathartica L.) Photo NN

Growth Habit: Shrub like or small tree that reaches heights of 1—25 feet, brown bark has elongated silvery corky projections with orange inner bark.
Leaves: Egg-shaped, pointed at the tip, smooth, dark, glossy and have finely toothed edges.
Flowers: Male and Female flowers are borne on separate shrubs.
Roots: Large extensive root system
Other: Common buckthorn occurs in disturbed and undisturbed habitats including roadsides, oil fields, prairies, woodland areas, and riparian areas.

Priority 2B Species

CANADA THISTLE (Cirsium arvense): Photo Q - Canada thistle is a native of Eurasia.

Growth Habit: Perennial, erect, up to 4 feet tall.
Leaves: Light to dark green, oblong or lance shaped, alternate, deeply cut, tipped with yellowish spines, and the underside is downy-white and slightly hairy.

Stems: Hollow, smooth to slightly hairy, branched at top.
Flowers: Small bristly clusters, 3/8 to 5/8 inch in diameter, vary from white to lavender to deep rose purple. Plants are male or female.
Roots: Extensive, fleshy, creeping rootstocks.
Seeds: Smooth, light to dark brown, tipped by a cupped conical point, approximately 1/8" long.
Other: Can develop from root fragments.

FIELD BINDWEED (Convolvulus arvensis): Photo R - Field bindweed was introduced from Europe.

Growth Habit: Perennial, extensive root system, often climbing or forms dense tangled mats.
Leaves: Alternate, more or less arrowhead-shaped, pointed or blunt lobes at the base.
Stems: Prostrate, 1 to 4 feet long.
Flowers: Bell or trumpet shaped, white to pinkish, approximately 1 inch in diameter with 2 small bracts located 1 in below flower. Flowering period from late June until frost in the fall.
Fruit: Small, round capsule, usually 4-seeded. Seeds remain viable for up to 50 years.
Roots: Long, deep taproot can penetrate soil up to 10 ft & gives rise to long lateral roots.

LEAFY SPURGE (Euphorbia esula): Photo S - Brought to the U.S. from Eurasia about 1897.

Growth Habit: Perennial, erect, up to 3' tall, spreading by seed or creeping roots.
Leaves: Alternate, long, narrow, ¼" wide and 2" long, usually drooping
Stems: Branched near top, hairless.
Flowers: Large heart shaped floral leaves which turn yellow-green near maturity.
Roots: Brown, numerous pink buds, deep, spreading, very persistent. Root growth may exceed 30 feet in depth.
Other: Grows in nearly all soil types and habitats. Seed is thrown up to 20' by exploding seed capsule. A white, milky latex exists in all parts of plant; this can produce blisters & dermatitis in humans, cattle and horses; it may cause permanent blindness if rubbed into eyes; protection is needed when handling. It is a very aggressive and "hard to kill" weed once established

WHITETOP OR HOARY CRESS (Cardaria draba): Photo T - Introduced from Europe late in the 19th Century.

Growth Habit: Perennial herb, up to 24" tall, erect, becoming lodged with age.
Leaves: Alternate, lance-shaped & irregular, grayish green, base of upper leaves clasping stem.
Stems: Stout, branched toward top.
Flowers: Small, white, 4 petals; numerous flower branches and dense flowers give plant a dense, white, flat-topped appearance.
Roots: Extensive horizontally and vertically, frequent shoots arising from root stocks. Root pieces can start new plants.
Seeds: Two small reddish-brown flat, granular, egg-shaped seeds in heart-shaped pods.
Other: Flowers early (April and May), reproduces by seeds, root stocks and creeping roots.

RUSSIAN KNAPWEED (Centaurea repens): Photo U - It is a perennial invader from Eurasia.

Growth Habit: Perennial herb, up to 3 feet tall, erect, may be in dense clumps. Grayish color.
Leaves: Alternate, simple, of several types: Upper leaves - small, narrow, unbroken edges; Stem leaves – intermediate in size, slight toothed margins; Basel leaves – deeply notched.
Stems: Numerous branched, each ending with a single flower.

Flower Head: Single, terminal, white or pink to lavender-blue, thistle like, scaly seed head. Greenish to straw-colored bracts surround the base of the seed head.
Roots: Dark brown to black and heavily scaled. Roots grow to a depth of 23 feet.
Seeds: Flat, ivory colored, retained in cup shaped seed heads. Have plume-falls off at maturity.
Other: Leaves & stems covered with short stiff hairs giving plant an appearance of knapweed. Spread by seeds and creeping rootstocks. Russian knapweed causes chewing disease in horses.

SPOTTED KNAPWEED (Centaurea maculosa): Photo V - Spotted knapweed is a native of Europe.

Growth Habit: Biennial or short lived perennial, up to 3 feet tall. Rosette formed first year, flowering stalk elongates second year.
Leaves: Long and divided below, short and narrow above. Covered with fine hair.
Stems: Erect with slender wiry branches. Covered with fine hair.
Flowers: Seed heads are mostly on branched tips, solitary, to 1" in diameter. Flowers are usually purple, occasionally white. Seed head bracts are stiff, black tipped, with a dark comblike fringe of short feathery appendages.
Roots: Taproot not well developed.
Seeds: Brownish, 1/8" long, notched on one side of base, short tuft of bristles at tip end. Each plant produces from 400 to 25,000 seeds.
Other: Very aggressive, can infest large areas quickly, offers little big game or livestock forage value.

DIFFUSE KNAPWEED (Centaurea diffusa): Photo W - Diffuse knapweed is a native of Eurasia.

Growth Habit: Is an annual, biennial or short-lived perennial that can grow to a height of 3 feet.
Leaves: Grayish-green, alternate, basal leaves whorled, upper leaves much reduced. Covered with fine hair.
Stems: Hairy, erect, single main stem from a rootstock, branched near or above the base and has a bush appearance.
Flowers: Solitary, usually white, sometimes pink, rose or lavender. Bracts surrounding the flower are yellowish-green with a light brown margin. The upper part of each bract narrows into a short, stiff spine.
Roots: Elongated taproot.

DALMATIAN TOADFLAX (Linaria dalmatica): Photo X - Dalmatian toadflax is a native to the Mediterranean region.

Growth Habit: Woody perennial, tall, erect, 2 to 4 feet tall.
Leaves: Pale to light green, alternate, broad, heart-shaped, clasping the stem.
Stems: Branching, light green, smooth and leafy.
Flowers: Snapdragon type, bright yellow, tinged with orange, to 1 and ½: long with spur, born in upper leaf axils.
Roots: Vigorous, deep and extensive, creeping roots.
Seeds: Numerous, irregularly angled, produced in a pod.
Other: Spread by seed and creeping roots.

ST. JOHNSWORT (Hypericum perforatum): Photo Y - St. Johnswort, originally from Europe, is frequently found in the Pacific Northwest.

Growth Habit: A perennial reproducing by seeds or short runners.
Leaves: Leaves are opposite, sessile, entire, elliptic to oblong, not over 1 inch long, covered with transparent dots.
Stems: Stems are 1 to 3 feet high, erect, with numerous branches, somewhat 2-ridged, rust-colored, woody at their base.
Flowers: Flowers are ¾ inch in diameter, bright yellow, numerous in flat-topped cymes, with 5 separate petals with occasional minute black dots around the edges. Petals are twice as long as the sepals. Stamens are numerous, arranged in 3 groups.
Seeds: Seed pods are ¼ inch long, rust-brown, 3-celled capsules, each with numerous seeds.
Other: A toxin may cause irritation on certain animals.

SULFUR CINQUEFOIL (Potentilla recta): Photo Z - Sulfur cinquefoil is an introduced perennial weed that has infested large acreage or range and pasture in Western Montana.

Growth Habit: Perennial, 1 to 1 and ½ feet tall, with well developed rootstocks.
Leaves: Palmately compound with 5 to 7 toothed leaflets on each leaf. Leaves that are sparsely hairy appear green on the underside rather than silvery as in many Potentilla species.
Stems: Long hairs growing at right angles to the leafstalk and stem.
Flowers: Light yellow with 5 petals, each flower producing numerous single-seeded oval achenes. Flowering occurs from May to July.
Roots: Taproot; woody rootstock.

COMMON TANSY (Tanacetum vulgare): Photo AA - Common tansy is a native of Europe and became established in the U.S. when introduced as an ornamental and for medicinal purposes.

Growth Habit: A perennial reproducing from seeds and rootstalks.
Leaves: Leaves are alternate, deeply divided into numberous narrow, toothed segments.
Stems: Stems are 1 ½ to 6 feet tall.
Flowers: Yellow flower heads, ¼ to ½ inch across, are numerous in flat-topped dense clusters.
Seeds: Seeds are yellowish-brown with short 5-toothed crowns.
Other: It is undesirable as forage for livestock, but it has long been used as a medicinal herb.

OX-EYE DAISY (Chrysanthemum leucanthemum L.) Photo BB - It is a native of Eurasia.

Growth Habit: An erect rhizomatous perennial.
Leaves: Leaves progressively reduce in size upward on stem. Basal and lower stem leaves are oblanceolate to narrowly obovate, 2 to 5 inches long including the petiole, margin crenate to lobed or parted. Upper leaves become sessile and merely toothed.
Stems: 10 to 24 inches tall, glabrous to sparsely hairy.
Flowers: Flowering heads are solitary at the ends of branches, about 1 ½ inches long. Fruits have about 10 ribs.
Other: Flower heads having white ray flowers and yellow disk flowers. Flowering occurs from June through August and is often transplanted as an ornamental.

HOUNDSTONGUE (Cynoglossum officinale L.) Photo CC - Introduced from Europe, Houndstongue forms a rosette the first year and sends up a flowering stalk the second year.

Growth Habit: A biennial reproducing from seed.

Leaves: Leaves are alternate, 1 to 12 inches long, 1 to 3 inches wide, rough, hairy, and lacking teeth or lobes.
Stems: 1 to 4 feet tall
Flowers: Reddish-purple and terminal. The fruit is composed of 4 prickly nutlets each about 1/3 inch long.
Other: Houndstongue is toxic, containing pyrrolizidine alkaloids, causing liver cells to stop reproducing. The nutlets break apart at maturity and cling to clothing or animals.

YELLOW TOADFLAX (Linaria vulgaris Mill.): Photo DD - Introduced from Eurasia as an ornamental. Has an extensive creeping root system makes this plant difficult to control.

Growth Habit: Creeping Perennial, 1 to 2 ft. tall.
Leaves: Pale green, numerous, narrow, pointed at both ends, 2 ½ or more inches long.
Flowers: 1 inch long with a bearded, orange throat.
Seeds: Dark brown to black, 1/12 inch in diameter, flattened with a papery circular wing.
Other: Fruit is round, ¼ inch in diameter, brown, 2-celled, with many seeds.

TAMARISK [SALT CEDAR] (Tamarix spp.): **Photo EE -** Introduced from Eurasia.

Growth Habit: Deciduous or evergreen shrubs or small trees, 5 to 20 feet tall.
Leaves: Leaves are small and scale-like, on highly branched slender stems.
Stems: Bark on saplings and smooth, woody stems is reddish-brown.
Flowers: Pink to white, 5-petalled and borne in finger-like clusters.
Other: Used as ornamentals, but have escaped and become naturalized along streams, canals, and reservoirs in much of the west.

HOARY ALYSSUM (Berteroa incana): Photo GG - Hoary Alyssum is a native of Europe and Asia.
Growth Habit: Can be an annual, winter annual or short-lived perennial. It reproduces by seed. See below for more on growth.
Leaves: Leaves are oblong, grayish-green and covered with rough hairs.
Stems: The stems are grayish-green, hairy, 1-3' tall with many branches near top.
Flowers: They are white with four deeply divided petals.
Seeds: Pods are round to oblong in shape (5-9mm long, 3-4 mm wide), slightly flattened, hairy, and swollen with a short beak or point on the end.
Other: Commonly found in closely grazed pasture, drought-stressed meadows, and abandoned fields and along roadsides. It is well adapted to dry conditions, particularly in areas with sandy to gravelly soil. It can be poisonous to horses.

CURLY LEAF POND WEED (Potamogeton crispus): Photo FF - It is a native of Eurasia, Africa, and Austrilia.
Growth Habit: Aquatic invasive found in alkaline and high nutrient waters, tolerates low water temperatures and low light conditions.
Leaves: Reddish green leaves, oblong and about 3 inches long with finely toothed wavy edges.
Stems: Stems are 1 to 3 feet in length and are flat and reddish brown in color.
Flowers:

Seeds: Does produce seed but mainly spreads by burr-like winter buds called turions
Other: Forms surface mats that become a problem for recreation, decaying plant material from this species can increase nutrients thus creating algal blooms.

Priority 3 Species

CHEATGRASS or DOWNY BROME(Bromus tectorum) Photo HH

Growth Habit: Annual or winter annual, 4 to 30 inches tall, reproduces by seed.
Leaves: Leaf Sheaths and flat blades are densely covered with hairs.
Stems: 4 to 30 inches tall, covered with hairs.
Flowers: seed heads are 2 to 6 inches long, contain seeds that are 3/8 to ¾ inches long with awns up to 5/8 inches long.
Other: nuisance and a fire hazard

HYDRILLA (Hydrilla verticillata) Photo II

Growth Habit: submersed plant that will grow to the surface forming dense mats.
Leaves: small leaves are strap-like and pointed, grow in whorls of four to eight around the stem.
Stems: long submersed stems, up to 25 feet in length
Flowers: male and female flowers, male flowers are tiny green flowers, female flowers and tiny white solitary flowers
Other: Spreads by fragments on boats and trailers

RUSSIAN OLIVE (Elaeagnus angustifolia) Photo JJ

Growth Habit: fast growing tree, ranging in height from 10 to 25 feet tall
Leaves: narrow, 2 to 3 inches long, covered with minute scales which give the tree a silvery appearance.
Branches: branches are armed with 1 to 2 inch long thorns
Flowers: flowers are yellow and arranged in clusters, fruits are shaped like small olives and are silvery in color when born but turn to tan to brown in color when mature.
Other: introduced from Europe as an ornamental and shade tree, good source of food and habitat for wildlife. Can become a serious weed problem when allowed to invade riparian areas and low lying pastures and meadows.

BRAZILIAN WATERWEED (Egeria densa): Photo KK

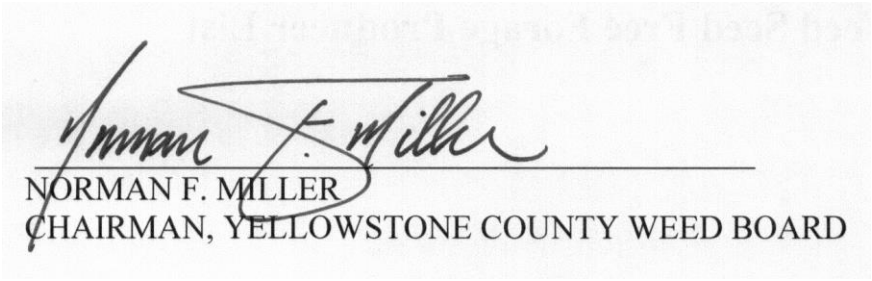
Growth Habit: submersed aquatic plant that invades still and flowing fresh water areas of the United States. Forms dense mats that can cover hundreds of acres thus crowding out native vegetation reducing valuable fish habitat.
Leaves: Finely serrated with a smooth midrib underneath and usually less than 1 inch in length and can occur in whorls of 3-6.
Flowers: Blooms above the water's surface and are white with 3 petals.
Other: Brazilian waterweed was once a native to South America was introduced to North America in the late 1800's as an aquarium plant.

PARROT FEATHER WATERMILFOIL (Myriophyllum aquaticum): Photo LL

Growth Habit: This species prefers slow moving, freshwater habitats including ponds, lakes and canals. It prefers open, high nutrient aquatic systems.
Leaves: Both submersed and emergent leaves are whorled and finely pinnate with 10 to 18 segments on either side.
Flowers: Small, white flowers occur in the leaf axils on the emergent shoots and are approximately 1/16 inch long.
Other: Parrot Feather Watermilfoil was introduced as an aquarium plant in the late 1800's. Parrot feather grows well in shallow wetlands, slow moving streams, irrigation reservoirs or canals, edges of lakes, ponds, sloughs, or backwaters (Sutton 1985). Although it can grow in moist soil and tolerates a wide-range of water levels, parrot feather grows most rapidly in higher water levels (but has been documented in depths up to 16 ft; Banfield 2008) and high-nutrient environments (Hussner et al. 2009, Sutton 1985, Sytsma and Anderson 1993). Parrot feather requires rooting in bottom sediments, so habitats where light can penetrate to the bottom favor growth and colonization.

This Yellowstone County Noxious Weed Management Plan has been approved by the County Weed Board.

Dated this 3rd day of December, 2018.



cf: Yellowstone County Commissioners
State Weed Coordinator

APPENDICES

- **Appendix A – Staff Directory**
- **Appendix B – YCWD Organization**
- **Appendix C – Noxious Weed Seed Free Forage Producer List**

APPENDIX A

Yellowstone County Officials, Weed Board and Staff Directory

Yellowstone Board of County Commissioners:

John Ostlund	P. O. Box 35000
Denis Pitman	Billings, MT 59107
Donald Jones	Phone: (406) 256-2701

Yellowstone County Public Works Director

Tim Miller	P. O. Box 35024
	Billings, MT 59107
	Phone: (406) 256-2735

Yellowstone Co. Weed District Board of Directors

Norman Miller - Chairman	
Judy Henry	3319 King Ave. East
Stuart Keller	Billings, MT 59101
Hank McNeel	Phone: (406) 256-2708
Clint Schmidt	Fax: (406) 254-7939
Brett Swartz	

Yellowstone County Weed Superintendent

Joe Lockwood	3319 King Ave. East
	Billings, MT 59101
	Phone: (406) 256-2731
	Fax: (406) 254-7939

Yellowstone County Weed Control Staff

Megan Hoyer – Education Specialist/Crew Foreman	Phone: (406) 256-2728
Roxy Jensen – Seasonal Secretary	Phone: (406) 256-2708

Note: Approximately 4 to 8 additional staff is added for seasonal/temporary positions to aid in the herbicide application program as well as a biological control program. Additionally, seasonal interns for projects such as weed inventory collections are also utilized. Yellowstone County Weed District operates under the guidelines set within the Montana State Noxious Weed Law and Yellowstone County Policy.

The Yellowstone County Weed District is located in the County Shop Yard located at 3319 King Avenue East in Billings, Montana 59101.

APPENDIX B

A.) Yellowstone County Weed District Organization

The Yellowstone County Weed District was organized under 7-22-2102 of the Montana Codes Annotated (MCA); and a district weed board was created under 7-22-2103 of the MCA. The Board of County Commissioners selects the board members and their terms. The Noxious Weed Control Department falls under the umbrella of the county Public Works Department. The Weed Superintendent, with guidance from the County Weed Board, will coordinate, plan, organize and supervise the activities of the Weed Control Department.

Powers and Duties of the Board, 7-22-2109 MCA –

1.) In addition to any powers or duties established in the resolution creating a district weed board, the board may:
a. employ a coordinator and other employees as necessary and provide for their compensation;
b. purchase chemicals, materials, and equipment and pay other operational costs as it determines necessary for implementing an effective weed management program. The costs must be paid from the noxious weed fund. c. Determine what chemicals, materials, or equipment may be made available to persons controlling weeds on their own land. The cost for the chemicals, materials, or equipment must be paid by the person and collected as provided in this part.
d. Enter into agreements with the department for the control and eradication of any new invasive plant species not previously established in the state which may render land unfit for agriculture, forestry, livestock, wildlife, or other beneficial use if the plant species spreads or threatens to spread into the state;
e. Enter into cost-share agreements for noxious weed management;
f. Enter into agreements with commercial applicators, as defined in 80-8-102, for the control of noxious weeds; and
g. Perform other activities relating to weed management.

2.) The board shall:
a. administer the district's noxious weed management program;
b. establish management criteria for noxious weeds on all land within the district; and
c. make all reasonable efforts to develop and implement a noxious weed management program covering all land within the district owned or administered by a federal agency.

. * The County Weed District Budget is approved by the Board of County Commissioners.

APPENDIX C

NOXIOUS WEED SEED FREE FORAGE PRODUCER LIST

YELLOWSTONE COUNTY

(As of December 3, 2018)

Dan Sloan
1805 60th Street West
Billings, MT
406-839-6289

Rick Sukut
1291 West M Road
Worden, MT
406-860-9259

Audie Stein
3781 US HWY 312
Billings MT
406-672-6725

Bill Anderson
3555 Racquet Drive
Billings, MT 59102
406-855-3701

FORMS

- 1st Notice of non-compliance letter
- 2nd Notice of non-compliance letter
- YCWD Weed Management Plan
- YCWD Opencut Mining Weed Management Plan

Date: 00-00-2018

NOTICE OF NOXIOUS WEED COMPLAINT
AND REQUEST TO INSPECT LAND

Legal Description:
Property Address:

Noxious Weeds:

Applicable Montana Code: 7-22-2116; 7-22-2117; 7-22-2131; 7-22-2132; 7-22-2133; 7-22-2134

Registered Agent
Landowner Address
CERTIFIED MAIL

Dear _____,

The presence of noxious weeds violates State law and it is the landowner's responsibility to control noxious weeds on their land pursuant to MCA Section 7-22-2116. It has been brought to the attention of the Yellowstone County Weed District that (_____) is on the above referenced property, see enclosed map. This letter serves as notice of this fact and is also a formal request for permission to enter the above referenced property to do an inspection to determine the extent, if any and species of noxious weeds are present, if any. State law provides 10 days after receipt of this NOTICE your responsibility to contact the Yellowstone County Weed Control Department at the address provided at the top of this NOTICE to discuss this issue, feel free to contact me by telephone at 406.256.2708.

In the event we do not hear back from you within 10 days of receipt of this letter, be advised that the Yellowstone County Weed District will seek a court order to enter and inspect your land for noxious weeds. Should that occur and if noxious weeds are found on your property, you will be notified by certified mail and asked to voluntarily comply with a weed management program. Enclosed find a list of contractors recommended to mitigate weeds in Yellowstone County.

In the event noxious weeds are confirmed to be on your property, and should the Weed Board then be unable to obtain voluntary compliance within 10 days of your receipt of notification of a weed management plan, you will be subjected to appropriate control measures found in MCA 7-22-2134 and the Board will seek a court order to enter your property and apply appropriate noxious weed control measures to the infested areas. Thereafter you will be responsible for the costs of control measures including associated cost of labor, materials, equipment time and a penalty that is up to 25% of total cost.

You may appeal any Weed Board decision for noxious weed eradication to the Yellowstone County Commissioners within 10 days of receipt of the weed management letter. If that appeal is denied, you can appeal within 10 days of the Commissioners decision to district court.

If you have any questions, comments, or if you are not, in fact, the landowner of the property in question, please contact me at 406-256-2708.

Sincerely,

_____
Joe Lockwood, Weed Department Coordinator
CC: County Attorney

NOTICE OF NOXIOUS WEEDS
NOTICE OF CONSEQUENCES OF FAILURE TO COMPLY AND RIGHT OF APPEAL

Date: 0-00-2018

Legal Description:
Property Address:

Noxious Weeds Present: _____
Applicable Montana Code: 7-22-2116; 7-22-2117; 7-22-2131; 7-22-2132; 7-22-2133; 7-22-2134

Landowner Address
CERTIFIED MAIL

Registered Agent
Name and address
CERTIFIED MAIL

Dear _____,

On _____the Yellowstone County Weed Control Office entered the above –referenced property to determine if noxious weeds were present. The result of that inspection revealed that _____, a noxious weed, is present and growing on your property.
Please be advised that you have 10 days after receipt of this NOTICE to contact us to develop a plan to eradicate and control the noxious weeds found on your property. If you fail to contact the Weed Department the Board will develop a weed management plan and take corrective action to mitigate/eradicate noxious weeds on your property.

FAILURE TO TAKE CORRECTIVE ACTION. In the event you do not contact us within 10 days of receipt of this letter either at the above address or by telephone at 406.256.2708, you will be considered non-compliant with a request for corrective action to manage noxious weeds identified on your property. If this occurs, be advised the Board will seek a court order to enter the property described above for the purpose to take corrective action to mitigate/eradicate noxious weeds on your property. These control measures may include herbicide application. If the Weed department must take corrective action on your property, you will be responsible for the cost of all control measures which may include costs for labor, material, equipment time and a penalty that is up to 25% of the total cost of the control measures. Invoices need to be paid within thirty (30) days of receipt. Invoices not paid in full within thirty (30) days are subject to a court action to impose a civil fine that may become a lien on your property.

APPEAL. You have the right to request a hearing to contest any finding of non-compliance or any determination by the Weed Board or the Board of County Commissioners. If your appeal to those boards is denied, you have then 10 days from date of denial to appeal to district court. That appeal would stop control measures until, if at all, after district court proceedings.
If you have any questions, comments, or if you are not, in fact, the landowner of the property in question, please contact me at 406-256-2708.

Sincerely,

_____
Joe Lockwood, Weed Department Coordinator
CC: County Attorney

YELLOWSTONE COUNTY WEED DISTRICT
WEED MANAGEMENT PLAN

Date:

Contact person & Phone number:

Name of project:

Land Description (Legal & Descriptive):

Number of acres involved:

Noxious Weed Species found on site if any:

_____ _____
_____ _____
_____ _____

Type of control to be used:
_____ Cultivation- (must include an attached Revegetation plan)
_____ Herbicide- (must include what kind, application rate, time & method)
_____ Grazing- (must complete enclosed grazing plan)
_____ Hand pulling/Mowing- (please include method of disposal)
_____ Biological
Specific control measures: _____
_____
_____

Weed control to be completed by: _____Self _____Commercial Firm
If a commercial firm is to be used, please give name and address when hired.

Dates weed control will be implemented: _____

Is there live or open water on the property? If so please outline on your map.

This plan if implemented by said contractor, will be in effect for two years from the date of project completion. The responsibility for weed control will revert back to the landowner after this period.

Dated this _____ day of _____, _____.

I acknowledge and agree to the foregoing provisions.

Signature _____

Name and Address _____
Please print _____
_____
_____

Weed Management Approval: (Yes) (No) Date _____

Weed District Representative _____

County Weed District Recommendations: _____
_____
_____
_____

Attach additional information if needed

YELLOWSTONE COUNTY WEED DISTRICT
REVEGETATION PLAN

Should you decide to use cultivation as a control method on a rangeland, non crop site, or other disturbed sites (reference section 7-22-2152, Montana Code Annotated) please complete the following plan. If you have a revegetation plan already in place, please attach a copy to your Yellowstone County Weed Management Plan.

(a) Please describe the site to be revegetated.

(b) Outline what method(s) will be used to accomplish revegetation of the disturbed areas (seeding, planting, sod, etc.)

(c) If applicable list the type and amount of seed/sod to be used for revegetation.

Type	Rate	On	Acres
Type	Rate	On	Acres
Type	Rate	On	Acres
Type	Rate	On	Acres

(d) If applicable list the type and amount of fertilizer to be used:

Type	Rate	On	Acres
Type	Rate	On	Acres
Type	Rate	On	Acres
Type	Rate	On	Acres

(e) Timing of revegetation practices:

Approximate cultivation date(s) _____
Approximate seeding / sod date(s) _____
Approximate fertilizer date(s)_____

Attach additional information if needed

NOXIOUS WEED GRAZING MANAGEMENT PLAN

IS THERE A CURRENT GRAZING SYSTEM USED?
PLEASE EXPLAIN

NOXIOUS WEED TO BE GRAZED?

TYPE OF ANIMAL TO BE USED?

A.U.M.'S PER ACRE?

TURN IN DATE_____ TURN OUT DATE_____

SEASON OF GRAZING?

STAGE OF PLANT GROWTH?

WERE ANIMALS HELD IN AN AREA TO LET INFESTED FORAGE PASS BEFORE ANIMALS WERE MOVED INTO UNINFESTED AREA?

WILL THIS METHOD BE USED ALONG WITH HERBICIDE CONTROL?

WHAT KIND OF MONITORING OR FOLLOW UP WILL BE DONE TO INSURE THAT GRAZING IS WORKING AS A WEED CONTROL MEASURE AND THE LAND IS NOT BEING OVER-GRAZED?

DATE INSPECTED BY WEED DEPT._____

NOTES_____
_____
_____
_____
_____
_____

Attach additional information if needed

Yellowstone County Noxious Weed Control Plan
Opencut Mining Operations (Gravel Pits)

In accordance with 7-22-2123 (4) MCA, a person is considered in compliance if they submit and the Board accepts a proposal to undertake specified control measures, and is in compliance for so long as they perform according to the terms of the proposal.

Land Description (Legal & Descriptive):

Noxious Weed Species found on site if any:

_____ _____
_____ _____
_____ _____

Method of Weed Control: _____Chemical _____Biological _____Cultural
Specific control measures: _____
_____
_____

Weed control to be completed by: _____Self _____Commercial Firm
If a commercial firm is to be used, please give name and address when hired.

Dates weed control will be implemented: _____

Dated this _____ day of _____, 20____.

This plan if implemented by said contractor, will be in effect for two years from the date above or the date of the Reclamation Bond Release. The responsibility for weed control will revert back to the landowner after this period.

I acknowledge and agree to the foregoing provisions.

Signature _____

Name and Address _____
Please print _____
_____

****
Weed Management Approval: (Yes) (No) Date _____

Weed District Representative _____

County Weed District Recommendations: _____
_____
_____
_____
Attach additional information if needed
***Mine Site Map Must Be Attached ***

WEED INDENTIFICATION PHOTOS

FOR NAMES OF WEEDS REFER TO LETTERS IN STATE LISTED NOXIOUS WEEDS OF MONTANA BEGINNING PAGE 14.

EXAMPLE - YELLOW STARTHISTLE (Centaurea solstitialis): Photo A