

Kootenai County



2016-17 Calendar

Noxious Weed Control

INVASIVE AQUATIC PLANTS

Aquatic plants represent a healthy component of a freshwater ecosystem, providing food, habitat and spawning grounds for fish and wildlife, as well as contributing to shoreline protection and overall water quality.

However, the introduction of non-native invasive weeds can have negative effects on lakes and rivers. These plants often outcompete the native species and can degrade water quality, destroy habitat, and spoil or reduce recreation opportunities.

Invasive aquatic plants (weeds) have negative effects on:

- Recreational uses such as boating, fishing, and swimming.
- Fish and wildlife habitat due to the creation of non-native monocultures within water bodies and along the shorelines.
- Water quality, in which plant sloughing, leaf turnover, and decomposition of large amounts of plant material at the end of the growing season increase phosphorus and nitrogen in the water column.
- Aesthetics by creating monocultures and replacing native vegetation, as well as forming mats of decaying plants along shorelines.

The Idaho State Department of Agriculture coordinates a statewide aquatic invasive species management and control program, acting to protect the integrity of the state's water bodies from the biological degradation caused by aquatic weeds.

By achieving this goal, the economic, recreational and aesthetic uses of water bodies are protected, water quality is maintained, and natural aquatic systems are not impaired.



Listed Aquatic Noxious Weeds of Idaho:

- Brazilian Elodea** - *Egeria densa*
- Common/European Frogbit** - *Hydrcharis morsus-ranae*
- Common Reed (Phragmites)** - *Phragmites australis*
- Curlyleaf Pondweed** - *Potamogeton crispus*
- Eurasian Watermilfoil** - *Myriophyllum spicatum*
- Fanwort** - *Cobomba caroliniana*
- Feathered Mosquito Fern** - *Azolla pinnata*
- Flowering Rush** - *Butomus umbellatus*
- Giant Salvinia** - *Salvinia molesta*
- Hydrilla** - *Hydrilla verticillata*
- Parrotfeather Milfoil** - *Myriophyllum aquaticum*
- Variable-Leaf-Milfoil** - *Myriophyllum heterophyllum*
- Water Chestnut** - *Trapa natans*
- Yellow Flag Iris** - *Iris pseudocorus*
- Yellow Floating Heart** - *Nymphoides pelata*

PROTECTING NATURAL AREAS

BEFORE LEAVING HOME

Use Noxious Weed Free Forage & Straw-

One big contributor in spreading noxious weed seeds is your livestock's food! When packing in forage and or bedding, make sure it is *Certified Noxious Weed Free*. This is a Federal requirement by the United States Forest Service and the Bureau of Land Management.



Check ALL Equipment- Having clean gear at the start of your trip will eliminate the chance of moving seeds collected from your last location to your next. However, check every piece of equipment including animals, livestock, ATV, UTV, motor bike, boat, and clothing as it is packed and loaded. There may be an unwanted hitchhiker hiding out.

AT YOUR DESTINATION

Stay on the Trail - Staying on designated trails not only helps insure that you or your ride will not be picking up and transporting any weed seed but also helps maintain native growth. When you leave the trail you tear up the ground, killing the desired plants and leaving a nice clear soil surface for noxious weed seeds to start growing.



Be Weed Aware - Knowing how to identify weeds, noxious or not, benefits you as well as others. Some plants are toxic to you and animals. If you are able to identify these plants

you will be able to stay out of harm's way. Not only are some noxious weeds poisonous but some are spiny and thorny, which can pierce the skin.

Curious - If you see a plant that you would like to have identified, please do not pick it or dig it up. It could be a protected species. Take a picture instead and show it to personnel at the Noxious Weed office or the County Extension office.



BEFORE YOUR RETURN TRIP



Clean off everything you bring back home. This gives you the chance to spot those unwanted hitchhikers and leave them behind. As you look over things, you will be able to check your equipment; something may need fixed before you take it out again.

CHECKLIST:

1. **Certified Noxious Weed Free Forage** - Make sure all the feed and bedding you pack in for your animal is Certified Noxious Weed Free. Bring clean gear and pack in Noxious Weed Free Forage.
2. **Make sure ALL equipment is clean before leaving** - This helps stop previously picked up weed seeds from spreading to your weekend destination.
3. **Stay on the trail** - Prevents you and your equipment from picking up weed seeds and carrying them to a new location.
4. **Know your weeds** - Helps you stay out of harm's way and also helps stop the spread.
5. **Curious to know?** Take a picture of the plant in question and show the image to staff at the weed office or extension. Pictures last longer and do not harm protected plants or fragile landscapes.

To Do List:
Early October -

- Spray new rosettes and new growth
- Fertilize and seed or overseed

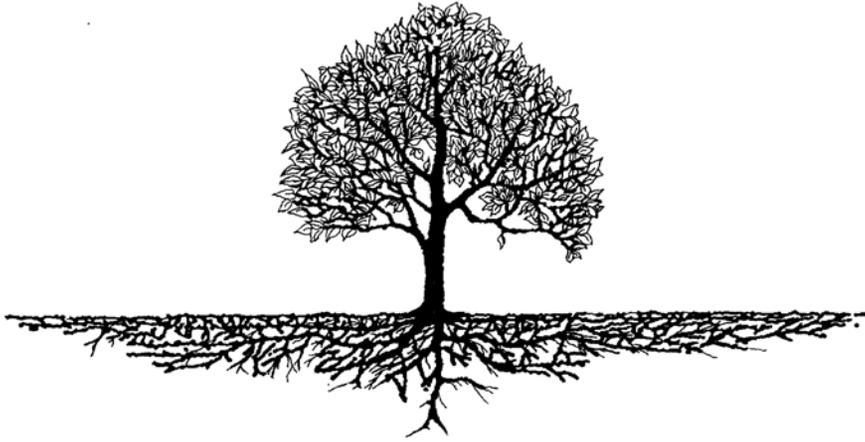
September 2016						
S	M	T	W	T	F	S
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4	5	6	7	8	9	10
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November 2016						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

October 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
						☾
9	10	11	12	13	14	15
						○
	Columbus Day					
16	17	18	19	20	21	22
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23	24	25	26	27	28	29
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PROTECTING DESIRABLE SPECIES



When used according to label instructions herbicides are extremely effective tools. Only you know which species you want to remove and which you want to save. It is important to read the label and use care when treating around desirable vegetation. Some of the new products are extremely effective on trees, brush and other vegetation. Spraying near desirable vegetation that you want to maintain may cause injury or loss depending on the active ingredient. The most successful vegetation managers follow these three "smart" rules of thumb:

SMART SITE

- Carefully consider the site characteristics and soil conditions to ensure drainage falls away from desirable species. Also, think about whether the treated soil would ever be moved and come into contact with the roots of the species you want to protect. If so, avoid using products that move easily in the water table or have long soil residuals.

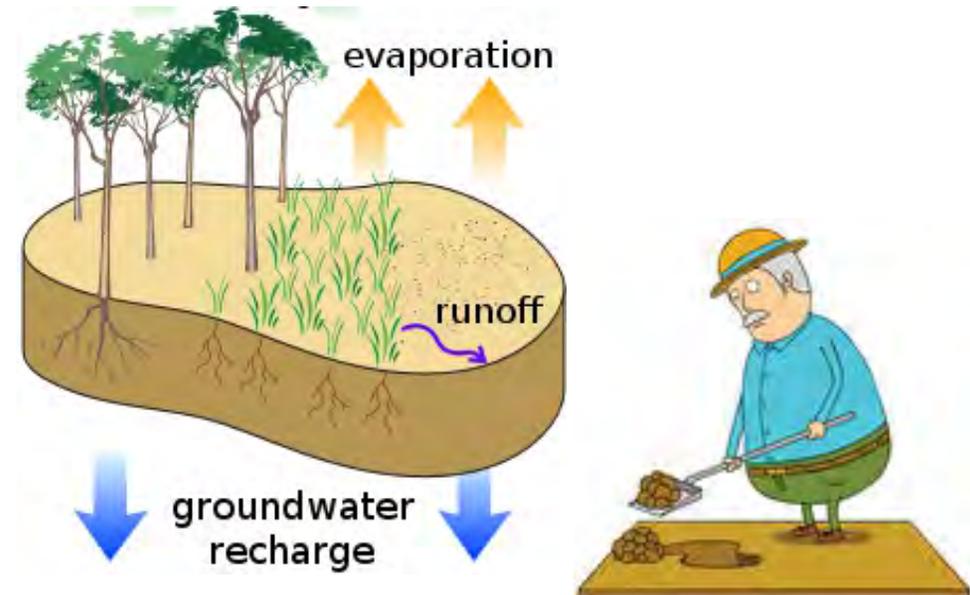
SMART APPLICATION

- Only apply herbicide to the species you want to remove. Be mindful that it's important to avoid direct or indirect contact with the roots and root zones of species you want to preserve.
- Desirable species have root zones that may extend beyond the drip line or plant canopy. Since all species differ in root structure, check with your extension office if you are not sure how far the root zone extends.

SMART EQUIPMENT

- When cleaning equipment, be sure to avoid flushing rinsate on or near trees or vegetation where roots may extend.
- When draining and flushing equipment, be sure to remember to avoid these trees and shrubs. As with active spraying, you should also avoid direct contact with roots and the root zones.

Always read the label to check for specific tree and shrub species that have demonstrated sensitivity to the active ingredient in your herbicide.



IS RESISTANCE TO BLAME?

Herbicide resistance is the inherited ability of a biotype of a weed to survive an herbicide application to which the original population was susceptible. In simple terms, resistance refers to a situation where a given herbicide, applied at the recommended rate and time, once controlled a particular weed population but, after repeated use, that herbicide no longer controls that population.

Most weed control failures are not due to resistance. Before assuming weeds surviving an herbicide application are resistant, eliminate other possible causes of poor control:

Check your herbicide application:

- a. Inadequate rate (not enough herbicide used)
- b. Poor spray coverage and/or incorporation
- c. Improper timing of application of postemergence herbicides (after weeds are too large to control)
- d. Failure to use an adjuvant (if needed)
- e. Excessive dust with post-emergence applications
- f. Antagonism between two or more herbicides

What were the soil and/or climatic conditions?

- a. Excessively wet or dry soil
- b. Seedbed condition (clods, etc.)
- c. Herbicide adsorption to soil particles or organic matter
- d. Stress conditions, such as hot and dry
- e. Lack of timely rainfall for activation
- f. Wash-off of postemergence herbicides



Inland Empire Cooperative Weed Management Area (IECWMA):

November 2016						
S	M	T	W	T	F	S
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January 2017						
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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

December 2016

County Weed Control Offices:

Benewah County Noxious Weed Control
 (208) 245-2234
carlrichel@hotmail.com

Kootenai County Noxious Weed Control
 10905 N Ramsey Road,
 Hayden ID 83835
 (208) 446-1290
kcnoxiousweeds@kcgov.us
www.kcweeds.com

Shoshone County Noxious Weed Control
 700 Bank St. Ste 35,
 Wallace ID 83873
 (208) 753-5475
cyoung@co.shoshone.id.us
www.shoshonecounty.org

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7 ☾	8	9	10
11	12	13 ○	14	15	16	17
18	19	20 ☾	21	22	23	24
25	26	27	28 ●	29	30	31
Christmas						

APPLICATOR SAFETY TIPS

When you are handling herbicides, always follow proper safety precautions. Keep in mind the importance of and safety behind making the mixtures, applying the products and cleaning up after an application.

When mixing products:

- Be aware of all mixing requirements and procedures indicated on the product labels.
- Keep containers below eye level when opening and pouring.
- Keep fill hoses above water level in the spray tank to prevent back-siphoning.
- Be aware of wind direction before pouring to minimize exposure downwind.

When applying products:

- Determine wind direction to avoid drift onto sensitive areas.
- Check equipment for loose connections or cracked hoses.
- Test equipment to ensure proper functioning. Make necessary repairs before each use.
- Minimize overhead spraying.

When cleaning up after an application:

- Use a nozzle brush or other appropriate device to clear clogged nozzles.
- Follow storage and disposal instructions found on the label based on the herbicide container size used.
- Be sure to thoroughly clean spray equipment before using to apply any other herbicides.



HANDLING PESTICIDE SPILLS

Accidents happen, and when they do you must be prepared to clean up and properly dispose of any contaminated materials.



If a spill occurs:

- Clean up spills immediately to protect yourself and others in the area
- **Do not put yourself at unnecessary risk;** wear the appropriate personal protective equipment (PPE) whenever handling pesticides.
- Some product labels provide specific guidelines on how to handle a spill, so prepare yourself to handle a spill before it takes place.

If a pesticide spill occurs, remember the three C's: **Control, Contain, and Clean Up.**

Control the spill.

- Always put on protective equipment before handling a pesticide spill.
- Stop the spill or leak immediately. If a container turns over, return it to an upright position. If a small container is leaking, place it directly into a larger chemical resistant container.

Contain the spill.

- Do everything possible to prevent the spill from spreading and to contain the material in as small an area as possible.
- For liquid spills you may be able to create a dike of soil, sod, or an absorbent material to contain liquid spills. Quickly cover liquid spills with an absorbent material, such as cat litter, newspaper, or paper towels. Keep adding the absorbent until all the liquid is soaked up.

- Contain dry pesticides, such as dusts, powders, or granules, by lightly misting with water or covering with a sheet of plastic. Be careful not to over moisten and cause clumping or release of the pesticide action.

Clean up the spill immediately.

- Never wash spilled pesticides away with a hose, and never wash pesticides down storm or sewer drains. Always prevent pesticides from entering any body of water or pathway that may lead to a body of water.
- Once liquid spills have been absorbed, sweep up or collect the contaminated absorbent materials, and seal them in a heavy-duty plastic bag for disposal.
- Sweep up dry pesticide spills for reuse. It may be applied to a labeled-use site, or stored for future use if the pesticide has not become wet or contaminated with soil or other debris. Otherwise, collect the dry spill in a heavy-duty plastic bag for disposal.
- Dispose of pesticide contaminated materials in the garbage outdoors, not in the home.
- Use diluted bleach or detergent to clean the contaminated area.
- Read the pesticide label and see "Pesticide and Container Disposal" for information on disposing of any excess pesticides.
- Clean all equipment thoroughly.
- Wash your hands, forearms, face, neck and any other parts that may have been exposed, with soap and water. Shower if necessary.



BIOLOGICAL CONTROLS

Biological control of weeds is the use of one organism to control another. Classical biological control is the introduction of control agents - usually insects - into a region that is not part of their natural range, to permanently reduce the populations of selected weeds usually also introduced into the region. **REDUCE, not GET RID OF!**

Biological Control Basics:

Advantages	Disadvantages
Target specific	Initial high costs
Continuous action	Long time until results seen
Long-term cost effectiveness	Uncertain results
Gradual in effect, environmentally friendly	Uncertain 'non-target' effects in the environment
Can move on their own (even into difficult terrain)	Cannot be removed

Things to Know:

- Efficiency of agents cannot be guaranteed.
- Will not work every time in every situation.
- Will not "eradicate" the weed (no complete kill)
- May not provide the desired level of control
- Sometimes it might take years before you see biological control impact.



Leafy spurge fleabeetles



Spotted knapweed moth



Toadflax weevil

Some Questions to Ask Yourself:

- ? *Do I want eradication?* - Biological control is not a good fit with this goal.
- ? *Do I want to reduce weed abundance?* - Depending on weed and control agent - maybe.
- ? *How soon do I need results?* Yesterday? 1 to 2 seasons? Within 5 years? Biological controls take years to show results.
- ? *Do I have lots of money, time, or people?* Other management tools such as herbicides, mechanical, or cultural control may help you achieve your goals sooner.
- ? *Do I have little time or money?* If you can't manage your weeds in any other way, biological control may be better than nothing.



Knapweed root weevil



Knapweed seedhead weevil exit holes

Biological Control may be an option for your weed problem IF.....

- You don't expect the weed to be totally destroyed,
- You don't need instant gratification,
- You are willing to check release sites for establishment and impact
- You are willing to give the agents the time they need to work (2-5+ years) before resorting to other weed management options (spray, mechanical, cultural).

KOOTENAI COUNTY NOXIOUS WEEDS

Noxious weeds are non-native plants that were brought into Idaho through human actions. Because they grow aggressively and have no natural enemies in our area, these species of plants can be destructive to wildlife habitat, competitive with crops and difficult to control. Legally, a noxious weed is any plant designated by a Federal, State or County government as injurious to public health, agriculture, recreation, wildlife or property. Some characteristics of noxious weeds include:

- They produce large numbers of new plants each season.
- They tolerate many soil types and weather conditions.
- They spread easily and efficiently, usually by wind, water, or animals.
- They grow rapidly, allowing them to displace slower growing plants.
- They spread rampantly when they are free of the natural checks and balances found in their native range.

Kootenai County has declared two weeds as noxious:

- Common bugloss - A perennial plant with a deep taproot that can grow 1 to 2 feet tall. Each plant can have several flowering stalks with hairy, angular stems. The slightly pointed leaves are succulent and fleshy and covered with stiff hairs. The flowers are on the ends of the stalks, blue to purple in color, with white centers.
- Kochia - A bushy annual that can grow from 1 to 6 feet tall depending upon conditions. It reproduces by seed and each plant can produce 14,600 seeds. As the plant dies in the fall it turns red, hence the common name of "Mexican Fireweed", and it becomes a tumbleweed, dropping seeds as it moves.



SCOTCH BROOM

Scotch broom brush field



Scotch broom flowers



Seed pods



WHAT DOES IT LOOK LIKE? Scotch broom is a woody plant with mostly erect branches that can grow to 10 feet tall. The flowers resemble those of a pea plant and are bright yellow. Scotch broom can form dense brush fields.

WHERE DOES IT LIKE TO GROW? This plant likes to grow in well drained sites. It spreads rapidly along roads, where the seed becomes imbedded in the tires of passing vehicles. It can be found in pastures, cultivated fields, forests and home landscapes.

WHEN DOES IT BLOOM? Bright yellow flowers begin to appear in our area in May and June, followed by the formation of pea-shaped pods containing several seeds.

HOW DOES IT SPREAD? When pods mature they are brown and smooth (except for hair along the margins), flattened, and contain beanlike seeds. The seeds are thrown some distance as the pods snap open at maturity. The seeds have hard coats enabling some of them to survive in the environment for 60 to 80 years.

CONTROL: Scotch broom was introduced to the U.S. as an ornamental shrub and has since escaped the home garden and become an aggressive invader. One of the best times of the season to control Scotch broom is early spring.

NON-CHEMICAL CONTROL:

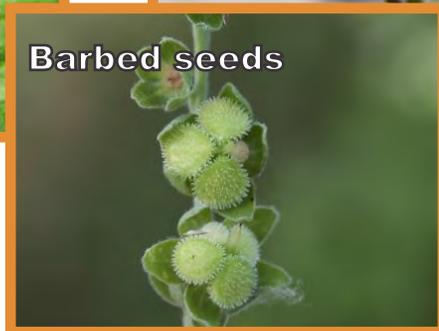
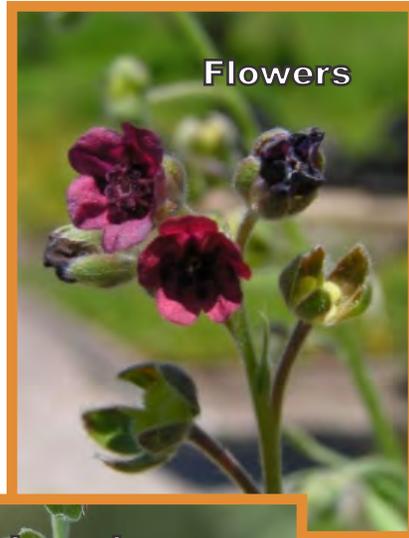
- Discourage people from planting Scotch broom or allowing it to grow undisturbed.
- When the soil is moist, small plants can be easily pulled by hand.
- Tilling can be effective in pastures. Cutting and/or mowing can also be effective.
- Biological control agents are available for control of Scotch broom, but have not proven effective in Idaho.

CHEMICAL CONTROL:

- Several herbicides are effective on Scotch broom.

SCOTCH BROOM (*Cytisus scoparius*)

HOUNDSTONGUE



HOUNDSTONGUE (*Cynoglossum officinale*)

WHAT DOES IT LOOK LIKE? Houndstongue is a biennial that forms a rosette the first year. The second year the plant produces a single, hairy, coarse flowering stock which can grow 1 to 4 feet tall with a thick, black, woody taproot. The leaves are oblong and rough, like a hound's tongue. The flowers are small, reddish-purple and appear at the end of the stems.

WHERE DOES IT LIKE TO GROW? Houndstongue plants generally are found along trails and roadsides, on the edge of wooded areas and in disturbed areas.

WHEN DOES IT BLOOM? Small, attractive reddish-purple flowers begin to appear in June and seeds are formed and dropped by the end of summer.

HOW DOES THIS PLANT SPREAD? Houndstongue reproduces only from seed, but can spread great distances because the barbs on the seed pod cling to clothing, machinery and animals. Each flower produces three to four seeds in a cluster which are flat and teardrop-shaped with a hard seed coat covered with barbs. Mature plants can produce up to 2,000 seeds. Seeds will germinate February to May.

CAUTION: Houndstongue contains toxins that are especially toxic to cattle and horses. The plant is rarely eaten in the green state; however, animals will eat the dried plant in hay. Death in animals from houndstongue poisoning is due to severe, irreversible liver failure.

NON-CHEMICAL CONTROL:

- Learn to identify plants. Know your property. Beware of seeds clinging to clothing or animals.
- Beware of hay and seed from outside your area. Use only certified weed-free hay.
- Digging of young rosettes in the autumn or early spring gives effective control.
- Mowing or cutting flowering stalks will help reduce seed production.

CHEMICAL CONTROL: First year rosettes are easily controlled with herbicides applied late May to mid-June. Second year plants are difficult to control with herbicides. Contact your Noxious Weed Control Office or County Extension Office for herbicide recommendations.

PUNCTUREVINE



Puncturevine flower



Seed capsule



Rosette

PUNCTUREVINE (*Tribulus terrestris*)

WHAT DOES IT LOOK LIKE? Puncturevine is a low growing annual that can make dense mats up to 5 feet across. Small ½ inch, 5 petal yellow flowers appear soon after germination followed by seed capsules with 2 sharp spines resembling the head of a goat often giving the plant the common name of goatheads.

WHERE DOES IT LIKE TO GROW? This plant grows best in dry, loose, sandy soils but can survive in almost any type of soil.

WHEN DOES IT BLOOM? The flowering time extends from June to October. Bright yellow flowers will begin to appear as early as 3 weeks after germination with seeds appearing 1 to 2 weeks later. Flowers are only open in the morning.

HOW DOES IT MAKE NEW PLANTS? Puncturevine reproduces from seed only. Woody, spiny fruits with five segments, that will split when ripe, each contain one to four seeds. The sharp spines easily penetrate leather, rubber tires, skin, or other surfaces, and may be transported some distance before being knocked or picked off.

HOW DO I CONTROL IT? As with all noxious weeds, prevention is the best control. Don't allow fields and pastures to become unhealthy and bare. The use of fertilizer to encourage strong growth of grasses is highly recommended.

NON-CHEMICAL CONTROL:

- Don't allow the plants to flower. Hoe, dig or till out seedlings as soon as you discover them.
- Puncturevine can be controlled with mulches in ornamental plantings, orchards, vineyards, vegetable crops and gardens.
- Two species of weevils were introduced into the United States for puncturevine control in 1961. The insects have yet to establish in Idaho or Washington.

CHEMICAL CONTROL:

- Many herbicides are reported to be effective, either pre or post emergent. Several applications of post emergent herbicide will be necessary to control seedlings after each rainfall or watering.

To Do List:

Early July -

- Spray or mow leafy spurge to stop seed production
- Mow spotted knapweed to stop seed production

Late July -

- Do not spray if temperature is above 85°*

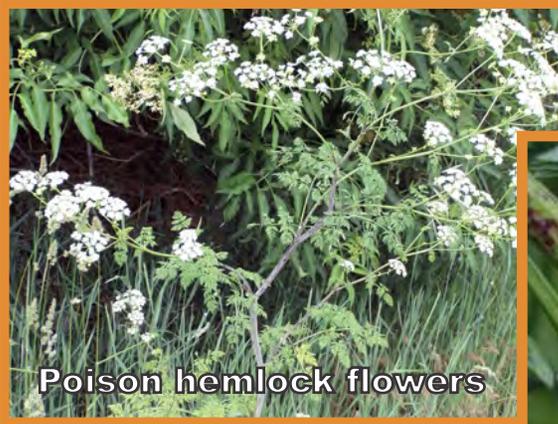
June 2017						
S	M	T	W	T	F	S
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

August 2017						
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			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

July 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8 ○
		Independence Day				
9	10	11	12	13	14	15
16 ●	17	18	19	20	21	22
23 ●	24	25	26	27	28	29
30 ●	31					

POISON HEMLOCK



Poison hemlock flowers



Purple spots on stems



Leaves of rosette

WHAT DOES IT LOOK LIKE? Poison hemlock is a tall biennial. That means it forms a rosette but does not flower during its first year of growth. In the second year, a tall, erect, flowering stem will grow up to 12 feet. Poison hemlock has a long, white taproot and the stem is strong, smooth and covered with purple spots. The leaves are fern-like in appearance.

WHERE DOES IT LIKE TO GROW? Poison hemlock can be found along roadsides, edges of cultivated fields and on stream and ditch banks. It prefers wet soil conditions but can survive in dry sites.

WHEN DOES IT BLOOM? Small erect clusters of white flowers appear in July and August. Each flower develops into a green, deeply ridged fruit that contains several seeds which turn gray-brown when ripe.

HOW DOES IT SPREAD? Poison hemlock reproduces only from seed. Seeds will drop next to the parent plant or be carried to new locations by water or birds.

CAUTION All parts of this plant are toxic to animals and humans. The toxic compounds are found in the stems, leaves and seeds of this plant.

NON-CHEMICAL CONTROL:

- Always wear long sleeves, long pants and gloves when around or handling this plant.
- Plowing or repeated cultivation will prevent poison hemlock seedlings from becoming established.
- Repeated mowing will prevent the plant from flowering and setting seed.

CHEMICAL CONTROL:

- Several herbicides are effective when used on the rosettes in the spring.

POISON HEMLOCK (*Conium maculatum*)

September 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4 Labor Day	5 ○	6	7	8	9
10	11	12 ●	13	14	15	16
17	18	19 ●	20	21	22	23
24	25	26	27 ●	28	29	30

October 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 ○	6	7
8	9 Columbus Day	10	11	12 ●	13	14
15	16	17	18	19 ●	20	21
22	23	24	25	26	27 ●	28
29	30	31				

Information for this guide came from the
Inland Empire Cooperative Weed Management Area Weed Identification and Control Handbook 2014

November 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3 ○	4
5	6	7	8	9	10 ●	11 Veterans' Day
12	13	14	15	16	17	18 ●
19	20	21	22	23 Thanksgiving	24	25
26 ●	27	28	29	30		

December 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3 ○	4	5	6	7	8	9 ●
10	11	12	13	14	15	16
17 ●	18	19	20	21	22	23
24	25 Christmas	26 ●	27	28	29	30
31						

Design and Printing:

Ron Harbison and Tracey Kelly of Kootenai County Reprographics Center; Weed Specialists Shelby Talley & Merry Ruth Dingman and Weed Superintendent Bill Hargrave of Kootenai County Noxious Weed Control.

CAUTION WHEN USING HERBICIDES:

READ THE ENTIRE HERBICIDE LABEL CAREFULLY.

Any time herbicides are used, the applicator is legally required to follow the directions and precautions stated on the label. Note what safety equipment is needed; where, when and how the herbicide can be applied; the plants it can be used on; mixing rates and disposal and storage requirements. When using any chemical product, **READ THE LABEL!** Idaho follows the Environmental Protection Agency (EPA) approved label because **the label is the law!**

ADJUVANTS AND SURFACTANTS:

It is common to use adjuvant/surfactants mixed with herbicides. These products increase the success of the treatment. They do this by better penetration, increasing coverage, and extra absorption on the plants being sprayed.

CONVERSION TABLE

1 ml	=1 cc	1 oz	= 28.4 grams
1 teaspoon	=5 ml	16 oz	= 1 pound
3 teaspoons	= 1 tablespoon	1 pound	= 454 grams
1 table spoon	= 15 ml	1 kilogram	= 2.2 pounds
2 tablespoons	= 1 oz	2000 pounds	= 1 ton
16 tablespoons	= 1 cup		
1 cup	= 8 oz	Length & Area	
2 cups	= 1 pint	1 mile	= 5,280 feet
2 pints	= 1 quart	1 mile	= 1.6 kilometer
8 pints	= 1 gallon	½ acre	= 21,780 sq ft
1 gallon	= 128 oz	1 acre	= 43,560 sq ft

SMALL QUANTITY DILUTION TABLE

To spray small areas use the following dilution table.

IF Dosage on Label
shows:

Use this Amount
for each **Gallon of Water:**

2 pints (1 quart) per acre	¾ ounces
3 pints (1 ½ quart) per acre	1 ¼ ounces
4 pints (2 quarts) per acre	1 ½ ounces
6 pints (3 quarts) per acre	2 ¼ ounces

If there are any questions about the use of an herbicide product, **please call your local weed control agency for guidance.**

CHEMICAL SUGGESTIONS

This noxious weed calendar does not recommend any product or company. All brand names listed are for resource purposes only.

CHEMICAL	NON-CROP LANDS	HOME LANDSCAPES
2, 4-D	Hi-Dep [®] and other generic brands	Hi-Dep [®] , Hi-Yield [®]
2, 4-D + dicamba	Weedmaster [®] Range Star [®] Brash [®]	Weed-B-Gon Weed Killer [®] Bayer All In One Weed Killer [®]
2, 4-D + clopyralid	Curtail [®] Commando [®]	
Aminopyralid	Milestone [®]	
Aminopyralid+ metsulfuron	Opensight [®]	
Aminopyralid+ triclopyr	Capstone [®]	
Picloram	Tordon RTU [®] ; Tordon 22K [®] (restricted use)	
Glyphosate	Roundup [®] and other generic brands	Roundup [®] ; and other generic brands
Clopyralid	Stinger [®] ; Transline [®]	
Dicamba	Banvel [®] ; Vanquish [®]	
Chlorsulfuron	Telar [®]	
Metsulfuron	Escort [®] and other generic brands	
Imazapyr	Arsenal [®] ; Habitat [®] and other generic brands	
Triclopyr	Garlon 3A [®] Garlon 4 [®] and others	Weed-B-Gon Chickweed, Clover & Oxalis [®] ; Weed-B-Gon Poison Ivy/Brush Killer [®] ; Image Brush & Vine Killer [®]
Triclopyr + Clopyralid	Brazen [®] ; Prescott [®]	Confront [®]
Triclopyr + 2, 4-D	Crossbow [®]	