

Himalayan Blackberry

Rubus armeniacus, syn. Rubus discolor

Evergreen Blackberry

Rubus laciniatus
Rosaceae

**Class C Noxious Weeds
Control Recommended**

Legal Status in King County: Himalayan blackberry and evergreen blackberry are Class C noxious weeds (non-native species that can be designated for control based on local priorities) according to Washington State Noxious Weed Law, RCW 17.10. The State Weed Board has not designated these species for control in King County. The King County Weed Control Board recommends control of these species where feasible, but does not require it.

BACKGROUND INFORMATION

Impacts and History

- Highly invasive and can be found throughout King County.
- Can be very difficult to control.
- Out competes native understory vegetation and prevents the establishment of desirable native shade intolerant trees such as Pacific Madrone, Douglas Fir and Western White Pine.
- Can limit movement of large animals when forming large impenetrable thickets.

Description

- **Himalayan blackberry** is a robust, sprawling perennial with stems having large stiff thorns.
- Main canes up to 10 feet long with trailing canes reaching up to 40 feet.
- Trailing canes typically take root at the tips.
- Leaves are large, round to oblong and toothed typically come in sets of three (trailing canes) or five (main stems).
- Individual canes can reach a density of 520 canes per square meter.
- Flowers are white to pink, about one inch in diameter and borne in clusters of about 5 to 20 blooms.
- Develops edible black fruit that clings to the center core when picked.



Himalayan blackberry

- **Evergreen blackberry** is a robust trailing evergreen shrub that grows into impenetrable thickets.
- Ribbed reddish stems up to 10 feet in length with large curved thorns.
- Young canes arch as they grow longer, eventually reaching the ground and rooting at the nodes.
- Palmately compound leaves with 3 to 5 deeply lacerated leaflets.
- Flowers are white to pink about one inch in diameter borne in clusters.
- Develops edible black fruit that clings to the center core when picked.



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Evergreen blackberry

Habitat

- Blackberry can be found in a myriad of habitats such as vacant lands, pastures, forest plantations, roadsides, creek gullies, river flats, riparian areas, fence lines, and right-of-way corridors.
- Does not grow well in wetland areas, will grow if cane tip roots.

Reproduction and Spread

- Reproduces vegetatively by root and stem fragments and by seed.
- Plants begin flowering in spring with fruit ripening in midsummer to early August.
- Daughter plants can form where canes touch the ground.
- Seeds can remain viable in the soil for several years.

Local Distribution

Found throughout King County.

CONTROL INFORMATION

Integrated Pest Management

- The preferred approach for weed control is Integrated Pest Management (IPM). IPM involves selecting from a range of possible control methods to match the management requirements of each specific site. The goal is to maximize effective control and to minimize negative environmental, economic and social impacts.
- Use a multifaceted and adaptive approach. Select control methods which reflect the available time, funding, and labor of the participants, the land use goals, and the values of the community and landowners. Management will require dedication over a number of years, and should allow for flexibility in method as appropriate.

Planning Considerations

- Plan your control effort including: 1) surveying of the area thoroughly for blackberry, 2) setting priorities for control, 3) selecting the best control method(s) for the site conditions and regulatory compliance issues (**refer to the King County Noxious Weed Regulatory Guidelines**) and 4) monitoring the success of control and implementing follow up control as necessary.
- Control practices in critical areas should be selected to minimize soil disturbance. Any disturbed areas need to be stabilized to control erosion and sediment deposition. Refer to the King County Surface Design Manual (www.kingcounty.gov/environment/waterandland/stormwater/documents/surface-water-design-manual) for further information about sediment and erosion control practices. Minimizing disturbance also avoids creating more opportunities for germination of blackberry and other weeds.
- Generally work first in least infested areas, moving towards more heavily infested areas.
- Ensure habitat protection by targeting only blackberry and preserving all native and beneficial vegetation.
- For sites that provide important bird habitat, it is recommended to remove only one quarter of the blackberry infestation each year especially if there is little alternative habitat nearby. You may also want to consider refraining from large blackberry removal projects during nesting season (mid-March to the end of June).

Early Detection and Prevention

- Blackberry is easily identifiable throughout the year.
- Manually control new infestations as early as possible.
- Monitor the control site and remove any plants returning from root fragments.

Manual

- Hand-pull the stem closest to the ground and uproot the root ball. This method is most effective with first year plants.
- Manual control works best after rain or in loose soils where the canes are suppressed because the blackberries are growing in a forest understory.
- Digging up root crowns and major side roots is slow but will control blackberry and is effective on small infestations.
- Using a claw mattock or pulaski/mattock is also effective.
- Recheck work area because large root fragments left can re-sprout.
- If removing dense patches, area should be replanted with native plants and mulched, or reseeded with a suitable grass.
- Hand pulling and the use of hand mechanical tools are allowable in all critical areas in unincorporated King County.

Mechanical

- Mowing, including the use of riding mowers and tractor mounted mowers, can be very effective in controlling blackberries but also may harm desirable plants present.
- Mowing should not be used where soils are highly susceptible to compaction or erosion, or where soils are very wet.
- Several cuttings a year over several years are necessary to exhaust the roots of their reserve food supply.
- If only one cutting is done per year, cut when the plants begin to flower. If no follow-up is done, the blackberry may re-sprout from the root crown at a greater density, and could overgrow any vegetation planted.
- Cultivation in agricultural areas utilizing cultivation machinery can be effective in controlling blackberry either alone or in conjunction with mowing but is not selective and may require specific sediment and erosion control measures (see Control of Large Infestations/Monocultures).

Biological

Biological control is the deliberate introduction of insects, mammals or other organisms which adversely affect the target weed species. Biological control is generally most effective when used in conjunction with other control techniques. Biological control methods that may assist in blackberry control include the use of goats and chickens as follows:

- Goats and pigs may be effective on clearing or controlling blackberry re-growth from a year to four years old. On mature stands, goats tend to only strip leaves off of the canes. Animals may prefer alternative forage available, so reduce opportunities for selective browsing. Grazing must be continuous or else re-growth will occur. Care needs to be taken to fence off or protect any native or other valuable vegetation. The King Conservation District can provide further information of the use and management of goats for weed control.
- Chickens can potentially decrease the seed bank in blackberry cleared areas by grazing on the seeds.

Chemical

- **Precautions:**
 - Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label of the product being used. **Follow all label directions.**
 - For herbicide use in critical areas and their buffers, certain restrictions apply depending on the site and jurisdiction. In unincorporated King County, refer to the **King County Noxious Weed Regulatory Guidelines** for a summary of current restrictions and regulatory compliance issues. Elsewhere, check with the local jurisdiction.

- For your personal safety, at a minimum wear gloves, long sleeves, long pants, closed toe shoes, and appropriate eye protection. Follow label directions for any additional personal protection equipment needed.
- For control of large infestations, herbicide use may be effective, either alone or in combination with mowing. Infested areas should not be mowed until after the herbicide has had a chance to work and weeds are brown and dead.
- For several years following treatment, monitor areas for new plants germinating from the seed bank, or any missed plants.

Specific Herbicide Information

Herbicides are generally described here by the active ingredient. Many commercial formulations are available containing a specific active ingredient. References to product names are as an example only, and other equally, or more effective commercial products may be available.

Glyphosate: can effectively control blackberry. Treatment with glyphosate needs to be combined with effective re-vegetation of the site to prevent re-invasion by undesirable vegetation and to control erosion. Glyphosate is most effective on blackberry in September to October when canes are actively growing and after berries have formed. Fall treatments should be conducted before the first frost.

Selective Broadleaf Herbicides (such as triclopyr, 2,4-D and metsulfuron): most effective when blackberry is growing in a grassy area. Read the label of the product you are using to determine the optimal time to spray. Re-treatment the following year may be necessary to control any returning plants. Continue to monitor for new plants for several years after the initial treatment and following any disturbance to the soil such as tilling or construction.

NOTE: Certain additional restrictions apply for products containing 2,4-D and Triclopyr BEE (e. g. Garlon 4, Crossbow). Refer to the King County Noxious Weed Regulatory Guidelines for more details.

Selective herbicides that are effective on blackberry include metsulfuron (e.g. Escort, Cimarron, Ally), triclopyr ester (e.g. Garlon 4) or triclopyr amine (e.g. Garlon 3A) and a combination treatment of triclopyr and 2,4-D (e.g. Crossbow).

Metsulfuron should be applied to fully leafed-out blackberry before fall leaf coloration. Good coverage is essential to achieve control.

Triclopyr (amine and ester) and triclopyr + 2,4-D should be applied when actively growing. Foliage must be thoroughly wetted with herbicide.

2,4-D can harm certain grasses, alfalfa, clover and other legumes. The addition of a suitable surfactant may improve the control results.

The mention of a specific product brand name in this document is not, and should not be construed as an endorsement or as a recommendation for the use of that product. Chemical control options may differ for private, commercial and government agency users. **For questions about herbicide use, contact the King County Noxious Weed Control Program at 206-477-9333.**

SUMMARY OF BEST MANAGEMENT PRACTICES

Small Infestations in Native and/or Desirable Vegetation

- Properly identify targeted blackberries.
- Mark all desirable vegetation around control area, ensuring that no native plants are removed.
- Small infestations of less than 200 square feet can be effectively and relatively easily hand-pulled or dug up. Isolated plants should be removed in order to prevent them from infesting a larger area.
- Cut above ground portion of blackberry with loppers or pruners. Dig up or pull the remaining root ball.
- Pull or dig up the plants when the soil is wet.
- Replace any divots created when removing the plants to lessen the amount of disturbed soil.
- Apply appropriate herbicide with wick wiper or by spot spray to the cut stumps to minimize off target injury.
- Monitor site throughout growing season and remove any new plants.
- If using an herbicide in a grassy area, use a selective herbicide to avoid injury to the grass.

Large Infestations/Monocultures

- Properly identify invasive blackberries.
- Mark all native vegetation in and around the control area, ensuring that no native plants are removed.
- Mow down the blackberry with weed-eaters, brush mowers or machetes.
- Following mowing, either dig up the root-ball if labor is available or treat re-sprouting blackberry re-growth with an appropriate herbicide (See the Chemical section of this BMP).
- Mechanical cultivation is also an option for controlling invasive blackberries in agricultural areas. After initially mowing down the above ground vegetation, deep cultivation of the land can control root balls if done multiple times. Yearly spot control of returning seedlings or re-growth will likely be necessary.
- For large areas, it may be more cost-effective to apply herbicide to the mature blackberry plants and then mow the dead canes.
- When large dense areas of blackberry are removed, the bare areas created need to be stabilized and re-vegetated with native or non-invasive vegetation to prevent erosion

and re-invasion of blackberries and other weeds (refer to the King County Surface Water Design Manual or equivalent for incorporated areas). Ensure that a high standard of blackberry control has been achieved prior to re-planting the site.

- If a non-selective herbicide is used in grassy areas, the area needs to be re-seeded to prevent reinvasion by weeds.
- Infested areas will require follow-up management lasting for several years to control plants re-growing from the seed bank and rhizomes.

Riparian and Aquatic Area Control Issues

- Additional permits may be required for control of infestations in riparian areas. See the Noxious Weed Regulatory Guidelines for more information or contact your local jurisdiction.
- In some cases, the cleared area will need to be replanted with native or non-invasive vegetation and stabilized against erosion. See the King County Surface Water Design Manual for further information.
- Focus on manual removal for small infestations if possible. Follow procedures listed above.
- For larger areas where herbicide use is warranted, spray using low pressure and large droplet size to reduce drift. If herbicide could potentially drift into the water or a wetland area, use only approved aquatic herbicides and surfactants.
- Blackberry shrubs can be found growing along wetland margins but are typically daughter plants off of a main cane. Control can be achieved by cutting the canes down to the ground. The roots can not withstand the anaerobic soil conditions without the supporting canes.

Road Rights-of-Way Control Issues

- Manually remove infestations if possible.
- If plants are in grassy areas, use a selective broadleaf herbicide; if controlled with a non-selective herbicide, re-seed after control is completed.
- An effective mowing program can control blackberries along a Right-of-Way. Any blackberries remaining outside the mowed area will quickly re-invade the cleared areas.
- Spot spray blackberries with glyphosate in areas with no desirable vegetation.

Disposal Methods

- Plant crowns and rootballs should be collected and discarded with the trash or yard waste or taken to a transfer station for disposal. Back yard composting of rootballs is not recommended.
- Stems can be composted, but they will root on moist soil so they need to be completely dried out or chipped up before composting.
- Dried out stems may be composted on site, disposed of in a city-provided yard waste container or in the green recycling at a transfer station.

- Stems with berries should be collected and put in the trash, yard waste container, or taken to a transfer station. If removal is not feasible, these stems can be left on site. However, there is a risk of spread from the seeds, so the area should be monitored for
- several years for seedlings. Stems should be left well away from waterways, shorelines, roads and un-infested areas.
- Never dump yard waste in parks or natural areas, as weeds may spread from yard waste piles.

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