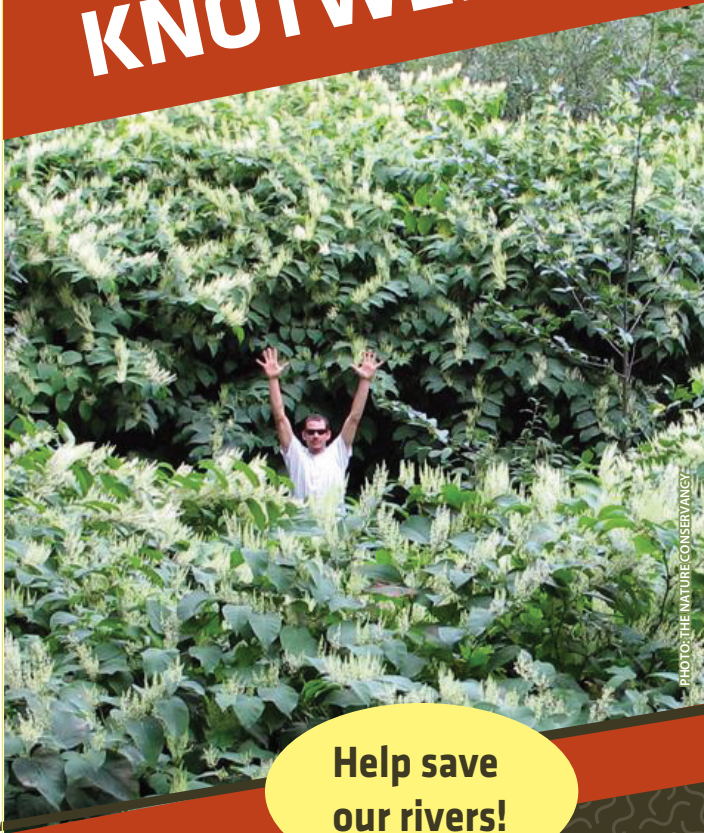


Stop the spread of **INVASIVE KNOTWEED**



**Help save
our rivers!**



King County



DEPARTMENT OF
ECOLOGY
State of Washington

Why is it important to control knotweed?

- Knotweed destroys critical fish and wildlife habitat and reduces recreational opportunities on rivers.
- Knotweed can create bank erosion problems, reduce water quality, clog small waterways and salmon streams, and displace native streamside vegetation. It reduces food sources for wildlife and lowers nutrient input into stream systems.
- Knotweed can overwhelm yards and damage structures such as foundations and roads.



*Knotweed dies
back in winter
leaving
riverbanks
exposed.*



*Knotweed's dense growth crowds out all other
vegetation.*

***Knotweed is destroying important habitat
along our rivers. We need to act now! Every
year, knotweed becomes more widespread
and more difficult to remove.***

What is invasive knotweed?

Knotweeds are robust, bamboo-like perennials introduced as ornamental plants that are spreading throughout the Pacific Northwest. The main species are itadori knotweed (*Fallopia japonica*), giant knotweed (*F. sachalinensis*), and hybrid knotweed (*F. x bohemica*).

The heaviest concentrations are along rivers and roads, but knotweed is also found in backyards, forests, parks, and farms. All invasive knotweed species are Washington State Class B Noxious Weeds. Control is recommended but only required in selected areas in King County due to the widespread distribution of invasive knotweed in the county.

What does it look like?

Knotweed grows in dense stands 6–12 feet tall. Its stems are hollow, green to reddish and bamboo-like. Leaves are bright-green, broad, egg- or heart-shaped, with a pointed tip. Small, white flowers in branched sprays appear from July to August. Dormant in winter, the dead reddish-brown stems often remain standing. Knotweed emerges from root crowns in April and reaches full height by June.



How does knotweed spread?

Knotweed spreads when roots and stems are moved by waterways, floods or in contaminated soil. Seasonal floods sweep plants into rivers and creeks. These plants then fragment and disperse throughout the floodplains and cobble bars. New knotweed plants quickly establish from the fragments. Knotweed can also germinate from seed, although this is less common.



Root and stem fragments as little as ½ inch can form new plants. As a result, even one patch can produce dozens of new populations.

Knotweed control on King County rivers

Knotweed does not stop at property lines and is constantly being moved by flood waters and other disturbance along waterways. Comprehensive, large scale control of knotweed along waterways requires the cooperation of all the stakeholders and landowners along the riverside. The King County Noxious Weed Control Program is working cooperatively with organizations and federal, state and local agencies to control knotweed along several high priority waterways in King County. Contact us for information on our current projects or to discuss future plans.

Without prompt and vigorous action, knotweed will take over riverbanks, displace native habitat, and ruin the recreational values of King County's waterways.

How to control knotweed

Controlling knotweed takes persistence and diligence. Roots are very deep and plants grow back if they aren't completely killed. Begin upstream because water spreads knotweed downstream.

Digging: Can work for small, isolated patches. Dig up as much root as possible each summer for at least three consecutive years. Dispose of roots in the garbage—do not compost. Even small root fragments can grow into new plants.



Cutting: Cut stems to the ground over the entire patch every two to four weeks until plants go dormant. This will weaken the roots and, if repeated every year for about five years, can kill small stands of knotweed. Regrowth will have smaller stems, so don't cut plants where you intend to use the stem-injection method.

Covering: For best results use a heavy-duty, non-woven (felted) geotextile fabric. Install covering at the beginning of the year or after cutting plants down several times during the growing season. Plan to leave the material in place for three to five growing seasons. Cover the entire patch extending out at least 10 feet beyond the outside stems. Weigh covering down with large rocks or blocks. Covering should be loose to allow some growth without knotweed punching through the fabric. Monitor area once or twice a month each year until plants go dormant. Fix any holes, break off any new shoots around perimeter, and stomp down any re-growth pushing up the covering material.



Eradication by covering works best on level, open terrain that does not get regularly flooded.

Chemical Control: If the knotweed is near water, a permit and special license may be required. Native plants, bees, fish and other organisms may be harmed if herbicides are used improperly. Please check with the noxious weed program and the Washington State Department of Agriculture about using herbicides.



Spraying: Apply a systemic, translocated herbicide to actively growing plants. Two chemicals that are effective if used correctly are glyphosate (e.g. Roundup, Aquaneat) and imazapyr (e.g. Arsenal, Habitat). Rate, timing and careful application are key to effective and safe control, so

follow all label directions carefully. Contact our office if you have any questions. Best time to spray is from August to end of September, before leaves fall off. It may take several weeks to show results. If you wish to cut down sprayed plants, wait at least two weeks before doing so.

Stem Injection:

A measured amount of concentrated herbicide is injected into each hollow cane using a stem-injection gun or large needle. This is effective and can reduce possible off-target damage compared with spraying. However, it is time-consuming and uses more herbicide. Also, there is a limit on how many canes can be treated per acre. The best time for injection is from July to September. Only glyphosate is labeled for this method. Labeled products include Aquaneat, Roundup Custom, and Roundup Super or Pro Concentrate. Although you can expect about 90% control, there will be some re-growth the following year that will be too small to inject and will need to be controlled with another method. More information on stem-injection is available on the noxious weed program's website.



DO'S AND DON'TS

Knotweed don'ts



Do not let knotweed move into rivers and streams. Stems and roots that break loose can float downstream and establish new infestations.

Do not compost root crowns and rhizomes. Instead, discard with the trash or take to a transfer station for disposal. Stems can be composted but make sure all stem pieces are completely dried out (brown and brittle). Keep fresh knotweed stems and fragments out of compost piles.

Do not spread soil contaminated with knotweed roots or rhizomes. Any soil that is obtained within 20 feet of a knotweed patch could contain fragments of rhizomes, which can grow into new plants. If you are using fill dirt, check the pile to see if there is knotweed nearby or ask your supplier.

Knotweed do's



Remove knotweed on your property. Follow the tips in this brochure or in the resources listed on the back to effectively rid your property of knotweed. Join others in your neighborhood to pool resources and get knotweed out of your community.

Be careful while working around knotweed, particularly if you are mowing or doing yard work. Small fragments can get into dirt piles and take root or get transported to other areas.

Encourage natives. Plant native species around your property for improved wildlife habitat and healthy rivers. Fill in gaps with natives suited to the site.

Volunteer your time. Help educate others about knotweed, or offer to help those controlling knotweed in your area. Help distribute knotweed information in your neighborhood.

Call us! We are mobilizing efforts to control knotweed along many waterways in King County. For more information, contact the noxious weed program at 206-477-9333.

For more information:

King County Noxious Weed Control Program:
kingcounty.gov/weeds

Washington State Noxious Weed Control Board:
nwcb.wa.gov

**Washington State Department of Agriculture
Knotweed Program:**
agr.wa.gov/departments/insects-pests-and-weeds/weeds/knotweed

Stem-injection tool information and ordering:
jkinjectiontools.com

King County Native Plant Guide:
kingcounty.gov/gonative

Questions?

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201 S. Jackson St., Suite 5600
Seattle, WA 98104
kingcounty.gov/weeds 206-477-9333

Translation services available.
Para pedir una traducción, favor de llamar al 206-477-9333.

Alternate Formats Available
206-477-9333 TTY Relay: 711

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