

## **WEED CONTROL: INVASIVE KNOTWEEDS**

Several knotweeds appear on the Washington state Class B noxious weed list, with control requirements that vary depending on local distribution. Japanese (*Polygonum cuspidatum*), bohemian (*P. x bohemicum*), and giant (*P. sachalinense*) knotweeds are woody perennials that grow 4–12' tall and have bamboo-like stems and heart-shaped leaves. They reproduce vegetatively from rhizomes that can spread up to 30' from the mother plant. Small, green-white flowers start in late July and often continue until October. Invasive knotweeds form dense thickets that exclude native plants and degrade wildlife habitat. They prefer moist soils, and often occur on stream banks, slopes and ditches.

Manual or mechanical control of invasive knotweeds will not work on any but the smallest patches. Intensive, concerted effort will be needed for several consecutive years. Small stands should be cut down twice per month, April–August, and once a month following that period until the first frost for at least three years. Be sure to completely clean all tools and equipment before moving to another site. Even a 2" long fragment of stem can root and form a new plant, potentially resulting in a brand new infestation! For that reason, do not compost cut material and take care not to spread root fragments into new areas when disposing of material. Cutting debris may be piled on sheets of plastic and turned frequently to ensure drying throughout. Once material is fully desiccated, it can be burned on site. To fully control a population, chemical control methods will likely be necessary.

One of the most effective ways to control knotweed is to inject 1.5–3 ml of full-strength glyphosate concentrate directly into each stem, just above the second node, with an herbicide injector gun or a syringe. Direct stem injection eliminates the risk of herbicide drift because the herbicide is contained within the target plant. Stem injection does not require clear weather and is effective at any time during the growing season (June works well because most of the canes have already developed). Each cane larger than 1/2" diameter must be injected to achieve effective control. Smaller canes will need to be treated with solution of 1% imazapyr + 2% glyphosate, mixed with a surfactant and applied to the leaves with a backpack sprayer. Foliar spray has a higher potential for the herbicide to drift or run off onto the ground, but uses significantly less herbicide than stem injection (because the solution is much more diluted). Search for and treat new (often deformed) shoots growing in the area around the original patch during the following year. A good brochure on controlling knotweed can be found at [www.co.clark.wa.us/weed/documents.html](http://www.co.clark.wa.us/weed/documents.html).

Roundup™ is the glyphosate formulation most readily available to homeowners, but its use is not allowed in wetlands or streams. Aqua Neat™ and Roundup Custom™ are glyphosate formulations approved for wetlands and streams, but they must be applied by a licensed aquatic pesticide applicator. Commercial injectors use different needles to treat particular growth stages. For example, the injector gun uses a longer needle early in the growing season, to puncture both sides of the cane so the water inside the stem can escape. A shorter needle can be used later in the growing season when the knotweed stem does not contain much water. See the following website for more information on herbicide injector systems: [www.jkinjectiontools.com](http://www.jkinjectiontools.com).