

FISCAL NOTE FOR NON-CAPITAL PROJECTS

Department:	Contact Person/Phone:	CBO Analyst/Phone:
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Legislation Title:

AN ORDINANCE relating to the Cedar River Municipal Watershed and amending the Secondary Use Policies, adopted by Ordinance 114632, to provide for the limited application of the herbicide Imazapyr to treat invasive knotweed species.

Summary of the Legislation:

This legislation amends a 1989 ordinance that banned all herbicide use in the Cedar River Municipal Watershed, and continues a 2010 ordinance that allowed limited application of the herbicide Imazapyr to treat knotweed, an invasive species that is extremely harmful to native plants and aquatic habitats. This ordinance would allow for three additional years of limited application of the herbicide Imazapyr to continue treating the knotweed within the municipal watershed, with the goal of eradicating the knotweed.

Background:

Seattle Public Utilities (SPU) has a policy of not using herbicides in the Cedar River Municipal Watershed. This policy was enacted in the 1980s, before there was widespread recognition of the damage certain invasive plants can do to ecosystems and water quality. Since that time, many invasive species have become severe ecological threats in the Pacific Northwest.

Knotweed (*Polygonum x bohemica*, *P. cuspidata*, and *P. sachalinense*) is one such group of species. Knotweed poses the greatest risk of any invasive plant in the Cedar River Watershed. The plant takes over habitats near water, displacing native plant species, degrading habitat for salmon and other fish, and threatening water quality by destabilizing stream banks. Knotweed spreads rapidly downstream by flowing water and is nearly impossible to control by physical means alone. The environmental risk posed by invasive species such as knotweed is widely accepted as far greater than that posed by Imazapyr. As a consequence, many organizations, including the Nature Conservancy and King County, use Imazapyr to successfully control this noxious weed immediately adjacent to streams, lakes, and wetlands.

A study conducted by the Nature Conservancy found that if Imazapyr enters the water column, it is very quickly photo-degraded by sunlight, with an average half-life of only two to five days. Imazapyr is of relatively low toxicity to birds, mammals, fish and invertebrates and a study by a Washington State University toxicologist found the risk to water quality to be nil. Imazapyr is used for knotweed control by SPU and King County in the lower Cedar River Watershed (below the City's municipal watershed ownership boundary), and by Forterra, the Nature Conservancy, Kitsap Conservation District, and numerous other land management agencies and organizations throughout Washington State and elsewhere. This lower area of the watershed, not owned by the City of Seattle, is not subject to the same herbicide restrictions that the municipal watershed is,

but is part of the same hydrographic watershed and is, therefore, directly impacted by how well knotweed is controlled upstream in the municipal watershed.

In 2010 the City Council granted SPU the authority to use Imazapyr to control knotweed in the Cedar River Municipal Watershed for three years, through 2012. Extensive water quality monitoring was conducted during this time and no trace of the herbicide was detected in the drinking water supply. Land managers and restoration experts throughout the region and the U.S. are learning that more than three consecutive years of treatment with Imazapyr is required to effectively control knotweed to prevent re-growth. SPU is requesting a three-year extension of the authorization to apply Imazapyr in the Cedar River Municipal Watershed to maximize the potential effectiveness of this treatment, avoid re-infestation of the areas treated within the last three years, and hopefully eradicate knotweed from the municipal watershed.

Please check one of the following:

This legislation does not have any financial implications.

This legislation has financial implications.

Appropriations:

Fund Name and Number	Department	Budget Control Level*	2013 Appropriation	2014 Anticipated Appropriation
TOTAL				

**See budget book to obtain the appropriate Budget Control Level for your department.*

Appropriations Notes:

No new appropriations are required as a result of this legislation. Adequate funds for the work related to this legislation are included in the 2013 Water Fund Operating Budget (Other Operating BCL #N400B-WU). Estimated annual costs are \$41,000.

Other Implications:

a) **Does the legislation have indirect financial implications, or long-term implications?**

The long-term implications of this legislation are a result of cost savings, not increased expenditures. This is explained in the answer to b) below.

b) **What is the financial cost of not implementing the legislation?**

Without this legislation, the only control alternative is covering. This alternative is less effective and more costly than the use of herbicides proposed under this legislation, as further described under “d)” below. The no action alternative was ruled out because the infested areas would continue to be sources of knotweed, undermining efforts by SPU and King County to control the plant in downstream areas, ultimately increasing the cost

of control and/or resulting in substantial negative ecological impacts. Under a related but different program described in the Background section of this fiscal note, over \$1,000,000 has already been spent controlling knotweed with herbicide (allowed outside of the municipal watershed boundary) in these downstream areas, projects that would be put at risk if control of the knotweed in the municipal watershed is not continued.

c) Does this legislation affect any departments besides the originating department?

No.

d) What are the possible alternatives to the legislation that could achieve the same or similar objectives? SPU attempted to use physical control (installing and maintaining geotextile fabric to cover knotweed) in the municipal watershed on a total of 4.5 acres of selected small patches of knotweed from 2004 through 2012. After six years of maintaining the fabric, they found that it was successful in killing the knotweed only on the smallest patches, with extensive re-growth on the slightly larger patches when the fabric was removed. SPU also tried several cutting regimes on test plots, and found it was ineffective after four years of intensive effort. There is currently no biocontrol agent approved for use on knotweed. Consequently, there are no viable alternatives to herbicide to control large patches of knotweed. Moreover, herbicide is a less costly alternative. Below is the estimated comparative cost of controlling a large area (15.86 acres) with covering versus herbicide.

Method	3-year Cumulative Cost	Ecological Risk from allowing knotweed to persist	Risk from Treatment¹	Notes
<i>Covering</i>	\$460,000	High	Low	Cost includes purchasing the fabric, contractor & staff labor to install and maintain fabric (average of \$17,000/ac to install and \$4,000/ac/yr to maintain).
<i>Herbicide (proposed option)</i>	\$41,000	High	Low	Cost includes purchasing the herbicide, contractor time to apply the herbicide, water quality testing, and staff labor to supervise the work & monitor the sites (approx. \$300/acre).

e) Is a public hearing required for this legislation? No.

- f) **Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?** No.

Does this legislation affect a piece of property? Yes, this legislation affects the 92,000-acre Cedar River Municipal Watershed, which is owned and operated by the Seattle Public Utilities as a drinking water supply watershed. See map in Figure 1 of Attachment A to this ordinance.

- g) **Other Issues:** None.

List attachments to the fiscal note below: