AQUATIC HERBICIDES and WATERCOURSE MAINTENANCE

Introduction

Aquatic herbicide applications are an effective means of maintaining drainage in watercourses where Reed canarygrass infestation traps sediment and impedes flow. However, the use of herbicides in and around water also has potential negative impacts to water quality and to fish habitat and is strictly regulated by the Washington State Department of Ecology (WDOE) and the Environmental Protection Agency (EPA).

Do I need permits?

- A National Pollutant Discharge Elimination System (NPDES) permit must be obtained before aquatic herbicides can be applied to water.
- Applicators must be licensed by the Washington State Department of Agriculture.
- Notification and posting are required before herbicide application and there may be additional mitigation proposed to protect rare plants or threatened and endangered species.

The general permit covers the discharge of products used to control noxious weeds in waters of Washington State. Under the Washington State Water Pollution Control Act, a permit is required to discharge pollutants that alter the biological or chemical characteristics of a water body.


Who: Drainage Improvement Districts, individual landowners, or the licensed applicator can act as the applicant and hold the permit.

What weeds: This permit applies only to plants on Washington State’s noxious weeds list such as Purple loosestrife or Reed canarygrass. It is a violation of the permit to treat any native aquatic plants.

Note: Additional Federal requirements are needed for work on Lummi Indian Reservation lands.

What are the Advantages?

- Aquatic herbicides can be less expensive than other aquatic plant control methods, especially when used to control wide-spread infestations of state-listed noxious aquatic weeds.
- Occasional use will extend channel maintenance intervals.
- Aquatic herbicides are very effective if used in combination with long term practices such as Watercourse Re-vegetation (see Informational Factsheet #20) to shade out noxious weeds.

What are the Disadvantages?

- Herbicides applied to vegetation on watercourse banks may kill the plant roots stabilizing the bank, resulting in erosion, bank failure, and additional dredging expense to clear the channel.
- Herbicides may have restrictions relative to swimming, drinking, fishing, irrigation, and water use. Check the label and general permit for restrictions.
- Herbicide use may have unwanted impacts to people who use the water and to the environment.
- In addition to nuisance plants, non-targeted plants may be negatively affected or killed by some herbicides.
- Depending on the herbicide used, it may take several days to weeks or several treatments during a growing season before the herbicide controls or kills treated plants.
Aquatic Herbicide BMPs

- Use only when permits have been secured.
- Use only licensed applicators.
- Limit applications to vegetation in the channel bottom.
- Do not apply to stream bank vegetation or bank stability will be lost.
- Apply in late summer and early fall for best results.
- Spring and early summer applications rarely result in a lethal dose but may be effective in reducing growth rates and maintaining drainage throughout the summer.

Is this a long term solution?

Aquatic herbicides can be one useful component of a drainage maintenance plan for a Drainage Improvement District or landowner. However their use is limited. For example, if field sediments are eroding into the watercourse, farm practices such as replacing bare ground with vegetative filter strips will save costs and soil over the long term. Reed canarygrass provides some cover and habitat for fish. Repeated annual herbicide treatments will eliminate this habitat unless it is replaced with another vegetative cover. (See Informational Factsheet #20 Watercourse Re-vegetation).