

AQUATIC PLANT MANAGEMENT COMMON QUESTIONS

Will these herbicides harm migratory birds and bees? How do herbicides affect fish/other aquatic life?

The Environmental Protection Agency (EPA) explains that when a registered herbicide is used according to the label directions, it will cause no unreasonable adverse effects on human health or the environment. All pesticides undergo years of testing, review, and evaluation by the EPA before they can be used. One of the specific criteria for review is “effects to non-target organisms”. Birds, mammals, fish, and invertebrates are all considered “non-target organisms”. Since herbicides are only used to manage plants, tests have shown minimal impacts on these non-target organisms.

Do herbicides harm fish or affect water quality?

When using aquatic herbicides according to the label, they do not harm fish. The impact of aquatic herbicides on fish and water quality can vary depending on the specific herbicide used, its concentration, the application method, and the environmental conditions of the water body.

Fish kills can sometimes be seen after an application, usually under warm conditions, when there is less oxygen in the water and the target plants decay rapidly. This situation can remove all remaining oxygen and lead to fish suffocation. Therefore, treating large infestations in mid-summer is not advised.

A proactive management strategy never allows invasive plants to reach high numbers. Managing fewer plants over time will reduce nutrient release and prevent shocking the aquatic ecosystem with drastic changes often associated with reactive management strategies.

Do herbicides cause sores on fish?

When used according to the label, herbicides have not been shown to cause fish sores. Fish sores can have many causes, but usually result from stress or an infection.

Are the fish safe to eat after treatment? How long do we wait to eat them?

Almost all aquatic herbicide labels list fishing and swimming restrictions as zero days after application, when used according to the label. Therefore, fishing (and consumption of those fish) can usually occur immediately after the application. It is important to check the herbicide label or contact your local management agency to be sure.

Will these chemicals harm my family or pets?

There is little likelihood of adverse effects from normal water usage after herbicide application. All herbicides undergo years of testing, review, and evaluation by the EPA before they can be used. One of the specific criteria for review is “effects to human and animal exposure.” Almost all aquatic herbicide labels list water consumption restrictions as zero days after application, but some have restrictions of one day. It is important to check the herbicide label or contact your local management agency to be sure.

What is the difference between the SDS and herbicide label since they sometimes seem to conflict?

Safety Data Sheets (SDS) (formally MSDS or Material Safety Data Sheets) and herbicide product labels serve different purposes, but both are essential for the safe handling and use of herbicides and other chemicals. SDS are developed by the Occupational Safety and Health Administration (OSHA) and the primary purpose of an SDS is to provide detailed information about the properties, hazards, and safe handling of a chemical product. SDS are not intended for the public, but rather for warehouse managers and those that transport these chemicals. On the other hand, labels are intended to inform herbicide users/handlers that are involved in plant management. This information is specifically designed to provide direction on the proper and legal use of the herbicide. The key distinction is that SDS sheets are designed to protect workers in an industrial environment while labels are designed to protect the natural environment.



Can I use the same herbicides in my ponds and in my yard?

Maybe, maybe not...it depends on the label. When the EPA registers herbicides, they register them for use sites, not individual plants. For example, some herbicides are labeled for aquatic use only, while others can be used in water as well as on lawns. Always read and follow the instructions on the herbicide product label since it describes where the product can be used safely. If you are unsure about which herbicide to use, consider consulting with your local Extension office, environmental agencies, or landscape professionals who can provide guidance for your specific situation. A permit may be required for some applications.

How does plant control in aquatic or conservation lands compare to applications in agriculture?

Both recognize the importance of sustainable and environmentally friendly practices. However, their management goals differ when it comes to using herbicides. Agriculture management goals relate to maximizing crop production by reducing weedy plants around their desired crop. Aquatic and conservation lands focus on preserving natural ecosystems by managing nuisance and invasive plants to allow desirable native species to thrive.

Why do we continue to spray when there are so few plants?

Proactive aquatic plant management refers to the measures taken (such as herbicide treatments) to minimize the impact of invasive and nuisance plants by intervening before large problems develop, to protect bodies of water and the biodiversity present in them. While proactive management requires more frequent visits to the lake, spraying fewer plants results in less herbicide use over time, and fewer plants decaying and releasing nutrients.

On the other hand, a reactive strategy involves waiting for plants to grow to problematic levels. Managing large amounts of plants at one time can lead to low dissolved oxygen as the plants decay, while also causing algae blooms with the mass release of nutrients from the decaying plants. Proactive management allows managers to get ahead of the invasive and nuisance plants before they become a problem in order to promote the growth of native plants.

How can we target one plant and not others?

The ability to target a single plant for removal is called “selectivity”, since we are attempting to select which plant will be managed. Selectivity is often based on traits that are unique to the plant that make them more sensitive or more tolerant to the herbicide. For example, some plants metabolize (or breakdown) certain herbicides very quickly and are able to survive the treatment. Therefore, knowing these differences in how specific plants respond to individual herbicides allows skilled biologists to safely use herbicides that will effectively remove target plants and leave the others.

Where can I purchase these herbicides?

Depending on what herbicide you need, there are a variety of options ranging from big-box stores, farm and garden stores, or professional pesticide distributor companies. When buying from big-box or farm and garden stores, the products may already be mixed at the appropriate concentration for use around your home and landscape. Professional distributors usually have more concentrated products, packaged differently for large applications. If you have a property with several acres of invasive plants that need management, it might be cheaper and easier to hire a contractor. A permit from a state, county, or local agency may be required.

Do herbicides contribute to blue-green algae blooms?

Algae blooms usually occur when there are more nutrients in the water than the plants and critters that use them. They can happen when heavy rains wash fertilizer and organic matter from surrounding lands into the water, or when large storms stir up the muck on lake bottoms and release stored nutrients.

It is also possible to see algae blooms immediately after an herbicide application. However, most aquatic herbicides do not add nutrients to the water. The reason is that target plants release nutrients into the environment when they decay. Algae are usually the first to access these newly available nutrients and a bloom can result. The best way to minimize this is to adopt a proactive management strategy that never allows invasive plants to build to high numbers. Managing fewer plants at any given time or place reduces nutrient release and help reduce blooms associated with plant management.

