

White Bear Lake Conservation District

Lake Quality Committee June 2010

Frequently Asked Questions About Eurasian Watermilfoil Management In White Bear Lake

How did Eurasian watermilfoil (EWM or Milfoil) get here?

Milfoil reached the Midwest in the 1960s (Wisconsin 1962), and was spread primarily by boat trailers, as boats were moved between lakes. It was first observed in Minnesota in Lake Minnetonka in 1987 and was first observed in White Bear Lake in 1988.

Why are we treating Eurasian watermilfoil on White Bear Lake?

Milfoil is an invasive plant that can grow in thick beds, in some cases, displace native plants, and can hinder boating. Milfoil infestations spread rapidly in White Bear Lake in the 1990s and stabilized at about 600 acres. In most years, during this time span, while milfoil was widespread, heavy growth of milfoil was estimated at less than 20 acres. In the last few years, more acres of heavy growth have been observed.

Why is Milfoil a nuisance now?

Mostly due to low water levels. Milfoil did not get enough light to grow at water depths of more than 12-15 feet deep, so low lake levels make once deeper waters suitable for milfoil growth. There is a pool of untapped nutrients in the sediments and milfoil has apparently tapped into this.

How are you treating it?

In June 2010 we will apply Triclopyr, an aquatic herbicide, to two sites of high-density milfoil totaling 60 acres. We will closely monitor the effectiveness of this treatment, and continue with this and additional strategies for enhancing effectiveness based upon the monitoring results. We will consider all means of managing as part of long-term milfoil management.

Is this herbicide toxic to people, fish, or wildlife?

There are no apparent acute impacts to people, fish, or wildlife at the concentrations planned for White Bear Lake. Based on studies by the Environmental Protection Agency and numerous government and university research reports, the herbicide is not toxic to people, fish, or wildlife when used at the recommended aquatic rates. The concentrated herbicide can cause skin irritation, so applicators must wear protective clothing. It is slightly toxic to ducks and upland birds at upland application rates, and salmonid fishes at higher rates. Studies indicate no increased cancer risk after repeat exposure. Potential risk is always present when introducing chemicals into an aquatic ecosystem. While subtle, chronic impacts that are difficult to quantify can occur, the US EPA considers these risks to be acceptable.

Triclopyr disappears relatively quickly in the environment, with most gone in a few days, with just a trace in a few weeks time. The half-life for Triclopyr and its breakdown products average six days or less in water.

I've read the herbicide is applied with kerosene, and this is toxic. Will this happen in White Bear Lake?

No. Triclopyr is registered for use on land and in water. Land applications may be mixed with kerosene when applying to brush, trees, or other tough plants. It is not registered, and may not be applied in this way to aquatic plants. The registered professional applicators are contracted to follow all established rules and guidelines for application to aquatic environments.

Will the applications endanger native aquatic plants?

Probably not. Selectivity is fairly good, but there could be some damage to native dicot plants. Applications in 2010 are targeted at mostly pure stands of EWM. Application areas will be surveyed in the weeks prior to treatment, visited by a contracted limnologist, and reviewed by DNR scientists to minimize risks to native aquatic plants. Triclopyr is a selective herbicide that will manage many dicots. Careful targeting for mostly pure stands of EWM should minimize damage to native plants.

Will the applications affect water quality and turn the lake green?

Unlikely. Successful applications will kill EWM, which will sink to the bottom and decompose during the growing season. Decomposition releases nutrients, but the amount of phosphorus in the plants is not expected to produce excessive algae growth in White Bear Lake.

Are there risks to the applications?

Minimal. The primary risk is a failed application. The chemicals are applied at low rates near the surface. Unforecast winds may kick up and mix the waters in application areas with waters in adjacent areas. This can happen before the Triclopyr has mixed down into the water column among the target plants. This is more relevant the farther target plants are far from the surface. If the concentration becomes too dilute, then control is ineffective. Herbicide will not be applied at a higher rate to ensure a kill, as law prohibits it.

Another risk is damage to non-target native plants. Surveying all application areas prior to treatment, and applying at recommended dosages minimize this risk.

Are there risks to not treating?

Some. Boating and swimming can be hindered in some areas, and EWM may reduce the distribution of native plants.

Why not use less expensive herbicides, or mechanical harvesting?

Alternative herbicides may kill a wider number of non-target native plants, and/or are more toxic to fish and other organisms. Some are suspected endocrine disruptors and cancer agents. Mechanical harvesting is often as expensive as herbicides yet controls for less time than Triclopyr. In the long-term we will be considering multiple control strategies tailored to the relative density of milfoil. This is a typical approach to managing any invasive plant species.

How are you paying for this, and where does the money go?

By a combination of WBLCD funds, DNR grants to reduce the adverse affects of EWM on recreational opportunities, and private donations. All monies go to pay the applicators and aquatic plant surveys. All WBLCD board members and Lake Quality Committee members are citizens, volunteering their time.