2017 treatment program

Brief history

The Billington Sea Town Brook Watershed Association Was founded in 1971 for the betterment of the Billington Sea the Pond and Town Brook which is fed by Billington Sea. The association is a 501 C 3 charitable organization and maintains liability Ins. and has about 50 active members.

Pond history

Billington Sea was a mesotrophic Pond that turned eutrophic in the late 1960s the Town of Plymouth in the 70s commissioned a study known as the Gale report done by Gale associates to study the possible causes and solutions, the cost of the solutions however were too costly being dredging or soil reversal . Sense then the Association has been battling the effects of a eutrophic Pond which are algae and weed problems.

Treatment History

The town of Plymouth in the late 70s did a weed treatment program to control the weed elodea sense then the association and the Town have done joint algae treatments in the 1980s and a harvesting program in the 1990s. More recently in 2012 the association did a weed treatment program with a product called Sonar the same as this article. The association approached Town meeting to pay the town's share of the cost. The association's belief then as now is that the residents own 55% percent of the property on the Pond and the Town owns the remaining 45% the 2011 town meeting then agreed with us and past that article with only eight descending votes.

2012 Treatment

The treatment program went as planed we came to agreements with the Department of Marine Fisheries and heritage regarding the Herring and the Tidewater Mucket an endangered species. There was no take with regards to the Tidewater Mucket and we achieved the three year systemic value from the treatment as suspected.

Fluridone (Sonar®)

March 2000

Fact Sheet

Environmental Health Programs
Office of Environmental Health & Safety

Washington State Department of Health

Fluridone is an aquatic herbicide used to control common nuisance plants like pondweed and watermilfoil. It is not equally effective at killing all water plants and has been used in Washington to selectively remove certain nuisance weeds. It is absorbed by the leaves, shoots and roots of vascular plants and kills susceptible plants by inhibiting their ability to form carotene, a substance which plants need to maintain essential levels of chlorophyll. Damage in susceptible plants usually appears in 7-10 days after water treatment.

Fluridone is the active ingredient in Sonar® and comes in two formulations: pellets (Sonar SRP) and liquid concentrate (Sonar A.S.)

The initial rate of application recommended by Sonar labels is quite dilute and varies depending on the size of pond or lake, density of weeds, and susceptibility of targeted weeds. Control of watermilfoil in Washington is often accomplished with rates as low as 10-20 parts per billion (ppb).

Environmental Persistence

Fluridone is moderately persistent in water and sediments following treatment of a pond or lake. Field tests have shown that the average half-life in pond water is 21 days and longer in sediments (90 days in hydrosoil). Residues may persist longer depending on the amount of sunlight and the water temperature. Fluridone is primarily degraded by sunlight and microorganisms.

Health Impacts

Laboratory animals (mice, rats, dogs) fed fluridone in their diets showed little signs of toxicity even when fed levels which far exceed potential human exposure from use of Sonar. Fluridone is not considered to be a carcinogen or mutagen and is not associated with reproductive or developmental effects in test animals.

There is no EPA standard for maximum allowable concentration (MCL) of fluridone in public water supplies. For the purpose of Sonar product registration, EPA determined that 150 ppb is an acceptable level for potable water following Sonar use. This level provides a 1000-fold safety factor between the no effect level in experimental animals and the estimated human exposure via drinking water.

Common Questions

Can I use treated lake water for drinking? The Sonar label prohibits application to water within 1/4 mile of functioning potable water intakes unless the treatment rate is 20 ppb or less. Estimated human exposure from daily consumption of water with 20 ppb of fluridone is 10,000-fold less than the no effect level in test animals. People who wish to avoid even minimal residues can do so by filtering their drinking water with a charcoal-based filter.

Can I swim and fish in treated water? There are no swimming or fishing restrictions associated with fluridone treatment. Fluridone does not significantly bioaccumulate or biomagnify in fish. Consumption of fish from treated water does not pose a threat to human health.

Can fluridone leach into groundwater wells, which are shallow and close to a treated water body? Fluridone tends to bind to organic matter and should not leach into groundwater from aquatic sediments. Fluridone shows a limited ability to leach if applied to soil.

What about the other ingredients in Sonar? "Inert" ingredients included in formulations of fluridone are confidential. DOH was permitted to review the list of inerts in Sonar and concluded that these chemicals are not of human concern at applied concentrations.

Can I use treated water for watering domestic plants? For information about susceptibility of specific plants, consult the product label or contact the manufacturer. According to the manufacturer, Sonar used at the maximum-labeled rate (150 ppb) may affect domestic plants, especially plants in the *Solanaceae* family (tomato, potato, eggplant, peppers etc.). More dilute concentrations are unlikely to affect domestic plants. Again, a charcoal-based filter will remove fluridone residues from water.

Need More Information?

Please Contact:

- Your county health agency
- Washington State Department of Health Pesticide Program (360)236-3360
- Washington State Department of Ecology Water Quality Program (360)407-6563
- Sepro is the company which manufactures Sonar products. Material Safety Data Sheets and current copies of Sonar labels are available by calling 1-800-419-7779 or at the Sepro website www.sepro.com/aquatics/sonar/index.html
- Additional copies of this fact sheet can be obtained from:
  Office of Environmental Health & Safety
  P.O. Box 47825
  Olympia, Washington 98504-7825
  Tollfree: (888) 586-9427