

PARADOX LAKE ASSOCIATION (/)

Paradox Lake ProcellaCOR treatment

Frequently Asked Questions

What is ProcellaCOR?

ProcellaCOR is a cutting-edge aquatic herbicide used for management of invasive aquatic vegetation in lakes, reservoirs and ponds. It was formally approved by the U.S. Environmental Protection Agency in 2017, and then by New York State in 2019, and has been incredibly effective at controlling and even eliminating invasive Eurasian watermilfoil infestations, without impact to native plant and animal populations. It is typically applied at a dosage of approximately 7 parts per billion (equivalent to 1 ounce in a typical size swimming pool), which is 1,000 times less dosage than the aquatic herbicide previously approved by the Adirondack Park Agency. Following application, there are no restrictions on potable water usage (drinking water) or on contact recreation such as swimming.

How does ProcellaCOR work?

ProcellaCOR is applied directly into the water at the depth of the invasive plants. It is a systemic herbicide that targets the milfoil plants, meaning that the plant takes it through its entire structure and roots. The plant dies off over a period of two to four weeks and breaks down naturally. ProcellaCOR itself is short-lived, and also breaks down naturally and quickly, within 3-4 days.

Why is ProcellaCOR being considered for use in Paradox Lake now?

ProcellaCOR is being considered for use in Paradox Lake to address areas of the lake that hand harvesting has been unable to effectively manage. ProcellaCOR is not planned to replace hand harvesting on Paradox Lake, but rather to supplement it in areas where very dense Eurasian water milfoil growth or rocky bottoms make physical removal ineffective. The Paradox Lake Association has been coordinating the physical removal of Eurasian watermilfoil since 2008. These efforts primarily consist of hand harvesting the plants, which consists of divers or waders pulling each individual plant out by the roots and removing it from the lake. While this method has seen success in some areas of the lake, not all areas respond well to these efforts and grow back over a short period of time. Eurasian milfoil that is rooted in rocky areas is particularly difficult to manage, as the roots cannot easily be removed.

The PLA has been hand harvesting with a combination of volunteer and professional divers. The costs have been increasing each year as the Eurasian watermilfoil has spread across the lake. The 2022 cost was \$5500 per week for the dive team removing the plants. The 2023 contract for hand harvesting milfoil is anticipated to be approximately \$90,000 and that amount of funding is unsustainable for the long-term.

Where will ProcellaCOR be applied?

The plan is to apply ProcellaCOR in the east side of the Narrows and in the Inlet Bay at the east end of the upper lake. Both areas have extensive Eurasian watermilfoil growth, have proven to be very difficult to hand harvest effectively, and see high boat traffic. The boat propellers cut fragments off the existing plants and these fragments drift around the lake, eventually sinking and rooting to create new plants.





What types of regulatory review has ProcellaCOR undergone?

ProcellaCOR was developed in 2010, and was subject to dozens of peer-reviewed scientific studies for several years, leading up to its ultimate approval by the US Environmental Protection Agency in 2017. The active ingredient of ProcellaCOR, florasulam, has been utilized worldwide for several years as an herbicide on food crops such as rice. The New York Department of Environmental Conservation approved ProcellaCOR for use in 2019 and it has also been approved for use in Connecticut, Massachusetts and New Hampshire. The approval documentation for ProcellaCOR for a number of states is available on the PLA website.

How much is ProcellaCOR is proposed to be applied to the Lake?

The effective dosage rate for ProcellaCOR is staggeringly low and equivalent to roughly an ounce in a typical swimming pool. The treat rate will be ~4 parts per billion in the Narrows and ~6 part per billion in the Inlet Bay. This amounts to a dosage that is 1,000 times less than the previous generation of aquatic herbicides. The herbicide will be released directly into the water at depths of 8-10 feet to achieve the required concentration over the area of the Eurasian watermilfoil bed. ProcellaCOR breaks down quickly and will be undetectable in the lake within a few days.

What are the risks to human health?

None. The USEPA registered ProcellaCOR as their lowest category of risk ('reduced risk') and identified no risks of concern to human health. Toxicology studies found no adverse acute or chronic effects. The EPA concluded that drinking water exposures to ProcellaCOR do not pose a human health risk and no federal maximum allowable drinking water concentrations were created (i.e. no drinking water restrictions). The observed half-life of the product is 2.6 days in aquatic environments, and EPA and DEC both concluded there is no hazard or concern for metabolites and degradates. The EPA's findings and an exemption from maximum tolerance can be found here: (<https://www.federalregister.gov/documents/2019/09/26/2019-20530/florasulam-exemption-from-the-requirement-of-a-tolerance>) (<https://www.federalregister.gov/documents/2019/09/26/2019-20530/florasulam-exemption-from-the-requirement-of-a-tolerance>). The Vermont Department of Health established a drinking water standard of a maximum of 3 mg/kg/day. This equates to a maximum concentration that is 400 times higher than proposed concentration to treat Eurasian milfoil in lakes (https://www.lakeiroquois.org/fileadmin/files/Milfoil/Documents/9_VTDOH_Review.pdf?482b7b3b42467861e81e20f2ce2774b7d0ff65f1) (https://www.lakeiroquois.org/fileadmin/files/Milfoil/Documents/9_VTDOH_Review.pdf?482b7b3b42467861e81e20f2ce2774b7d0ff65f1)

Does ProcellaCOR negatively impact fish or other aquatic plants?

ProcellaCOR is a highly targeted aquatic herbicide for milfoil plants. There have not been any demonstrated long-term effects on other aquatic plants. Some aquatic plants demonstrate short-term distress following the application but will fully recover.

Toxicological testing on ProcellaCOR included the evaluation of impacts on fish and aquatic invertebrates. The testing showed no harm and there have been no limitations place on the use of ProcellaCOR due to fish or invertebrate's impacts.

How is the PLA funding the Eurasian water milfoil hand harvesting and ProcellaCOR treatment?

The PLA is going into the second year of a three year spending surge to reset the Eurasian watermilfoil population in the lake and the surge represents a very significant increase in spending versus historical levels. After the surge is complete, we expect to have a significantly lower Eurasian watermilfoil population in the lake and expect the annual spend to drop back to levels seen in 2017-2019.

The PLA raises the required funds for fighting Eurasian watermilfoil via a number of channels. These include: the PLA fundraising events, direct contributions from the Town of Schroon, reimbursement from a NYDEC grant and lake steward labor provided by the Adirondack Watershed Institute. However the largest percentage of the PLA funding comes from the PLA membership fees and contributions by PLA members. Members stepped up in 2022 and increased their contributions by more than 30% in support of the Eurasian watermilfoil spending surge. A further increase in 2023 will be needed if the PLA is to conduct all the work that is needed in 2023 to get the Eurasian watermilfoil back under control.

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