# Willow Lake Algae Mitigation Program

## Overview

Discovery Bay has experienced harmful algal blooms (HABs) dominated by cyanobacteria, commonly called blue-green algae. These blooms can degrade water quality, create surface scums, and pose risks to people, pets, and wildlife, especially during warm summer months.

The main driver of HABs in Discovery Bay is excess phosphorus, a nutrient that algae need to grow. Phosphorus comes from two major sources: phosphorus-rich Delta water entering the system and phosphorus released from sediments where nutrients have accumulated over many years.

Because Discovery Bay is connected to the Delta, the District cannot simply “turn off” phosphorus entering from Delta water. This connection is part of what makes Discovery Bay special, but it also makes water-quality management challenging.

The 2026 program is focused on Willow Lake because water remains there longer than in many other parts of Discovery Bay. This longer residence time gives algae more time to grow, but it also makes Willow Lake a practical place to begin targeted management. The goal is to demonstrate effective HAB control in Willow Lake, learn from the results, and use that information to guide future management decisions.

## The 2026 Program

Beginning in May 2026, Reclamation District 800 plans to treat Willow Lake approximately every other Tuesday with Captain XTR, a copper-based aquatic algaecide, under the guidance of EutroPHIX. With more than 30 years of experience restoring water bodies nationwide, EutroPHIX specializes in science-based solutions designed to deliver measurable results. Treatment timing may shift depending on weather, lake conditions, algae levels, and operational constraints.

The product will be applied by trained applicators according to the product label, permit requirements, and applicable water-quality regulations. The program is regulated through the Central Valley Regional Water Quality Control Board.

Applications will focus on open-water areas where treatment can be completed safely and effectively. This targets the greatest volume of water growing HABs. Natural lake mixing, wind, and water movement will help distribute treated water around the whole lake.

## Program Goals

The goals of the 2026 program are to:

- Reduce harmful cyanobacteria and the risk of algal toxins.
- Reduce surface scums and shoreline accumulations.
- Improve water quality and lake usability during the summer.
- Collect monitoring data to evaluate performance and guide future decisions.

## What the Program Is Not Designed to Do

The program will not make Willow Lake look or function like a swimming pool. It will not eliminate the underlying causes of HABs, and it will not prevent every visible patch of algae, especially during windy periods when algae can accumulate along shorelines. The expected

outcome is a measurable reduction in harmful cyanobacteria and much fewer severe surface scums compared with typical summer bloom conditions.

**How This Fits into Longer-Term Management**
Algaecide treatments are a near-term management tool. They can reduce algae already growing in the lake, but they do not remove the nutrients that fuel blooms. For that reason, the 2026 program is being paired with continued evaluation of longer-term nutrient mitigation strategies.

## Frequently Asked Questions

**Why does Discovery Bay have harmful algal blooms?**
HABs occur when cyanobacteria grow rapidly under favorable conditions. In Discovery Bay, the main driver is excess phosphorus, combined with warm temperatures, sunlight, and periods of low water movement. Phosphorus comes from both Delta water and phosphorus released from sediments.

**Why is the program focused on Willow Lake?**
Willow Lake has a longer residence time than many other parts of Discovery Bay, meaning water remains there longer and makes it an easier place to implement targeted management. The 2026 program is intended to reduce HAB impacts in Willow Lake first and use the results to guide future management decisions.

**What is being applied, and is it safe?**
The product being used is Captain XTR, a copper-based algaecide made for use in lakes and other aquatic systems. It will be applied by trained applicators following the product label, permits, and water-quality regulations. When applied properly, Captain XTR is expected to present negligible risk to people, pets, fish, and wildlife. Products used directly in water are reviewed for potential effects on humans and aquatic life before they are approved for aquatic use by the US Environmental Protection Agency and for use in California. The application plan also considers lake conditions, algae levels, weather, and dissolved oxygen to reduce the potential for unintended impacts.

**Why do applicators wear protective gear if the lake can still be used?**
Applicators handle the concentrated product before it is diluted into the lake, so they are required to wear protective gear. That does not mean treated lake water has the same exposure risk. Concentrated products require more caution during handling than the diluted form after proper application.

**How often and where will treatments occur?**
Applications are planned for approximately every other Tuesday beginning in May 2026, depending on weather, lake conditions, algae levels, and operational constraints.

Treatments will focus on open-water areas where applications can be completed safely and effectively. This targets the greatest volume of water growing HABs. Natural lake mixing, wind, and water movement will help distribute treated water around the whole lake.

**How quickly will residents see a change?**

Captain XTR begins working when it contacts algae cells, but complete results usually take several days. The response can vary depending on bloom density, wind, temperature, water movement, and where algae are concentrated at the time of treatment.

**Will the treatment make the lake water crystal clear?**
No. The goal is to reduce harmful cyanobacteria and surface scums during the program, not to make Willow Lake look like a swimming pool. Because Willow Lake is highly productive and nutrient-rich, the water may still look green at times, especially when wind pushes algae toward shore.

**Why can algae look worse after treatment?**
After treatment, algae may lose buoyancy, change color, break apart, or temporarily accumulate along shorelines depending on wind and water movement. When cyanobacteria scums decay from sunlight or treatment, it is common to see bright blue pigments released from the cells. This pigment is called phycocyanin. While it can look concerning, it is often a sign that the bloom is breaking down. These accumulations typically dissipate, sink, or disperse within a few days.

**Will the project affect boating, fishing, or lake access?**
No lake-wide closures are planned. Boating access is expected to remain open, although small areas near active application equipment should be temporarily avoided during operations. No negative impacts to fishing are expected.

**How will the District know whether the program is working?**
The program includes routine water-quality monitoring throughout the treatment season. Results will be shared through Reclamation District 800 board meetings and public communications.