

The Greens vs. the Blue-Greens: Polytechnics save lakes with microalgae

In recent years in St. Petersburg and other cities of our country there has been an increase in the amount of blue-green algae in lakes. This has led to serious problems with water quality and biodiversity of aquatic ecosystems.



Blue-green algae, known as cyanobacteria, form dense clusters on the surface of water. They create thick films and negatively affect the environment. This phenomenon is a cause for concern among residents and the environmental community. Therefore, experts suggest urgent measures to restore the ecological balance.

By order of the St. Petersburg Committee for Nature Management, scientists are cleaning water bodies from blue-green algae with the help of green microalgae *Chlorella*. Natalia Politayeva, professor of the Institute of Civil Engineering of St. Petersburg Polytechnic University, is leading the work. The method investigated by our scientists involves the use of microalgae strain «*Chlorella kessleri* VKPM A1-11 ARW» (*Chlorella*). Its introduction into the water body will reduce the content of blue-green algae, pollutants and improve the organoleptic properties of water.

Green microalgae, such as *Chlorella*, actively combat blue-green algae and the problem of lake blooms in general. They act by competing for nutrients and resources necessary for aquatic ecosystems. *Chlorella* microalgae grow rapidly and absorb phosphate and nitrate from the water, which are the primary nutrients for blue-green algae. Green microalgae help reduce the amount of nutrients in the water body, which creates less favorable conditions for blue-green algae to reproduce and grow. The first lake monitoring work in Sosnovka began back in 2023.



In spring of this year, the first stage of direct «treatment» procedures to prevent blue-green algae blooms took place. 50 liters of suspension of photosynthetic plants — *Chlorella chlorella* — were introduced into the experimental pond. The next task is to determine the effectiveness of this method and the prospects for its further application in water bodies of St. Petersburg.

Дата публикации: 2024.04.23

[>>Перейти к новости](#)

[>>Перейти ко всем новостям](#)