



Possible Funding Sources for Managing Cyanobacterial Harmful Algal Blooms and Cyanotoxins in Drinking Water

OVERVIEW

Cyanobacteria, formerly known as blue-green algae, naturally occur in marine and fresh waters. Under certain conditions cyanobacteria can grow rapidly, producing cyanobacterial blooms. Some cyanobacteria are capable of producing toxins, called algal toxins or cyanotoxins, which can pose health risks to humans and animals through exposure from drinking water, recreational water or other surface waters. Blooms are often referred to as harmful algal blooms (HABs).

Preventing, treating, and monitoring for HABs can be an unanticipated cost for a public water system. This document assists vulnerable public water systems and states in identifying available financing options for the prevention of HABs and treatment of finished water with cyanotoxin contamination. The options explored in this document include the Drinking Water State Revolving Fund (DWSRF), the Clean Water State Revolving Fund (CWSRF), and alternative funding options. Low interest loans are available through the DWSRF and CWSRF to eligible recipients. Both are managed by states and funding varies according to the priorities, policies, and laws within each state. State DWSRF and CWSRF representatives should be contacted for more information about funding availability.

HOW CAN THE *DRINKING WATER STATE REVOLVING FUND* ASSIST SYSTEMS WITH HABs?

The DWSRF makes funds available to drinking water systems to finance infrastructure improvements. In addition, states can use up to 31 percent of their annual capitalization grant as set-asides to offer technical assistance, capacity development, or other local assistance to drinking water systems. The program also emphasizes funding for small and disadvantaged communities and has the potential to fund technical assistance through states' source water protection programs using the set-asides as a tool to ensure safe drinking water. Below are types of activities that can be funded.

Equipment

Drinking water systems are eligible to receive funding from the DWSRF project loan fund to add new equipment and upgrade existing technologies. A state could also use DWSRF set-asides to

obtain test kits or laboratory equipment for systems to test for HABs, as long as certain requirements are met.

Monitoring

Routine/compliance monitoring is not an eligible DWSRF expense. While operation and maintenance are ineligible costs for both the project loan fund and the set-asides, a state may finance special non-routine monitoring using the Local Assistance set-aside (capital development is one of the activities available under this set-aside). This monitoring would need to be associated with newly-installed equipment to ensure that the equipment is operating properly and meets equipment specifications as part of the equipment delivery and installation process, or to obtain a baseline for an emerging contaminant of concern. Additionally, the activity must be consistent with a state's capacity development strategy. The state must also report on its progress as part of its annual/biennial DWSRF reporting.

Training

A state could also use the DWSRF Local Assistance set-aside to conduct non-routine monitoring at a system for the purpose of training system operators and assisting them in acquiring the capacity to independently conduct routine monitoring in the long-term. For example, public water systems can request reimbursement for training for analysis of toxins associated with HABs (see Ohio Case Study).

OHIO CASE STUDY

In 2015, Ohio used the set-asides to establish a \$1 million fund that awarded grants to surface water treatment plants to reimburse the purchase of cyanotoxin investigative monitoring equipment. Having the capacity to analyze samples at the water supply instead of sending samples to an outside laboratory will allow flexibility in monitoring and timely response to any potential finished water detections.

Source Water Protection

It is important to prevent HABs through source water protection before it enters the drinking water treatment facility to avoid contamination of finished water. States can use the State Program Management set-aside to administer or provide technical assistance through their source water protection programs. In addition, the Local Assistance set-aside can be used to build capacity of individual systems to carry out source water protection, which could be connected to source water HABs. Examples of eligible activities under these two set-asides include source water management plans, buffer establishment and upkeep, and storm water management and reconstruction activities.

The Local Assistance set-aside can also be used by states to help systems develop public outreach and educational programs and materials. The State Program Management set-aside can provide funding for states to develop source water protection ordinance templates for city and county governments, and provide technical assistance for systems in the form of workshops, training, and certification programs.

Special Opportunities for Small Systems

Small public water systems historically have had difficulties in meeting the requirements of the SDWA. Therefore, the 1996 Amendments to the SDWA included three specific sections that stipulate the provision of special assistance to systems that service 10,000 or fewer people, including a section establishing the Small System Technical Assistance set-aside described below.

As a result of the 1996 Amendments, states are required to provide a minimum of 15 percent of the funds available for assistance to small systems to help address infrastructure needs. This could include HABS prevention and treatment. The DWSRF also has a Small Systems Technical Assistance set-aside that enables states to provide technical assistance and training to help small systems develop projects and build capacity.

For more information, please see the EPA Fact Sheet: [Using DWSRF Set Aside Funds to Assist Small Water Systems](#)

HOW CAN THE CLEAN WATER STATE REVOLVING FUND ASSIST SYSTEMS WITH HABS?

The CWSRF was established by the 1987 amendments to the Clean Water Act (CWA) as a financial assistance program for a wide range of water infrastructure projects. To be eligible for CWSRF assistance, a project must meet the criteria of one of the eleven CWSRF eligibilities outlined in Section 603(c) of the CWA.

Source Water Protection

The CWSRF is a low-interest source of funding for a variety of capital projects related to source water protection, where they implement a state nonpoint source management plan. These include tree plantings and other protection activities that take place in a well head protection area or surface water drainage area and the purchase of land for water quality purposes. CWSRF funds can also be used for source water planning and assessment activities if there is a reasonable chance the work could lead to a capital expenditure. Planning activities eligible to receive CWSRF funds that could be relevant to HABS include climate and extreme weather vulnerability planning, total maximum daily load (TMDL) implementation plans, and watershed management plans.

Source water protection activities can also include water quality trading programs. CWSRF can provide funding for nonpoint source projects that produce water pollution

Washington State

In 2009, Washington State's Water Pollution Control Revolving Fund provided a total of \$5 million in loans for the Conservation Tillage Sediment Reduction Program. Funds are provided to farmers to purchase conservation tillage equipment and implement other agricultural BMPs. The program also provides education and technical assistance to farmers.

control credits that can be sold for revenue. Water quality trading can occur for point and nonpoint sources of pollution.

Pollution Management

Funds are available for the implementation of a variety of watershed pollution management activities related to HABs, including: removal of leaking or damaged septic systems, implementation of agricultural BMPs such as no-till equipment and manure management measures, and wetland restoration. Other projects to prevent the degradation of water quality that are less focused on drinking water systems, but still impact source water, include green infrastructure and stormwater management activities.

Other Activities and CWSRF Funding Opportunities

Funds are available for the initial development and implementation of an education or outreach program, but cannot be used for the ongoing implementation of an education or training program. Eligible activities include the development of fact sheets, posters, or other outreach materials, as well as workshop planning and material development for community engagement activities. Water quality monitoring equipment (e.g., sensors, meters, gauges) and activities (e.g., sampling, lab work, data analysis) to evaluate project effectiveness may be eligible for CWSRF assistance. Routine ambient water quality monitoring is not eligible. CWSRF funds are available under Section 603(c)(7) for the development or implementation of watershed projects related to one of the six areas identified in Section 122 of the CWA: 1) watershed management of storm discharge; 2) stormwater BMPs; 3) watershed partnerships; 4) integrated water resource planning; 5) municipality-wide stormwater management planning; and 6) increased resilience of treatment works. In some cases, projects related to the prevention or reduction of HABs could meet the criteria for these project areas.

WHAT ARE ALTERNATIVE METHODS OF FUNDING FOR HABS?

There are alternative HAB-related funding options for treatment, monitoring and source water protection. These funding options include both federal and local programs. State or tribal coordinators should be contacted to see if there are more options available in that state.

319 (Nonpoint Source) Grants

The 1987 Clean Water Act (CWA) amendments established the Section 319 Nonpoint Source Management Program in an effort to establish greater federal support to aid nonpoint source pollution protection efforts. Under Section 319, states, territories, and tribes receive grant money for state priority areas. States have flexibility to focus these funds with the goal of reducing nonpoint sources of polluted runoff. These funds can also be allocated to nutrient reduction efforts, which can reduce HABs.

Nonpoint source control practices may include restoration of wetland and floodplain hydrology and vegetation; treatment of urban and agricultural runoff; reforestation; and public education.

106 (Water Pollution Control) Monitoring Grants

Eligible federal funding sources for source water monitoring include CWA Section 106; Water Pollution Control Grants. CWA Section 106 funding is received annually and consists of base funding and the 106 monitoring initiative enhancement fund.

These grants support water pollution prevention and control programs and activities such as monitoring and assessing water quality, developing water quality standards, and identifying impaired waters. Goals and programs supported include total maximum daily loads, managing national pollutant discharge elimination system permits, ensuring compliance, implementing enforcement actions, protecting source water, and managing outreach and education programs.

USDA Rural Development Program – Water and Environmental Programs (WEP)

The Rural Development Program provides loans, grants, and loan guarantees to support critical rural services including water infrastructure. Support is provided in the form of loans to businesses and as technical assistance and information. Most grants limit eligibility to communities with fewer than 10,000 people, with special consideration given to impoverished and very small (<5,000 people) communities.

A subset of the Rural Development Program is the Water and Environmental Programs funding source, which provides technical assistance and financing to rural communities to develop drinking water and waste disposal systems. WEP funding is provided for the construction of water and wastewater facilities in rural communities, with funding for specific infrastructure needs such as water well systems, solid waste management, water and waste disposal, and water treatment.

<http://www.rd.usda.gov/> and <http://www.rd.usda.gov/programs-services/all-programs/water-environmental-programs>

Regional Conservation Partnership Program (RCPP)

USDA provides funding through the RCPP to foster restoration efforts and the sustainable use of soil, water, flora, and fauna at regional and watershed scales. Through the RCPP, funding recipients partner with agricultural producers to help the producers implement and maintain conservation activities in defined project areas. The partners administer RCPP funding to local project participants and stakeholders. Funds have previously been provided to water and sewer districts for watershed conservation projects.

RCPP funding is allocated at the national level, state level, and for critical conservation areas such as the Great Lakes, Mississippi River watershed, and Chesapeake Bay. State entities administer state-specific funds. A project can be eligible for funding at all levels. Funding is provided in accordance with the rules of EQIP, the Conservation Stewardship Program, and other USDA conservation programs.

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/farmbill/rcpp/>

NRCS Innovation Grants

The National Resource Conservation Service provides agricultural land conservation grants for the development and implementation of innovative approaches and technologies. Funds are originated from the Environmental Quality Incentives Program (EQIP), so entities seeking NRCS Innovation Grants must also be EQIP eligible. The new funding distribution approach allocates grants by focusing on specific natural resources priorities, with a different focus each year.

Additional funding is allocated through a state competition for projects that only benefit a limited geographic area. There are historical and current Innovation Grants relevant to harmful algal blooms, including water methods for water quality trading valuations and innovative management practices for nutrient reduction.

http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cig/?utm_source=Funding+Supplement

Source Reduction Assistance Grant Program

Grants support pollution prevention activities through source reduction and resource conservation. Projects must include one or more of the following components: surveys, studies, research, investigation, experimentation, education, and training and/or demonstrations. The majority of funds are provided to government entities that use the funds to provide technical assistance and education to stakeholders. The grants are generally focused on hazardous waste and contaminants, and not on nutrients and nonpoint source reduction efforts.

<https://www.epa.gov/p2/grant-programs-pollution-prevention>

Community Development Block Grant (CDBG)

The Community Development Block Grant program provides funds for a wide range of community development needs, with the mission to encourage urban revitalization and development in underserved communities. At least 70% of the funds provided for a project must be used on initiatives that benefit low- to moderate-income persons, and all projects must meet one of the following objectives: benefit underserved communities, prevent or eliminate slums or blight, or address critical community development needs if existing conditions pose an immediate threat to public health. Funded development projects must include a construction or restoration project that aids in revitalizing a depressed neighborhood or assisting low- to moderate-income individuals.

http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

EPA's Urban Waters Small Grants

The mission of EPA's Urban Waters Program is to help local residents and their organizations, particularly those in underserved communities, restore their urban waters in ways that also benefit community and economic revitalization. These projects should address urban runoff pollution through diverse partnerships that produce multiple community benefits, such as protection of drinking water sources.

<http://www.epa.gov/urbanwaters/urban-waters-small-grants>

Great Lakes Restoration Initiative

This Request for Application (RFA) is EPA's major competitive grant funding opportunity under the Great Lakes Restoration Initiative. It is one of several funding opportunities available through federal agencies under the GLRI.

Those who are available for funding under this grant include: nonfederal governmental entities, including, state agencies, interstate agencies, federally recognized Indian tribes and tribal organizations, local governments, institutions of higher learning (i.e., colleges and universities), and non-profit organizations as defined in 2 C.F.R. § 200.

<https://www.epa.gov/great-lakes-funding/great-lakes-restoration-initiative-2016-rfa>

Source Water Collaborative (SWC)

Comprised of federal, state, and local partners, the SWC provides information on funding options; including: funding for surface water protection, funding for emergency response, and a cost/benefit calculator tool.

<http://sourcewatercollaborative.org/assess-protect-drinking-water-sources/find-funding/>

Additional State Funding Sources

In addition to federal funding sources, there are also state-level funding programs for HAB testing equipment and treatment infrastructure improvements. Some states also have access to other state funding programs related to water pollution control and public health protection in addition to the DWSRF and CWSRF programs. Eligible projects in many states include drinking water and wastewater infrastructure construction and system upgrades, habitat and watershed restoration, and agriculture/forestry best management practices for pollution prevention. Funding from state environmental offices such as DEQ or a state EPA can include nutrient control initiatives, monitoring efforts, and public communications/outreach support. A good example of potential state funding is the Ohio EPA HAB funding.

http://www.epa.state.oh.us/HAB_funding.aspx

FOR MORE INFORMATION...

DWSRF Website:

<http://www2.epa.gov/drinkingwatersrf>

CWSRF Website:

<http://www.epa.gov/cwsrf>

CyanoHABs Website:

<http://www.epa.gov/cyanoHABs>

EPA's Ground Water and Drinking Water Cyanotoxins in Drinking Water:

<https://www.epa.gov/ground-water-and-drinking-water/cyanotoxins-drinking-water>

EPA's Ground Water and Drinking Water Website:

<http://water.epa.gov/drink/>

Office of Ground Water and Drinking Water (4606M)

SDWA Hotline
1-800-426-4791

January 2017