

Outdoor Heritage Fund Grant Application



Instructions

After completing the form, applications and supporting documentation may be submitted by e-mail to ndicgrants@nd.gov. It is preferred that only electronic copies are submitted.

You are not limited to the spacing provided, except in those instances where there is a limit on the number of words. If you need additional space, please indicate that on the application form, answer the question on a separate page, and include with your submission.

The application and all attachments must be received by the application deadline. You may submit your application at any time prior to the application deadline. **Applicants are strongly encouraged to submit applications prior to the deadline for staff review in order ensure that proposals will be complete when submitted on deadline date.** Incomplete applications may not be considered for funding.

Please review the back of this form to determine project eligibility, definitions, budget criteria, and statutory requirements.

Project Name: Epping Springbrook Dam Algae Control

Name of Organization: Williams County Parks (WCP)

Federal Tax ID#: 45-6002250

Contact Person/Title: Jeremy Ludlum/Parks Director

Address: 206 East Broadway or P.O. Box 2047

City: Williston

State: North Dakota

Zip Code: 58801 or 58802

E-mail Address: jeremyl@co.williams.nd.us

Web Site Address (If applicable): www.williamsnd.com/departments/parks

Phone: (701)-580-1628 (cell)

List names of co-applicants if this is a joint proposal: N/A

MAJOR Directive:

Choose only one response

Directive A. Providing access to private and public lands for sportsmen, including projects that create fish and wildlife habitat and provide access for sportsmen;

Directive B. Improving, maintaining and restoring water quality, soil conditions, plant diversity, animal systems and by supporting other practices of stewardship to enhance farming and ranching;

Directive C. Developing, enhancing, conserving and restoring wildlife and fish habitat on private and public lands; and

Directive D. Conserving natural areas and creating other areas for recreation through the establishment and development of parks and other recreation areas.

Additional Directive:

Choose all that apply

Directive A.

Directive B.

Directive C.

Directive D.

Type of organization:

State Agency

Political Subdivision

Tribal Entity

Tax-exempt, nonprofit corporation.

Abstract/Executive Summary.

Summarize the project, including its objectives, expected results, duration, total project costs and participants. (no more than 500 words):

To mitigate annual Harmful Algal Blooms (HABs) at Epping/Springbrook Dam (ESD), Williams County Parks would like to purchase three MPC-Buoys. ESD is a popular recreation area for families with children and dogs. For at least the past three summers, ESD has had HABs, which can cause sickness to people and animals. MPC-Buoys utilize ultrasound technology to reduce algae production by blocking sunlight, which causes algae to sink to the bottom and die off without releasing toxins. We expect HABs to occur less frequently and less intensely in the near-term, with a long-term expectation that the HABs will be eliminated completely. It will take 4 to 6 weeks to receive the buoys from the time we are awarded the grant and plan to begin using them at the end of summer 2023. This will give us the opportunity to be fully trained and equipped to effectively use the buoys. ESD is approximately 130 acres in area and therefore will require three buoys. The total price is \$175,895.00 There is a \$12,000 annual maintenance fee, which WCP has committed to paying.

Project Duration:

This will be an ongoing project that WCP will operate and fund after the initial purchase.

Indicate the intended schedule for drawing down OHF funds:

Upon grant approval WCP will order and purchase the product immediately.

Amount of Grant request: \$131,921.25

Total Project Costs: \$175,895.00

Note: in-kind and indirect costs can be used for matching funds.

Amount of Matching Funds: \$43,973.75

A minimum of 25% Match Funding is required. Indicate if the matching funds will be in-kind, indirect or cash. Please provide verification that these matching funds are available for your project. Note that effective as of July 1, 2015 no State General Fund dollars can be used for a match unless funding was legislatively appropriated for that purpose.

Amount of Match	Funding Source	Type of Match (Cash, In-kind or Indirect)
\$43,973.75	Williams County Parks General Fund	Cash
\$		
\$		
\$		
\$		
\$		

Certifications

I certify that this application has been made with the support of the governing body and chief executive of my organization.

I certify that if awarded grant funding none of the funding will be used for any of the exemptions noted in the back of this application.

- This application may fall under the following exemptions:
 - o Personal Property that is not affixed to the land
 - o Infrastructure that is not part of a comprehensive conservation plan

However we feel this is an exceptional circumstance and given the opportunity to present, we feel the Industrial Commission will agree.

Narrative

Organization Information – Briefly summarize your organization’s history, mission, current programs and activities.

Include an overview of your organizational structure, including board, staff and volunteer involvement. (no more than 300 words):

The WCP Board consists of five Williams County Commissioners and two at-large members. Prior to 2020, WCP operated with seasonal employees, camp hosts, and volunteers. In January 2020, WCP hired its first full-time employee, a Parks Director. In January 2023, WCP hired its second full-time employee, a Maintenance Supervisor. Today, WCP has 2 full-time employees, eight seasonal employees, three camp hosts, and a team of volunteers.

Our mission is to preserve, protect, and enhance a high-quality system of parks and trails to connect current and future generations to the outdoors through diverse year-round recreational opportunities, consistent with responsible land use conservation and stewardship.

WCP operates six parks, including five campgrounds. Minimal improvements or upgrades were made prior to 2020. The WCP Board understands the importance of quality of life and is committed to improving the parks. In 2022, a comprehensive parks master plan was completed, with \$35 million allocated to implement the plan over a six-year period.

The MPC-Buoys are only one aspect of our plan to address water quality at Epping/Springbrook Dam (ESD). A major cause of HAB's is long-term nutrient runoff from agriculture and animal waste. ESD is surrounded by agricultural land within a large watershed. WCP has partnered with the Williams County Soil Conservation District and the ND DEQ-Division of Water Quality to develop a Watershed Management Program (WMP) for ESD, which includes two years of sampling and analysis. We are developing an informational flyer to provide to every landowner in the watershed later this summer. I have educated myself and contacted entities (Soil Conservation District, USDA, Ducks Unlimited) that provide funding, resources, and education on soil conservation to support the WMP.

Purpose of Grant – Describe the proposed project identifying how the project will meet the specific directive(s) of the Outdoor Heritage Fund Program

Identify project goals, strategies and benefits and your timetable for implementation. Include information about the need for the project and whether there is urgency for funding. Indicate if this is a new project or if it is replacing funding that is no longer available to your organization. Identify any innovative features or processes of your project. Note: if your proposal provides funding to an individual, the names of the recipients must be reported to the Industrial Commission/Outdoor Heritage Fund. These names will be disclosed upon request.

For tree/shrub/grass plantings: provide a planting plan describing the site design, planting methods, number of trees/shrubs by species and stock size, grass species and future maintenance. A statement certifying that the applicant will adhere to USDA-NRCS tree/shrub/grass planting specifications along with the name of the governmental entity designing the planting may be substituted for a planting plan.

For projects including Section 319 funding: provide in detail the specific best management practices that will be implemented and the specific projects for which you are seeking funding.

For projects including fencing: A minimum cost share of 40% by the recipient is preferred. Include detailed information on the type of fencing to be installed, whether funding is requested for boundary fencing, new or replacement of existing fencing, and/or cross fencing.

The project goal is to eliminate HABs at Epping Springbrook Dam. This addresses Directive D of the OHF Program. Urgency for funding because the HABs inhibit lake usages when the weather gets hot in July and August preventing taxpayers from using a public resource. Over time, this could become a larger public health concern. The Buoys are part of a larger watershed management plan, as we recognize they will not be a silver bullet and a comprehensive approach is crucial for success and reducing or eliminating the HABs.

We understand that the Industrial Commission does not typically fund purchases of equipment. We also understand that this could be considered personal property not affixed to the land or infrastructure that is not part of a comprehensive conservation plan. However, we feel that this is an exceptional circumstance. Epping-Springbrook Dam has had Harmful Algal Bloom for at least the last three years, prior to that it was not being closely monitored. We are developing a comprehensive conservation plan, that already included water sampling, but that will be a large undertaking that will take time. There are over 1000 parcels of land in the watershed with over 100 landowners. Multiple generations of farmers and ranchers have worked the land in the Stoney Creek watershed. This has cause generations of nutrient runoff into Epping Springbrook Dam. The water quality is deteriorating. Now is the time to act. This is an innovative approach towards saving our lake.

This entire project is innovative. There are zero of these in North Dakota. One specific innovative element of this product is the Interactive Algae Control. Every 30 minutes water quality data is downloaded, based on the changes in water conditions the system has an algorithm that optimizes the ultrasound frequencies. This is all automated and WCP will have access to real time data.

Is this project part of a Comprehensive Conservation Plan? Yes No

If yes, provide a copy with the application.

Note: Projects involving buildings and infrastructure will only be considered if part of a Comprehensive Conservation Plan. Please refer to the "Definitions" section at the back of the form for more details.

Management of Project – Provide a description of how you will manage and oversee the project to ensure it is carried out on schedule and in a manner that best ensures its objectives will be met.

Include a brief background and work experience for those managing the project.

The project will be managed by the WCP Director, a graduate of the University of Wisconsin-La Crosse with a bachelor's degree in recreation management and a professional in the parks and recreation field for over 20 years. The annual maintenance program WCP will fund will be a huge resource for the management of this program. We will also lean on the resources offered by the Williams County Soil Conservation District and the ND DEQ.

Evaluation – Describe your plan to document progress and results.

Please be specific on the methods you will utilize to measure success. Note that regular reporting, final evaluation and expenditure reports will be required for every grant awarded.

Part of the annual maintenance plan includes monitoring water conditions. The MPC-Buoys provide a complete overview of the water quality by collecting levels of Chlorophyll (green algae), Phycocyanin (blue-green algae), pH, Turbidity, dissolved oxygen, and temperature every ten minutes.

WCP will continue to participate in the sampling and analysis program with the Williams County Soil Conservation District and the ND DEQ as mentioned prior.

WCP will comply with all OHF required reporting requirements.

Financial Information

Project Budget – Use the table below to provide an itemized list of project expenses and describe the matching funds being utilized for this project.

Indicate if the matching funds are in the form of cash, indirect costs or in-kind services. The budget should identify all other committed funding sources and the amount of funding from each source. **A minimum of 25% match funding is required.** An application will be scored higher the greater the amount of match funding provided. (See Scoring Form.)

Certain values have been identified for in-kind services as detailed under “Budget Information” at the back of this form. Refer to that section and utilize these values in identifying your matching funds. **NOTE: No indirect costs will be funded. Supporting documentation for project expenses, including bids, must be included or application will be considered incomplete.**

Project Expense	OHF Request	Applicant's Match Share (Cash)	Applicant's Match Share (In-Kind)	Applicant's Match Share (Indirect)	Other Project Sponsor's Share	Total Each Project Expense
Total	\$131,921.25	\$43,973.75	\$0	\$0	\$	\$175,895.00
	\$	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$	\$
Total Costs	\$131,921.25	\$43,973.75	\$	\$	\$	\$175,895.00

Note: Costs for seeding, fencing, pipelines, wells, and cover crops cannot exceed NRCS Field Office Tech Guide without justification. Projects involving perimeter fencing must follow NRCS eligibility standards.

Budget Narrative – Use the space below to provide additional detail regarding project expenses.

Quote from LG Sonic is included with this application.

Sustainability – Indicate how the project will be funded or sustained in future years.

Include information on the sustainability of this project after OHF funds have been expended and whether the sustainability will be in the form of ongoing management or additional funding from a different source.

Williams County Parks is committed to providing the manpower to manage the project and financing the annual maintenance fee.

Partial Funding – Indicate how the project will be affected if less funding is available than that requested.

Depending on the amount of funding it could delay the purchase of the equipment.

Partnership Recognition - If you are a successful recipient of Outdoor Heritage Fund dollars, how would you recognize the Outdoor Heritage Fund partnership? * *There must be signage at the location of the project acknowledging OHF funding when appropriate.*

This technology is not being used anywhere in North Dakota. This would be an exciting project, Williams County Parks would promote it through social media, radio, and print media. On every occasion we would recognize the OHF and the Energy Commission.

WCP will have signage at ESD explaining the purpose of the MPC-Buoys. This signage will identify the OHF/Energy Commission as the entity that funded the buoys and made it possible.

Awarding of Grants - Review the appropriate sample contract for your organization on the website at <http://www.nd.gov/ndic/outdoor-infopage.htm>.

Can you meet all the provisions of the sample contract? Yes No

If there are provisions in that contract that your organization is unable to meet, please indicate below what those provisions would be:

ABOUT OHF:

The purpose of the North Dakota Outdoor Heritage Fund is to provide funding to state agencies, tribal governments, political subdivisions, and nonprofit organizations, with higher priority given to projects that enhance **conservation** practices in this state by:

Directive A. Providing access to private and public lands for sportsmen, including projects that create fish and wildlife habitat and provide access for sportsmen;

Directive B. Improving, maintaining and restoring water quality, soil conditions, plant diversity, animal systems and by supporting other practices of stewardship to enhance farming and ranching;

Directive C. Developing, enhancing, conserving and restoring wildlife and fish habitat on private and public lands; and

Directive D. Conserving natural areas and creating other areas for recreation through the establishment and development of parks and other recreation areas.

EXEMPTIONS

Outdoor Heritage Fund grants may not be used to finance the following:

- Litigation;
- Lobbying activities;
- Any activity that would interfere, disrupt, or prevent activities associated with surface coal mining operations; sand, gravel, or scoria extraction activities; oil and gas operations; or other energy facility or infrastructure development;
- The acquisition of land or to encumber any land for a term longer than twenty years; or
- Projects outside this state or projects that are beyond the scope of defined activities that fulfill the purposes of Chapter 54-17.8 of the North Dakota Century Code.

OHF funds may not be used, except after a finding of exceptional circumstances by the Industrial Commission, to finance:

- A completed project or project commenced before the grant application is submitted;
- A feasibility or research study;
- Maintenance costs;
- A paving project for a road or parking lot;
- A swimming pool or aquatic park;
- Personal property that is not affixed to the land;
- Playground equipment, except that grant funds may be provided for up to 25% of the cost of the equipment not exceeding \$10,000 per project and all playground equipment grants may not exceed 5% of the total grants per year (see Definitions/Clarifications for how this will be calculated);
- Staffing or outside consultants except for costs for staffing or an outside consultant to design and implement an approved project based on the documented need of the applicant and the expenditures may not exceed 5% of the grant to a grantee if the grant exceeds \$250,000 and expenditures may not exceed 10% of the grant to a grantee if the grant is \$250,000 or less (see Definitions/Clarifications for how this will be calculated);
- A building except for a building that is included as part of a comprehensive conservation plan for a new or expanded recreational project (see Definitions/Clarifications for definition of comprehensive conservation plan and new or expanded recreational project); or
- A project in which the applicant is not directly involved in the execution and completion of the project.

The goal of the Industrial Commission is that at a minimum 15% of the funding received for a biennium will be given priority for recreation projects that meet Directive D.

The following projects are not eligible for funding, unless there is a finding of exceptional circumstances by the Industrial Commission include:

- Construction or refurbishment of indoor/outdoor ice rinks,
- Construction or refurbishment of indoor/outdoor athletic courts and sports fields,
- Other substantially similar facilities.

- Infrastructure that is not part of a comprehensive conservation plan.
- Projects not meeting a minimum funding request of \$2,500.

Budget Information

In-kind services used to match the request for Outdoor Heritage Fund dollars shall be valued as follows:

- Labor costs \$15.00 an hour
- Land costs Average rent costs for the county as shown in the most recent publication of the USDA, National Agricultural Statistics Services, North Dakota Field Office
- Permanent Equipment Any equipment purchased must be listed separately with documentation showing actual cost. (For example: playground equipment)
- Equipment usage Actual documentation
- Seed & Seedlings Actual documentation
- Transportation Mileage at federal rate
- Supplies & materials Actual documentation

More categories will be added as we better understand the types of applications that will be submitted. We will use as our basis for these standards other State and Federal programs that have established rates. For example, the North Dakota Nonpoint Source Pollution Management Program has established rates. If your project includes work that has an established rate under another State Program, please use those rates and note your source.

Definitions/Clarifications:

Building - Defined as "A structure with a roof either with walls or without walls and is attached to the ground in a permanent nature."

Comprehensive Conservation Plan - Defined as "A detailed plan that has been formally adopted by the governing board which includes goals and objectives--both short and long term, must show how this building will enhance the overall conservation goals of the project and the protection or preservation of wildlife and fish habitat or natural areas." This does not need to be a complex multi-page document. It could be included as a part of the application or be an attachment.

New and Expanded Recreational Project means that the proposed building cannot be a replacement of a current building. The proposed building must also be related to either a new or expanded recreational project--either an expansion in land or an expansion of an existing building or in the opportunities for recreation at the project site.

Playground equipment calculation - Only the actual costs of the playground equipment (a bid or invoice showing the amount of the equipment costs must be provided) - cannot include freight or installation or surface materials or removal of old equipment, etc.

Staffing/Outside Consultants Costs - If you are requesting OHF funding for staffing or for an outside consultant, you must provide information in your application on the need for OHF funding to cover these costs. For example, if you are an entity that has engineering staff you must explain why you don't have sufficient staff to do the work or if specific expertise is needed or whatever the reason is for your entity to retain an outside consultant. If it is a request for reimbursement for staff time then a written explanation is required in the application of why OHF funding is needed to pay for the costs of that staff member(s)' time. **The budget form must reflect on a separate line item the specific amount that is being requested for staffing and/or the hiring of an outside consultant.** This separate line item will then be used to make the calculation of 5% or 10% as outlined in the law. Note that the calculation will be made on the grant less the costs for the consultant or staff.

Maintenance – Activities that preserve or keep infrastructure in a given existing condition, including repairs. Repair means to restore to sound condition after damage, to renew or refresh; except repairs due to damage caused by Acts of God.

Scoring of Grants

Oral Presentation. Please note that you will be given an opportunity to make a ten-minute Oral Presentation at a meeting of the Outdoor Heritage Fund Advisory Board. These presentations are strongly encouraged.

Open Record. Please note that your application and any attachments will be open records as defined by law and will be posted on the Industrial Commission/Outdoor Heritage Fund website.

All applications will be scored by the Outdoor Heritage Fund Advisory Board after your ten-minute oral presentation. The ranking form that will be used by the Board is available on the website at <http://www.nd.gov/ndic/outdoor-infopage.htm> .

Awarding of Grants

All decisions on requests will be reported to applicants no later than 30 days after Industrial Commission consideration. The Commission can set a limit on duration of an offer on each application or if there isn't a specific date indicated in the application for implementation of the project, then the applicant has until the next Outdoor Heritage Fund Advisory Board regular meeting to sign the contract and get the project underway or the commitment for funding will be terminated and the applicant may resubmit for funding. Applicants whose proposals have been approved will receive a contract outlining the terms and conditions of the grant.

Responsibility of Recipient

The recipient of any grant from the Industrial Commission must use the funds awarded for the specific purpose described in the grant application and in accordance with the contract. The recipient cannot use any of the funds for the purposes stated under Exemptions on the first page of this application.

If you have any questions about the application, the Commission can be reached at 701-328-3722 or outdoorheritage@nd.gov.

Revised: November 4, 2019, April 12, 2023

Epping Springbrook Dam Harmful Algal Bloom





Quote

Quote Number: 25064788
Our Reference: Greg Eiffert
Quote Date: Nov 30, 2022 02:47 PM
Valid Until: Apr 21, 2023
Your Reference: Epping Springbrook Dam
Payment Term: Prepaid

Invoice address:

The Parks Department and the County Park Board
.
Williston
North Dakota
United States

Delivery address:

Product Code	Product Name	Qty	List Price	Total
10100	MPC-Buoy Pro	2	\$ 50,100.00	\$ 100,200.00
10020	Anchor system Complete anchor system incl. anchor, D-shackles, marine rope, sinker, galvanized, chains and swivels	3	\$ 3,640.00	\$ 10,920.00
10200	MPC-Buoy Lite	1	\$ 43,500.00	\$ 43,500.00
3426	Transport Transport	1	\$ 14,400.00	\$ 14,400.00
10900	Installation and Set up LG Sonic	1	\$ 5,900.00	\$ 5,900.00
87316	Sim Card SIM Card: yearly fee per MPC-buoy	3	\$ 325.00	\$ 975.00
Sub Total				\$ 175,895.00
Tax				\$ 0.00
Grand Total				\$ 175,895.00

Terms and conditions

Payment

- Credit card (VISA / MasterCard / American Express): Till 10.000 USD + 4% Creditcard Fee
- Wire transfer
- Check payment

Please mention your quote number in your payment details.

Orders are standard being shipped with an Invoice and Packing list. If you require additional export documents please indicate this with your order.

Please transfer payment including the bank charges for successful handling of your order.
All the units are ready to work on AC power supply. If your device will work on DC supply, please let us know so we can prepare it in advance.

Company details

201 Lackawanna Ave. Suite 222
Scranton
Pennsylvania
18503
United States
Tel: +1 833 547 6642
E-mail: g.eiffert@lgsonic.com

Terms and conditions at: www.lgsonic.com/terms



Monitor, Predict, Control Algae with the MPC-Buoy

- ✓ Eliminate up to 90% of the algae
- ✓ Reduce TSS, pH, and chemical usage
- ✓ Safe for fish, plants, and other aquatic life

LGSONIC

Complete algae control solution

Meet the MPC-Buoy

The MPC-Buoy is a floating, solar-powered system that combines real-time water quality monitoring and ultrasound to effectively control algae (blooms) in lakes and reservoirs.



Each MPC-Buoy device can control algae in areas up to 2600 ft in diameter.



Algae problem

A combination of high temperatures, stagnant water, and nutrient overload can result in excessive algae growth. These organisms deplete oxygen levels in water, release toxins, and cause bad taste and odors. The solution is to deploy one or more MPC-Buoys that emit targeted ultrasound into the water.



Algae solution

- ✓ Eliminate up to 90% of the algae
- ✓ Prevent the growth of new algae
- ✓ Reduce TSS, pH, and chemical usage
- ✓ Safe for fish, plants, and other aquatic life

Designed for large water bodies

The MPC-Buoy is specifically designed to control algae and improve water quality in large water bodies.

Drinking water reservoirs



Reduce chemical consumption, odor and taste issues.

Cooling ponds



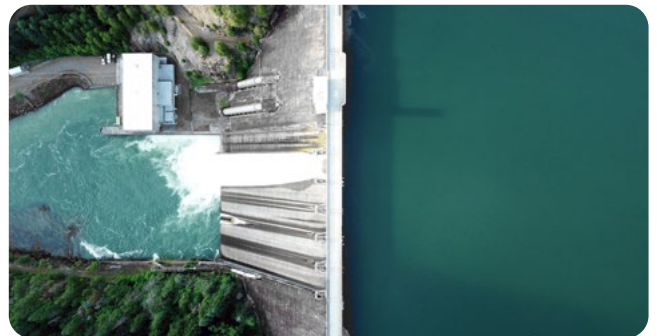
Increase the water quality and efficiency of your cooling water.

Wastewater ponds



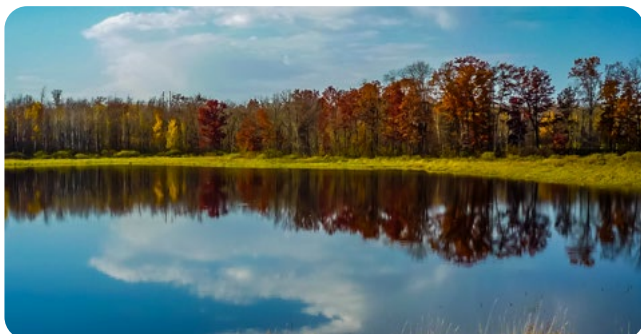
Control algal blooms to lower pH, TSS, and BOD levels.

Hydroelectric dams



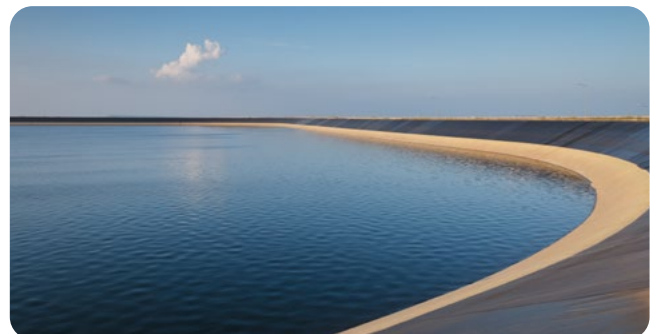
Lower chemical consumption and improve water quality.

Lakes



Reduce odor problems and prevent dangerous toxins.

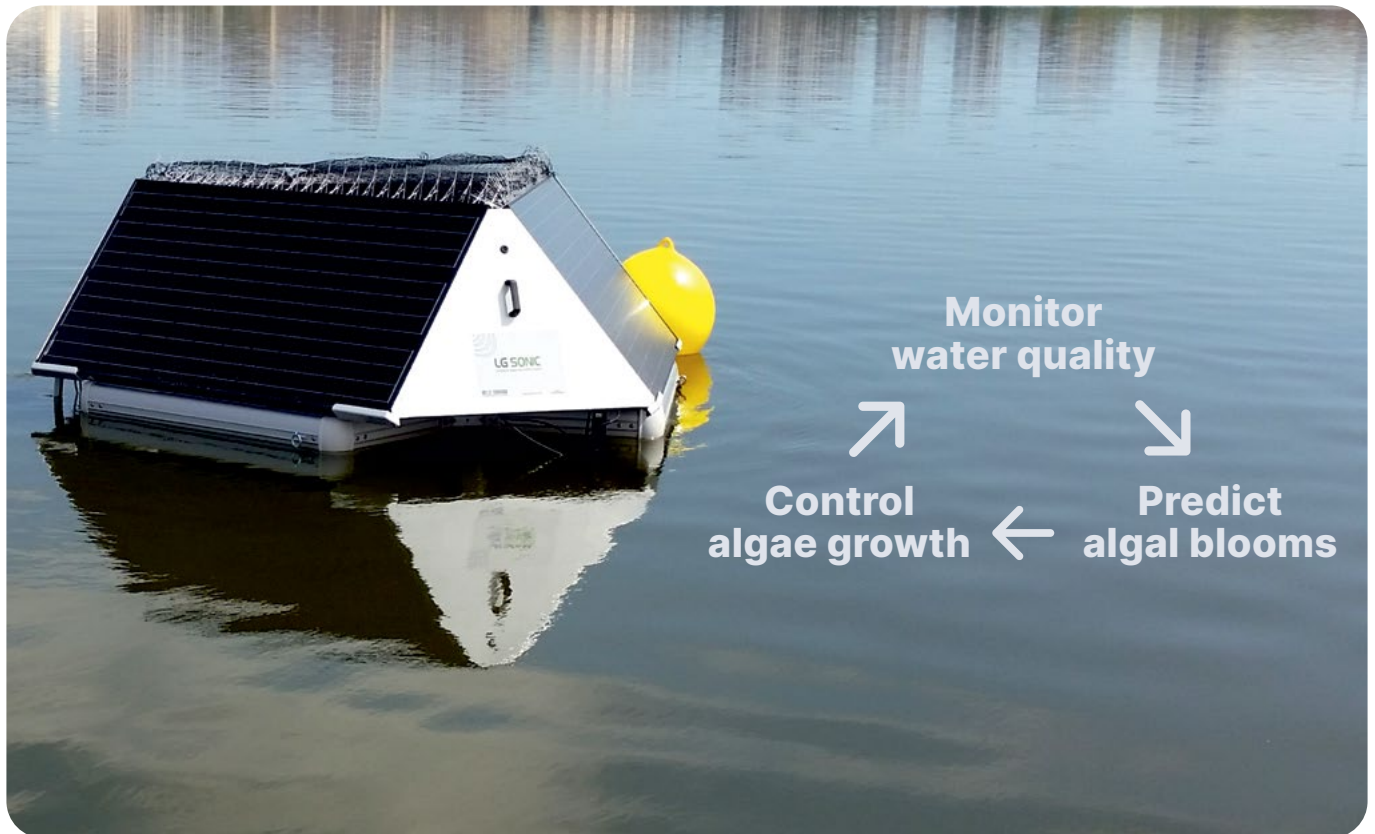
Irrigation reservoirs



Prevent clogging of filters and pipes of drip irrigation systems.

Monitor, predict, and control algae with ultrasonic technology

The MPC-Buoy uses low-power ultrasound to stop algal growth without harming the environment.



1. Monitor water quality

The MPC-Buoy provides a complete overview of your water quality by collecting the following parameters* every 10 minutes:

- Chlorophyll α (green algae)
- Phycocyanin (blue-green algae)
- pH
- Turbidity
- Dissolved oxygen
- Temperature

2. Predict algae blooms

Our database contains more than 10 years of information collected from thousands of LG Sonic devices operating around the world. It includes datapoints on different types of water bodies, algae species, seasons, etc. Our database is continually refreshed with new information, always optimizing predictive algorithms for the benefit of all our customers.

3. Control algae growth

Algae can become resistant to treatment methods, including ultrasound. To avoid this, we'll determine the most effective ultrasonic program for your unique situation. The program parameters will be specific for wave form, frequency, pause, and amplitude. The key to long-term results is adjusting settings before the algae mutate.

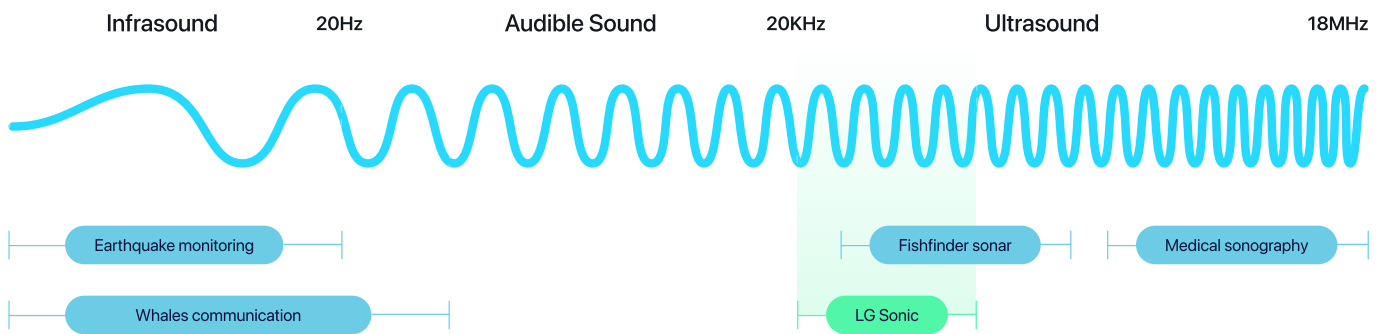
* Additional sensors can be purchased separately

How ultrasonic algae control works

Eco-friendly ultrasonic treatment

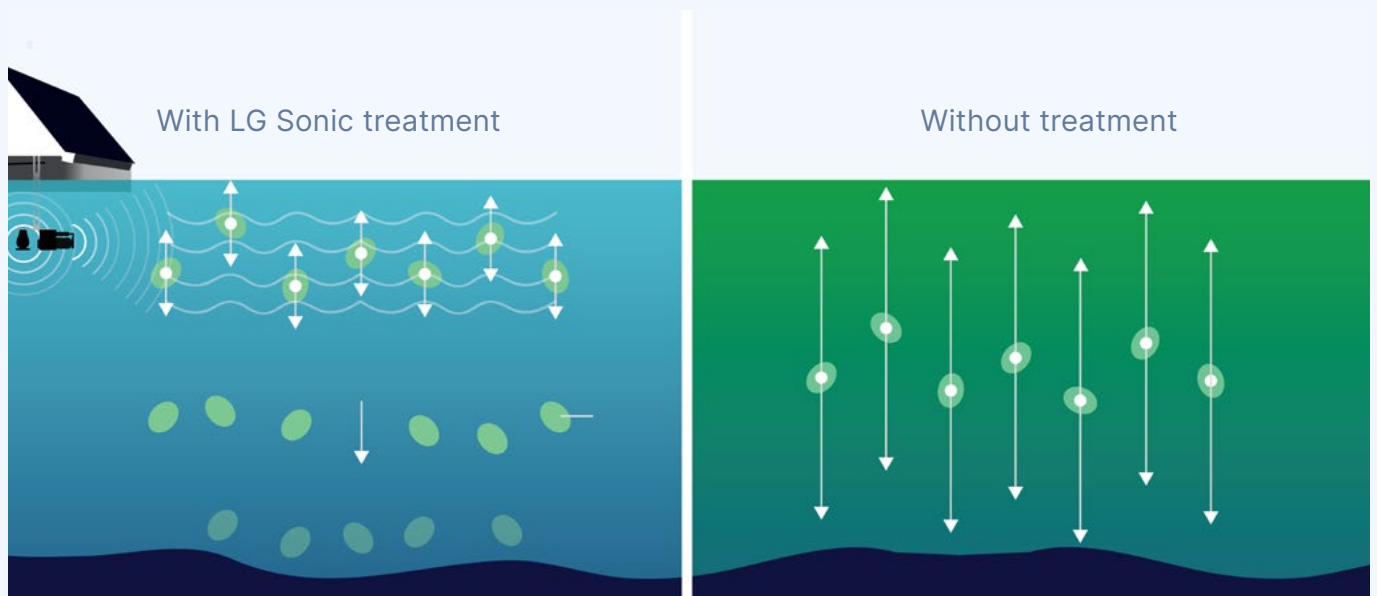
Algae blooms reduce light penetration, deplete oxygen, and release dangerous toxins, harming fish, plants, and other aquatic organisms. By controlling algal growth, LG Sonic's ultrasonic technology has the power to restore entire ecosystems.

After one year of treatment, algae levels will significantly reduce as water clarity increases, encouraging plant growth and therefore, increasing oxygen levels. Our ultrasonic treatment reduces algae blooms by up to 95%, compared to no treatment.



How ultrasound targets the algae

- 1 Algae move to the water surface for photosynthesis. The ultrasound creates a sound layer at the top of a water body.
- 2 The ultrasound affects algae's vertical movement by fixing them in the water column.
- 3 Without sunlight and nutrients, the algae sink to the bottom, where they decompose without releasing toxins.
- 4 In time, bacteria will degrade the algae.



MPC-Buoy components

Solar-powered

- 3× 200 Wp high quality solar panel that provide power all year-round in any country
- 1× 24 Volt, 40 AMP lithium battery
- Switches to energy-saving program during periods of low sun irradiation

Smart communication system

- 4G, Satellite, LAN
- Real-time water quality data with the MPC-View software
- Integrated alarm functions



4 ultrasonic transmitters

- Treatment range: 2600 ft in diameter
- Integrated Aquawiper™: automatic cleansing system for the transmitters
- Chameleon Technology™ adjusts the ultrasonic program to specific water conditions

Anchored floating construction

- Aluminium powder coated frame
- UV and corrosion resistant construction
- Unsinkable floats

Complete quality sensor package

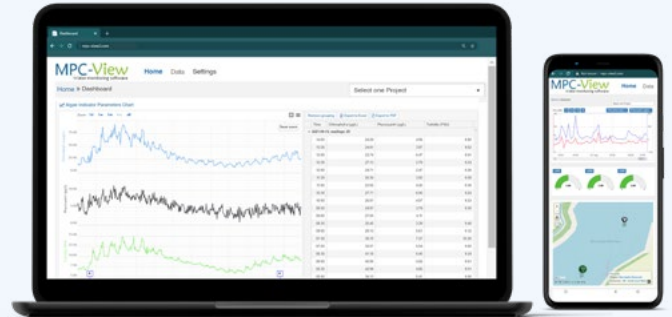
- In-situ water quality sensors to provide real-time data
- Monitors DO, turbidity, pH, chlorophyll α , phycocyanin, and temperature
- Automatic antifouling wiper ensures optimal readings

Get real-time water quality insights

Meet the MPC-View

MPC-View is an advanced web-based software. It provides a complete water quality overview of one or more water bodies.

- ✔ Real-time insights into your water quality
- ✔ Data transfer through 4G or satellite
- ✔ Ultrasonic programs change based on the water quality data received



MPC-View software features



- ✔ The software receives, summarizes, and publishes data into charts, tables, and spreadsheets on your personal webpage.
- ✔ Allows you to follow the algae treatment progress and the status of the units.



- ✔ Based on the data, ecologists, biologists and technicians from LG Sonic modify the ultrasonic program for effective treatment.
- ✔ Set alarms for changing water conditions and maintenance activities.

Remote sensing is also integrated into MPC-View. This allows you to view the historic data of a specific water body, and further optimize the treatment.

Technical specifications



<p>3x aluminum framed polyethylene buoy</p> <ul style="list-style-type: none"> • Material: Rotationally-moulded UV-stabilized HDPE polyethylene • Filling: Closed-cell polyurethane foam • Buoy frame: Anodized aluminum • Weight: 33 lbs • Size: 47 × 23.5 × 8 in • Buoyancy capacity 600 lbs 	<p>Solar panels (3x)</p> <ul style="list-style-type: none"> • Solar cell: Monocrystalline cell • Rated Power (Pmax): 200 Wp Weight: 35.3 lbs • Connectors IP67 • Size: 62.2 × 32 × 1.4 in
<p>Telemetry</p> <ul style="list-style-type: none"> • GSM/GPRS • CDMA (optional) • Radio (optional) • GPS (optional) • Iridium Satellite (optional) 	<p>Data acquisition system</p> <p>4 x analog channel (user-configurable for either 4-20mA)</p> <ul style="list-style-type: none"> • 1 x RS485 port for instruments • 1 x high frequency pulse counting channel • 1 SDI-12 input • 3X RS232
<p>Battery</p> <ul style="list-style-type: none"> • 1× 24 volt lithium lifepo4 • Capacity: 40 Ah • Weight: 33 lbs 	<p>Solar Charge Controller</p> <p>Overcharge and Deep discharge protection Ip68 Protection</p>

Water quality sensor package

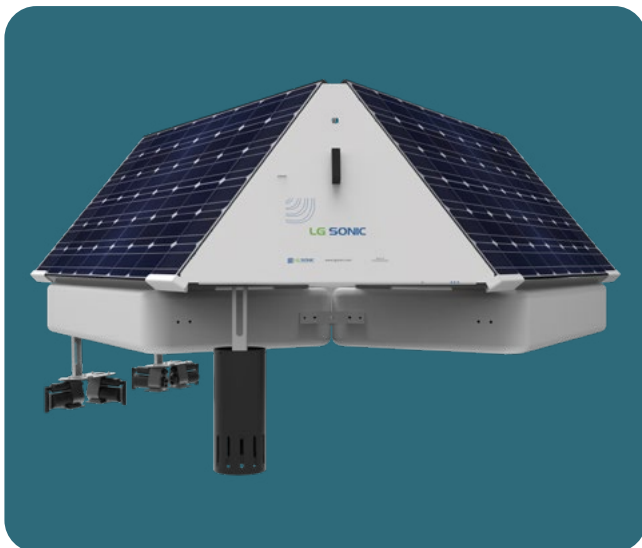
<p>Fluorescence, including anti-fouling wiper: chlorophyll a, phycocyanin, turbidity</p> <ul style="list-style-type: none"> • 470nm – Chlorophyll a • 610nm – Phycocyanin • 685nm Turbidity 	<p>Dissolved Oxygen</p> <ul style="list-style-type: none"> • Optical measure by luminescence • Measure ranges: • 0.00 to 20.00 mg/L • 0.00 to 20.00 ppm • 0-200% 	<p>pH</p> <ul style="list-style-type: none"> • Combined electrode • special glass, Ag/AgCl ref. • Gelled electrolyte (KCl) • Range 0 – 14 pH • Resolution 0,01 pH • Accuracy +/- 0,1 pH
<p>Temperature</p> <ul style="list-style-type: none"> • Technology CTN • Range 32°F to 122°F • Resolution 0,02°F • Accuracy ± 0,9°F • Response time < 5 s 		<p>It is possible to add additional sensors to the water quality sensor package.</p>

What other products do you need?

Vertical profiling system

LG Sonic Vertical Profiler can be pre-set to take samples from a wide range of depths within a water body and measure key water parameters in real-time. Data is transmitted through 4G, radio or satellite to the MPC-View online software.

- Easy maintenance: can be done from the boat, without bringing it back to shore
- Possible to measure up to 330 ft in depth
- 50% more affordable than other Vertical Profilers on the market



PO₄ sensor

By measuring PO₄ in a water body, you're able to predict harmful algae blooms and you gain a better understanding of the different PO₄ sources in your water.

- Reliable measurements at different depths
- 2-POINT calibration with each measurement
- High durability of reagents
- User-friendly and highly customizable
- More affordable than other PO₄ sensors
- Operates completely autonomously
- The sensor can be supplied on a stable buoy

Weather station

Our Weather Station is a low-maintenance unit that enables more accurate algae bloom predictions by integrating local weather data into your MPC-Buoy and MPC-View software.

- Real-time weather data
- Highly customizable
- Low maintenance



Our customers

We work together with top-level water and energy utilities.



American Water is the largest and most geographically diverse U.S. public water and wastewater utility.

To control harmful algae and eliminate foul odor and taste issues, American Water installed MPC-Buoy systems in their reservoir located in New Jersey. Amongst other positive results, the utility achieved 100% chemical reduction in the reservoir



In California, the MPC-Buoy technology is controlling algae in an open water reservoir where treated reclaimed water is stored to be later used for irrigation.

Since the start of the ultrasonic treatment, overall algae levels have decreased. TSS, pH, and dissolved oxygen levels have also improved, allowing Vallecitos to provide higher water quality to their customers.



For years, power generating company NIPSCO tried lowering TSS levels using algaecide, but it never gave consistent results.

Since the installation of five MPC-Buoy systems in the spring of 2019, TSS levels remained at lower levels than 3 ppm. Additionally, the company could keep pH and TSS in check, complying with EPA's NPDES permit limits.



After installing the MPC-Buoy in their wastewater pond, American Crystal Sugar Company has reduced chlorophyll-a levels by up to 85%.

As a result, TSS values lowered, enabling them to comply with the NPDES limits. American Crystal Sugar is the first company in the sugar beets industry to start using ultrasonic technology for improving water quality.

About LG Sonic

We're global leaders in sustainable algae management. Our patented ultrasound integrated into our technologies can be remotely controlled by our team of experts.

For over 10 years, we've invested in research and development. Today, we deliver technological solutions that restore aquatic ecosystems without the use of chemicals or other pollutants.

100+

Clients

55+

Countries

12+

Industries served



LG Sonic US

In 2018, we opened our US office and expanded our business in North America. Ever since, we've been able to better service the needs of our customers. We are running algae treatment projects across the states, including California, New York, Florida, New Jersey, Pennsylvania, Colorado, and Georgia.

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Award-Winning Innovation



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