



**US Army Corps
of Engineers®**
Northwestern Division

**CENWP-OD Standing Natural Resources (NRM)
Policy & Procedures 1130-1**

**NATURAL RESOURCES MANAGEMENT
Blue Green Algae in District Operating Project Waters**



Portland District

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Foreword

This Standing Policy and Procedure (SPP), *Blue Green Algae in Water Resource Project Waters*, implements a comprehensive Blue Green Algae (BGA) public outreach and education communication program for the Portland District.

The District will no longer conduct routine BGA monitoring, sampling, and testing. The District will continue to collect BGA data as part of routine water quality monitoring. Prior to the 2015 recreation season Operating Projects will advise the public, partners and stakeholders of the District's updated policy.

The proponent office for this document is District Natural Resources Management (OD-SR) and any questions or comments should be directed to this office at:

CENWP-OD-SR
333 SW First Avenue
Portland, OR 97204
Phone: (503) 808-4322
FAX: (503) 808-4329

Review. This document will be reviewed annually or more often if conditions change.

History. This policy supersedes No. 200-1-3 dated 23 July 2008, which is now obsolete.

Change Management. No changes to this document shall be made without concurrence of the Management Representatives. Any change must be approved by the District Commander or his designee.



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Record of Review and Changes

Change No.	Page / Paragraph/ Section:	Statement of Review or Change:	Date:	Approval:
1	Entire Document	Replaces NWPR 200-1-3 in its entirety 23 July 2008	25 July 14	
2	Entire Document	Organizational symbol CENWP-OD-SR was abolished on 17 Dec 14 and a new symbol CENWP- OD-TN is created. Any reference to CENWP-OD-SR in this policy document is now CENWP-OD-TN.	4 Feb 15	



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1.0 Purpose

The purpose of this document is to update the District BGA policy and establish new procedures. This SPP also clarifies the roles and responsibilities of relevant Corps business lines regarding BGA and the recreating public, project purposes, existing water uses, and public health and safety. This SPP is a living document; subject to change as needed to comply with applicable Federal and state water quality standards.

2.0 Applicability.

This SPP applies to all District Operating Projects with recreation areas within the Portland District's jurisdiction located in the States of Oregon and Washington.

3.0 References.

ER 1110-2-8154. *Water Quality and Environmental Management for Corps Civil Works Projects* (RCS: DAEN-CWH-4). 31 May 1995.

EM 1110-1-400. *Recreation Facility and Customer Services Standards*. 1 November 2004.

ER/EP 1130-2-550. *Recreation Operations and Maintenance Guidance and Procedures*. 15 November 1996.

Public Law 108-456. *Harmful Algal Bloom and Hypoxia Research and Control Act of 1998* (HABHRCA). 10 December 2004.

4.0 Related Procedures.

EP 1130-2-500. *Partners and Support (Work Management Policies) Sign Standards Program for Civil Works Projects*. 27 December 1996.

EP 310-1-6a and 6b. *U.S. Army Corps of Engineers Sign Standards Manual*. V. 1 & V. 2. Appendices. 1 June 2006.

5.0 Definitions.

5.1 Blue-Green Algae (BGA): *blue green algae*, also known as *cyanobacteria*, are a diverse group of photosynthetic organisms. BGA thrives in slow-moving warm and nutrient-rich water. BGA blooms can be detrimental by outcompeting beneficial algae, depleting dissolved oxygen needed by aquatic life and producing toxic compounds.



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5.2 Blue-Green Algae bloom: A visible concentration of algae in a water body or along the shoreline of a water body.

5.3 Blue-Green Algae toxin: Certain *blue-green algae* have the ability to produce toxins, also known as *cyanotoxins*, that can harm people, pets and wildlife. The most common toxigenic cyanobacteria in Oregon are *Microcystis* and *Anabaena*. Both genera are capable of producing microcystin (a liver toxin) and anatoxin (a nervous system toxin). In addition, *Anabaena* is capable of producing cylindrospermopsin (a liver toxin) and saxitoxin (a nervous system toxin).

5.4 Outgrant: A written, legal Real Estate instrument granting either real property interest or permission over a specific period of time, for a specific consideration.

5.5 Recreation area: A developed area of Corps-owned land either directly managed by the Corps or outgranted to others that provides direct access to a water body for public recreation purposes.

5.6 Route of Exposure: The way in which a substance comes into contact with an organism. For example, water-based recreational activities are considered the primary *route of exposure* for cyanotoxins via direct skin contact, inhalation, or inadvertent ingestion of water. The most common complaints after recreational exposure are gastroenteritis and epidermal allergic reactions.

6.0 Responsibilities.

6.1 District Natural Resource Manager (OD-SR): Responsible for providing support to Operating Projects by reviewing their public outreach and education plans to ensure consistent application of this policy across the District.

6.2 Operation Project Manager (OPM): Responsible for ensuring that this policy is applied at recreation areas under their responsibility.

6.3 Project Natural Resource Manager: Responsible for implementing this policy at all recreation areas within the jurisdiction of their Operating Project through public outreach and education.

6.4 Public Affairs Office (PAO): Responsible for developing and communicating District messages regarding BGA to all external and internal audiences using various methods to maximize public outreach in partnership with the OD-SR and OPM.

6.5 Real Estate Division (RE): Responsible for notifying out grantees that manage water-based recreation areas of changes to the District's BGA policy and informing them of how these changes may affect them.

6.6 Safety and Occupational Health Office: Provides advice and technical consultation to the Portland District Commander and staff on the safety implications of the BGA policy.



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6.7 Water Quality Program (EC-HR): Ensures that water quality, as affected by the project and its operation, is suitable for project purposes and existing water uses, and is in compliance with applicable Federal and state water quality standards.

7.0 Procedures. Due to the transitory nature of BGA presence and risk the Portland District is shifting to an aggressive outreach campaign to educate and inform the public of BGA problems and to let them make their own risk decisions. OPMs at Operating Projects with recreation areas, in cooperation with OD-SR and PAO will develop and maintain an ongoing BGA public outreach and education program.

7.1 Public Outreach Program. Annually, with increased outreach during peak recreation periods, OPMs will make the recreating public aware of the potential for BGA to be present in some of our reservoirs; informed on what BGA looks like; and, alerted to the precautions they can take to ensure they are not adversely affected by algae-produced toxins that may be in a bloom.

7.2. Messaging. A uniform message informing of the change to the Corps policy; the potential harm from exposure to BGA-produced toxins; and, listing resources where more information can be obtained will be developed by OD-SR, OPMs and PAO, and disseminated to the public, partners and stakeholders.

7.2.1 Methods of delivery to the public will consider full use of all available media, including social media and public service venues.

7.2.2 Messaging will begin after policy approval; and increase at the approximate start of the annual recreation season and extend throughout the season. Messaging will be ramped up prior to when anticipated visitation to recreation areas is normally high, such as before holidays and long weekends.

7.2.3 PAO, OD-SR and OPMs will develop a webpage for the District public website. The link to the website will be made available in multiple locations and as a QR code.

7.3 Signage. Existing signage referencing monitoring and testing in cooperation with Oregon Health Authority (OHA) will be removed and replaced with new permanent interpretive signs no later than April 30, 2015. New signs shall comply with the standards and requirements of the U.S. Army Corps of Engineers Sign Manual (EP 310-1-6a & 6b).

7.3.1 OD-SR and OPMs will develop signage to post at recreation areas where BGA is present. Signs will inform the public of the Corps revised policy, e.g. "this lake or river is not tested" and include cautionary language, e.g. "when in doubt, stay out".



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7.3.2 OD-SR and OPMs will develop a master bulletin board poster(s) containing the information identified in 7.3.1 above and how to identify BGA. The posters will be placed strategically at recreation areas to inform the recreating public.

7.4. Partners/Stakeholders. OD-SR, OPMs and PAO will communicate with affected partners, stakeholders, the general public and others who may be affected on the revised District policy and provide BGA updates to post on their websites.

7.4.1 OD-SR will ensure web content is current.

7.4.2 RE will contact outgrantees that manage water-based recreation areas or would otherwise be affected and notify them of the changes to the District BGA policy.

7.5. Current Science. OD-SR will coordinate annually with OPMs and EC-HR to ensure the recreating public is informed of the current science regarding the potential for adverse effects to people, pets and wildlife exposed to BGA toxins and, in the case of people and pets, measures they can take that limit those effects. EC-HR will collect BGA data as part of studies related to ER 1110-2-8154. EC-HR will disseminate scientific data to interested partners and the public. If OHA issues a public health advisory based on shared data from EC-HR, follow up monitoring will be conducted by EC-HR with the goal of providing sufficient data to OHA to lift the advisory as soon as practicable. The frequency of follow up monitoring will depend on available resources, field reports and reservoir history but should strive to occur approximately every other week.

8.0 Records & Measurements.

8.1 OPMs will notify OD-SR and EC-HR of incidences where BGA exposure is the perceived cause of human or pet effects. OD-SR will retain the information for five years.

8.2 OD-SR will annually review and make the necessary changes to the public outreach and education program to ensure it adequately protects the health and safety of the recreating public. OD-SR will develop recommendations to adjust the program to improve public safety.

8.3 EC-HR will store and maintain collected scientific data, including water quality data related to BGA. EC-HR will disseminate current science regarding BGA to OD-SR and to OPMs, as requested.


JOSE L. AGUILAR
COL, EN
Commanding