

MEMORANDUM FOR RECORD

SUBJECT: South Florida Operations Office (SFOO) Standard Operating Procedure (SOP) for Harmful Algal Blooms

BACKGROUND: This Memorandum supersedes the “SFOO Efforts Regarding Harmful Algal Blooms” Memo dated 18 August 2021 (attached) and is pursuant to WRDA 2022 SEC. 8141. This MFR is also in accordance with the “Corps Records Relating to Harmful Algal Blooms in Lake Okeechobee, FL” Memo (attached).

1. Due to various environmental conditions in Central and South Florida, Harmful Algal Blooms (HAB) are likely to develop within the waters of Lake Okeechobee, the surrounding canals, and tributaries. The most common HAB in this area is Cyanobacteria Algal Bloom also known as Blue Green Algae (BGA). It is important to point out that just the presence of BGA is not an indication that it is “harmful”. BGA does produce a toxin called Microcystin that is considered harmful and can cause damage to the liver. However, the presence of BGA does not mean there is a presence of Microcystin. While there are several studies being done on Microcystin, the current understanding is that it is a heavy molecule, and it is difficult to aerosolize. Therefore, the presence of it in the water does not mean that it is also in the air. The risk to the liver is far greater through ingestion than it is through inhalation. SFOO is committed to continue to monitor these studies and modify this SOP as the need arises.
2. The U.S. Army Corps of Engineers is not the responsible organization for water quality. However, we are committed to partnering with the State of Florida, specifically the Florida Department of Environmental Protection (FDEP) and the South Florida Water Management District (SFWMD) in these efforts. As part of that partnership, we provide observations at our navigation structures (S-77, S-78, S-79, S-80 and S-308) to determine the severity and size of BGA that may be present. This data is used to determine a “Bloom Index” which is shared with the state and used to determine if conditions necessitate testing and/or treatment. If necessary, we allow access to perform water sample testing and treatment.
3. SFOO is committed to following federal, state, and local guidelines with respect to precautions to BGA, minimizing all health risks, and providing Personal Protective Equipment (PPE) to reduce these risks. This includes monitoring toxin levels as reported by FDEP and documenting employees’ covered duty in BGA presence in accordance with the Water Resource Development Act (WRDA) of 2022, Section 8141. The SFOO policy for compliance with WRDA 2022 Section 8141 is attached to the MFR.
4. SFOO’s policy regarding operation in the presence of HABs will be to follow state and local guidelines for activities. In general, these include:
 - a. Do not drink, swim, wade, use personal watercraft, water ski, or boat in the waters where there is a visible bloom.

- b. Wash your skin and clothing with soap and water if you have contact with algae or discolored or smelly water.
- c. Keep pets away from the area. Waters where there are algae blooms are not safe for animals. Pets and livestock should have a different source of water when algae blooms are present.
- d. Do not cook or clean dishes with water contaminated by algae blooms. Boiling the water will not eliminate the toxins.
- e. Eating fillets from healthy fish caught in freshwater lakes experiencing blooms is safe. Rinse fish fillets with tap or bottled water, throw out the guts, and cook fish well.
- f. Do not eat shellfish in waters with algae blooms.

These precautions are focused on ingestion. Therefore, under lock operations, employees are encouraged to follow the precautions above. In this case, PPE usage will be at the discretion of the employee. However, during times of high bloom index (colored red on chart below), dam operations will require surgical masks to be worn in the immediate area of the dam or areas where water vapor from the dam is present.

Bloom Index		Severity			
		None Visible 0	Low 1	Mod 2	High 3
Area	None Visible 0	0	0	0	0
	Car 1	0	1	2	3
	Basketball Court 2	0	2	4	6
	Football Field 3	0	3	6	9
	Larger than Football Field 4	0	4	8	12

Bloom Index (Area * Severity = Bloom Index)

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