



DATE: March 11, 2021
TO: House Committee on Water
FROM: Rian vanden Hooff, Legislative Analyst
SUBJECT: HB 3093 (2021 Session) – Harmful Algal Blooms

HB 3093, as amended under -7 and -8, would provide resources aimed at improving statewide coordination and analytical capacity in response to harmful algal bloom threats to Oregon waters.

Harmful algal blooms (or HABs) in lakes, streams and rivers typically refer to the excessive abundance of cyanobacteria: a variety of single-celled photosynthetic organisms that – under some circumstances – produce and release dangerous compounds referred to as cyanotoxins. When cyanobacteria release toxins into the water, it can be harmful to humans as well as other vertebrates including pets, livestock, fish and other wildlife. HABs can cause extensive economic, environmental, or health consequences by potentially impacting our recreational areas, fisheries, agricultural operations, or our drinking water supplies.

HAB causation tends to be waterbody specific but typically includes one or more contributing factors involving warm water temperature, low flow, excess nutrients, or disrupted food webs resulting from introduction of non-indigenous species. Watersheds impacted by large wildfires are susceptible to increased risk of HABs due to increased erosion and nutrient runoff, as well as increased stream temperatures resulting from loss of riparian vegetation. HABs are also likely to become more common due to climate change as well as land and water use changes related to population growth.

For waterbodies impaired by HABs, DEQ is responsible for investigating the causes, identifying contributing factors, and where necessary, developing a watershed management plan or alternative strategy aimed at reducing HAB occurrence, frequency and severity. DEQ developed a [Harmful Algal Bloom strategy](#) in 2011 to improve its abilities to address HABs and identify resource needs, and is currently updating the strategy document for 2021.

DEQ has been an active participant on the HAB Legislative Workgroup established by the House Water Committee following the 2019 Legislative Session. A diverse range of workgroup participants and stakeholders articulated a need for enhanced HAB coordination and communication amongst various agencies and other entities; expanded testing capacity, and improved prediction, modeling and analytical capacity to support mitigation and prevention efforts. The resources described in the -7 amendment are consistent with workgroup recommendations.

Understanding HABs in Oregon waters is a key to the planning and implementation of strategies to predict, prevent, and control them. Our understanding of bloom occurrence would benefit from a proactive and systematic monitoring strategy; greater utilization of remotes sensing and satellite imaging tools; Oregon specific studies that will contribute to modeling and predictive capabilities; and analytical expertise that can translate available information into locally tailored management strategies that reduce the extent, frequency, severity, and duration of HAB events. Furthermore, enhanced capacity to support inter-agency coordination, communication and data sharing amongst practitioners, and education and outreach efforts (particularly to disadvantaged communities vulnerable to HAB exposure) would further

support efforts to protect Oregonians from HAB related threats.

Specifically, Section 4 of -7 (and -8) amendment would require DEQ to create, fill and utilize one position that would help the agency address various objectives described in the bill that are also consistent with workgroup recommendations. This would provide support for a dedicated staff position with specialized lake and HAB expertise within DEQs Watershed Management Section who would

- Collect and analyze water quality data, weather data, watershed attributes and other applicable information to facilitate better understanding of waterbodies affected by HABs;
- be a resource for various modeling and implementation efforts, and can work with other agencies and stakeholders who are doing HAB related studies;
- Work with local groups and stakeholders to identify watershed specific management strategies to reduce the extent, frequency, severity, and duration of HABs; and
- Assemble and evaluate water quality data to identify and prioritize development of HAB management responses that may include watershed management plans or other appropriate management strategies.

The -7 amendment would also provide increased capacity to assess HAB vulnerable waterbodies for nutrients by providing for an additional nutrient analyzer for the DEQ lab. Nutrients are a potential contributing factor to HAB formation. The additional sample processing capacity provided by this equipment would further contribute to our understanding of HAB formation and contributing factors while also supporting efforts to predict HAB vulnerability and the development of watershed management strategies. To achieve the benefits of the new nutrient analyzer, additional staffing for sample collection and analytical testing would be required. If additional staff resources are not authorized in a companion bill (see HB 3102) or elsewhere, DEQ would be unable to fully utilize the additional capacity intended by this nutrient analyzer instrument. Otherwise, the appropriations to DEQ identified in Section 6 of -7 (or -8) would be adequate to support DEQ activities described in the bill, as amended.

This bill is consistent with existing regulatory authorities and workflow agreements involving the respective agencies and provides dedicated resources at OHA to support statewide coordination and at DEQ to enhance waterbody specific HAB analyses and development of management strategies. DEQ has no position on this bill.

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