



THE UNIVERSITY OF
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KNOXVILLE

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NHC Lifetime Research and Service Award
The National HAB Committee

To the membership of the committee,

It is with great pleasure that I provide a nomination package for **Professor Gregory L Boyer** for the ***NHC Lifetime Research and Service Award***. As I am sure you are aware Dr Boyer is presently a Professor Emeritus at the *State University of New York College of Environmental Science and Forestry*, Professor Boyer has been on the faculty at SUNY-ESF since 1985 and has served the HAB community as one of the top cyanotoxin chemists in the world during this period. With a record of research in the Laurentian Great Lakes that dates to the very early 2000s, he has been a central player in the development of research programs addressing the ongoing algal issues in lake systems. To say that Professor Boyer was working on HABs well before they were “*en vogue*” would be quite accurate.

Greg Boyer completed his PhD at the *University of Wisconsin* (Madison) prior to spending a year as a research associate at the University of British Columbia. In 1985, he established his research group at SUNY-ESF where he spent time focusing on trace element and natural products chemistry. Beginning in the late 1990s/early 2000s his research turned toward a study of *Microcystis* and the toxins (microcystins, or “*fast death factors*”) that these cell lines produce. Since then, he has retooled his lab to be a major core-facility that supports research scientists interested in nuisance blooms. Thousands of samples per year have been sent to the Boyer lab for careful and thoughtful analyses. He has collected samples across North America as well as on-location internationally, including South American and China. In total, this effort has led to >150 peer-reviewed contributions to the scientific literature (h=54; Google Scholar, August 28, 2024) and countless presentations in the United States and at institutions across the globe.

During this period he and his collaborators have worked together to be leaders in the development of many of the tools now commonly used by members of the Great Lakes community: this includes the development of the first field-deployable quantitative PCR approaches for toxic cyanobacteria (1), the development of standardized protocols for measure cyanotoxins in the Great Lakes basins (2), and approaches for measuring toxin concentrations as they accumulate through the food-web (3). Moreover, he has been a constant and visible presence at domestic and international meetings during the last 2 decades both within the HAB community as well as informing the large limnetic community. Notably he has served his service includes 17 years as the *Director of the Great Lakes Research Consortium* and has been active in participation

**BIG ORANGE.
BIG IDEAS.**

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(including service on the steering committee) in the Great Lakes *HABs Collaborative* as well as other bodies (including the *US National Harmful Algal Bloom Advisory Committee*).

Within our HAB community, Professor Boyer led the *MERHAB-Lower Great Lakes Program* for five years: this NOAA funded multi-institutional effort was the impetus for many of the harmful algal bloom tools and much of the research that continues in the lower Great Lakes and across North America. It served as a model for how those of us working in the Great Lakes basin on HABs issues should focus on cooperation.

To those of us who have been lucky enough to work with Greg he has been a steady colleague, and for students an inspirational mentor. He has spent a lifetime working in the large lakes of the world - including those in North America – and to this end we feel a lifetime acknowledgement as he moves onto this new phase as a Professor Emeritus is worthy of recognition. He has both represented and served our community with distinction.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven W Wilhelm". The signature is written in a cursive style and is enclosed within a large, sweeping, horizontal oval stroke.

Steven W Wilhelm, PhD

References noted in document.

1. Rinta-Kanto JM, Ouellette AJA, Boyer GL, Twiss MR, Bridgeman TB, Wilhelm SW. Quantification of toxic *Microcystis* spp. during the 2003 and 2004 blooms in western Lake Erie using quantitative real-time PCR. *Environ Sci Technol.* 2005;39(11):4198-205.
2. Howard KL, Boyer GL. Quantitative analysis of cyanobacterial toxins by matrix-assisted laser desorption/ionization mass spectrometry. *Anal Chem.* 2007;79:5980 - 6.
3. Schmidt JR, Shaskus M, Estenik JF, Oesch C, Khidekel R, Boyer GL. Variations in the Microcystin Content of Different Fish Species Collected from a Eutrophic Lake. *Toxins (Base I).* 2013;5:992-1009.