Mitigating harmful cyanobacterial blooms in drinking water reservoirs through *in-situ* sediment resuspension

Jiao Fang^{a,b}, Yande Li^d, Ming Su^{a,f,*}, Tengxin Cao^{a,f}, Xufeng Sun^c, Yufan Ai^{a,f}, Jinyi Qin^e, Jianwei Yu^{a,f}, Min Yang^{a,f,*}

^a State Key Laboratory of Environmental Aquatic Chemistry, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, P.O. Box 2871, Beijing, 100085,

^bSchool of Environment and Spatial Informatics, China University of Mining and Technology, Xuzhou, 221116,

^cZhejiang Weicheng Huanbao Co. Ltd., Yunxiu North Road 1200, Huzhou, 313200,

^d Management Station of Shuangxikou Reservoir, Reservoir Management Service Center of Yuyao, Ningbo, 315423,

> ^eSchool of Civil Engineering, Chang'an University, Xi'an, 710054, ^fUniversity of Chinese Academy of Sciences, Beijing, 100049,

Highlights

- Sediment resuspension (SR) controls algae by light reduction and TDP removal
- SR improves sediment quality by increasing ORP and inhibiting phosphorus releases
- SR technology is green and economical, can be applied in drinking water reservoirs

^{*}Corresponding author