

## Introduction to Articles on Floating Wetlands

Mason Bowles

Floating wetlands was the topic of one workshop at the 2018 annual meeting of the Society of Wetland Scientists titled “Wetland Science: Integrating Research, Practice, and Policy - An Exchange of Expertise” held in Denver, Colorado from May 29 to June 1. The meeting forum was designed to encourage collaboration and partnerships among wetland researchers, practitioners, managers, and policy-makers, with the overall goal of improving wetland science. Ralph Tiner attended a number of sessions at the meeting and thought that the topic of floating wetlands would be of interest to the wider SWS membership and others. Consequently, he approached me about having my presenters prepare short articles based on their presentations. After contacting them, I learned they were willing to contribute and as a result, this issue of WS&P is largely focused on the inventive design, application and research that is occurring to develop constructed floating wetlands (CFWs). Derived from naturally-occurring ecotypes that form in highly productive aquatic ecosystems, CFWs are being designed, engineered and deployed in coastal and aquatic environments across the globe. They can be used to retrofit and revive degraded urban shorelines and waterways to improve water quality and provide more opportunities for wildlife.

The first article - [Reviving Urban Ecosystems with Constructed Floating Wetland](#) - provides a broad overview of the structure, functions, processes and potential of CFWs to restore near shore wetlands to cities, including attempts to provide habitat for threatened salmon in the Pacific Northwest. The following two articles, [Design Optimization in Floating Treatment Wetlands: An Examination of Key Challenges and Solutions](#) and [Adapting Floating Wetland Design to Advance Performance in Urban Waterfronts](#) provide a deep dive into the challenges of

designing CFWs that can withstand the physical challenges of long-term deployment in challenging urban environments. [BioHaven Floating Islands: Modeling and Their Role in Water Resource Recovery and Potential Problems of Floating Treatment Wetlands for Mitigating Agricultural Contaminants](#) examine the water quality improvement aspects of CFWs. The last two articles provide the perspective and vision of two leading CFW industry leaders in [Structural Floating Wetlands: Achieving Ecosystem Services in Heavily Modified Waterbodies](#) and [Fish Fry Lake: Perspectives from an Inventor on the Application of Created Floating Islands for Water Quality Renovations](#). After reading these articles, people should have a better understanding of constructed floating wetlands, their variability, their purposes, and the challenges for installation, operation, and maintenance. Please note that the October issue of *Wetland Science & Practice* will include another article from our workshop - [Formation and Development of Floating Peat Mats in a European Eutrophic Lake: A Case Study](#). It will describe the conditions that support the formation and development of naturally-occurring floating wetlands. ■

Floating island wetlands comprise the De Groene Tunnel (the "Green Tunnel") in Amsterdam's IJburg neighborhood. IJburg is the biggest project of housing construction in Amsterdam and consists of seven artificial islands. For more information on this project: <http://endretimar.com/wp-content/uploads/2015/05/ijbteaser.pdf>. (Photo courtesy of Mason Bowles)

