

## **Habitat and Community: How the Restoration of Onondaga Lake Has Transformed the Ecological Services, Public Perception, and Future Use of Its Watershed**

**Natalia J. Cagide Elmer** (natalia.cagide-elmer@parsons.com) (Parsons, Syracuse, NY, USA)

Mark Arrigo (mark.arrigo@parsons.com) and Edward Glaza (edward.glaza@parsons.com)  
(Parsons, Syracuse, NY, USA)

John McAuliffe (john.mcauliffe@honeywell.com) (Honeywell, Syracuse, NY, USA)

Craig Milburn (cmilburn@brownandsandford.com) (Brown and Sanford, Syracuse, NY, USA)

**Background/Objectives.** After completing the cleanup of Onondaga Lake, a 4.6-square-mile lake located in Syracuse, New York, the water quality has improved to be the best it has been in over 100 years. As part of the cleanup of the lake and adjacent sites, approximately 90 acres of wetlands, living shorelines, and riparian corridors have been restored, with nearly a million native plants installed. Monitoring efforts have documented over 260 wildlife species in these newly restored habitats, some of which are listed as rare, threatened, endangered, or have not been seen in the area in decades. The result has been that community engagement and positive public perception has blossomed and grown exponentially in recent years. This presentation discusses how this broad habitat restoration portfolio has impacted the community, how an active outreach program has transformed public perception, and what approaches of the restoration work are driving the revitalization of the lake and its surroundings.

**Approach/Activities.** Although restoration work is typically viewed as a minor component of most large-scale sediment remediation projects, it is often the portion of work which is most visible and which receives the greatest scrutiny from the public. By actively engaging the community early in the process in a variety of ways, and by integrating site assets and ecological services into the design to better support the recreational opportunities of the sites, the restoration of Onondaga Lake has changed public perception, grown the demand for public access to the lake, triggered the creation of several miles of connecting trails, provided greater resource opportunities for anglers and the general public, and has driven the lake to become a new recreational hub for all of Central New York State.

One of the approaches which have vastly impacted the overall success of the restoration work around Onondaga Lake, and the public's excitement for its future use, has been the inclusion of a wide variety of habitat structures which attract a greater variety of species of birds, fish, and wildlife to the sites (over 1,000 structures, including porcupine cribs, downed trees, rock piles, tree trunk perches, basking logs, and more). In addition to this, a design approach of creating a mosaic of different conditions and habitat types has allowed to enrich the sites with a high number of native plant species (over 500 species identified through monitoring efforts to date), increasing further the biodiversity throughout the watershed. By rethinking the standard approach to restoration to better enhance the ecological services of these sites, outreach programs with higher community engagement are more easily achieved, increasing public interest and positive publicity, and driving urban planning opportunities in the area.

**Results/Lessons Learned.** This presentation discusses the overall impact that this restoration portfolio has had on the local community and public perception, resulting in significant benefits to the overall remediation program. The projects provide greater ecological services when integrated into the urban grid, provide tools for improving public image while reducing long-term expenses, and create rich and sustainable habitats which become an asset to the local community.