Re-Creation of a Historical Island in the Mississippi River: Restoring Habitat in an Urban Setting

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Background/Objectives. In 2018, the Minneapolis Park and Recreation Board (MPRB) reconstructed Hall's Island, an island that was once present in the Mississippi River in Northeast Minneapolis. The entire island was dredged and deposited on the mainland in the 1960s by the adjacent shoreline property owner to expand their mainland property. The filling resulted in the placement of demolition debris from the island and contaminated fill from other unknown sources along the shoreline. The MPRB purchased the mainland property, which is part of their long-range plan to develop the land along the Mississippi River in the Central Minneapolis Riverfront area as a regional park. The island will be maintained as a natural habitat and park within an urban waterway.

The objectives of the Hall's Island reconstruction were to: improve biodiversity, create a softer and more accessible connection to the river, and provide a migratory flyway stopover for birds in a portion of the Minneapolis urban environment that is dominated by industrial and commercial uses with limited access to natural areas. Hall's Island features several types of native habitats featuring nesting logs and sandy beach areas in the upland zone, as well as sediment cover layers designed for mussels and standing snags for fish in the river. The sediment cover materials were selected not only to enhance the natural habitat, but also to form a cover to mitigate potential human and ecological exposure to residual concentrations of metals and polycyclic aromatic hydrocarbons in the underlying fill.

Approach/Activities. Construction of the island involved excavating historic fill, debris, and sediments from the existing shoreline to carve out the channel between the island and mainland. Contaminated soils and sediments were disposed offsite and clean fill from the site was processed to remove debris and reused in the reconstruction of the island. The island construction occurred during the winter/spring of 2017 and 2018 and vegetation establishment is underway.

Results/Lessons Learned. The presentation will highlight the complexities and challenges of reconstructing an island and developing habitat in the Mississippi River in an urban setting while effectively managing and mitigating legacy contamination.