

Determining the Effectiveness of Habitat Restoration Projects: A Case Study in the Great Lakes

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Background/Objectives. Since 2010, the Great Lakes National Program Office (GLNPO) through the Great Lakes Restoration Initiative (GLRI) has funded over \$100M towards habitat restoration projects within Great Lakes Areas of Concerns (AOCs). Habitat restoration projects may have immediate positive ecological impacts; however, it is uncertain whether the short-term effects seen are the limit of what will occur and if the positive ecological impacts are sustained long term. GLNPO conducted a pilot study that evaluated a habitat restoration project that took place in 2012 to better understand what indices define project success and what lessons can be learned and integrated for future habitat restoration projects. This pilot study evaluated 10 habitat restoration projects within the White Lake AOC that contributed to delisting. Specifically, the project looked at the project goals, on-going maintenance, and ecological health status five years post construction completion. The case study was performed in 2017 in Montague, Michigan with assistance from the U.S. Army Corps of Engineers (USACE) Chicago District.

Approach/Activities. In this case study, all historical documentation, funding information, construction completion documents, as well as monitoring data were compiled to establish a post-construction baseline. A major field effort took place during the spring, summer, and fall of 2017 to evaluate status of fish, upland and submerged vegetation, frogs, birds, and habitat quality. Activities included fyke netting, electroshocking, vegetation surveys, quality habitat index evaluations, and compilation of previous marsh monitoring citizen science surveys.

Results/Lessons Learned. Overall, this pilot study indicated a healthy environment five years post habitat restoration construction, still meeting original project goals. However, site by site, there were impairments and many key takeaways. Key lessons learned from this pilot study include; tips for habitat restoration location selections, metrics to measure success, possible implications when working with private landowners, and more.