

# Best Management Practices to Reduce Environmental Impacts at Golf Courses



## Overview

The New York golf course sector is comprised of almost 900 courses, both public and private. The environmental aspects of golf course management involve use of water resources and discharge of nutrients and chemical pesticides. The New York State College of Agriculture and Life Sciences at Cornell University and the New York State Pollution Prevention Institute (NYSP2I) have developed pollution prevention methodologies, or Best Management Practices (BMPs), to reduce environmental impacts from golf courses.

## Challenge

Implementation of many BMPs at golf course has been low, despite efforts by Cornell and other stakeholders to help courses through development of guidebooks, presentations and technical assistance. A different approach was needed to promote increased adoption of BMPs. NYSP2I and Cornell launched a new sector initiative based on the Environmental Results Program (ERP) model that focuses on 200+ golf courses in Western and Central NY.

ERP is designed to help a business sector within a predetermined region become more sustainable through technical assistance and outreach, where metrics (improvements) are determined through specific statistical models. The value of ERP is predicated on using fewer resources to reach a wider audience, as compared to the traditional business assistance model where assistance providers work with individual facilities to

## Challenge

- Many important Best Management Practices (BMPs) to reduce environmental impacts have not been implemented in the NY golf sector. Understanding the most glaring needs is the first step to helping golf courses.

## Solution

- NYSP2I partnered with Cornell to develop a list of key BMPs that focus on water use, point source pollution, and chemical use. Meeting with 42 different courses in Western and Central NY provided a good baseline understanding of where outreach can be focused. Some funding is available to help courses implement BMPs.

achieve improvements for those facilities only. There are three (3) distinct phases to ERP: 1) Baseline Determination, 2) Outreach & Training, and 3) Post-Intervention Analysis. This project covered Phase 1 work where a more detailed understanding of the golf course sector as related to key BMPs was determined.

### Work Performed

NYSP2I and Cornell finalized a list of 32 BMPs, called indicators, in the areas of moisture management, point source pollution, fertilizer management, and pesticide use. The project team surveyed 42 randomly-selected golf courses to collect data on the adoption rates of the 32 indicators.

### Results

A snapshot of the golf courses in Western and Central NY was obtained, with the following key results:

1. For ten (10) BMP indicators, the adoption rate for all courses surveyed was 30% or lower, and another eight (8) indicators showed adoption rates between 30 and 50%.
2. Trends were observed within the golf sector as related to public vs. private, maintenance budget, and golfer expectation.

Based on these results, Phase 2 outreach efforts will focus on sector-wide programs that can better disseminate BMP strategies to all courses, especially the smaller courses with fewer resources. Webinars, podcasts and on-site technical assistance videos will be made available. Some funding is available to help courses implement BMPs.



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Funding provided by the State of New York.  
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## ERP

