



Best Management Practices for New York State Golf Courses

Site Analysis

Site analysis is the first and most important step in aligning golf course management with research-based BMPs designed to protect water quality. A site analysis describes site maintenance areas, chemical storage and handling practices, equipment cleaning, and other priority areas on the golf course associated with topography and environmental sensitivity. Following this thorough assessment, the feasibility of land use and management BMPs should be considered to ensure reasonable water quality protection.

BMPs can be incorporated into the design for a new course or course renovation. For an existing golf course, the golf course superintendent can undertake a site analysis to identify specific areas of interest to focus the implementation of BMPs. For a new golf course development or a renovation project, the New York State requires that a licensed golf course designer guide the site analysis process to ensure compliance with [relevant regulations](#). Designers and others involved in golf course development are encouraged to work closely with local community groups and regulatory bodies during planning and siting and throughout the development process. For every site, local environmental issues and conditions must be addressed.

The first step in a site analysis is to develop a better understanding of how a golf course fits into the landscape. The site assessment begins with identifying high priority areas and the current potential for water quality impacts. Note that the high priority areas are more often located where equipment is cleaned and fertilizer and pesticides are stored and handled because these areas have the potential for large volume releases.

Identifying Priority Areas

Understanding the golf course landscape is the first step in assessing potential water quality issues. Areas to identify first are the environmentally sensitive areas such as wetlands, surface water bodies and shorelines, steep slopes to surface water, and areas with shallow depth to ground water or that are located in a critical groundwater recharge zone (especially true for Long Island, due to its sandy soils). In addition, identify relevant geological characteristics such as karst topography, which leaves groundwater vulnerable to contamination. Understanding the basic environmental concepts and fate and transport mechanisms is necessary to successfully identify priority areas.

On golf courses, point sources of pollution should be identified as priority areas for water quality protection. Specifically, these point sources can originate from storage and maintenance facilities and as the unintended release of chemicals, such as pesticides, fertilizers, or fuel, during transportation, storage, handling or cleaning of mowers and pesticide application equipment. Containment measures can easily prevent chemicals from becoming point sources of pollution, as described in the Facilities section of the web site.

The goal of the site assessment process is to identify priority areas, beginning with determining the following:

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- the golf course's position relative to its position in the watershed
- drainage basins
- environmentally and ecologically sensitive areas

Watershed Drainage Basins

Drainage basins on the property should be identified on both topographic maps and routing plans. Identifying drainage basins also helps to determine the approximate area of greens, tees, fairways, and roughs in each drainage basin. For more information on watersheds, see the watersheds section of the website.

Environmentally and Ecologically Sensitive Areas

Environmentally sensitive areas are those areas with natural resources susceptible to changes that can alter ecosystem structure or function (such as wetlands), or areas that might be home to an endangered, threatened, rare species, or species of special concern. Information on the presence of endangered species can be obtained from New York's Natural Heritage Program (see <http://www.dec.ny.gov/animals/31181.html>).