As the stewards of golf courses in New York State, superintendents are dedicated to protecting New York’s natural resources.

Best Management Practices for New York State Golf Courses

Golf courses and their supporting industries benefit New York State residents directly and indirectly:

- **Environmental benefits.** Golf courses provide open space, and their well-managed turfgrass protect water and other natural resources.
- **Economic benefits.** The golf industry contributes more than $3 billion and 50,000 jobs annually to the state’s economy. Golf fundraisers also contribute approximately $100 million yearly to charities across the state, funding countless diverse and worthy causes.
- **Recreational and health benefits.** Golf courses provide excellent recreational opportunities for residents. The golf industry contributes $23 billion annually to the state’s economy.

As the stewards of golf courses in NY, superintendents are dedicated to maintaining these facilities in harmony with the natural environment. Therefore, the golf industry has led the effort in establishing Best Management Practices (BMPs) for golf courses in New York State and making the information easily accessible through the Best Management Practices for New York State Golf Courses web site (http://nysgolfbmp.cals.cornell.edu).

The first phase of this effort, led by Cornell University scientists, integrated the latest research on BMPs to develop voluntary BMP guidelines specifically for New York State’s environment and in order to protect and preserve the state’s water resources. The second phase of this effort involves the development of a self-assessment survey tool, accessible through the BMP web site, to help facilities implement BMPs throughout the state. These efforts are helping the golf industry to work in concert with policymakers and regulators in a shared commitment to water quality protection. Golf turf professionals are upholding the best traditions of golf in their environmental stewardship efforts, as defined by golf’s inherent values: honesty, integrity, and fair play (including upholding the rules when no one is watching).

Best Management Practices

- **Assess current surface and groundwater quality.**
- **Conduct water quality assessments using accepted standards.**
- **Use an appropriate laboratory for water quality assessment.**
- **Design and maintain stormwater systems to uniformly apply water to the intended area of management.**
- **Assess and implement stormwater management practices on a facility-by-facility basis.**
- **Assess stormwater system efficiency through periodic manual application of stormwater and BMP performance.**
- **Assess potential point source pollution.**
- **Ensure compliance with all regulatory requirements designed to preserve point source positions.**
- **Manage organic and inorganic waste to minimize potential point source pollution.**
- **Use and manage turfgrass spore and surface waters adapted to native and native alternative grass species.**
- **Use turf and soil native to the geographical region to increase native turfgrass persistence.**
- **Manage the surface application of organic matter to maintain a permeable system that maximizes soil infiltration.**
- **Recognize all organic waste generated on golf course contains nutrients that are potential contaminants.**
- **Determine accurate supplemental nutrient needs based on soil chemical and physical analysis.**
- **Integrate the latest research on BMPs to develop voluntary BMP guidelines specifically for New York State’s environment and in order to protect and preserve the state’s water resources.**
- **Assess fertilizer application efficiency through regular equipment calibration.**
- **Establish appropriate pest thresholds for managed turf areas.**
- **Identify and correct growing environments that exacerbate pest pressure.**
- **Establish appropriate pest thresholds for managed turf areas.**
- **Ensure compliance with all regulatory requirements designed to prevent point source pollution.**
- **Ensure compliance with all regulatory requirements designed to prevent point source pollution.**
- **Adopt or implement as many NY Department of Environmental Conservation pesticide storage guidelines as possible.**
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Project partners and supporters:
- Cornell University-Atlantic Golf Course Superintendents Association
- Central New York Golf Course Superintendents Association
- Cornell Composting Project
- Northeastern Golf Course Superintendents Association
- Northeastern Golf Course Superintendents Association
- Metropolitan GCSA
- Metropolitan PGA
- Mohawk Valley Golf Course Superintendents Association
- New York State Turfgrass Association
- Northeastern Golf Course Superintendents Association
- Turfgrass Environmental Stewardship Fund
- and Western New York Golf Course Superintendents Association
Best Management Practices at Work

**BMPs** are methods or techniques found to be the most effective and practical means of achieving an objective, such as preventing water pollution or reducing pesticide usage. Many BMPs reduce stormwater peaks, reduce pollutants, and improve water quality through infiltration, detention, filtering, as well as use of biological and chemical actions. This guidance provides for using BMPs to prevent or reduce the adverse effects of golf course management on surface and groundwater to insure and enhance public health and environmental quality. Pollution prevention is easier, less expensive, and more effective than addressing problems “downstream.” Essentially, BMPs are a sustainable approach to providing environmental and public benefits to golf and society.

Why are BMPs important to the golf industry?

Golf courses rely on a healthy environment that includes water and wildlife. A significant body of research exists that indicates successful implementation of BMPs virtually eliminates the golf course risk to community and environmental goals. Several studies have shown that implementing BMPs enhances water quality on its journey on and through the golf course property. Additional incentives for New York golf courses to implement BMPs include the following:

- potential for more efficiently collecting resources by identifying management zones
- cost savings associated with applying less fertilizer and pesticide
- improved community relations
- recognition as environmental stewards by golfers and the community at large.

When should you be aware of BMPs?

BMPs provide a science-based approach to protecting water quality from potential risks. Whether managing an existing course, renovating an existing course or constructing a new course, BMPs can be designed, installed and implemented. For example, golf course renovation and design projects can incorporate landscape BMPs such as vegetated swales, properly managed in order to prevent point source release of chemicals that preserves and protects water quality.

How to align golf course management with BMPs

Successful implementation of BMPs begins with understanding a few basic environmental concepts associated with land management and water. Using these concepts, a thorough management decision can be made on how much and how to apply nutrients provides many additional opportunities to apply BMPs that preserves and protects water quality.

BMP implementation assessment

The second phase of the BMP project is a self-assessment survey that will be available through the BMP web site. The survey is an educational tool to assist in identifying areas for potential improvement in their golf course management operations and to encourage the use of the NY BMP matrix by identifying the location of opportunities for further consideration. The survey results will also be used to provide verifiable evidence for NY regulatory agencies that a majority of New York State golf course superintendents are utilizing the BMP information.

Irrigation

- Evapotranspiration
- Rainwater harvesting
- Systems design and performance
- Managing irrigations

Nutrients

- The golf course environment and the golf course management
- Nutrients, and phosphorus

Cultural Practices

- The role of cultural practices in promoting turf density, reducing the need for chemical and fertilizer inputs
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Pests

- The importance of applying integrated pest management as a framework for addressing pest needs
- The use of IPM
- Selecting and evaluating pesticides
- BMPs for using pesticides

The BMP web site bring together key science-based information in one comprehensive resource. This richer source allows golf turf professionals, those in supporting industries, and regulators to make informed decisions regarding the protection of water quality on golf courses. Specifically golf course superintendents can now align their existing practices with BMPs by reviewing specific recommendations and supporting information, backed up by the latest scientific research from the golf industry, regulators, and members of the community can visit the web site to learn more about the benefits of golf courses and the environment that we all share.

Additional useful information

- Glossary
- List of acronyms
- A document version of the BMP web site
- A link to a list of all fact sheets and PDF files
- A guide to identifying various BMPs through thematic categories
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The web site functions independent of platform, making it easy access online to the course or in the office.