



Site Evaluation Module March 2004

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Introduction

The purpose of the Michigan Turfgrass Environmental Stewardship Program is to assist golf property managers in describing and evaluating potential sources of contamination from their operation through a series of self-assessment exercises. Through these exercises, property owners and managers will be able to gauge their level of pollution protection, clearly indicate their level of compliance with the most common laws and regulations that affect turf operations and establish a plan to further protect and enhance the environment. This program is designed as a self-assessment tool and is intended to be a confidential, internal document used to illustrate areas of excellent environmental performance and areas where additional pollution protection measures are necessary. This is a dynamic program that will be continually updated as additional information is needed or as laws change. New modules are currently being developed to address the enhancement of wildlife habitat and the protection of indigenous vegetation and water quality on golf course properties.

This module will examine the natural resources on your property and identify aspects of the turf management operation that may have the potential to impact these resources. An evaluation of the current level of protection for groundwater, surface water and soil will be made by examining the location and condition of a number of items on your property including pesticide, fertilizer and fuel storage areas, mixing and loading areas, equipment washing areas, the septic system, well and compost areas.

Exercise One:

The objective of this exercise is to create a map of the property, locate important features and potential pollution sources, and indicate their proximity to natural resources. An architectural drawing or existing map can be used or you can draw your own map. If drawing your own map, it is not necessary to be highly precise. The intent is to illustrate important features of the operation and their proximity to natural resources. **See example map at the end of the module.**

With the existing map or one you create, indicate the following items on the map.

- Property lines
- Fairways
- Greens
- Tees

- Ponds
- Lakes
- Streams
- Wetlands
- Major stormwater flow patterns - Using arrows indicate the major stormwater flow patterns on the property from parking lots or slopes. Also indicate stormwater flows onto your property from outside sources and indicate where stormwater leaves your property.

- Clubhouse
- Maintenance buildings
- Golf cart storage areas
- Other buildings (outdoor equipment storage areas etc.)

Do you have any floor drains that discharge to the ground?

- no yes

- Fuel Storage Tanks
- Septic fields
- Pesticide storage
- Fertilizer storage
- Equipment wash station
- Grass clipping piles, tree leaf piles
- Compost areas
- Soil piles
- Site dumps
- Wells – Identify drinking water wells, irrigation wells, oil/gas wells, abandoned wells etc.

Do you have any rare, endangered or protected plant or animal species on your property?

- no yes If yes, please list plant or animal species: _____

Are you a member of the Audubon Cooperative Sanctuary System? no yes

Exercise Two:

Please review the items listed below and approximate the area associated with the ones that reside on your property.

	Acres
Total Property Size	_____
Putting Greens and Tee Boxes	_____
Fairways	_____
Roughs	_____
Other Maintained Turf Areas Lawn Areas, Clubhouse, Condos/Housing etc.	_____
Wetlands	_____
Forested Areas	_____
Ponds or Lakes within Property	_____
Other (paved parking areas etc.)	_____

	Lineal Feet (Approximate)
Lineal Feet of Stream	_____
Lineal Feet of River	_____
Lineal Feet of Drainage Ditch	_____
Lineal Feet of Lake Frontage (Lake not enclosed on property)	_____
Number of Wells - Indicate total number (Irrigation, potable water supply, abandoned, oil/gas, other)	_____

Well # / ID	Well Type (drinking/irrigation)	Diameter	Depth	Pumping Rate (average gpm)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Do you withdraw water from a stream or river to irrigate your property? no yes

Do you withdraw water from a lake to irrigate your property? no yes

Exercise Three:

Using the map created by the previous exercise and your knowledge of the site, complete the following table by inserting the most appropriate ranking listed below.

Rankings

1= Within 100 Feet & No Protection

The item is within 100 feet of the listed resource and there is **no protection** in place such as secondary containment, berms, grass buffers or security that would lower the potential for the material to impact the resource.

2= Within 100 Feet With Protection

The item is within 100 feet of the listed resource and there is **some level of protection** such as secondary containment, berms, grass buffer or security that will lower the potential for the material to impact the resource.

3= Over 100 Feet Away & No Protection

The item is at least 100 feet away from the listed resource and there is **no protection** in place such as secondary containment, berms, grass buffers or security that would lower the potential for the material to impact the resource.

4= Over 100 Feet Away With Protection

The item is at least 100 feet away from the listed resource and **protection is in place** such as secondary containment, berms, grass buffers or security that will lower the potential for the material to impact the resource.

	Stream/ Drainage Ditch	Wellhead	Lake/ Pond	Property Line	Wetland
1. Pesticide Storage Area	_____	_____	_____	_____	_____
2. Fertilizer Storage Area	_____	_____	_____	_____	_____
3. Mixing and Loading Area	_____	_____	_____	_____	_____
4. Equipment Washing Area	_____	_____	_____	_____	_____
5. Compost Piles	_____	_____	_____	_____	_____
6. Site Dump	_____	_____	_____	_____	_____
7. Soil Piles	_____	_____	_____	_____	_____
8. Fuel Storage Area	_____	_____	_____	_____	_____
9. Septic System	_____	_____	_____	_____	_____
10. Other Potential Threat	_____	_____	_____	_____	_____

After reviewing this module, please list the areas you identified as having the greatest potential to impact the environment.

1. _____

2. _____

3. _____