



IPM
Planning Guide

instructions



Management
Zone Inventory
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INSTRUCTIONS

Management Zone Inventory

What is the Management Zone Inventory?

Management zones are geographic areas of the golf course that have common management features. For example, greens frequently are similar in construction and management requirements and can be grouped in an overall category called “greens.” Similar zones can be constructed for fairways, tees, roughs and special management areas, such as buffers around water features.

What is the Management Zone Inventory used for?

- To help organize management plans into logical groups with common management goals.
- To identify areas of high risk of damage by pests.
- To aid in reduction of pesticide usage to areas of high risk or pest impact.
- To streamline management programs and recordkeeping.
- To identify sensitive areas where nutrient and pest management may require special care - for example, fertilizing near water features.
- To enhance communication between superintendents and golfers.

Estimated time involved: 1-2 hours

Materials needed:

Form: Management Zone Inventory Form

References:

- Optional: Soil survey map (<http://websoilsurvey.nrcs.usda.gov/app/>)
- Optional: As-built map, aerial photograph, or Google Earth aerial images that can be used for mapping management zones

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1. **Prepare the form.** Open the Management Zone Inventory. Click on “save as” in the “File” menu, choose an appropriate location on your computer to save the file (the authors suggest that you create an “IPM Plan” folder for all of your files) and name the file appropriately.

For file naming, the authors suggest the current date followed by the word “management zone” (example: 2010_0513_management_zone).

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If you are entering your information by hand, open the PDF version of the form and save it using the instructions above. Then print it out to begin work on it.

- 2. Identify management zones.** The basic management zones are greens, greens surrounds, tees, fairways and roughs. Additional zones should be added as needed to represent trees, landscape, streams, lakes, buffer zones and any other area that is handled with specific management needs.
- 3. Identify management subzones.** The subzones are the smallest management areas that require special management practices. For example, there are frequently several soil types running through a golf course or high-traffic areas where additional management practices are needed. If different fertility or cultivation is needed, separate subzones should be used.

For example, fairways 4 and 6 may require additional aeration. These areas should be designated as a subzone, such as F04 and F06. Green 5 may need to have fans installed between the months of June and September. This subzone might be designated G05.

4. Identify soil type subzones (optional):

- Develop soil subzone maps by using self-generated soil survey data from soil testing, or experience, or by using data available from Natural Resources Conservation Service (NRCS) soil surveys (<http://websoilsurvey.nrcs.usda.gov/app/>). If your resources and/or budget allow, more detailed information can be provided through a site visit and report from the NRCS or through various web mapping service providers.
 - Try to be as simple and logical as possible using standard golf course references such as greens, aprons, tees and fairways. Combine fairways, greens and/or tees that have similar soil conditions and therefore similar management requirements into the same subzone.
 - For example, all USGA recommended greens of similar age are an example of a soil type subzone that could be labeled G01-sand, while all pushup greens could be labeled G01-pushup. The sand-based greens would be managed differently than the pushup greens in terms of fertility, irrigation and other cultural practices. All fairway and rough areas characterized by heavy clay could be labeled F01/R01-clay, and would be managed differently than other subzones.
 - Use the “description” area on the Management Zone Inventory Form to record information on the areas characterized by each subzone (for example, “poorly drained, heavy clay soils on fairways 2 and 7 and roughs 3 and 6”). Attach maps, when available, to identify as precisely as possible the areas characterized by each subzone.
- 5. Identify pest subzones.** In some cases, there are areas that are particularly conducive to disease, weed or insect invasion and damage. Identifying these areas may result in reduced pesticide inputs by accomplishing the goal of pest control without treating the entire zone.

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For example, green 5 may be in a poor location that results in heavy pressure from pythium during the summer months. Consider separating out green 5 for increased pythium management rather than treating all greens more aggressively for pythium. A separate management program would be developed for green 5 with the subzone identified as G05.

The next step

Complete the Pest Worksheet.