

Drought and Nutrient Management Plan Worksheet

Enclosed in this packet are a series of worksheets that, when completed, constitute definitive drought emergency and nutrient management plans. Our surveys and conversations with superintendents indicated many did not have documented plans due to lack of time commitment to create, perceived lack of knowledge to develop, and the overall lack of value. Our goal with these worksheets is to remove the barriers currently limiting adoption of best practices that require documentation.

Answering all the questions in these worksheets (most of which are yes/no) will generate information necessary to produce drought or nutrient management plans. To encourage adoption, sections are broken out into pars, birdies and eagles. Pars are components readily employed, while eagles represent the best water and nutrient management practices.



Best practices that foster sustainability also help with an operation to:

- 1.) Stay one step ahead of regulations – Documenting use of sensitive resources demonstrates environmental stewardship. A proactive approach from golf courses helps to ensure that not only compliance is achieved but you are doing more to help maintain your course and protect the environment. Documentation helps to show your commitment when water use becomes scrutinized and demonstrates that you are aware of what's required to maintain golf course functionality.
- 2.) Communicate needs to club ownership – Effectively communicating the level of resource requirements to ownership is a vital skill. Verbal communication is important, but documentation displays another level of preparedness that ownership typically responds favorably to.
- 3.) Learn – These worksheets help complete the components of a proper nutrient and drought emergency plan. Completing the documentation includes recognizing a courses adherence to the basic concepts (pars) and also the more progressive (eagles) practices one should aspire to.

Visit our video tutorial, which explains how to find required information:

www.youtube.com/watch?v=IKFc_96UZ7Q&t=1s

For additional information visit: www.rit.edu/nysp2i/golf

General Info for both Drought and Nutrient Plan:

City: _____

County: _____

State: _____

Zipcode: _____

Do you know what soil types are present on the course? Yes No

– If so, what are they:

– Do you have a map of soils on the property? Yes No

– Web soil survey tutorial: www.youtube.com/watch?v=IKFc_96UZ7Q&t=1s

What is your Total Property acreage? _____

 PAR	Greens	Fairways	Tees	Rough
Turfgrass Species				
Acreage of surface				
% of surface that is fertilized				
% of surface that is irrigated				

Nutrient Management Worksheet:

 Do you have annual fertilizer targets for Greens/Tees/Fairways, N-P-K? Yes No

- If so, what are they? _____
- If so, do targets and actuals differ some years? Yes No
- If Yes, why? _____

 What are mowing frequencies for:

- Greens? _____ Are clippings removed? Yes No
- Fairways? _____ Are clippings removed? Yes No
- Tees? _____ Are clippings removed? Yes No
- Rough? _____


Are fertilizer rates and frequencies based on:

 Soil nutrient levels? Yes No
If so, how often are soil samples taken? _____


 Weather forecasts? Yes No


 Soil type differences? Yes No

 Traffic levels? Yes No


 Shade and light? Yes No

 Measurements of turf growth rate? Yes No


 Routine monitoring of organic matter? Yes No


 What Fertilizer products are used (Name, N-P-K, % slow and % quick release)?

If you have water bodies on the course, do you:

 Maintain at least a 25ft application buffer zone? Yes No

 Reduce fertilizer rates on steep slopes near water bodies? Yes No

 Avoid fertilizing near these areas if rain is likely? Yes No

 Maintain longer vegetation around the water to prevent runoff? Yes No

Drought Management Plan:



What is your irrigation source?



Do you know how much your water costs? Yes No

- If so, how much? _____



Do you know how much it costs to pump your water (electrical or fuel costs)? Yes No

- If so, how much? _____



Normal Irrigation system use?

- Spring - days per wk: _____ hours per day: _____
- Summer - days per wk: _____ hours per day: _____
- Fall - days per wk: _____ hours per day: _____

Do you employ the following water saving practices:



Visually assess every irrigation head during start up? Yes No



Scheduled routine maintenance of irrigation heads? Yes No



Allow some moisture stress before irrigating? Yes No



Use of wetting agents to uniformly retain soil moisture? Yes No



Use soil moisture meter readings to plan irrigation? Yes No



Complete an irrigation audit in the last 3 years? Yes No



Utilize “deep and infrequent” irrigation cycles? Yes No



Utilize Evapotranspiration data to plan irrigation? Yes No



If a 40% reduction in total water use were mandated due to drought, how much would water use be reduced on each surface:

- Greens - _____ %
- Fairways - _____ %
- Trees - _____ %
- Rough - _____ %



Would mowing heights be raised under drought measures? Yes No