



*Applications applied to turf next to water should maintain a "no-go" buffer zone to protect water resources and wildlife.*



*Landscapes designed with swales or mounding prevents direct runoff into lakes and estuaries thereby allowing the turf to filter the water and reduce erosion.*

## Manage the Turf, **BUT** Protect the Water! Abide by The “Ring of Protection”

Doug Caldwell  
Collier County Commercial Horticulture

A new, two-year in the making, 60-page manual, ‘Florida Green Industries Best Management Practices for Protection of Water Resources in Florida’, is the result of a multi-agency, University of Florida and green industry collaboration. Fortunately, the information is more succinct than the title. It serves as a guide for landscaping approaches that both conserve and protect water. Chapter subjects include: Design and Installation of Landscapes; Irrigation Best Management Practices; Mulching, Mowing and Pruning; and Fertilization Practices for Turf and Trees and Shrubs, etc. Copies are available through your local extension office or on-line: [http://www.dep.state.fl.us/water/nonpoint/docs/nonpoint/BMP\\_Book\\_final.pdf](http://www.dep.state.fl.us/water/nonpoint/docs/nonpoint/BMP_Book_final.pdf)

With all of the water hazards, applicators must be very careful applying fertilizers and pesticides around lakes, estuaries and all of the various waterways we have in Florida. Guidelines from the booklet include maintaining the buffer zone or ‘ring of responsibility’ between where the granules land and the water’s edge. This applies to turf fertilizer and pesticide applications. It means keeping a “no-go” zone of ten feet if no deflector shield (not Star Wars stuff, just an adjustable baffle that blocks the fertilizer granules from going out of the right side of the spreader) is used. If the fertilizer applicator uses a deflector shield, delivery is easier to target, but there should still be a “no-go” buffer zone of three feet to protect water ways.

Common sense dictates that it is wasteful and undesirable for lawn fertilizers and chemicals to land “off target” into our ponds and lakes. Whereas we desire to maintain healthy turf in the landscape, off target or misdirected lawn chemicals grow algae in lakes. Too much nitrogen and phosphorous can cause algal blooms that are detrimental to the aquatic wildlife ecosystem. Misdirected insecticides, such as some of the chinch bug products can cause fish kills at less than 5 ppb of the active ingredient, that’s parts per billion. Just for comparison, one ppm equals one ounce of salt in about 31 tons of potato chips; one part per billion equals one second in 32 years! Not much! It seems strange, but fish and other aquatic life are sensitive to insecticides as well as insects!

To fight that tendency (intentional or not) to fertilize to the water’s edge, landscape architects and homeowners’ associations could use alternative bog or marsh plants rather than the “turf it to the water” (and usually with a downhill slope into the water) concept that is so common-place. Even a swale or mound to catch stormwater run-off and redirect it would be a big step.

To minimize run-off impact potential, one should carefully analyze how many pounds of fertilizer per 1000 square feet are applied and how many applications are needed to maintain the turf. The goal is to reduce the fertilizer and pesticide load on the environment, but still maintain a reasonable quality of turf. Study the bag to determine the type of fertilizer ingredients being used. The Institute of Food and Agricultural Services recommends blends that contain some slow release nitrogen and in the near future, zero to four percent phosphorous - see publications: <http://edis.ifas.ufl.edu/SS318> or <http://edis.ifas.ufl.edu/LH014>

*Doug Caldwell is a Certified Arborist and the commercial horticulture extension agent with the University of Florida Collier County Extension Service. The Cooperative Extension Service is an off-campus branch of the University of Florida, Institute of the Food and Agricultural Sciences and a department of the Public Services Division of Collier County government. E-mail [dldcaldwell@mail.ifas.ufl.edu](mailto:dldcaldwell@mail.ifas.ufl.edu); call 353-4244. Extension programs are open to all persons without regard to race, color, creed, sex, handicap or national origin.*