

Water quality affects virtually every golf course

ing all sides of a water body would provide the best nutrient filter, this is usually not an acceptable situation when an area comes into play. Maintaining a higher height of cut turf buffer strip or grassed swale for those areas in play is a reasonable compromise that can also help minimize maintenance requirements. For the out-of-play areas of lakes or ponds, border shrubs and emergent plants should be established and maintained.

Ideally, "no-spray" zones approximately 50-foot wide should be enforced

around all surface water bodies. However, adhering to this ideal is not always feasible on a golf course. When fertilizer applications must be made immediately adjacent to a water body, the use of drop spreaders is recommended.

Also, only slow release nitrogen sources and no more than 0.5 lbs. of actual nitrogen per 1,000 square feet should be applied at a time in sensitive areas. If an unacceptable level of pest activity develops in a "no spray" zone, naturally the first route to pursue would

be the use of biological control agents. If a pesticide must be used in these areas, it should only be applied as a spot treatment.

Also, the chemical characteristics of the pesticide options should be carefully considered in selection of the material to use in these locations.

The Jan/Feb, 1995 issue of the *Green Section Record* contains a listing of commonly used pesticides and their characteristics.

Water management by design

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OLD MARSH GOLF CLUB

Old Marsh Golf Club was built on a unique 460 acres of land. Architect Pete Dye routed many of the holes around protected wetlands and his design for the irrigation and drainage systems were very well thought out.

The irrigation system was installed with many different sized heads and half circles to ensure no irrigation water would be thrown into the wetlands or created marshes.

The drainage system on the course has approximately 30 catch basins per hole. All the excessive runoff water from rain or irrigation is collected by these basins and run through a series of pipes to containment lakes. From these containment lakes, the water is pumped to the main irrigation lake for reuse.

One design feature that each hole has is that all the perimeters of the fairways and roughs are built higher than the middle of the fairways to ensure no fertilizer or pesticides contaminate the wetlands. We are very selective on our use of products, and try to be environmentally conscious.



Pete Dye manages water at Old Marsh with unique design features.
Photo courtesy USGA Green Section.