

GOLF & ATHLETIC TURF

Trends toward environmental considerations

From design to management, Ballantrae Golf and Yacht Club integrates philosophies that keep the surrounding grass, water and air healthy.

by Ed Etchells
and Sharon B. Rinehimer

■ When Golden Bear International was initially contacted in 1990 to design the Ballantrae course along the St. Lucie (Fla.) River, exhaustive studies were conducted. Great care was also taken during construction to preserve and set aside the environmentally-sensitive areas on 402 acres.

Forty acres were set aside as a wetland preserve which drains into the river. Twenty-two acres were preserved as a fenced-in protected hammock of native vegetation for such wildlife as bobcats, gophers and sandhill cranes.

Ballantrae worked with the South Florida Water Management District and the St. Lucie Sewer Treatment District to conserve water by planning effluent water irrigation. A holding pond was designed and built specifically to retain and re-irrigate the effluent runoff back onto the course.

An advanced Rainbird Maxi computerized irrigation system and weather station reads the weather conditions, determines the amount of water needed daily, thus reducing erosion throughout the course.

Thirty-year veteran superintendent David Holler spent considerable time with the project director to design the maintenance



Cleaning systems like the one used at Ballantrae help golf courses meet environmental standards.

equipment wash-down, chemical storage facility, and mix-and-load areas.

An impervious, permanent concrete wash pad contains all the contaminated water from the washing operations, and a separate one is for mix-and-load spills. Golf course maintenance wash water typically contains such pollutants as oil, grease, related hydrocarbons, and trace amounts of herbicides, insecticides, fungicides and fertilizers.

To maintain Ballantrae's high profile as a new premier course, Holler purchased and had installed an RGF Ultrasorb closed-loop wash water recycling system. It has a grass filtration and drying device, hydrocarbon separation, proprietary H.I.P. filter media, storage/oxidation, and automatic delivery of all wash water for total re-use. Ballantrae's maintenance team always washes turf equipment, so savings in water use is substantial.

In an average month, the course uses about 35,000 to 40,000 gallons of water

just for one wash water maintenance operation alone. The RGF system can conserve 420,000 to 480,000 gallons annually.

Holler's primary concern was to eliminate the groundwater contamination experienced by other courses in their maintenance operations—yet reduce budget expenditures.

"The savings (calculated in months time) more than adequately paid for the RGF Ultrasorb recycling system," Holler says. "I feel confident that we are doing everything possible to conserve water and effectively protect the natural resources that abound our beautiful course."

By eliminating potential contaminants that normally get washed onto the grass or dirt area, the course's liability for EPA or state fines and/or assessments are effectively reduced or negated. Special care must also be given to the chemical storage and mix-and-load activities to assure that all OSHA, EPA and state regulations are followed, and to protect the environment

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and employees from possible spills or accidents.

Holler wanted recycling equipment, wash down area and mix-and-load to be adjacent to each other on the impervious pad for easy, efficient operations.

Plan for safety—Environmental issues do not go away. Here are our recommendations to golf course designers, contractors and superintendents:

- Develop a plan to strategically incorporate environmentally sensitive areas such as wildlife preserves, indigenous tree hammocks and wetlands.

- Conserve water; use an effluent water source for irrigation and a recycling system for maintenance washing.

- Follow through with responsible construction activities to minimize damage to protected plants and animals.

- Set up environmentally sound management practices for course maintenance.

- Consider implementing the new EPA

storm water run-off plan.

If a course is properly designed and managed, the potential hazards to the environment can be reduced.

It pays to play it safe. Like doctors practice defensive medicine, golf courses should practice defensive environmental programs. The alternatives can lead to regulatory fines, decreased property values, expensive clean-up, adverse media attention, and law suits.

Ballantrae Golf and Yacht Club is just one of the many courses coming to the forefront of being a premier, "environmentally in-synch course," and with all of the recent media and television coverage, it will not be long before most or all golf courses in the U.S. adhere as well.

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Grote, because the members at this Milford, Ohio course "love their golf."

The temperature can be as low as 35, says Grote, and he'll see about 30 members on the course.

Grote says the extended play causes a serious *Poa annua* problem in greens.

"The bent can't recuperate when it's dormant," says Grote. "The poa wakes up



Grote: Experiments to stop *Poa annua*.

first and has a good foothold by the time the bent starts to grow."

Grote's looking for a solution.

"As of December 20th, we will keep one green closed and use a temporary one in its place," to

see how the unused green fares during the winter.

As a possible cure for the poa problem, in August Grote's crews applied a mixture of Anderson's fertilizer and Dimension herbicide to one-half of three greens. They'll repeat the treatment in February.

To help the greens cope with foot traffic, Grote has the cups rotated once a week if the turf's not frozen.

"In winter, (the course is) compared to the public courses. In the summer, we're compared to the other private clubs," Grote says, which sounds like a testament to his skill as a greenskeeper.

But he thinks it's because somebody up there likes him.

—Terry McIver

Winter golf: Turf's last gasp before snow falls

Dormant bentgrass is helpless against heavy traffic. Keep an eye on temperature swings, apply extra topdressing, and pray for snow.

■ A recent study showed golf to be one of the favorite winter sports in the eastern and midwestern U.S...

(Just kidding.)

But winter golf is one thing some courses put up with due to member demand or as a way to bring in some extra revenue. Most fans of outdoor sports are content to wait until spring. But not golfers.

"You get a nice day, you want to go hit the ball around," says Joe Alonzi, superintendent at Westchester Country Club, Rye, N.Y.

Westchester has multiple courses, so Alonzi can keep one 18 closed; but on the other links, he's faced with the challenge of protecting the greens from serious damage.

One challenge of winter golf, says Alonzi, is being able to guess what the weather will do on any given day. In the early days of winter, the temperature will fluctuate from a morning freeze to an afternoon thaw.

To help prepare for winter golf, Alonzi applies an extra layer of topdressing just before winter, or sometime during.

"Spring maintenance is more affected," says Alonzi. "The greens might need an extra aeration, fertilization or pesticide spraying, as a result."

"There isn't much you can do in the winter to maintain the course," he says, "beyond keeping it closed on the bad days."

Poa problem—Winter golf has been a tradition at Terrace Park Country Club for many years, says Rick



Winter golf is put to rest once the snow flies.