



WASH AWAY YOUR CARES

A group solution to the dilemma with wash pads.

by **BRAD G. KOCHER, CGCS**

IN THE planning stages of our golf course maintenance facility for the Pinehurst #8 course, we determined that we needed a well-designed, functional wash area for our equipment. The wash area needed to achieve several objectives:

1. Screen out grass clippings.
2. Provide easy cleanup of grass clippings.
3. Prevent rinse water from traveling into any surface water.
4. Process shop rinse water.

Using a common-sense approach to meet these objectives, we designed a wash area and rinse system that retains all water on site and uses a series of



A unique wash area and rinse system was implemented at Pinehurst Course #8 to retain all water on-site. The system uses a series of natural filters to cleanse wash-down water before it is discharged onto the turfgrass.

natural filters to cleanse our wash-down water. The original concept involved the collective thinking of our golf course superintendent on #8, Jeff Hill, CGCS, our assistant director of golf and grounds, Bob Farren, CGCS, and our shop manager, Richard Yow.

As shown in Figure 1, we essentially have two systems that culminate in a standard below-ground septic tank. This water is then pumped onto an area generally acknowledged as the greatest filter on golf courses — turfgrass. Here, the plant utilizes the water, possible contaminants go through a natural microbial degradation process in the thatch, and nutrients are taken up by the turfgrass as food.

A concrete pad 24' x 30' in size was designed with a slope of approximately 2 percent, allowing all grass clippings to flow into a 5'4"-wide concrete channel. At the end of the channel or trough is a stainless steel screen of 18-gauge mesh with 40 percent opening.

The channel was designed to be wide enough to accommodate the bucket of our Bobcat loader in order to facilitate clipping removal. Typically, our clean-out occurs twice a week in the busier months of the year. The clippings are then stockpiled in a nearby area and later mixed with sand and topdressed onto turf, thereby returning nutrients to the turfgrass.

The water that passes through the screens is held in a 1,000-gallon below-

ground tank. Adjacent to the tank is a pump, which is activated by a float. This water is then pumped onto our nearby practice range through two irrigation heads with nozzles that have 3/16" diameter orifices. The pump is activated daily during our busy washing times.

Following the success in dealing with equipment washing and clipping removal, we then dealt with the rinse water that comes off the shop floor. Since the potential for contaminants in this area was higher, we decided that a more sophisticated filter system would be necessary.

Again, we brainstormed that an adaptation of a below-ground septic tank would fulfill our needs. We created three separate layers of materials the rinse water would pass through before draining downhill (which was most convenient) to the septic tank that holds clipping rinse water. The three layers consisted of small gravel, sand, and granulated charcoal. As the rinse water flows into the tank, it passes through eight inches of charcoal (1/16" x 3/32" particle size). The water then passes through 20 inches of normal bunker sand and then 20 inches of 1/4" x 3/8" size gravel (see Figure 2).

Periodically, the charcoal and sand are replaced and the old material is topdressed onto turf areas. The charcoal material is replaced once a year.

The following is a list of materials used to fabricate this system and costs:

1,000-gallon septic tank (2)	\$ 300
Charcoal — 100 lbs.	58
Sand and stone	30
Piping	125
Pump and controls	875
Pump house	800
Guard rail	200
Cement (pad and drainage flume)	5,000

Would we do some things differently? Yes. We keep refining the system to make adjustments and improvements. We added a second screen, reduced the particle size of the charcoal in order to be able to topdress onto turf areas more efficiently, and plan to install a better filter on our pump intake.

By working together to come up with a common-sense approach to the challenge of designing an effective wash pad, we've devised a system that can be modified to improve effectiveness at a reasonable cost. We retain all water and rinse by-products on site and use nature's products as the ultimate recycler.

BRAD G. KOCHER is a certified golf course superintendent and has been with Club Corporation International for the past 22 years. He served as golf course superintendent at Inverray Country Club in Ft. Lauderdale, Florida, and is currently director of golf course maintenance at Pinehurst Resort and Country Club in the Village of Pinehurst, North Carolina.

