

to a depth of about one foot.

When shaping and edging are finished, the bunker is ready to be filled with new, clean sand. We use sand that meets USGA particle size guidelines (0.25 to 1 millimeter). The playability of sand is determined, to a large extent, by its particle size. Sand that is on average larger or smaller than the USGA guidelines will have a lower quality of playability and is harder to maintain.

We haul the new, clean sand to the bunker using the same one ton, dual wheel dump trucks we hauled the old sand away with. Pieces of plywood are laid on the edge of the bunker so the trucks can back into the bunker and dump the sand without crushing the lip. This minimizes hand labor and saves time. The sand is spread out and leveled in the bunker using a power sand rake with a metal pushing blade attached to the front. Little hand shoveling is needed. Cushmans are used to dump sand on the green side of the bunker, where the trucks cannot go. We wet the sand before we put it in the bunker because wet sand is easier to control. Dry sand tends to pour like sugar, making it hard to handle. We continue to fill the bunker with sand until it reaches a depth of nine inches.

The sand in the newly renovated bunker is soft and loose for about 90 to 120 days. Frequent raking with a power rake can reduce this settling period. I have read that using a gunite machine eliminates this settling period. This machine blows sand under high pressure through a hose up to several hundred feet into the bunker. The sand is compacted by the force of impact as it enters the bunker and eliminates the soft sand problem. This method may be worth trying.

We renovate bunkers one at a time and a six man crew can usually complete renovation of an average sized bunker in one working day.

The March/April 1980 issue of the USGA Green Section Record has an article on installing sand in bunkers using the gunite machine and the November/December 1983 issue contains an excellent article on selecting and handling sand. They would be well worth reviewing if you plan on doing any sand bunker renovation this year.

COOPERATORS REQUESTED FOR GYPSY MOTH TRAPPING

We've heard from Julie Nara and learned that the Wisconsin Department of Agriculture, Trade and Consumer Protection is seeking cooperators to conduct local trapping for gypsy moths again this year. Julie, a Plant Industry Specialist in the Bureau of Plant Industry, Agricultural Resource Management Division of the Department, has appreciated the help and cooperation of Wisconsin's Golf Course Managers in recent years and would like to see similar or even increased participation in this program for 1986.

The gypsy moth, which was introduced and accidentally released in the state of Massachusetts in 1869, has now attained outbreak populations in the northeastern United States. In Wisconsin, isolated infestations in Oconomowoc, Monona, Hubertus and a possible infestation in Sheboygan were treated in 1985. No moths were caught in these treated areas during 1985, and while 13 gypsy moths were captured last year, no new infestations were identified in the state. In neighboring states, moths have been caught near the Wisconsin border in Minnesota, Michigan and Illinois.

While the gypsy moth situation in Wisconsin has been stable during the last few years, there is a possibility of an upswing in the future, and continued vigilance is necessary.

Gypsy moth trapping requires adherence to the following timetable in the southern part of the state.

- July 14 — All traps should be in place.
- July 20 — First moths expect to emerge.
- Last week of July — First check of traps. If possible, check at weekly intervals afterwards.
- End of August — Remove and check traps again.
- September — Send us a map or sketch with trap locations indicated and trapping results.

Gypsy moth trap density is 1 — 4 traps per square mile. Location of traps, placement date, dates and results of checks should be recorded.

If you are a golf course superintendent interested in cooperating, please fill out the following form and send to: Wisconsin Department of Agriculture, Trade and Consumer Protection, Agricultural Resource Management Division, P.O. Box 7883, 4702 University Avenue, Madison, WI 53707.

1986 Gypsy Moth Trapping Cooperator

Name: _____

Address: _____

Telephone number: _____

I would like to cooperate in gypsy moth trapping in:

_____ County _____ Township,

Section _____

The trapping area measures approximately _____ square miles and is: residential, parkland, golf course, nursery, cemetery, other _____

The number of traps I can take care of is: _____