

- a) green bunkers average 4.9, range 3-7
- b) fairway bunkers average 4.75, range 3-7
- 4) For normal raking how many hours per day are spent on bunkers?
Average 5.8, Range 3-14
- 5) What is the average \$/hr. cost of personal raking traps?
Average \$4.06, Range \$3.35-\$5.25
- 6) How many times per season are the traps edged?
Average 3.7, Range 1-8
- 7) What method is used in edging and how many times for the particular method?
 - a) knife type mechanical edger, Average 1.8, Range 1-3
 - b) nylon string edger, Average 2.2, Range 0-6.5
 - c) others
- 8) Last season approximately how many times was sand shoved or pushed on traps?
Average 8.5, Range 3-15
- 9) How many hours does it take to edge the traps?
Average 125.3 hrs., Range 6-350 hrs., Average per trap 2.5 hr.
- 10) How many hours does it take to move sand up on the edge of the bunker?
Average 22.6, Range 3.5-41 hrs.
- 11) How frequent is sand added to bunkers?
Range as needed — once per year
- 12) What was the per ton cost of bunker sand F.O.B. at your club in 1985?
Average \$7.87, Range \$5.10-\$12.00/ton
- 13) What was the total cost of sand added to bunkers for 1985 season?
Average \$973.75, Range \$0 — \$3,000
- 14) How many mechanized machines are used on a regular basis for raking traps?
Average 1.5, Range 0-3
- 15) What manufacturer produces the machine?
Toro (16), Smithco (5)
- 16) How many years on the average is the mechanical rake kept before being traded?
Average 9.75 yrs., Range 3-15
- 17) How many hand trap rakes do you have on the course used

by golfers?

Average per trap 2.9

- 18) What term best describes the sand in your bunkers?
 - a) hard 6
 - b) soft 7
 - c) both 1

structed?
2,140 sq. ft.

- 4) What was the approximate construction cost per trap?
*average of 5 responding \$1.23/sq. ft. (range \$1.00 — \$1.48/sq. ft.)
*results of a sixth club was omitted because it varied widely from others responding

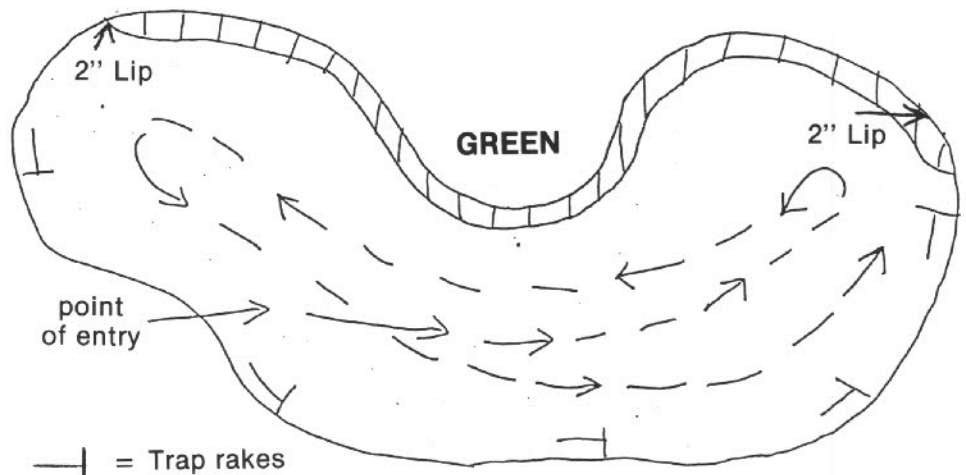
BUNKER CONSTRUCTION

- 1) In the past 5 yrs. have you added or filled in any traps on your course?
Added: 66 filled in: 21 (14 clubs)
- 2) In the next 5 yrs. do you project any bunker renovation?
Yes 13, No 1
- 3) How many square feet was the average trap that was con-

Construction expense variables:

- 1) Labor
- 2) On sight soil moving per yd.
- 3) Off sight soil moving per yd.
- 4) Drainage per ft.
- 5) Fiber blanket per yd.
- 6) Grading
- 7) Sand per cubic yard
- 8) Sod per sq. yd.
- 9) Rentals

SAND TRAP RAKING PROCEDURES



- 1. Fill gas and check oil daily; do not overfill
 - a. maintain full level on dipstick
 - b. blow out clutch daily on SMITHCO
- 2. Begin by handraking around the perimeter of the trap (green traps only). Clean up all sand that is out of the trap. Where sand is sparse in the trap, pull sand from an area with too much sand.
- 3. Begin machine raking in the center of the trap. Proceed in an outward circular direction.
- 4. The objective of raking is to provide a smooth and even surface for the membership. Do not leave a trap until that goal has been reached. NO GROOVES, ROCKS, GRASS,

- etc.
- 5. Leave no sand outside of the trap; i.e., clean up sand which the machine drags out.
- 6. All rakes should be placed **inside** the trap in a manner illustrated below.
- 7. Do not go in reverse with the rakes down because this gives Peter G. great heart-ache.
- 8. On Thursdays check to make certain a two-inch lip is maintained on green side traps. This does not mean the lip is to be erased on the other days, however.
- 9. Shut off motor if people (golfers) are on greens.
- 10. No one is finished until everyone is finished.