

## **GOLF SCHOLARSHIP**

The Maryland State Golf Association presented a \$500 scholarship to Glenn S. Shields of Rockville, Maryland. Glenn's father, Bob Shields of Woodmont C.C. was present to see the award presented by Irving E. Cantor, vice president of the golf association. Glenn is a graduate of Richard Montgomery High School and attended Montgomery College. He will enter the University of Maryland this fall. Glenn was also presented a \$250 scholarship by a former greens committee chairman at Woodmont C.C.

## **THE IMPORTANCE OF WATER MANAGEMENT**

### **PART I**

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Water is LIFE! Death comes when there is a scarcity or an excess. Floods killed 500,000 Pakistanis in minutes; Pakistani parents repaired the population loss in just 40 days. Deserts speak eloquently of the loss of life when water ran out. Old prospectors managed water very carefully because it was Life! We recall the Rime of the Ancient Mariner - "Water, water everywhere - nor any drop to drink." We are using water at a prodigious rate. By 1980 we can expect water usage to equal replenishment by rainfall, snow melt, glacier melt, dew and all other forms of water return. Where do we go from here? Overpopulation is not likely to be blamed for loss of life but lack of water could be the real cause only because there are too many people who are using and wasting too much water.

In southeast Asia there is a village where the only source of drinking water is 9 miles away. Only women carry water and one wife can make one trip a day. This forces the man to take more wives who can then supply the family with sufficient water. Water runs downhill and finds its own level. A hose filled with water is a simple device for leveling and staking an area for zero grade. As water moves it erodes and carries impurities with it. It is very important to reduce erosion to a minimum so that our sources of water may not be unduly contaminated.

Water is a universal solvent. It dissolves rocks and minerals. It carries plant nutrients in solution. It may form 90% of the weight of green plants. Water is an essential constituent of every living cell.

Water freezes. When it freezes it expands. Pressures thus created burst many structures. Rocks are split asunder, one of the soil-forming factors.

Water evaporates and, in so doing, absorbs heat and cools the atmosphere. Evapotranspiration is the device by which green plants cool and create a more pleasant atmosphere.

Water boils and passes into the air as steam or water vapor, one of the many forms of water. Water is a chemical reagent entering into and becoming a part of infinite number of chemical reactions.

Pure water exists only in the laboratory. Good drinking water may be "pure" in the medical or pathological sense but the "goodness" of drinking water is created by dissolved minerals and impurities. "Pure water" is flat and uninteresting.

Water has tensile strength similar to some kinds of steel. It would take a pull (force) of 210,000 pounds to rupture a column of water one inch square.

Desalination (de-salting) of brackish water is gaining ground. Cost is now the big drawback. In Texas during a drought water sold for 50¢ a gallon. In New York not long ago you got water with your meal only if you requested it.

On Long Island there are some 7,000 Recharge Basins  $\frac{1}{2}$  to  $\frac{3}{4}$  acre in size, 12 - 15 feet deep with porous bottoms that collect surface water from highways, roofs, shopping centers. The water soaks into the soil, recharging the ground water and keeping out the salt water from the Sound.

In life we have a closed cycle of water, oxygen and carbon dioxide with hydrogen atoms going back and forth where needed, all driven by sunlight, the ultimate source of power.

In South Africa they are "milking" the clouds to obtain water. Huge nylon nets are suspended on tops of mountains to condense the moisture in clouds that pass over but never drop any rain.

Microorganisms need water. There are times when soil pores become clogged with the bodies of living and dead microbes. This is true especially when water is present continuously in excess.

Soils become more friable when they enjoy cycles of wetting and drying. Soils that are continuously wet become "sour" and unproductive. Only the anaerobic organisms persist - the ones that create substances toxic to grass.