

Please send resume to:

Kings Country Club  
415 North Redington  
Hanford, CA 93230

or call Gary Misenhimer (209) 582-2511 ext. 216.

Valley Gardens Golf Course has an immediate opening for a full time Golf Course Superintendent. Applicants should have worked on a golf course for at least 2 years, and be familiar with all phases of running the operation, from mowing to fertilization, from equipment maintenance to irrigation. Management is running an aggressive improvement schedule which had included a new automatic irrigation system and other equipment in the last two years, and will involve a new clubhouse soon.

Valley Gardens is a nine hole course located in Scotts Valley, 15 minutes from Santa Cruz.

Benefits include major medical insurance coverage.

To apply for this position, or for further information, please contact Jerry Imel at (408) 438-3058.

## WANTED

Looking to purchase used 7 gang pull behind mower. Must be in working condition-price negotiable. I will arrange pick up. Good chance to sell the old and tired and get something new! Call Carol Lozito, Snowcreek Golf Course (619) 934-6861.

## WINDSOR GOLF RESULTS

### LOW GROSS

Mike Glass	76
Fred Bliss.....	78
Bill Abell.....	80
Mick McBride.....	80

### LOW NET

Chuck Weatherton, SR.....64

Bob Dalton.....	70
Bob Dauterman.....	71
Dulbag Dubria.....	72

Closest to the pin #14

Mark Francettic

## SOURCES OF PRESSURE FOR IRRIGATION SYSTEMS

*Pressure (presh' er) n-Force of air, steam, water, etc. against a unit of area.-New Scholastic Dictionary of American English*

If you sit down and think about it for a minute, irrigation systems put a fairly simple concept to use: Transporting water from a source to one or more locations for dispersal to plant material,. One of the properties of water (as with most of us) is that it needs energy in order to move. Water can be energized by using the natural effect of gravity or by artificially injecting energy through a pump system. The real trick about irrigation systems is that the irrigation components themselves require the water to be provided at specific pressures or they don't work properly.

Now for some relatively dry information...

Water pressure is typically expressed in pounds per square inch (PSI). Water that is not flowing through the system but is pressurized is said to have "potential energy" known as static pressure. Static pressure is expressed in terms of the force exerted on the bottom of a column of water and is directly related to the elevation or height of that column. Every vertical foot of elevation change is equivalent to .433 PSI of static pressure. Therefore, a water source that is 100 vertical feet above the sprinkler system is said to have 43.3 PSI of static pressure (potential energy in relation to the system).

Water that is flowing in the system loses some of its energy as it moves due to friction caused by contact with the pipe itself. This "friction loss" is related to the type and size of pipe, and the volume of water flowing through it. Other factors contributing to loss of pressure in a flowing

system include the effect of turbulence as the water moves through fittings, valves and other components; and the effect of elevation change as the water moves up (constituting a pressure loss) or down (constituting a pressure gain) along the pipe routing. Each of these loss (or gain) factors combine to have a "net effect" on the energy available at any point along the system when the water is in motion. This net effect is commonly termed "dynamic pressure".

In order for an irrigation system to operate properly it must be designed to account for all of these factors and provide the proper amount of dynamic pressure at each sprinkler. If the water source supplying your golf course doesn't provide adequate potential energy (static pressure) at the outset then you need to somehow overcome this pressure deficit.

***Next month: Overcoming Inadequate Pressures***

## **ENVIRONMENTAL CONSIDERATIONS FOR GOLF COURSE MANAGEMENT**

At the 61st GCSAA National Conference held in Orlando, Fl. this past February, I attended "Environmental Considerations in Golf Course Management." The two day seminar was presented by Tom Thomas, a lawyer/scientist and Scott Harrison, Director of Pesticide Education at Penn State. Topics included: environmental benefits of golf courses; fate of chemicals in the environment; groundwater and wetlands protection; water law and policy related to golf courses; health effects and toxicology of golf course pesticides; legal liabilities for environmental consequences of management actions; public opinion; media relations; pesticide modes of action; environmental audits; Integrated Pest Management and a discussion of specific problems related by class participants.

This was the first time this seminar was presented, the instructors were interesting and informative, the material was well presented and given adequate time. I feel it's critical that we understand how our management strategies effect the environment, that we are aware of public perceptions and liabilities we create. Northern

California GCSA was well represented at this seminar as six local superintendents participated. I strongly urge those going to next year's GCSAA convention in Las Vegas to schedule this seminar.

Submitted by Peter J. Galea, CGCS  
Crystal Springs Golf Course

## **MEMBERSHIP-APRIL**

### **Members Today-30 day wait up**

#### **Class A**

David Wilber, Lake Wildwood CC

#### **Class D**

Jeffrey Roberts, Royal & Ancient Golf Club, Scotland  
Garmit Singh, Richmond CC  
Leon Smithen, Saratoga CC

#### **Class F**

Charlotte Sestito, West Coast Greens  
William Tavener, Pacific Sod

### **Current-30 day Wait**

#### **Class D**

Don Ballard, Bennett Valley GC  
Wilber Maeder, Petaluma G&CC

#### **Class F**

Mark Razum, Oakland Athletics  
Andrew Wheeler, Water Utilities Services

### **Pending Exams**

Carol Lozito, Snowcreek GC Class A  
Darshan Dass, Canyon Lakes CC Class B