

Protecting Your Investment In an Irrigation Installation

AN IRRIGATION system is not needed by and for itself; the sole purpose of the system is to assure plant survival and growth. In many areas of the United States, this need can be met by Mother Nature, however, due to erratic rainfall man has strived to improve the reliability of watering and this has led to the artificial "rainfall" of a sprinkler system. Water can be applied when needed, at a desirable time not interfering with the main function of the project, and improving the esthetic quality of the project as well.

Naturally, the consumer seeks to minimize the cost of applying water and (as a new concern), to conserve water. In many parts of the United States, an increase of 10 percent and greater per year in the cost of water has been witnessed. With projects growing in size, so grows the need for an irrigation system if landscaping is to survive.

The golf course is a perfect example of this situation. At present, a minimum single row type system in the East can cost approximately \$100,000; the "wall to wall" type coverage needed in the West can cost upward of \$400,000. It's obvious that the consumer should be interested in protecting this size of investment. It is not uncommon, however, to find projects with an expenditure of 50 percent over the actual value of what was received, and in other cases, the expenditure is only 50 percent of that actually required. It is not uncommon to find a golf course requiring, as a result of inadequate planning, a complete revision in less than 10 years — or the system incapable of providing the required amount of water in a period of time that does not interfere with play on the course. It is not uncommon to find systems incapable of assisting in maintenance and lowering the maintenance operation cost. And worst of all, it is not uncommon today to find collusion in the promotion and sale of an irrigation system to a golf course.

The first requirement in an effort to obtain the ideal irrigation system is that the system be planned for the



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Author Bob Cloud has been involved with or responsible for more than 70 million dollars worth of irrigation systems since his career began in 1948. With this extensive background he feels he is qualified to offer criticism and advice to the irrigation industry.

requirements and demands of the individual site. Secondly, the equipment should be selected for performance and economy. Finally, a set of clear, concise and complete plans and specifications should be supplied to insure competitive bidding, all bids being based on the same criteria, resulting in the most economic cost figures. Even if the consumer has met all of these requirements, he still needs quality control, someone to supervise the installation and see that the demands of the plans and specifications are upheld. Unfortunately, errors are covered up and may take a number of years to become evident. It really makes little difference whether the error is unintentional or deliberate, the end result is the same. If such errors are allowed to go uncorrected, an untold expenditure can be involved at a later date. All too often, a sprinkler system is conceived by a manufacturer or supplier, designed by a manufacturer or supplier, adjusted by the contractor during the installation and, upon completion, immediately modified by maintenance personnel in order to adequately do the job intended. Too low a cost can explain why a system is a failure, on the other hand very often the cost is great enough to

have paid for a satisfactory system. The prejudiced attitudes that prevail in our industry prevent achieving a system in the client's best interests. For the majority of golf courses today, the three major equipment manufacturers render the design, always utilizing their equipment. This design is generally rendered to the consumer at "no cost." Superficially, this seems like getting something for nothing, however, the consumer is intelligent enough to know that he gets what he pays for.

Generally in a situation like this, the contractor recommended by the manufacturer owes his allegiance to this manufacturer for having referred the lead, therefore, the consumer cannot discuss the pros and cons of the design with his contractor, because the contractor's comments will be slanted to where his "allegiance" really lies. When the supplier provides the design, a similar situation prevails; most suppliers favor a certain line of equipment, based on economic factors. Once again, the consumer cannot discuss the pros and cons of the design with the supplier because he will receive a prejudiced view. What the consumer fails to understand in these situations is that the people involved with sprinkler systems are in one camp — the owner and his money are in the other. He has no one to look out for his best interests and to advise him how the task can be accomplished with greater efficiency and minimal cost. The consumer ends up having no rights at all, other than paying the bills.

If the situation is not stacked against the consumer enough in the previously mentioned procedures, a new twist is now turning up. The manufacturer, supplier or contractor will retain the services of an irrigation consultant to design the course, and will pay all costs involved. The consultant is acting as the professional, but is retained by one of the purveyors and is now under his control. The consumer will ultimately have to pay for all of the costs incurred, but unfortunately he

again has no right to discuss the project with the irrigation consultant and expect an unbiased opinion. The consultant owes his allegiance to his client, and is dictated to regarding equipment and installation methods, and is not retained to supervise the installation.

“I truly believe if our industry is to prosper, certain changes in attitude and an increasing concern for the consumer, will have to occur.”

It is readily accepted that an architect designing a building will receive approximately 6 to 10 percent to develop and oversee the project. Most independent consultants don't charge that much, and I feel render an equal service. The one thing the consumer should watch for is paying the consultant too low a fee. In this case, the consultant is more receptive to offers of remuneration from the manufacturer, supplier or contractor to compensate for the inadequate fee.

Beside the biased opinions resulting from low fees, a system is often poorly designed and/or installed because the people involved in the planning are incompetent or ignorant of all the many factors that go into making up a complete system. Inadequacies most frequently occur in pumping plants; if designs are executed by the manufacturer, supplier or contractor, the requirements are usually very vaguely explained and the plant is not thoroughly engineered to meet the requirements and complexities of the irrigation system. This occurs on other features, too; features that could be incorporated into the system for the benefit of maintenance are ignored for fear of costing too much, and the proposal being rejected by the client. However, if the client had been informed of the savings that will result over a period of time, the initial cost does not seem out of line. This information is not supplied through ignorance, and such features are overlooked.

I have yet to see two projects requiring the same type of system, each project is unique and what is
(continued on page 45)



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PROTECTING (from page 39)

satisfactory or efficient on one might be entirely wrong on another. For the most part, manufacturers are generally committed to one approach, which they make fit each project, whether or not a more economical or other alternative is possible.

Too much designing is motivated by cost alone. What the industry fails to recognize is that a healthy profit can be realized, at the same time rendering a useful and competent service to the consumer. Until prejudiced direction is eliminated, this plague of inadequacies will continue. Perhaps the consumer will wise up and learn that retaining an independent consultant to look out for his best interests will assist in avoiding waste and confusion. The golf course architect should also be scrutinized. In many cases, he does not possess the ability or does not wish to perform the irrigation design in-office, and instead relies on the manufacturer to supply him with drawings and specifications. The same problem can result here as

with the supplier, contractor or manufacturer; once again, the allegiance of the individual is in jeopardy, for the service is more than likely not being rendered in the consumer's best interest.

It is not uncommon that the golf course architect, although acknowledging the need for irrigation, is not overly concerned with this aspect. He might be very capable of producing a good golf course layout, but he often gives little concern to the irrigation, other than the potential fee it brings, he therefore relies heavily on the manufacturer or contractor to see that some sort of system is supplied. The contractor is potentially more aware of the inadequacies than any other individuals involved, but for fear of not being allowed to bid on future projects by the golf course architect, he has a tendency to cover up errors in the design. Result, the golf course architect no longer has control over the contractor.

Covering one mistake involving a few hundred dollars could eventuate a cost to the consumer of thousands of dollars on some portion of

the installation not properly performed or completed. It is imperative that an independent relationship exist between the professional and the contractor, as well as no alliance between the consultant and the manufacturer.

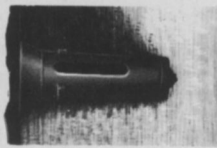
Another dangerous situation is the "turnkey" operation. This sounds attractive from the consumer's standpoint, because he designates total responsibility for the irrigation system to the contractor; unfortunately, few contractors are capable of rendering such a range of services. Somewhere along the line in planning, the criteria must be clearly established. The owner can also fail to receive competitive bidding on the project and this results in not only an inefficient tool, but also too high a cost.

It seems obvious that the only way the irrigation system can be the preventive maintenance tool intended, at an economical cost, is with the guidance of an individual who is not only knowledgeable but who receives no remuneration from anyone but the client. The only extra benefit he can receive is the con-

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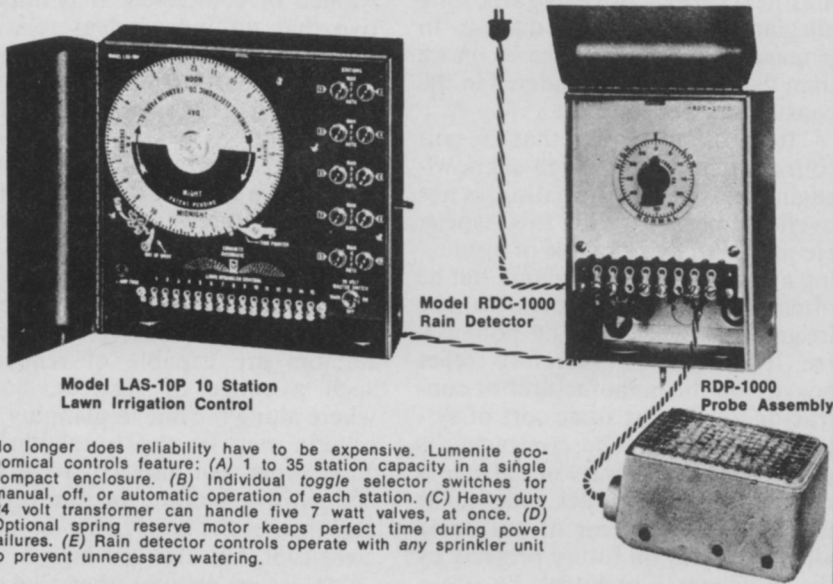
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On most projects, particularly golf courses, the emphasis is on the esthetic qualities and the main function of the course; the concern over irrigation is solely how much it will cost. Far more is involved in the irrigation than is apparent. However, when the time comes to maintain the course, all of the shortcomings are obvious but it is generally too late and only through large expenditures, or in some cases a complete re-do, can the system be made acceptable as to operation and operating costs.

A sprinkler system has many facets. It is the only entity, outside of the primary function of the project, that affords a return on the investment. It should be thoroughly investigated from all standpoints. The materials used should be of high quality to insure years of satisfactory service. The ease and method of operation, conserving water as well as manpower, should be carefully considered. Maintenance saving features, such as a system to inject fertilizer at the same time the system disburses water, should be considered.

The sprinkler system is not like trees and turf — it can't grow. If not properly executed initially, it is very, very difficult (if not impossible) to correct an inadequate installation. You can always plant a few more trees, but if an inadequate number of sprinklers have been installed, additional heads cannot be simply tacked on. The time for preparation and planning is initially. Even if the consumer recognizes the need for an irrigation consultant, he is still faced with a very difficult decision. Many consultants depend on manufacturer recommendations, and to obtain such recommendations, will owe their allegiance to the manufacturer and will specify his products whether or not they feel the product is truly right for the project.

This is difficult to ascertain. However, applicants should be screened thoroughly. Above all, the resume of the consultant should not be trusted to the point that only the individuals or projects indicated as references are checked. A more accurate picture can be obtained by checking at random with some local contractors and asking their opinion of the consultant. They are knowledgeable and will generally have

worked with the consultant's designs on several occasions. The contractor knows whether the consultant is affiliated with any manufacturers, and whether he is competent.

The client must realize that he is dealing with a close knit group of individuals; the personalities, favoritism or dependence upon each other can be used to the client's disadvantage. I have witnessed situations where a client has checked on a reference of a consultant, and the person in charge of the project (for fear of looking ridiculous) will give a favorable comment on a system that is actually a failure.

The consumer's only salvation is, after exhaustive selection procedures, to establish a complete list of requirements. The irrigation consultant should be bonded for an amount proportionate to the cost of the project being undertaken. The criteria should be established through plans and specifications. Upon obtaining a contractor, he should also be bonded accordingly. After completing the project satisfactorily, a maintenance bond covering a period of two years in the amount of 20 percent of the total cost of construction should be filed. It is often true that even though a guarantee on materials and workmanship exists, this guarantee cannot be exercised because the individual or company is no longer in business.

These measures involve only a relatively small cost expenditure. Due to the fact that the majority of the sprinkler systems are approved through a group or board of directors composed of individuals not necessarily knowledgeable in this area, it is in their best interests to retain a responsible individual to insure that their selection will result in a good installation and who will be fully responsible for any actions in this regard.

The simple do's and don'ts to protect the investment in an irrigation system can be summarized as follows: Don't accept a design from a manufacturer, supplier or contractor, free or otherwise. Don't accept drawings from a manufacturer, supplier or contractor indicated to have been done by an independent consultant. Don't lower the quality of the system to meet the present budget. Do program and phase the project in the event the total funds required are not avail-

able immediately. Do investigate thoroughly and select an independent consultant. Do bond this independent consultant. Do bond the contractor selected. Do establish a maintenance contract bond after completion of the installation.

There is an old expression which says "Too Much Or Too Little". There is hardly anything in the world that some man cannot make a little worse and sell a little cheaper.

The people who consider price only are this man's lawful prey. It is unwise to pay too much, but it is worse to pay too little. When you pay too much, all you lose is a little money. But when you pay too little, you sometimes lose everything, because the thing you bought is incapable of doing the task it was bought to do. The common law of business prohibits paying a little and getting a lot. It can't be done. □



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