

Bad audit may be good news

We attended the irrigation audit workshop by Dr. Kopec at the 2005 STMA Conference last year and decided to have our old system audited. The bad news is we failed miserably with a Distribution Uniformity of 25%. The good news is we are getting a totally new system. My previous requests for an irrigation system upgrade fell on deaf ears, but the audit was the documentation I needed to sway their decision. The cost savings analysis that showed a 3-year pay back from reduced labor and water savings was the deciding factor for my boss. I am working with the irrigation designer now and I was wondering if you could give me some advice on what to ask for so that I have a really good system for the future.

St. Louis Parks and Recreation Department

Seeing professional guidance, as you have done, is a good first step in developing a capable and efficient irrigation system. Some of the other critical players for your project will be an Independent Certified or Licensed Contractor and a reputable distributor. Be sure to check references and previous work experience to insure that they have specific sports field experience, not just landscape or golf experience. Let the players practice on your field, not the irrigation company.

Ask your designer to calculate and explain precipitation rate and distribution uniformity profile for your old and new systems. If they can't do that, then look for a new consultant. The Distribution Uniformity (DU) on your fields ranged from 25 to 50% and that means that you were applying more than 1.5 times the amount of water that should be needed. A properly functioning irrigation system will have a DU of 70 to 95%.

I have made many mistakes and fixed just as many from others so here are some of my tips to consider for your fields. I won't try to play irrigation consultant, designer, and contractor in this reply, but instead will act as a sports turf manager who is explaining what I want from an irrigation system. Remember you are the customer and they are there to serve you. They should be giving advice but they should also be asking you for your special irrigation needs. Some of my favorite head placement layouts for football, soccer, baseball, and softball can be found at <http://turfgrass.hort.iastate.edu/extension/egathfldheads.pdf>

Football

* Don't place a row of sprinklers down the center length of the field. This is an intense traffic area that often turns to mud, exposes heads, and places players in greater contact with heads. Instead, place rows of heads on either side of the intensely trafficked center of the field.

* The irrigation designer sees the entire field for uniform water distribution; however you need to explain that the field has differential wear patterns and you want the field irrigation zones blocked so that you can water the high traffic areas separately. This is because frequent shallow watering is needed to establish seed in high-traffic areas and deep infrequent watering is needed for other low-traffic areas of the field. The system can't be perfectly blocked to cover the exact shape

of the wear pattern, but it will make it possible to differentially water traffic areas that are constantly being reseeded and resodded.

Soccer

* The wear pattern for soccer is concentrated in the center and then at each goal mouth. A row of center sprinklers is used for soccer since the players don't line up and drudge through the center of the field and because regulation soccer fields are often wider than football fields.

* Instead of trying to fit the goal mouths in with the rest of the head layout, it is easier to just place one or two extra heads to cover the goal area and place them on a separate valve for separate control from the rest of the stations.

Baseball

* Water the skinned dirt area separately from the grass area. Use a fast rotor head, such as the Hunter I-42, at the edge of the skin and the outfield grass. These part circle heads should be set to water only the infield skin. All heads should be placed in the grass not the skinned dirt area.

* Place quick-couples behind the mound and/or near the warning track by first and third base.

* Be careful not to place any head, quick-couple, or valve box in the player rounding areas near first and third base.

Softball

* At a minimum place one head behind the pitching circle to partially water the skin infield. This head should be placed in a small valve box to protect the head when dragging and using the field. Turn the head on and it pops off the valve box head and waters the

skin. Just replace the lid when the field is being groomed or being used for play.

* In addition, place heads in front of each dugout and directly behind home against the fence. These heads can even be used for between-game maintenance of a doubleheader to keep the dust down and prep the field. Heads can also be placed in the grass and at the arc of the infield to water the skinned area.

I am a do-it-yourself type of person so I fully understand the cost-saving temptation to put in your own irrigation based on lots of free advice and your own ingenuity. Well, here is my free advice: the best products in the world don't make up for poor design and a good irrigation design must take into account traffic patterns associated with specific sports. Beware of those that sell you irrigation supplies and give you a "free design" as part of the package. It is better to have a design by an independent agent that is accountable for their work. Once the equipment is specified, then let the bidding begin. **ST**



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