

TurfSpy™

EARLY STRESS DETECTION GLASSES

Disease, drought and weed invasion are plant and turf killers. But by the time you see them it can be too late. TurfSpy™ glasses, with stress detection technology developed by NASA, lets you “see into the future” to identify problems 2-10 days before they are visible to your naked eye. Keep your turf and vegetation healthy BEFORE serious problems arise.



fusarium patch

pythium blight

yellow patch
(rhizoctonia)

brown patch

anthracnose

get a jump on broken
or poor-performing
sprinklers

highly efficient spot
watering saves time
and labor costs

superior weed location
and spraying saves
time and money



features

- Shatterproof/polycarbonate stress detection lens (ANSI approved safety lens)
- Wrap-around lens limits ambient light for optimal detection
- Sports frame with adjustable ear piece
- Lightweight case included

HOW IT WORKS

Dying vegetation absorbs and reflects sunlight differently than when its healthy. The earliest signals occur at the outer limits of the human visual spectrum, and are rendered invisible compared to the predominant middle wavelengths. TurfSpy™ filters the light in the center so that fringe spectra, which show early plant stress, become visible.



ordering

Part # NG655-01 TurfSpy™ Glasses and Deluxe Case

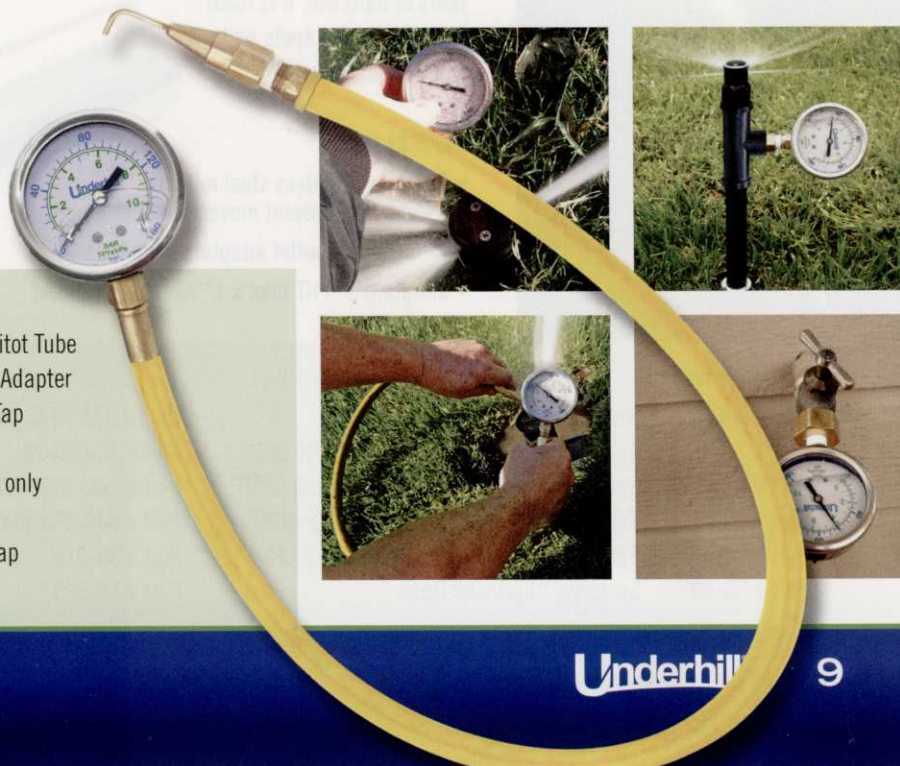
HeadChecker™

NOZZLE DISCHARGE PRESSURE GAUGE

Use this liquid-filled 160 psi gauge with 30" flex hose and solid brass Pitot tube, hose bib, or spray head adapter to measure water pressure at discharge points.

ordering

- Part # A-PHG-160K HeadChecker™ gauge, 30" Flex Hose, Pitot Tube
- Part # A-SHG-160K HeadChecker™ gauge with Spray Head Adapter
- Part # A-HBG-160K HeadChecker™ with 3/4" POC Hose Bib Tap
- Part # A-HCGPK HeadChecker™ gauge and Pitot tube
- Part # A-PG160L HeadChecker™ 160 psi pressure gauge only
- Part # A-HCP Pitot tube only
- Part # A-HBT 3/4" Hose Thread x 1/4" Brass Hose Bib Tap
- Part # A-SHA Spray Head Adapter





SpotShot™

LOW VOLUME PORTABLE SPRINKLER KIT

SpotShot™ is an expandable sprinkler system kit ideal for turf areas requiring low volume watering for extended periods. Connect the Starter Kit to a quick coupler (or golf sprinkler with the HoseTap™ on page 12) and connect Add-On Kits for larger area needs.



ideal for

- Leaching salts on greens
- Targeting hot spots on fairways, roughs, etc.
- Mound watering
- New seed grown in
- Other low volume watering



Starter Kit includes 20' of 1/2" flexible PVC tubing with connection fittings, pressure regulator, sprinkler base and low volume rotating sprinkler (20 ft. radius / 0.65 GPM - 0.16 in./hr.)



Add-On Kit includes 20' of 1/2" flexible PVC tubing with connection fittings, sprinkler base and low volume rotating sprinkler (20 ft. radius / 0.65 GPM - 0.16 in./hr.)



Micro-Sprinkler Options

- 20 ft. radius / 0.65 GPM (0.16 in./hr.)
- 20 ft. radius / 1.2 GPM - (0.26 in./hr.)



RollerPro™

PORTABLE SPRINKLER BASE

The 22" wide stainless steel roller of RollerPro™ provides a stable field position for supplemental watering. Designed for years of hard use, it is ideal for watering dry spots and newly seeded areas.

features

- 22" wide stainless steel roller is weighted to prevent movement during use.
- 3/4" inlet and outlet adapters included
- Standard 1" FHT inlet x 1" female NPT outlet



RollerPro™ works with both 1" and 3/4" hoses and sprinklers using the included adapters. Sprinklers sold separately on page 12-13.

ordering

Part # A-RP221	RollerPro™
Part # SS-SK	SpotShot™ Starter Kit (20 ft. rad, 0.65 GPM)
Part # SS-AOK	SpotShot™ Add-on Kit (20 ft. rad, 0.65 GPM)
Part # SS-SK26	SpotShot™ Starter Kit (20 ft. rad, 1.2 GPM)
Part # SS-AOK26	SpotShot™ Add-on Kit (20 ft. rad, 1.2 GPM)
Part # SS-SB	SpotShot™ Sprinkler Base

Part # R75-HFM-40	Pressure Regulator (40 psi)
Part # TP-050-20	20' Coil of 1/2" PVC, SuperFlex Pipe
Part # S40-050-HFS	3/4" Hose Thread Female x Male, Slip Fitting
Part # S40-050-HMS	3/4" Hose Thread Male x Female, Slip Fitting
Part # SS-S16	Micro-sprinkler (20 ft. rad, 0.65 GPM - 0.16 in/hr)
Part # SS-S26	Micro-sprinkler (20 ft. rad, 1.2 GPM - 0.26 in/hr)

Tracker™

PORTABLE IRRIGATION MACHINE

The Tracker™ offers an economical solution for supplementing seasonal watering needs of ¼ acre to 2 acre areas. It's also ideal for irrigating athletic fields, cemeteries, golf course roughs, or other large areas where an underground system is impractical. Built to last with precision German engineering and high quality materials, this portable powerhouse can irrigate an entire football field in just two passes.

specifications

- Weight: 58 lbs.
- Size: Length 33", Width 22", Height 22"
- Materials: Aluminum, Brass, ABS
- Minimum Water Pressure: 50 psi
- Hose Required: 1"
- Includes 1" brass quick-connect adapter



ordering

Part # T-400 Tracker™ Portable Irrigation Machine

NEW!

Nozzle Locker™ Kits

**STOP LOSING
YOUR NOZZLES!**

THE VERY BEST NOZZLES - KEEP THEM SECURE (and handy)

- Entire Precision™ nozzle series (Rainbow™, Rainmaker™, Cloudburst™ and Cyclone™)
- Solid Brass High-Flow Valve
- CoolPro™ with Precision™ fogging nozzle
- Your choice of MAGNUM™ multi-pattern nozzle (original, UltraMAX Turbo Shift, or UltraMAX Full Throttle)
- Unbreakable, lockable, corrosion-proof case to keep these tools safe and secure



ordering

- Part # HP-K1 NozzleLocker™ with ¾" Magnum (yellow) nozzle
- Part # HP-K2 NozzleLocker™ with ¾" Magnum UltraMAX Full Throttle nozzle (high flow)
- Part # HP-K3 NozzleLocker™ with ¾" Magnum UltraMAX Turbo Shift nozzle (high flow)
- Part # HP-K4 NozzleLocker™ with 1" Magnum UltraMAX Full Throttle nozzle (high flow)
- Part # HP-K5 NozzleLocker™ with 1" Magnum UltraMAX Turbo Shift nozzle (high flow)



Quick Coupler Valves & Keys

SOLID BRASS, SINGLE SLOT/LUG ESSENTIALS

Built to last, Underhill valves and keys are constructed of solid red brass and stainless steel. Valves incorporate rugged one-piece design.



Valve: Part # QV-075R
($\frac{3}{4}$ " FPT inlet)

Key: Part # QK-075
($\frac{3}{4}$ " MPT x $\frac{1}{2}$ " FPT outlet)

Valve: Part # QV-100R
(1" FPT inlet)

Key: Part # QK-100
(1" MPT x $\frac{3}{4}$ " FPT outlet)

Valve: Part # QV-150R
($1\frac{1}{2}$ " FPT inlet)

Key: Part # QK-150
($1\frac{1}{2}$ " MPT x $1\frac{1}{4}$ " FPT outlet)



The Claw™ pictured with 1" quick coupler, key and hose swivel.

hose swivels

- Part # HS-075 $\frac{3}{4}$ " FPT x $\frac{3}{4}$ " MHT outlet
- Part # HS-100 1" FPT x $\frac{3}{4}$ " MHT outlet
- Part # HS-101 1" FPT x 1" MHT outlet
- Part # HS-151 $1\frac{1}{2}$ " FPT x 1" MHT outlet



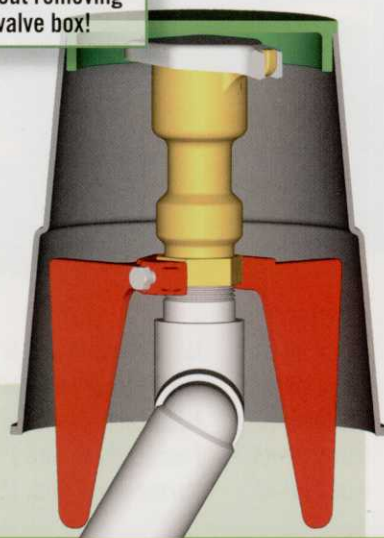
The Claw™

QUICK COUPLER MOTION RESTRAINT

When quick coupler valves become unscrewed from swing joints, it's more than just a hassle - it can be dangerous. The Claw™, new from Underhill, offers a simple solution. Embedded in the soil below the quick coupler, and then securely attached to its base, The Claw provides significant resistance to rotational, vertical and horizontal motion, preventing the valve from moving. Made from high strength ductile iron, this compact anchor attaches easily with a single steel bolt.

EASY RETROFIT!

Installs without removing valve or valve box!



ordering

- Part # QCA-075100 The Claw™ for $\frac{3}{4}$ " and 1" valves
- Part # QCA-150 The Claw™ for $1\frac{1}{2}$ " valves

Impact Sprinklers

SOLID BRASS, ULTRA-RELIABLE WORKHORSES

For reliable, trouble-free, high-performance year after year, you just can't beat our brass impact sprinklers. Available in full circle and full/part circle, in inlet sizes of 3/4", 1" and 1 1/4".

features

- Solid brass construction
- Stainless steel drive spring
- Bearing assembly hood for longer wear life
- Chemical resistant bearing seals
- Solid brass nozzle



Underhill brass impacts atop the RollerPro™ portable base (see page 10) puts a powerful sprinkler anywhere you can run a hose.



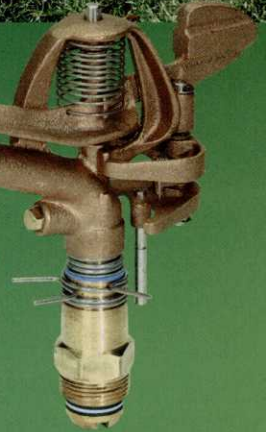
3/4"

Flow: 5-15 GPM
Spacing: 40-60 ft.



1"

Flow: 15-45 GPM
Spacing: 50-80 ft.



1 1/4"

Flow: 25-120 GPM
Spacing: 75-110 ft.

Performance data shown at 80 psi. GPM and radius will vary with pressure at sprinkler

ordering

Part #	Inlet Size	Circle Type	GPM	Radius (ft.)
Part # SI075F	3/4" MPT	Full Circle	13	57
Part # SI075P	3/4" MPT	Part/Full Circle	11	48
Part # SI100F	1" MPT	Full Circle	23	71
Part # SI100P	1" MPT	Part/Full Circle	23	71
Part # SI125F	1 1/4" MPT	Full Circle	51	96
Part # SI125P	1 1/4" MPT	Part/Full Circle	54	78

HoseTap™

SOLID METAL HOSE ADAPTER

HoseTap™ gives you a hose connection anywhere you have a Toro® or Rain Bird® electric, valve-in-head sprinkler... a fast connection when quick-couplers or hose bibs are not available. Includes aircraft aluminum body (won't break or wear out like plastic) anodized with sprinkler manufacturer color, o-ring, riser, 1" brass swivel and 3/4" adapter. Also available without brass swivel/adapter.

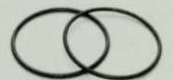


ordering

- Part # HN-T100S HoseTap™ for Toro® 1" inlet golf sprinklers
 - Part # HN-T150S HoseTap™ for Toro® 1 1/2" inlet golf sprinklers
 - Part # HN-R125S HoseTap™ for Rain Bird® Eagle 700 Series sprinklers
 - Part # HN-R150S HoseTap™ for Rain Bird® Eagle 900 Series sprinklers
- Includes 1" brass swivel and 3/4" adapter. Add "B" for BSP thread.
To order without brass swivel: Remove "S" from part number.

REPLACEMENT O-RINGS

- Part # OR-100 Fits Toro® 1" inlet and Rain Bird® Eagle 700 Series golf sprinklers / HoseTap
- Part # OR-150 Fits Toro® 1 1/2" inlet golf sprinklers / HoseTap
- Part # OR-150R Fits Rain Bird® 1 1/2" inlet golf sprinklers / HoseTap



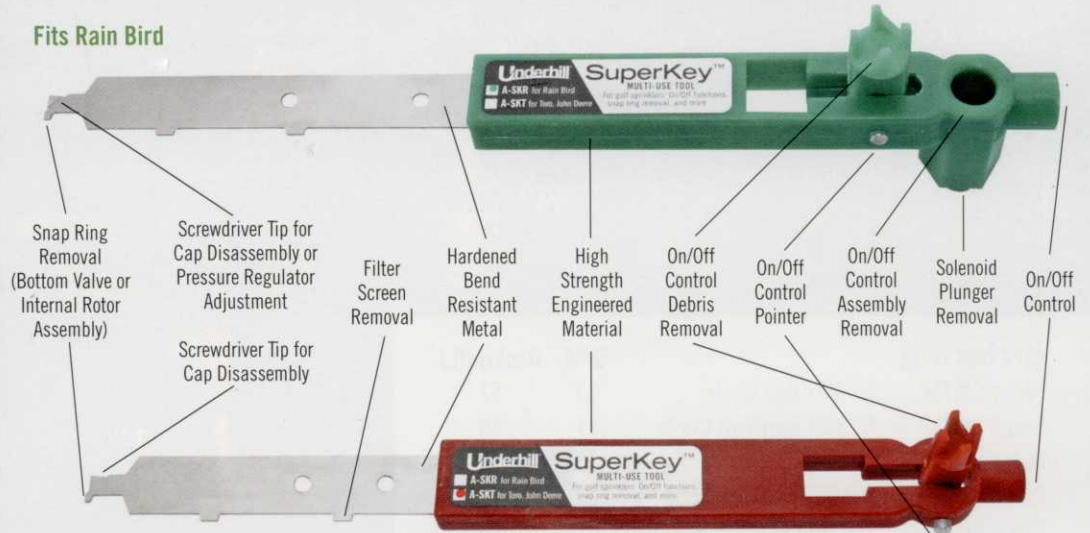


SuperKey™

MULTI-PURPOSE GOLF SPRINKLER TOOL

This ultimate multi-purpose tool designed for Rain Bird®, Toro® and John Deere® golf sprinklers is a must have. Made of stainless steel and composite material, it effortlessly turns Electric-Valve-In-Heads on and off, removes internal assembly snap rings and performs many other sprinkler maintenance chores.

Fits Rain Bird



Fits Toro, John Deere

ordering

- Part # A-SKR SuperKey™ for Rain Bird® golf sprinklers
- Part # A-SKT SuperKey™ for Toro® and John Deere® golf sprinklers



VersaLid™

VALVE BOX UNIVERSAL REPLACEMENT LID

VersaLid™ is the easy solution for broken or missing valve box lids. No need to guess what brand a buried box is or even worse - dig it up to find out - VersaLid's locking system fits all 6"-7" round valve boxes.

features

- Fits all 6"-7" round boxes
- Universal fit
- Greater top-load strength and more UV-resistant than structural foam lids
- Purple Lid available for non-potable/reclaimed water

STRONGER! BETTER FIT!
than original equipment lids



Splice Kit

3M DIRECT BURY SPLICE KIT

Each kit includes one wire connector which can accommodate wire sizes from 18-10 gauge and a waterproof gel case. Excellent for golf, commercial and residential applications.

ordering

- Part # VL-6 Green VersaLid™ 6"-7" valve box lid
- Part # VL-6P Purple VersaLid™ 6"-7" valve box lid
- Part # DBRY-4 Direct Bury Splice Kit - 4 Pack

Gulp™ UltraMAX

SUPER HIGH-CAPACITY WATER REMOVAL SUCTION PUMPS

Whether you need to remove water from sprinklers and valve boxes or other areas or devices, UltraMax Series Pumps are the ideal tools for the job... huge capacities and the smoothest pumps you will ever use as well.

special features

- Super Smooth Pumping Action
- Extra Volume Capacity
- Strong Aluminum Pump Shaft
- Heavy-Duty Clear Tube Material
- Self Priming

also great for



fountains

pipe repair

boats

toilets

spas

and more!

GULP SYRINGE ULTRA

- 12 oz./stroke
- 12" pump chamber

BIG GULP ULTRAMAX

- 12+ gallons per minute!
- 36" clear pump chamber
- 72" or 36" outlet hose

GULP ULTRAMAX

- 8 gallons per minute!
- 14" clear pump chamber
- 18" outlet hose



Contour grip handle



Aluminum shaft



Aluminum shaft



Easy, push-button cleaning system



Gulp UltraMAX and BigGulp UltraMAX include debris filter attachment for very dirty water.



ordering

- | | |
|------------------|--------------------------------------|
| Part # A-G12-C | Gulp™ UltraMax |
| Part # A-G3636CK | BigGulp™ UltraMax w/ 36" outlet hose |
| Part # A-G3672CK | BigGulp™ UltraMax w/ 72" outlet hose |
| Part # A-G12S-C | Gulp™ Syringe Ultra |
| Part # A-GTUB-C | 100 ft. outlet hose |



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An industry leader in innovative watering products all over the world, Underhill brings 33 years of know-how in developing our inventory of "Products that work...smart.™"



Form No. UIWP-B12

Products that work...smart.™



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FACEBOOK, UPDATED!

As of March 30, the business pages on the most popular social networking site on the planet took on a major change. Facebook forced implementation of the "Timeline" profile format for all business pages – and that includes those for golf courses.

The change might seem drastic, but it actually presents some great opportunities for golf courses to connect in completely new ways with players and colleagues. Here are some tips for handling the switch like a pro.

BE VISUAL. Taking a cue from other social media sites like Pinterest, Facebook is starting to skew for a more visual layout. The Timeline format organizes content not by its type but by its importance and timeliness. Want to share photos of the course? Upload a shot from your phone and watch it get top placement in your feed rather than being tucked away in an album. Keep that in mind when logging photos for a proposed upgrade project that needs to be sold to your members.

The new "cover image" gives you another opportunity to use a beauty shot from your course to really show off the turf you work so hard to manage. Make the first thing the visitor sees just as memorable as the course itself.

BE IN CONTROL. The new "Admin panel" not only collects all your notifications and alerts to one place, but gives you enhanced control of your entire page. Take a look at who's recently liked elements on your page, and check out the statistics of what's got people talking about them. Use your Activity Log to manage each interaction on your page.

Use the bar beneath your cover image to show off important photos, links or apps your members might find useful. Individual posts can be managed to span the width of the Timeline for more prominence, or can even be permanently "pinned" to the top for more visibility.

BE A PERSON. Facebook is allowing customers to offer reviews of companies on their own pages, which can be shared with others. It may be impossible for businesses to remove unfavorable customer reviews, but in trade,

businesses are finally able to interact with users via private messages. Located in the Admin panel, new private messages will give you the chance to make things right with a dissatisfied member or discuss a problem on the course without airing the whole conversation on the course's Wall. **GCI**



Spin or relief, everyone agrees... quality of cut is what it's really all about. For "spin only" operations, nothing beats a Foley for speed, accuracy and ease of use. And for relief grinding, Foley's hands-free "auto-index" relief system means you can perform other tasks while the machine does the work. No matter how you grind it, Foley makes it easier and faster to keep your reels performing like new.

You Can't Be Too Sharp.



www.foleyunited.com



Brian Vinchesi, the 2009 EPA WaterSense Irrigation Partner of the Year, is president of Irrigation Consulting Inc., a golf course irrigation design and consulting firm headquartered in Pepperell, Mass., that designs irrigation systems throughout the world. He can be reached at bvinchesi@irrigationconsulting.com or 978/433-8972.

WHO, WHAT, WHO AND WHY?

You've probably heard of "Who, What and Why," but when contemplating irrigation system improvements it should be Who, What, Who and Why?

WHO WILL DESIGN YOUR IMPROVEMENTS?

Will it be an irrigation consultant, the distributor, the irrigation contractor, yourself or a club member who's a retired engineer? Costs, comfort level, independence and even proximity will all factor into the decision.

You must feel comfortable with your designer. You want to get along with him/her because you'll be working closely for what could be several years. Equipment distributors may have design services and can provide a design representing each manufacturer's equipment. If you go this route, will you be able to tell the differences between the distributors' designs? If the improvements are not too extensive, then can you determine what is needed on your own? The designer should not only be experienced with golf course irrigation design, but have experience designing with the product you want. At a minimum, make sure there are detailed plans, product specifications and details. A set of installation and behavior rules, payment schedule and construction schedule also make a smoother project. If using an outsider, ask their references if they came in on budget.

WHAT EQUIPMENT WILL YOU USE? This includes which manufacturers, sprinklers, controllers and valves (i.e. Hunter, Rain Bird, Toro, etc.), and should include less obvious components such as pipe, fittings, wire and valve boxes. These

days there are many important choices for irrigation systems – HDPE versus PVC, decoder versus field controllers, hard wire versus wireless communication – and some of them should be made early in the design process.

When it comes to hard goods, the products have many similarities and differences. Do your homework. Research which product works best for your course and, more importantly, your irrigation and water management philosophy. The improvements should match your style. If you are dealing with a large project – such as a full-replacement system – then consider

Many of the larger irrigation installers have **several crews**. Are you getting the "A" team or the "F" team?

visiting the manufacturers' factories to get a feel for the equipment's design and quality. The "what" should also include pipe-pressure ratings, fitting types, isolation, quick couplers, individual or blocked control and blocked sprinklers or valve-in-head everywhere.

WHO INSTALLS IT? Is it an irrigation contractor, a builder, yourself or the landscaper who tends the clubhouse grounds? The installer must be experienced in golf course irrigation system installations, not home lawns or athletic fields. The guy who installed the president's sister's system won't cut it.

Golf irrigation is different than other types of irrigation. The pipe is bigger,

different material fittings, there is lots of wire and proper grounding is imperative. Experience, financial viability, proper machinery and personality are characteristics that enter into the installer selection process. Consider the foreman who will be overseeing the crew. Many of the larger irrigation installers have several crews. Are you getting the "A" team or the "F" team? Along those lines, how deep is the crew's experience? If the foreman takes a day off, is a qualified supervisor still on site? Get a reference list and call them. Talk to other courses the contractor has done, but may not be on the reference list. Visit courses where the contractor is working and look at how the irrigation system is being installed.

WHY THE BACK-UP FOR THE THREE PREVIOUS DECISIONS AND WHY ARE YOU UNDERTAKING THE IMPROVEMENTS IN THE FIRST PLACE?

With the economy as it is and a large amount of money that will be spent for irrigation improvements it is important to back up your decisions. Document your due diligence for a designer, equipment supplier and installer. Have reference lists. Have notes on talking to people. Have pictures of site visits and write down your thinking process. Have a budget that includes all aspects of the project. Have all your bid documents and proposals organized and put all the numbers in a spreadsheet. You may not need it, but if someone asks you how and why you picked the who or a what, you want to easily explain why and be able to convince the board, owner or whoever that it was the best choice based on all the factors of experience, cost and schedule. GCI