MILLCREEK MANUFACTURING CO.
Leola PA
Millcreek manufactures three sizes of topdressers. They are the Turf Tiger 4300 and the Turf Tiger Cub models 3100 and 3200. www.millcreekmfg.com

MILLIKEN TURF PRODUCTS
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Milliken Turf has provided superior products to the turf market for 20 years. Our Emerald Isles product line offers foliar nutrition products derived from sea-plant extract. The Blazon spray pattern indicator is the only non-staining SPI of its kind. www.millikenturf.com

MISSOURI TURF PAINT
Kansas City MO
Manufactures and distributes products used in athletic field marking, including bulk and aerosol paint, turf dye, stencils, application equipment and marking systems/accessories. www.missouriturfpaint.com

NEWSTRIPE, INC.
Aurora CO
Newstripe is a manufacturer of walk-behind and ride-on field marking machines, drag mats infield groomers and stencils. www.newstripe.com

NOVOZYME BIOLOGICALS
Salem VA
Produces microbes used in high quality turf products such as biostimulants, micronutrients, mycorrhiza distributed by Cleary Chemicals. www.novozymes.com

PAR AIDE PROFESSIONAL FIELDCARE
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We are committed to providing sports turf managers with the finest, professional grade tools and accessories available. www.paraidemn.com

PARKS & REC. BUSINESS/NORTHSTAR PUBLISHING
Jackson NJ
Parks & Rec. Business is published monthly, and features the latest news and products, plus lively features and profiles. Dedicated to bringing the 15,000 parks and recreation professionals across North America the latest and best information to help them run their departments efficiently and profitably. www.parksandrecbusiness.com

PEAT, INC.
Elk River MN
A unique golf, sports turf and horticulture peat supply company affiliated with Plaisted Companies which allows them to control the quality of the process from peat harvest to final mix. www.peatinc.com

PENNINGTON SEED, INC.
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Provides high-quality warm- and cool-season turfgrass varieties such as Princess-77 Hybrid Seeded Bermuda and Applaud Perennial Ryegrass. www.penningtonseed.com

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Tangent OR
As a leading developer of high performance turfgrass for more than 30 years, Pickseed West has been committed to high standards of performance that ensure reliable product availability, delivery and support. www.pickseedwest.com

PIONEER MANUFACTURING
Cleveland OH
Specializes in providing quality stadium and athletic maintenance products. Sells striping machines, aerosol and bulk paints, stencils and field maintenance products. www.pioneer-mfg.com

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Premium sports turf products for all your soccer, football and baseball needs. Pro’s Choice is going the extra yard for healthy turf. www.prochoice1st.com

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Manufacturer of specialized turf and ground care equipment produced especially for aeration, seeding, topdressing and environmental maintenance. www.redexim.com

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Conditioners manage moisture, reduce compaction, promote healthier rootzones in turf areas and provide enhanced appearance and performance of any infield-skinned playing surface. www.moltan.com

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REELCRAFT INDUSTRIES, INC.
435
Columbia City IN
Manufactures and markets a wide variety of water hose reels including the DGM underground retractable hose reel system for sports turf applications. www.reelcraft.com

REIST INDUSTRIES, INC.
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Elmira ON
Serves the national and international markets offering custom machine shop innovations and the ESAB Sabre 3000 high current Plasma Cutter. www.reistindustries.com

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Van Buren AR

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1007
Sandy Springs SC
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Sologix offers premium fertilizers and organic soil conditioners that use a process called carbon fertilization to combat the negative effects that salts, chemicals and pesticides have on the soil. The products clean the soil of harmful chemicals, accelerate recovery from wear and damage and produce full healthy turf and ornamentals. www.solealgix.com

SOUTHERN ATHLETIC FIELDS, INC.
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Columbia TN
Southern Athletic Field, Inc. is a supplier of quality infill mixes, mound clays, clay bricks, calcined clays and warning track materials as well as innovative field accessories. www.mulemix.com

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202
Chicago IL
The official magazine of the Sports Turf Managers Association. www.greennamediaonline.com

SPORTS TURF, INC.
522
Whitesburg GA
Sports field construction company specializing in general contracting, construction management of design/build projects, construction/renovation of athletic fields for municipalities, schools, colleges/universities and professional teams. www.northgeorgiaturf.com

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Specializes in infill products such as Hilltopper Mound Clay, Stabilizer infill mixes, and TurfGrids fiberglass for all types of turf reinforcement. www.stabilizersolutions.com

SUBAIR SYSTEMS, LLC
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Products and services include sub-surface aeration and hydronic temperature control. www.subairsystems.com

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Clearwater FL
Turbo Link International, Inc. is capable of building natural or synthetic fields including site preparation and drainage systems. We are the sole distributor for Polytan synthetic turf and track systems in the United States. www.turbolinkintl.com

TURF DIAGNOSTICS & DESIGN
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Linwood KS
A soil testing and agronomic consulting company. www.turfdiag.com

TURF-SEED, INC.
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Turf-Seed, Inc. is a family-owned company providing premium turfgrass seed to the sports turf industry, worldwide. www.turf-seed.com

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Manufacturers fine turf, 3-point hitch verticut equipment for athletic fields. www.turfspecialties.net

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There are four fields at the National Soccer Hall of Fame in Oneonta, New York, and according to Kevin Meredith, Turf Manager, "The Smithco Super Liner is great. This machine is going to make my life a lot easier". It could do the same for you. That's because the Super Liner is not only self riding, it has a 35 gallon tank for less fillups. And a new air compressor means no pumps to clog, no valves to jam, and no belts to slip. Plus cleanup is easy. See for yourself. Call 1-877-833-7648 for a test drive.

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(Right: Don Smith President of Smithco with Kevin Meredith)

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| Body | Heavy strong steel |

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Keynote Speaker: Larry Helms, Ph.D.

Positioning to Win: Using Your Head to Get Ahead
Thursday, January 19, 10:30 - 11:45 AM

Larry Helms holds a Ph.D. from the University of Michigan and a post-doctoral certificate in management from Harvard University. He is a former Fulbright Scholar, Standish Evans Scholar, and has authored five books and numerous articles. He is regarded as one of the nation's leading authorities in adult education and leadership. He holds the Certified Speaking Professional (CSP) designation, the highest earned award given by the National Speakers Association. Success doesn't just "happen" in professional life. To be successful, or to "win" requires positioning yourself to take certain necessary steps. Learn how realistic self-discipline, self-control, hard work, and other strategies come together to help position you for the future.

Thursday, January 19

8:00 - 8:20 AM
Welcome to STMA's 25th Year
Mike Trigg, CSFM, STMA President, Waukegan Park District

8:20 - 9:30 AM
A View to the Past - Panel Presentation
Moderator: Gil Landry, Ph.D.
Panelists: Steve Wightman, Joe Matz, Williams, Steve Cockerham

Hear reflections of the industry from those who lead the profession through the years to its current place in the sports world today. An informal conversation with a panel of industry leaders about the future of the industry.

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various changes that have occurred over the past 25 years.

9:30 - 10:15AM
The Future of the Profession
Andy McNitt, Ph.D., Pennsylvania State University
Dave Minner, Ph.D., Iowa State University
Learn what’s on the horizon for the sports turf manager in the emerging technology for equipment, turfgrasses, design and construction, facility management. Also learn about new sports that will challenge the role of sports turf managers.

CONCURRENT SESSIONS
1:30 - 4:00PM
There will be 4 concurrent sessions with 3 presentations of 50 minutes each.

Athletic Field Management
Moderator: Lance Tibbetts, CSFM
1:30 - 2:20PM
Your Role in Facility Risk Management
Eric Fasbender, University of Oregon Athletics
More and more groundskeepers have to contend with outside users in our facilities. This talk will address how to protect your facility against usage from these groups. Heavy emphasis on planning and communication will be covered.

2:20 - 3:10PM
The Intramural Blues - Managing Intense Traffic and Multiple Sports
Sam Jones, University of Delaware
Jim Cornelius, West Chester Area School District
Nick Gammill, CSFM, American University
The ability to convince a School Board and the public as to why limiting athletic fields to minimal outside group use and protecting the fields for school athletes is in the best interest of everyone. Even with the limited number of fields available it can be done with proper documentation and truthful facts. This talk will also focus on maintenance programs for overused intramural fields.

3:10 - 4:00PM
Getting Everyone on Board to Perform!
Greg Petry, Waukegan Park District
With limited budgets and tight deadlines, it is essential that everyone work together to produce the desired results. We need to mobilize all of our resources to meet the needs and demands of those we serve. Building commitment, trust, and cooperation amongst your staff will be explored.

Managing the Bermudagrass/Ryegrass Transition
Moderator: George Trivett, CSFM
1:30 - 2:20PM
Cultural and Chemical Strategies to Remove Overseeded Perennial Ryegrass from Bermudagrass

Bert McCarty, Ph.D., Clemson University
This talk will list and discuss agronomic means of spring transition from overseeded Ryegrass to Bermudagrass. Included will be strategies of possibly incorporating herbicides to aid in this transition. Considerations of environmental, aesthetic, and turf health will be included.

2:20 - 3:10PM
Bermudagrass and Ryegrass - Making the Transition in the Deep South
Leo Goertz, Texas A&M University
James McAfee, Ph.D., Texas A&M University
“The quick and easy of Ryegrass transition in the deep south.” For this transition process to work, it is impor-
3:10 - 4:00PM
Managing Bermudagrass and Ryegrass in the Transition Zone
John Sorochan, Ph.D., University of Tennessee
Bob Campbell, CSFM, University of Tennessee
This talk will focus on the benefits and detriments of overseeding perennial Ryegrass into Bermudagrass athletic fields. Seeding date and rates will be discussed. Also, spring Ryegrass transition and reasons for poor Bermudagrass winter survival and spring green-up will also be discussed.

Eco-Balanced Athletic Fields
Moderator: Jay Warnick
1:30 - 2:20PM
Implementing IPM Strategies for Athletic Fields
Roch Gaussen, Ph.D., University of Nebraska
Integrated pest management (IPM) involves a set of decisions designed to minimize chemical inputs without compromising turf quality. First and foremost in the decision process is agronomically sound cultural practices. This presentation will focus on these practices with emphasis on long-term health and function of athletic turf.

2:20 - 3:10PM
Water Quality Issues for Athletic Fields
John Cisar, Ph.D., University of Florida, IFAS Research & Education Center
This presentation focuses on things that athletic field managers can do to improve agrichemical efficiency and reduce potential off-site losses of natural resources. Water quality issues and protection will be discussed. Practical management strategies that help protect water quality such as incorporating efficient irrigation, fertilizer application methods and sources of fertilizer will be offered to the end-user.

3:10 - 4:00PM
Athletic Field Management: The Whys and How's of a Return Program
Chip Osborne, The Living Lawn Project
This presentation will explore the reasons why we should consider a natural turf management program and the basic steps to begin to implement one.

Research You Can Use
Moderator: Dave Minner, Ph.D.
1:30 - 2:20PM
Warm Season Athletic Field Research Update
Grady Miller, Ph.D., University of Florida
Will update the group on warm-season research projects being conducted in Florida. Highlighted studies will include research in water distribution, weed control, turf colorants, soil amendments, and fertility. A highlight of the presentation will be the new multi-million dollar turfgrass research center that is under construction near Gainesville, FL.

2:20 - 3:10PM
Cool Season Athletic Field Research Update
Andy McNitt, Ph.D., Pennsylvania State University; Dave Minner, Ph.D., Iowa State University
These researchers will bring you up to speed on the latest research related to traffic tolerance, high seeding rates, and Ryegrass/Bluegrass competition.

3:10 - 4:00PM
Graduate Student Scholarship Winners Research Project Presentation
FRIDAY, JANUARY 20
CONCURRENT SESSIONS
8:00 - 10:00AM
#1 Schools K-12
Moderator: Tom Curran
8:00 - 8:30AM
Motivation and Innovation, Trying to Do Things on a Limited Budget
Floyd Perry, Grounds Maintenance Services
Provides practical information for identifying wear problems and addresses potential solutions. It will attempt to answer the question, “How much wear can my field take?”

9:00 - 9:30AM
Managing Wear and Tear on K-12 Fields
John Mascaro, Turf-Tec International
This talk will take you on a visual journey of real world situations showing wear and tear on athletic fields. It will also address how to manage these stresses and grow the best turf for your area. Understanding wear and tear on turf will lead to better turf and safer fields.

9:30 - 10:00AM
Practical Fertilization for Sand-based Athletic Fields
John Cisar, Ph.D., University of Florida, IFAS Research & Education Center
Fertilizer timing, rates, sources, and application methods in relation to turfgrass needs will be discussed with an objective of getting the most out of your fertilizer budget and the best management strategies for athletic fields. Practical information on the nutritional needs of grass and the fertility of the sand-based soils that many fields are maintained on will be highlighted.

#2 Parks & Recreation
Moderator: Bud Nolder
8:00 - 8:30AM
Practical Maintenance of Athletic Fields
Connie Ferriola, Disney’s Wide World of Sports
Will discuss strategies and techniques used to prepare and maintain high quality fields with a busy event schedule.

8:30 - 9:00AM
Our Biggest Problem, lime and Manpower
Floyd Perry, Grounds Maintenance Services
Evaluate your personal needs and job requirements so that all facilities are equipped with proper equipment and adequately staffed to handle the job at hand as well as special projects. You’re only as strong as the people involved. Work smarter, not harder.

Call us today for more details or to arrange a demonstration
9:00 - 9:30AM
How to Keep your Participants Happy with 7 Games a Day
Bill Berry, Cherry Park, SC
Would anyone schedule 7 games a day for 36-40 weeks? This talk will provide information on maintaining highly used fields.

9:30 - 10:00AM
Tools for Conducting a Water Audit and Diagnosing Soil Conditions
Richard Sanger, CPRP, CLIA, Sarasota Parks & Recreation Department
Ron Kelly, Sarasota Parks & Recreation Department
Tools for conducting a water audit and diagnosing soil conditions. Lecture, PowerPoint presentation, and demonstration on how to do an irrigation water audit to determine if water is being applied uniformly to the turf, and how soil conditions impact watering practices. In-class demonstration of soil instruments for measuring soil parameter impacting irrigation is included.

#3 Professional Fields
Moderator: Darian Daily

8:00 - 8:40AM
Managing Non-Sporting Events
Abby McNeal, CSFM, Denver Broncos
Brief overview of how we at Invesco Field manage events not related to sporting events.

8:40 - 9:20AM
Dealing with the Aftermath of the Super Bowl
Nick Fedewa, SMG/Jacksonville Jaguars
This talk will focus on the process of preparing the field at Alltel Stadium for the pre-season after the Super Bowl.

9:20 - 10:00AM
Managing Turf Covers
Ross Kurcab, CSFM, Denver Broncos
This talk will provide a general overview of the various turf covers typically used at sports turf facilities. Mr. Kurcab will discuss the evolution of the covers and how they impact the field. The human elements associated with owning and using turf covers are also discussed. A short video will be shown taking the audience through a snow game weekend in the NFL, showing all aspects of using these types of covers.

#4 College/University
Moderator: Mike Andresen, CSFM

8:00 - 8:40AM
Contracting and Renovation of Tired Fields
Jason DePaepe, CSFM, University of Colorado
Athletic fields are often contracted out to outside contractors. How to work towards the same thing for sports turf fields.

8:40 - 9:20AM
Developing the Relationship between Educators and Sport Field Managers
Pam Sherratt, Ohio State University
How to work with educators and the turf manager. How to make it a win-win situation.

9:20 - 10:00AM
Baseball Infield Mixes - Panel Discussion
Mike Schiller, CSFM, Sodexho-Lake Forest
Paul Terrell, University of Texas A&M
Luke Yoder, San Diego Padres
Some baseball infield skin materials are used nationwide while others are developed from local materials. Strategies to manage the infield skin will depend on geographic location, rainout expectations, level of play, budget, and several other factors that will be discussed by this panel to help you select and develop a strategy to manage your infield skin. In this panel discussion, you will hear a variety of infield mix strategies, different soil properties, and how they effect turf management.

Sports Field Student Challenge Exam
Student Exam Moderator: Steven Ries
Student Exam Coordinator: Steve Cockerham

8:00 - 10:00AM
PM WORKSHOPS
3:00 - 5:15PM

Workshop #1
Proven Techniques to Enhance your Influence and Effectiveness
Mark Esoda, CGCS, Atlanta Country Club
This workshop will portray the challenges course superintendents face and work towards making it better. How to work towards the same goal.

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Workshop #1
Applied Math for Sports Field Managers
Brad Jakubowski, University of Nebraska College of Technical Agriculture

This workshop covers the practical aspects of turfgrass mathematics and will help certification candidates prepare for the CSFM exam. Topics covered will include topdressing, irrigation, seeding rates, fertilizers and pesticide applications. Attendees are invited to bring examples from their own experiences to be used as workshop examples.

Workshop #3
Experiences with Rubber Infill Systems and Task Force on Synthetic/Natural Turfgrass Field - Panel Discussion
Debbie Kneeshaw, Delta Sports Complex, City of Portland; Aaron Boggs, University of Louisville; Abby McNeal, CSFM, Denver Broncos Chair; Synthetic/Natural Turfgrass Task Force

The panel will discuss their experiences with rubber infill fields. Ms. Kneeshaw will share her experience at Delta Park concerning long term wear of the oldest Field/Turf synthetic rubber infill field in the United States. There will also be an overview of white sheet synthetic natural grass.

Workshop #4
Student Workshop
A workshop designed to address the needs of the sports turf management student.

To Understand the Present, Investigate the Past
Kent Kurtz, Ph.D., Cal Poly Pomona

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Workshop #8
When the Media Comes a Calling
Erica Santella, TruGreen Companies

Is your first inclination to run and hide? Learn how to respond (and not react!) to this powerful reality in a professional manner.

Workshop #7
Preparing for the CSFM Exam
Mary Owen, UMASS Extension; George Trivett, CSFM, Hudson Middle School; Mike Schiller, CSFM, Sodexho-Lake Forest Academy

This workshop presents an overview of the CSFM exam and provides hints to prepare for taking it. Without giving any specific questions, the presentation team will point out areas the exam takers should be familiar with. It will also show how the practical, everyday part of sports turf management can help you prepare for the exam. If you are thinking about certification, but are nervous about the test, this session is for you.

Workshop #5
Managing Microbials in your Athletic Field: Can they Work for You?
Elizabeth Guertal, Ph.D., Auburn University

Biologicals, bio-products or microbial amendments: they have a lot of different names but the goal is the same: help your turf grow and withstand athletic wear and tear. This presentation will discuss the various types of microbial additives on the turf market, how they might differ, and how they fit into your management program. Recent research in the area, product label interpretation, and how the products differ from fertilizers will also be discussed.

Workshop #6
Building Athletic Fields- Construction, Renovation, Root Zones, and Irrigation that Fits Your Budget
Mark Heinlein, The Motz Group; Chuck Darrah, Ph.D., CLC LABS; Boyd Montgomery, CSFM, The Toro Company

This talk will cover high dollar and low dollar practices for field renovation. Economic rootzone mixes will be covered, specifically sand and soil combination and modified rootzones. Also, when cost cutting should and should not be done.

Saturday, January 21

Concurrent Interactive Workshops
8:00AM - 12:00PM

Irrigation Systems for Sports Fields - Common Mistakes, Irrigation Audit, and Hydraulic Misconceptions
Brian Vinchesi, Irrigation Consulting, Inc.

This workshop will outline common errors in sports field design and installation. A hands-on irrigation system audit will be performed on one of Disney's Wide World of Sports baseball fields. Additionally, piping hydraulics will be demonstrated and discussed using an on site hydraulics training area in place at Disney World. Participants will have the ability to discuss their problems and experiences with sports turf irrigation systems.

Outdoor Demonstrations
1) Equipment Calibration

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November 2005
Roch Gaussoin, Ph.D.,
University of Nebraska
GPA, PSI, WDG, XR, flat fan, 8002. Ft2, Al. Confused?
You won't be after this hands-on workshop.

2) Innovative and Creative Ideas to Save Time, Money and Effort
Floyd Perry,
Grounds Maintenance Services
When ideas arise, don't take on a negative "it won't work" attitude. Arough idea can become a strong one with a little hard work. Cut down on wasted time and effort by using your mind instead of your muscle.

3) Infield Skin Mounds & Plate Maintenance
Preston Courtney, Disney's Wide World of Sports
Get an expert demonstration of how the sports management crew at Disney takes care of the skin, mound and plate areas at their baseball complex.

Fertilizers
Fertilizers for Sports Fields
Bradley Jakubowski, University of Nebraska College of Technical Agriculture
Fertilizers and Plant Interactions
Tom Samples, Ph.D.,
University of Tennessee
Sports turf requires balanced nutrition. However, solubility, the rate of nutrient release, the density, size, and uniformity of particles and the price often vary among today's fertilizers. Information presented during this hands-on workshop is intended to help managers maintain healthy turf-grasses by selecting and applying fertilizers that will deliver the desired results within budget.

Online Resources
Using Turf Online Resources - TGIF and More
Pete Cookingham,
Michigan State University
Whether you think you have a good handle on how to use the Web in your job, or if you're uncertain of how to use it effectively - come learn about online resources for turf, search tips and tricks, saving time getting around what sometimes seems to be nothing but sidetracks, evaluating sources, and contribute yourself to a lively session about how to maximize your professional gain from the online world.

ROUND-TABLE DISCUSSIONS
1:30 - 3:30PM
Compost Topdressing
Mike Andresen, CSFM,
Iowa State University
Paint Issues on Athletic Fields
Grady Miller, Ph.D., University of Florida
Non-Grass Sport Surfaces
Tra DuBois, World Class Athletic Services, Inc.

THE GROUNDS STAFF PROVES ITS PROFESSIONALISM AND EXPERTISE EVERY WEEK BY MAKING AGGIE MEMORIAL STADIUM THE PRIDE OF NEW MEXICO STATE UNIVERSITY AND THE WAC.
Taking On Winter: The Basics of Irrigation System Blowouts

By Luke Frank

Anybody in the turf industry north of 45 degrees latitude should have a firm grasp of proper irrigation system winterization. Otherwise, both acute and chronic forces can cause considerable system damage at spring recharge and nightmarish summer maintenance.

The power of water turned to ice is chilling; it can split mains and laterals, fracture fittings and heave sprinkler heads and valve boxes to new heights. There are three areas of opportunity for executing proper irrigation evacuation. The first two, sound irrigation design and installation, may be for-gone conclusions. The third opportunity, actually purging your system, is a logical, methodical procedure of isolating and blowing out your system infrastructure.

Start at the beginning

Those who contend with winter soil frost lines of 4 inches or more have a strong appreciation of nature and its power. Pipes, sprinklers, wires, valves, boxes, and other equipment are continually heaved, and hoed, all winter. Install something poorly in the fall and you'll have to rework it in the spring.

In many cases, there is little we can do to combat our weather conditions. However, there is much that can be done to make a system “give” with weather conditions.

Most systems are designed and installed somewhere within the top 12 to 24 inches of soil. Such systems are in the direct line of fire for winter abuse. Techniques such as pipe pitching, intended to direct water flow to the manual drains when opened in the fall for winter purging, are clever but shortsighted. If pipe truly is pitched at installation, it rarely remains that way due to frost heaving.

Consequently, each autumn, less and less water will be evacuated, so more of it will remain in the piping system. This remaining water then freezes and expands to continually weaken pipe and fittings through fatigue over time. Each year, system damage increases, whether visible or not, and spring recharge costs increase.

If pipes don’t remain pitched from frost heaving, then water never really has the chance to get to any drains. Moreover, once winter frost completely surrounds the drain, it becomes ineffective, as it can no longer release the water from the system. For these same reasons, systems that rely exclusively on manual and automatic drains for winterization are at risk.

Essential design features

Basic fundamentals tell us that if a device or technique is marginally effective, additional system service will be incurred. Adding pieces to the system that may fail or not work as specified, or will damage other components, should be avoided.

An irrigation consultant/designer should be aware of winterization techniques required for each specific project before finalizing the layout. For example, mainline systems on all projects should be configured so that compressed air can be introduced into the system at key locations and provide for the easy removal of the majority of water from the entire mainline system promptly. At the water source(s), just downstream of the backflow preventer, an outlet should be provided as the point of connection for the compressor hose.

At the mainlines' ends, or at isolation points in looped system design, quick couplers should be specified to enable water release. Naturally, these also would be useful for manual watering during the season, but placed in key locations so that during winterization, high volumes of water can be easily released from the system. All quick couplers should be accessible and protected by a valve box for easy location in the fall.

Irrigation consultants/designers must have practical knowledge and thorough experience in winterization procedures to truly design a reliable system. Examples are pumping systems designed to require minimal winterization; or the research of and experience with sprinklers, valves, and other components that perform better in colder climates and during winterization. Poor design will result in hard to winterize and maintain systems.

In northern climates choked with heavy frost, building in system flexibility is very important. All systems should be installed with an appropriate flexible riser (preferably swing joints) at each sprinkler. Valves should be installed so that valve boxes don’t rest on any incoming pipe or wire.

Mainlines should be installed outside of the electrical valve boxes to allow for wintertime movement, and adequately sized compressor connections should be installed near the water source and outlets, preferably quick couplers at the end of mainlines.

While these installation fundamentals are important, an accurate as-built plan will be your winterization reference tool every fall. As-built should provide information for your crew about where to begin and end the process and warn of peculiar issues and how to deal with them. Be diligent in regularly updating any changes in product or location as the seasons pass.

Getting down to business

On larger projects with multiple taps and looped mainlines, a game plan should be designed, documented, and followed. The overall goal is to replace the piping system’s full water volume with equal or greater air volume by methodically pushing the water out.

Looped mains will have to be isolated to create single, independent flow directions. Multiple tap systems also will have to be isolated, one tap from another, to form independent flow directions.

Proper compressed air volumes and pressure are keys to successful winterization procedures. Generally, compressed air pressures of 70-80 psi combined with air vol-