STMA's Playing Conditions Index revisited

Mike Tarantino, director of maintenance and operations, Poway (CA) School District.

IT'S BEEN SEVERAL YEARS now since the Sports Turf Managers Association unveiled the Playing Conditions Index (PCI). I still believe this is one of the most valuable tools that the organization has given to us.

How many of you reading this article know what the PCI is? How many of you that do know are using it? Hopefully, all of you know what it is and are using it.

I was fortunate to be on the committee that developed the PCI. The PCI's original intent was to be used as a way to evaluate your sports field and provide a ready reference as to its current condition. It has, for me, become more than that.

I use the PCI for field evaluation; however, I take it a few steps further. I use the PCI four times yearly on my "show case" sports fields; four should be a minimum. I not only answer the questions honestly but my PCI is a road map for the maintenance and renovations I perform on my sports fields. My PCI is full of notes. The notes include weather conditions, type of products used, pest identification, weed identification, percentage of field that was renovated, exact area of the field that was renovation and results of the renovation. Why? What I have found by using the PCI is it isn't just a simple tool to evaluate the current playing condition of the field. Using the PCI evaluation along with the notes I write down on the PCI gives me the overall picture and history of that particular sports field.

Whatever you do, do not toss your old PCI's in the trash! I use my old PCI's and compare them to the new; weather conditions jotted down now provide me with an historical look at the weather conditions. Weather plays a major role in what we do, soil temps, air temps, rain or drought all contribute to the safety, playability and aesthetic quality of our sports fields. Weather may affect the pesticides or herbicide we select to control a fungus or weed infestation problem. By comparing past PCI's with the present I can know determine what products worked, what renovation practiced worked and I can now make educated management practices and budget decisions based on the information I obtained from the PCI.

What's on the horizon? At STMA's National Conference in Orlando 2 years ago, I had the pleasure of meeting Ian Lacy, who is with the Institute of Groundsmanship in the United Kingdom. We became friends while discussing the PCI and the United Kingdom's Performance Quality Standards (PQS). Ian and I picked up our friendship again in Austin this past January and soon began talking about the PCI and the PQS and where both of these valuable tools are headed.

We agreed to beginning looking at both documents to see if they could be merged to become one. Imagine having a document that meets the needs of Sports Turf Managers around the world! I have begun to look at developing a database for the information collected on my PCI's so that it would be readily available for applying management practices, budget and board meetings and for media releases. I am also hopeful that the database can then be merged with the use of a specific sports field. Merging these two data bases may provide valuable information into the management practices used vs. the sport or sports that is played on them. There is work to be done in the future to hone this tool into what it really can be, maybe the most valuable one we have in our tool box.

There are three things I don't leave my office without when evaluating my sports fields: the PCI, my maintenance standards and a passion for what I do. ■

Mike Tarantino is director of maintenance and operations for Poway (CA) School District, and an STMA board member representing Schools K-12.

About the STMA PCI©

SOME OF THE COMMENTS that were made by PCI Task Group members and those who "piloted" the PCI are:

- "It is a great start to something that can be used as a tool for managers to tune their programs, and help as firepower when asking for a better budget."

– Peter Lockwood, Head Groundskeeper, Nashville Sounds, Tenn.

- "The worksheet is a good tool for assessing your fields. It forces you to take the blinders off and really look more specifically at your field instead of generally, as I tend to do when conducting a daily inspection."

– Scott Pippen, Superintendent of Streets and Parks, Village of Lincolnshire, Ill.

STMA members who have already used the STMA PCI in its formative stages, either those in the Task Group or those in the Focus Group, state several reasons that the STMA PCI is a useful tool to them in their current situation. There are primarily three reasons cited:

- "will allow me to go to my administration to justify additional resources"
- "a tool for my media relations department"
- "it will help me to communicate with all the constituent groups involved: parents, coaches, players, administrators, etc."

STMA is dedicated to making the STMA PCI a useful tool for the Sports Turf Manager. If you have any questions, comments, or concerns, please note them in the Comments section on Page 4 of the STMA PCI Worksheet and fax or email them to STMA at 785.843.2977 or PCI@STMA.org. If you need more immediate assistance, please call STMA Headquarters at 800.323.3875. ■

To download and print the STMA PCI in its usable format, please log on to www.stma.org.

2010 NFLPA Playing Surfaces Opinion Survey

NO MATTER WHICH SIDE YOU TAKE on the current labor situation in the National Football League, or if like most people you just shake your head over egos that can't divide up $9 billion, we can all agree on one thing—results of the annual playing surface opinion survey the players' union conducts sure are interesting! The survey was conducted by the NFLPA at team meetings during September through November 2010. A total of 1619 active NFL Players from all 32 teams voluntarily participated. Here are selected results from the latest version:

Which surface do you think is more likely to contribute to injury?
- Grass 15.9%
- Artificial Infilled 82.4%

Which surface do you think causes more soreness and fatigue to play on?
- Grass 9.2%
- Artificial Infilled 89.1%

Which surface do you think is more likely to shorten your career?
- Grass 7.6%
- Artificial Infilled 89.7%

What type of field do you prefer to play on?
- Grass 69.4%
- Artificial Infilled 14.3%
- No preference 9%

How significant a role do you believe NFL grounds keepers play in the performance of NFL grass playing surfaces?
- 75% say "very significant"

How significant a role do you believe NFL grounds keepers play in the performance of NFL artificial infilled playing surfaces?
- 23.7% say "very significant"

How much do you value your grounds crew's work on your practice fields?
- 73.3% say "strongly value"

MOST RE-OCCURRING COMMENTS

Artificial turf is much harder on the body with joint soreness and makes for tougher work.

Southern grass fields are the best.

Fields that are used for baseball and football leave hard infield that is difficult to play on. When you have one foot on grass and one in hard dirt, injuries are bound to happen.

If it's grass, enough of the high schools, colleges and concerts playing on it the day before.

If it's a cold weather grass field, these fields are battered to heck. The grounds crew can only do so much.

We need a league wide standard/regulation policy for every field if the NFL really cares about the safety of all players.

SUGGESTED CHANGES FOR IMPROVEMENT

Artificial surfaces should be required in cold weather cities.

We need better practice fields. Level and eliminate holes, divots and uneven ground.

Cold weather grass teams should have road trips late in the season to avoid playing on frozen surfaces. There should be no games played on grass fields the same weekend as another event.

Even [placement] of rubber material is needed, specifically comfortable give in twists and turns and level in height with no bumps.

Every stadium should be evaluated properly every week prior to game day.

If it's a multi-purpose stadium, mandate that it's artificial. If only one team [uses] then it can be grass. Force Chicago and Pittsburgh to go turf.

More time and money need to be spent on the fields. College surfaces are better.

Use softer bermuda grass with sand.

No more non updated artificial turf that is hard and over filled with ground up rubber and cheap top layer grass that you can pull off like a cheap toupee like Kansas City. ■

Best/Worst

Best Grass Playing Field
1 **ARIZONA CARDINALS:** University of Phoenix Stadium
2 **TAMPA BAY BUCCANEERS:** Raymond James Stadium
3 **SAN DIEGO CHARGERS:** Qualcomm Stadium
4 **CAROLINA PANTHERS:** Bank of America Stadium
5 **GREEN BAY PACKERS:** Lambeau Field
6 **MIAMI DOLPHINS:** Sun Life Stadium
7 **HOUSTON TEXANS:** Reliant Stadium
8 **JACKSONVILLE JAGUARS:** Everbank Field
9 **DENVER BRONCOS:** Invesco Field at Mile High
10 **TENNESSEE TITANS:** LP Field
11 **WASHINGTON REDSKINS:** FEDEX Field
12 **SAN FRANCISCO 49ERS:** Candlestick Park
13 **KANSAS CITY CHIEFS:** Arrowhead Stadium
14 **PHILADELPHIA EAGLES:** Lincoln Financial Field
15 **PITTSBURGH STEELERS:** Heinz Field
16 **CLEVELAND BROWNS:** Cleveland Browns Stadium
17 **CHICAGO BEARS:** Soldier Field
18 **OAKLAND RAIDERS:** Oakland Coliseum

Worst Grass Playing Field
1 **PITTSBURGH STEELERS:** Heinz Field
2 **OAKLAND RAIDERS:** Oakland Coliseum
3 **CHICAGO BEARS:** Soldier Field
4 **MIAMI DOLPHINS:** Sun Life Stadium
5 **CLEVELAND BROWNS:** Cleveland Browns Stadium
6 **PHILADELPHIA EAGLES:** Lincoln Financial Field
7 **GREEN BAY PACKERS:** Lambeau Field
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16 **WASHINGTON REDSKINS:** FEDEX Field
17 **DENVER BRONCOS:** Invesco Field at Mile High
18 **ARIZONA CARDINALS:** University of Phoenix Stadium

Best Artificial Infilled Playing Field
1 **INDIANAPOLIS COLTS:** Lucas Oil Stadium
2 **NEW YORK JETS/GIANTS:** New Meadowlands Stadium
3 **NEW ORLEANS SAINTS:** Louisiana Superdome
4 **SEATTLE SEAHAWKS:** Qwest Field
5 **DALLAS COWBOYS:** Cowboys Stadium
6 **ATLANTA FALCONS:** Georgia Dome
7 **NEW ENGLAND PATRIOTS:** Gillette Stadium
8 **DETROIT LIONS:** Ford Field
8 **BALTIMORE RAVENS:** M&T Bank Stadium
9 **ST.LOUIS RAMS:** Edward Jones Dome
10 **CINCINNATI BENGALS:** Paul Brown Stadium
11 **MINNESOTA VIKINGS:** Metrodome
12 **BUFFALO BILLS:** Ralph Wilson Stadium

Worst Artificial Infilled Playing Field
1 **MINNESOTA VIKINGS:** Metrodome
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3 **ST. LOUIS RAMS:** Edward Jones Dome
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13 **DALLAS COWBOYS:** Cowboys Stadium

Build the ground work properly when choosing your field surface

IN THE WORLD OF RECREATION and sport design and facility management, few topics can be as hotly debated and contested as the decision of what type of playing surface to provide the user groups. The primary question commonly revolves around whether the newly renovated or constructed field will remain natural grass or be synthetic turf. This decision is clearly one that will be set in place likely for several years, and in the case of synthetic turf, likely for a decade or more due to the difficulty in reverting back to natural grass due to funding limitations most owners have.

When discussion initially begins in scoping out a project for improving the existing field or building a new facility, there are several factors that need to be weighed and discussed at all levels. These factors will typically include:

- Available capital (i.e. initial construction/project) funding
- Foreseeable anticipated annual M&O funding for field/facility upkeep
- Required hours of field use for various end users
- Expectations of a successful sports field
- Alignment of design field type with all parties, including:
  - Governing Board/Owner's final decision makers
  - Owner's Project Team
  - Maintenance Team
  - Design Team
  - User Groups
  - Community at-large/Constituents
- An educated understanding of project issues that may arise during the surface selection process before beginning the actual process

The important tools needed by every owner and design professional are the knowledge and ability to facilitate project discussions and, ultimately, build consensus among stakeholders.

While all of the above factors are key influences in making a successful decision, the last two typically are ones where missteps can have profound effects. This is where advanced pre-planning is essential, and that the owner undertake the necessary time to understand where these issues may lay, and how to effectively address in the decision making process.

The important tools needed by every owner and design professional are the knowledge and ability to facilitate project discussions and, ultimately, build consensus among stakeholders. Creating a forum where a clear message about the project can be disseminated to those outside the decision-making circle, while, at the same time, providing an opportunity for stakeholder comments, desires, and concerns be heard, is a time-honored method used by design professionals to bring all involved parties together. However, if steps haven't been taken to align the desires of all of the interested parties in the design field types and if the issues that can arise during the selection process are not clearly understood, the facilitation process may face a significantly reduced chance for success. This is especially true when the community-at-large is included in the facilitation process.

INCLUDE TURF MANAGERS IN DECISIONS

To not have an advance understanding of issues and concerns of any one group, as well as not have prepared and developed plans to address these issues and concerns, can lead to the quick erosion of project support. It does not take much to undermine months of work and hundreds of hours spent on the evolution of the project if key research and consensus building among all parties is not proactively developed.

One example of where effective facilitation was used was with a city developing new fields in conjunction with a local school district. The public process brought in all the key stakeholders and there was consensus that the fields as planned would serve the needs of the local youth groups scheduled to use these fields.

However, the USGA sand-based fields that were planned (and subsequently constructed), while high-end fields, were not necessarily understood by the maintenance staff, nor was the required water use. While these items should be identified before facilitation processes, the inclusion of the maintenance staff (who were not present at initial project scoping sessions) would have likely shaped what was presented and discussed with the community and user groups.

An example how facilitation can be detrimental when the discussed pre-planning processes and alignment among the stakeholders are not completed occurred with a public agency that wanted to replace several natural grass fields with synthetic turf. The owner's project manager did not fully understand that the agency's governing board was not fully behind the project's objective to use synthetic turf to reduce maintenance costs and increase field use. In addition, the local community surrounding the fields was largely opposed to the proposed project, due to the environmental and health concerns, as well as the identified increased use.

While there was likely nothing that may have fully alleviated these concerns from a small group of neighbors, knowing in advance what the concerns were would have allowed the design professionals time before the facilitation meetings to educate the client on the benefits and issues with synthetic turf, whether real or perceived. In addition, the project manager would have been well-suited to ask superiors whether there was strong support for the project as proposed from all levels, including the decision-makers and governing board. This understanding of the concerns, and where the support was—and most importantly, was not—would have made the facilitation process more effective.

While facilitation can bring up issues, it also can be instrumental in developing clear support and consensus for a project. Work with a public agency recently was completed replacing two existing natural grass fields with synthetic turf. Before the project was begun, the city's project manager in charge of delivering the project completed extensive research on issues other nearby public agencies encountered when reconstructing natural grass fields with synthetic turf and how they were/were not addressed. He also made sure that his superiors and the city council fully supported the project before commencing the work. By the time that the predesign effort had begun, much of the research had been completed about what the key issues would be with the improvements. As it turned out, the community was fine with the synthetic turf fields, provided field lighting was not installed. But this would not have been known without preliminary research and discussions.

Effective facilitation for any project revolves around providing information for discussion and receiving clear comments and full discussion. Hopefully, there is common ground in support for the project from the community and user groups. In order to maximize the opportunity to achieve this goal, the pre-planning research and reinforcement that there is solidarity in the project's support is a key factor in its successful use of facilitation as a means to obtain project support. ■

Devin Conway, PE, is principal at Verde Design, Inc., Santa Clara, CA.

Recycling synthetic turf fields and infill material: *case study*

FATHER TERRENCE A. BAUM, a Jesuit priest and president of Rockhurst High School in Kansas City, MO clearly is a believer in the "seek and you shall find" and "ask and you shall receive" approach to life—and high school athletics!

Father Baum asked for a new athletic field before the 2010-2011 academic season began. And he got it.

Father Baum also asked that the old turf and infill be recycled. And he got that, too!

The Rockhurst High School athletic program has been ranked by *Sports Illustrated* in recent years as one of the Top 10 high school athletic programs in the nation. Rockhurst has won 34 state championships in the past 10 years. The mission of the athletic program is to develop strong leaders through discipline, perseverance, and the pursuit of excellence through team sports and physical education activities.

Here's how prayers were answered and dreams were realized for Rockhurst High School administrators, staff and students when their multi-purpose athletic field was installed in only 17 days last summer.

THE CHALLENGE

Earlier last year, Father Baum, Rockhurst High School athletic director Peter Campbell, and director of facilities Delbert Conrad were faced with choosing between repairing their existing athletic field and replac-

>> **EXTRACTING INFILL** from the existing field at Rockhurst High School. MDH Turf tested, cleaned and recycled the infill using a proprietary technique.

Six steps to recycling and replacing synthetic turf and Infill

MANY OF THE 5,000-PLUS SYNTHETIC TURF FIELDS in North America are approaching the end of their useful life. Maintenance and repair costs are typically so high that upgrading with new turf and infill is usually the best option for facility owners and managers.

MDH Turf, a subsidiary of McAnany Construction, offers six key steps for upgrading turf fields with an effective and progressive recycling solution that the company calls "The Extreme Turf Makeover." MDH has found that recycling turf and infill can save a client approximately 20% of the total budget on a new turf and infill installation project, reduce fuel consumption for transportation of the old turf and infill to landfill, and eliminate waste in landfills.

The steps and timeframes outlined below are provided for a typical 100-yard football field based on MDH's actual experience.

1 ASSESS THE FIELD CONDITION

Evaluate the condition of existing infill, the grade of the field, condition of existing nail board, and any potential drainage issues. If needed, the general contractor or project owner will engage an architect with athletic field design experience to assist with making adjustments to the grade of the field. **Estimated timeframe: 2 days**

2 EXTRACT EXISTING INFILL

Using an extraction device, remove all existing field infill. MDH has found that about 95% of the existing infill can be removed and reused; however, usually only about 2/3 of the original infill is available for salvage due to infill loss over the 8-10 year life of a typical synthetic field. **Estimated timeframe: 36 hours**

3 RECYCLE EXISTING INFILL

Test the infill to ensure that it meets or exceeds GMAX standards for adequate shock absorbency. Sieve the infill to sort out sand and other debris. Clean all extracted infill (MDH is able to remove 99% of all bacteria removed from contaminated infill through a patented cleaning method.) **Estimated timeframe: 7 days**

4 REMOVE EXISTING TURF

Remove existing turf. Transport all sections of turf that is in good condition and make it available for other landscaping, sports or recreation applications. Ensure that the base grade of the field is in good condition and is free of infill spillage. **Estimated timeframe: 2 days**

5 PREPARE THE FIELD

Grade the field using laser equipment. Re-grade the subsurface to meet field specifications. Repair the drainage system and nailers as needed. Secure certification from the architect and turf installation crew that the requirements for the field are met and adjust the grading of the field as needed. To expedite the preparation process, the contractor or project owner may choose to assign multiple work crews to various parts of the field. **Estimated timeframe: 16 hours**

6 INSTALL NEW TURF AND RECYCLED INFILL

Install new turf. Approximately 93,000 square feet of new turf is typically needed for a 100-yard football field. Stripe the field for use by multiple sports. Apply numbers. Insert home team logo. Add freshly recycled rubber infill and appropriate amount of new rubber infill to meet the needs of the field. Approximately 300,000 pounds of infill is typically needed for a 100-yard football field. **Estimated timeframe: 10 to 12 days**

Turning to several general contractors for recommendations and estimates, Rockhurst administrators were being told that their athletic field renovation would take between 4 and 6 weeks

ing the field altogether. The turf field was in almost continuous use for football, soccer teams, lacrosse, and physical education classes. When their grass facilities were unplayable due to weather conditions, the school's baseball and track and field teams also used the turf field for practice. Their old synthetic turf field was 9 years old and the warranty had expired. Estimates of up to $80,000 to recondition the old turf field for the next school year deemed the repair option to be impractical and unacceptable.

Turning to several general contractors for recommendations and estimates, Rockhurst administrators were being told that their athletic field renovation would take between 4 and 6 weeks, and that the work would have to be done after football season ended in late 2010. Only one of the general contractors in the mix offered a much shorter time frame, MDH Turf, a new subsidiary of McAnany Construction, Shawnee, KS. McAnany and MDH committed to completing the field in only 2 weeks.

"EXTREME TURF MAKEOVER"

Assigning Ed Huggins as project manager, MDH Turf implemented a design/build solution that included TigerSports Americas, Inc., as the synthetic turf supplier and VSR Design as the architect for the field design enhancements. The TigerTurf US operation is based in Austin, TX while VSR Design is out of Overland Park, KS. Huggins has had a working relationship with VSR Design for more than 20 years.

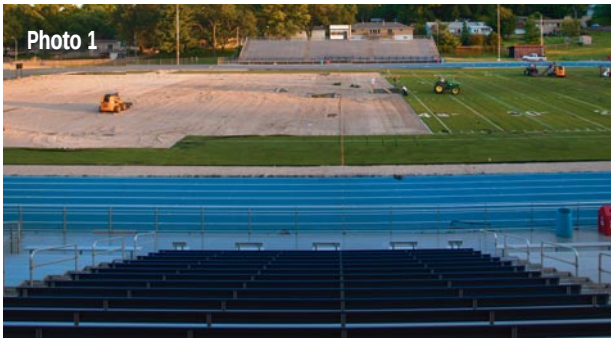
"The level of care and concern from the collective team impressed me quite a bit. McAnany had reps from TigerTurf meet with officials from our school to explain about the durability and other characteristics of the TIGER XQ 48 turf product that they had specified. I had every confidence that McAnany and MDH Turf would take special care with the sub-surface and grading of our field," Father Baum said.

"McAnany also offered up and promised a short, 2-week turnaround time so that our summer camps and practices for football and soccer would not be hindered. It became apparent within only a few days of beginning the project that they were keeping their word. They had crews working through the blisteringly summer heat to stay on schedule," Father Baum said.

The project got under way on July 23 and wrapped on August 9. Undertaking what it now calls The Extreme Turf Makeover, MDH employed three continuous shifts of crew members for several consecutive days to meet the tight project schedule and install 103,000 square feet of new turf.

Recycling the old turf and rubber infill was an additional requirement for the Rockhurst project. Using an extraction device

>> **Photo 1: THE REMOVED AND RECYCLED OLD TURF** from the field was made available for other sports, landscaping or recreation applications. >> **Photo 2: THE GRADE** of the field was adjusted to accommodate a variety of uses by the school's athletic department. >> **Photo 3: MDH Turf** added freshly cleaned, recycled rubber infill as the final step for the new Rockhurst High School synthetic turf field. The project was completed in only 17 days.



over a 3-day period, MDH was able to remove approximately two-thirds of the original rubber infill. The infill was then tested, cleaned and reserved for reuse on the new field. Work crews removed more than 100,000 square feet of old turf, which was salvaged and made available for other turf projects in the Kansas City area.

"Recycling the turf and infill saved about 20% of the total estimated cost of the new field. And we were able to eliminate the need for transporting the old turf to a landfill, which would have consumed approximately 1,000 gallons of diesel and added about 350,000 pounds to a landfill site in another state," Huggins said.

Vance Rzepka, founder of VSR Design, determined through an onsite assessment that the existing grade of the field and the perimeter constraints of the track and field events would present a significant challenge that had to be addressed. He also had to factor in the school's need to accommodate many different sports with the fewest compromises in adjusting the field design.

"The existing track and field events in both 'D' areas and the shape of the sub-grade limited how much grading could be done to the finished surface. The existing field had a crown on one end and was sloped from the 30-yard line to the back of the end zone. The ability to make the crown uniform along the entire length of the field was limited by the sub-grade and drainage rock thickness. Also, the addition of perimeter netting to allow lacrosse practice during track practice added a level of complexity to the coordination of the entire project," Rzepka said.

Rzepka worked closely with MDH Turf throughout the laser-grading process and also supervised and approved the placement of the additional rock that was needed to prepare the sub-surface of the field.

"Quality control was happening real time throughout every stage of this project," Huggins said. "The TIGER XQ 48 product was the best solution for Rockhurst High School since we were well aware of the extremely high usage that this field would have to withstand," said Bob Aurich, regional sales manager for TigerSports Americas

With the completion of the field renovation accomplished in early August, Rockhurst High School coaches and student athletes were able to get ample time on the practice field to gear up for the competitive fall season. The varsity football and soccer teams went on to win state championships after their first season of play on their new field.

"We have had zero problems with drainage, and the players love the resiliency of the turf," Campbell said. "Our coaches were especially happy to have been consulted and updated throughout the entire renovation process. Having Delbert Conrad closely involved every step of the way facilitated the entire process. Delbert was empowered to make decisions that kept the project moving forward effectively. If changes needed to be made, they were made quickly and to the complete satisfaction of everyone involved." ■

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How to ask for A RAI$E

SO YOU THINK YOU DESERVE A RAISE.
Chances are, your boss hasn't voluntarily showered you with bonuses or even offered you more than the annual cost-of-living raise, if even that. So it's up to you to make the first move. Here is some advice from eHow.com:

First, make sure you deserve a salary increase. Make a list of what you've done; what are your recent achievements? Write them down. Read them and think about what you did to create positive change or avert disaster. If you can't think of any good examples, you probably shouldn't be requesting a raise.

Once you have a list to work with, your next step is to figure out a successful strategy for delivery. Having the goods only gets you part of the way; timing and delivery will either seal the deal or not. Devising a strategy is all about research and preparation. You should know what the salary standard is for your industry, what objections the boss might raise, and how to deliver your pitch without backing down too soon.

Figure out exactly what you want. You also must consider what other options exist besides a one-time raise. This will help you when bargaining time comes. Compensation is not just limited to money: Perks can be great, too. You might want to think about more vacation time, tuition, getting a company-paid cell phone or more flexible work hours.

You also should know what your company's raise policy is. Are raises merit-based? Are they fixed cost-of-living raises that everyone gets? Is there a percentage range depending on performance? That way, you can have a more productive discussion once the issue is on the table.

Predict your boss' objections. If the boss says the company does not have money in the budget at the present time, ask when you might see the raise you hoped for. Or you can ask for feedback on what you need to do to get the raise you want and get a schedule of goals in writing so you both can remember what you agreed on. If the boss offers a completely different compensation package than you had thought of (and it might be a better one) ask to be allowed to sleep on it before agreeing. If it's unfamiliar to you, the plan may have a drawback you haven't noticed.

If the boss delivers an outright "No!" for an answer, you don't have to take it lying down. Naturally, this is not the answer you want to hear, but there are ways of dealing with it. Try your spectrum of compensation options, ask for feedback and finally convey your sense of dismay about the answer. You can always tell your boss you would like to take this discussion to the next level and target someone higher on the chain of command that might agree with you and overrule your immediate supervisor. But be prepared to raise some hackles if you take this approach; it is essential you do it openly and not behind your boss' back. Your boss will eventually find out anyway.

There are several conditions to consider when weighing your options. One is how far off the annual review is. If it is several months away, you might want to strike when you have recently had a stunning success. That way, your achievement won't lose its luster, and the boss can't claim amnesia when you bring it up a year from now. If you decide to have the raise discussion when your boss is not expecting it, or if your company does not have regularly scheduled formal reviews, let her know you want to set aside time to sit down and talk about your performance and compensation.

Another opportune time to ask is when you have been handed more responsibility in your job or a new position entirely. While it would seem that more money is a natural consequence, you sometimes have to bring it up yourself. Yet another time to request a raise is when you notice that your job responsibilities have gradually morphed into a beast of burden but your paycheck has somehow been left behind.

On the other hand, if your review is coming up, it could be the perfect moment, since you and your boss will be on the topic anyway. Furthermore, you will have some time to get some good deeds under your belt and build your case.

It is also essential to be sensitive to external pressures, such as the overall economy and how your employer is doing financially. If the economy is in a major recession or your employer is struggling to stay in the black, it is clearly not an appropriate time to demand a raise, no matter how darn good you are. Bide your time, and hopefully the company will recognize your efforts later. ■

Tree selection and planting

Recommendations for optimum planting success

WHEN SELECTING A TREE FOR PLANTING, there are several considerations to take into account. John Kmitta, editor of *Arbor Age*, *SportsTurf*'s sister magazine, recently asked Daniel Butler, author of "How to Plant a Tree," for suggestions to maximize planting success.

Q: What type of planning should be done before planting a tree?

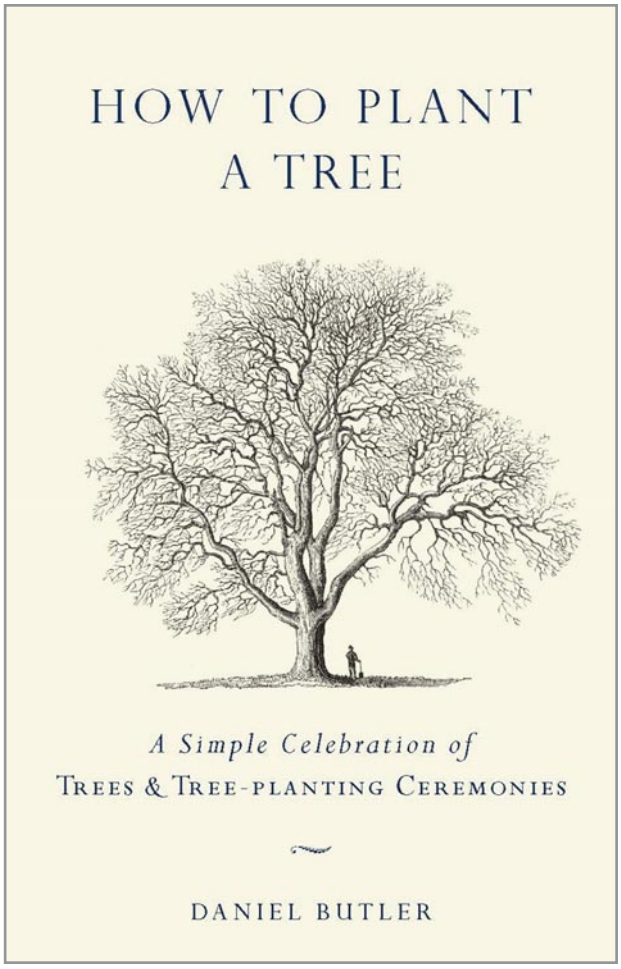
A: The most critical aspect has to be thinking ahead. It's very easy for enthusiasts to prepare the ground meticulously — clearing the site and getting the soil and protection for the tree just perfect — only to overlook how things will look in 30 or 40 years time. To be fair, the problems usually lie with the client: many want 'big' results quickly. When they put in an oak or a redwood, they just can't picture how quickly this little sapling will completely dominate its surroundings. So I would say one of the most important skills any tree care expert needs is a doctorate in client psychology — the ability to persuade the homeowner, planner or architect of the need to scale things down and, more importantly still, to convince them the new realistic idea was actually their own brainchild.

Q: What recommendations would you make in terms of trees that tolerate urban conditions?

A: Obviously the tree has to be relatively tough, drought and pollution tolerant, but scale is probably the most critical issue. Big trees take up a huge amount of light and space — and, in time, spreading branches and foliage can easily create problems. At best this requires costly maintenance, but at worst it can end up in costly litigation and even the loss of the tree. That's the bad news, but the more constructive path is to think in terms of maximizing impact. I come from the university town of Oxford. Fifty years ago someone had the brainwave of planting ornamental cherries along all the main roads in and out of town. These never produce any fruit, but they flower for almost a month and have wonderful purple leaves. In other words, they are a wonderful addition to an already beautiful city for at least half the year.

Q: What suggestions do you have for matching the tree to the planting site?

A: That's an incredibly difficult question. Obviously there's no point planting a tropical tree in an area where there's winter snow for months on end, but given that, I don't think there are hard and fast rules. I love all trees in their natural setting, so I would tend toward planting native species. That said, I live in Wales on the western fringe of Britain, and some of the most spectacular trees locally are Californian sequoias planted by Victorian entrepreneurs 150 years ago. They are just stunning in our Celtic valleys. And I also love utilitarianism — I just adore the idea that as well as looking beautiful in its own right, a nut or fruit tree will produce a natural bonanza of nutrients for both man and wildlife in due course. So, what's the answer? Well, in the end, the most important thing is to remember that the trees we are talking about are for people. Therefore, it's critical to work with the client and, better still, the local community — what do they like? Do they want just the aesthetic beauty of wonderful bark, blossom or leaves



>> **DANIEL BUTLER** is a former editor of Tree News, the in-house magazine for England's Tree Council. In his book, "How to Plant a Tree: A Simple Celebration of Trees and Tree-Planting Ceremonies" (Tarcher/Penguin, April 2010), Butler offers a wealth of information on these stately subjects, including details about commemorative tree-planting ceremonies for every occasion. The book can be ordered at Amazon.com.

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— or are they more interested by symbolism in which case a majestic, long-lived, veteran species might be more important.

Q: When is the best time to plant?

A: Again, it varies with location, but in most places the colder months are best. Trees are generally dormant, or nearly so, and are far more tolerant of the stresses involved in transplanting.

Q: What should be taken into consideration regarding climate and soil conditions?

A: Common sense is by far the most important thing. It is pointless planting a mango in Ohio, and a birch is never going to thrive in Nevada. Most trees have evolved to thrive in a particular habitat, and you ignore millions of years of plant genetics at your peril. So, before planting, read up on your chosen species. Yes, you can alter the soil's pH to get something to grow in an otherwise alien environment, but you are setting a millstone around not only your own neck, but those of future generations. If you are in an acid area and you plant an alkali-loving tree, then every couple of years you will have to treat the soil to keep the tree happy. And if you plant a delicate tree in a harsh climate you will need to rush out each fall to shroud the thing with frost-protection.

Q: What suggestions do you have regarding planting of B&B trees versus bare root planting versus containerized trees?

A: Impatience is a very human failing. We all suffer from it and it's one of the biggest headaches when it comes to planting trees. Clients naturally long to see results quickly, so they want a big tree now! This often means putting in a big B&B specimen and involving huge trucks, diggers and cranes. To me this just misses the big picture. Trees grow fast in their early years, but can live for centuries. Smaller, bare-rooted, specimens will usually catch up with their bigger B&B or containerized equivalents within a few years. Indeed, some years back I planted two hedges — one using foot-high bare-rooted 'whips' and the other using 10-foot B&B stock. A decade later the 'whips' are half as high again as their expensive neighbors.

Q: What are your recommendations regarding follow-up care?

A: I wish I could put on a saintly expression and put forward a litany of after-care instructions with a straight face. The truth is I tend to 'plant and walk'. One of the wonderful things about trees is that a healthy specimen planted in the right spot should need very little aftercare. Yes, protection from deer and rabbits can be vital, and it certainly doesn't hurt to clear grass away from the base of the trunk — preferably by mulching — but, in general, the tree should be able to look after itself. If it can't, you've probably planted the wrong tree in the wrong place, in which case you are starting a potentially never-ending battle with nature. ■

John Kmitta is editor of Arbor Age magazine, sister publication to SportsTurf. This interview originally appeared in Arbor Age.