

Environmental management and employee safety

I RECENTLY NOTICED some of the good habits that my two assistants have instilled in the crew in regards to Personal Protective Equipment, such as checking over the equipment safety guards, oil levels and grease fittings. It occurred to me that this magazine would be a great vehicle to share valuable information about how employee safety is tied into sustainable environmental management.

Most environmental issues typically fall under the Environmental Protection Agency umbrella; but there is another organization that we have all heard of, the Occupational Safety & Health Administration (OSHA). Do we take it for granted or worse yet, do we give any thought?

OSHA's Code of Federal Regulations can help guide us to a safe workplace. We all have to follow these federal regulations. Here are a few CFR regulations that pertain to sports turf managers; see <http://www.osha.gov/> to be in 100% compliance.

HAZARDOUS COMMUNICATIONS TRAINING

It is the law to give all of your employees the Right To Know Training annually with their signatures for record keeping and have Right To Know Station visible with Material Safety Data Sheets (MSDS) on all products current and up to date yearly. Your Right to Know Station should be located in a central location within your shop area. Train your employees to know where to find any MSDS for any chemical on a moment's notice. Also explain labeling for potential health hazards from single word labeling:

- **CAUTION** means the pesticide product is slightly toxic if eaten, absorbed through the skin, inhaled, or it causes slight eye or skin irritation.
- **WARNING** indicates the pesticide product is moderately toxic if eaten, absorbed through the skin, inhaled, or it causes moderate eye or skin irritation.
- **DANGER** means that the pesticide product is highly toxic by at least one route

of exposure. It may be corrosive, causing irreversible damage to the skin or eyes. Alternatively, it may be highly toxic if eaten, absorbed through the skin, or inhaled. If this is the case, then the word "POISON" must also be included in red letters on the front panel of the product label.

You should train your employees to know how to react in case of a spill for health or the environment in a safe and productive way. Do you know what chemicals in your shop are labeled "Danger"? You might be surprised to find out that for most of us it is windshield washing fluid. For more information on MSDS training please go to <http://www.osha.gov/html/faq-hazcom.html>.

BLOOD BORNE PATHOGENS & HAZARDOUS SPILL TRAINING

Some preventable measures as indicated by OSHA include:

- Routine use of latex gloves or other precautions to prevent skin and mucous-membrane exposure when contact with blood or other body fluids is anticipated.
- If bleeding is profuse and requires the assistance of a supervising adult, latex gloves should be donned and pressure applied to the wound, keeping the injury above the level of the heart if possible. Medical care should be sought.
- Immediately wash hands and other skin surfaces if contaminated (in contact) with blood or other body fluids. Wash hands immediately after removing gloves.
- The bloodied portion of the athlete's uniform must be properly disinfected, or the uniform changed before the athlete may participate.
- Clean all blood-contaminated surfaces and equipment with a solution made from 1-100 dilution of household bleach or other disinfectant before competition resumes. Use a new mixture for each event, and discard the mixture after each event.
- Practice proper disposal procedures to prevent injuries caused by needles and other

sharp instruments or devices found in the area of the field.

- Although saliva has not been implicated in HIV transmission, mouthpieces, resuscitation bags, or other ventilation devices should be available for use to minimize the need for emergency direct mouth-to-mouth resuscitation.

- Athletic trainers/coaches with bleeding or oozing skin conditions should refrain from all direct care until the condition resolves.

- Contaminated towels, dressings, and other articles containing body fluids should be properly disposed of or disinfected.

A spill of fuel, oil, pesticides or chemicals more than a gallon is classified as a hazardous spill. To avoid harm to health and environment you should train and document preventable measures for all kinds of spills. Also plan and prepare for the worst and hope it never happens. Maps indicating emergency exit routes for each building should be posted by the elevator and exits on each floor to aid you in locating emergency

TOP 11 national EPA VIOLATIONS

1. Waste label not properly filled out (on both sides, need complete information).
2. Weekly inspection of the satellite accumulation or main/central accumulation area NOT being performed.
3. Full container remaining in a satellite accumulation area for more than 3 days.
4. More than one container per waste stream (type of waste).
5. No impervious base (secondary container requirement). All waste containers must be stored in a compatible secondary container in order to contain spills.
6. Required annual training NOT documented (Hazardous waste and spill response training).
7. Open waste container.
8. Satellite accumulation area not under control of the staff generating the waste.
9. Spillage or leakage of waste (including contamination on the container).
10. Failure to determine waste as hazardous. (e.g., it is clearly waste like but there is no waste label.)
11. Satellite accumulation area NOT at or near the site of generation. (e.g., Not across or down the hall, or if it is, use secondary containers to transport.)

equipment, and in leaving the building during emergency evacuations. Also:]

- Notify your Emergency Coordinator and your neighbors for back up.
- Notify the Environmental Health and Safety Office (EHSO).
- Review MSDS and request additional advice from EHSO.
- Locate the spill kit and other needed material.
- Choose appropriate personal protection according to information given in MSDS.
- Wear chemical resistant gloves, safety glasses and/or a face shield.
- Wear a coverall and/or apron.
- Use appropriate respiratory protection if permitted to do so.
- Work in pairs, never work alone.

GENERAL SPILL CLEANUP PROCEDURES

- Apply the absorbing or neutralizing material to the spill according to the hazardous characteristics of the spilled substance.

- Work inward from the spill perimeter until the spilled material is covered.
- Scrape and sweep contaminated absorbing material into a dust pan, place in a sealed container.
- Wet mop contaminated area if spilled material is not water sensitive.
- Collect the spill clean up material in a leak proof container.
- Label container with a hazardous waste label as to its content (i.e. spill cleanup material & spilled compound name)
- Arrange with EHSO for pick up and appropriate disposal.

Have a spill response action plan for these types of emergency and protocol for employees to act in a safe and responsive way. Have spill kits readily available at gas and diesel pumps, pesticide storage lockers and within your shop maintenance area.

SAFETY

It is the responsibility of the sports turf manager and employer to provide safe work-

ing conditions for their employees. There are many parts to this CFR; however I have tried to simplify:

It shall be the responsibility of the employer to initiate and maintain such programs as may be necessary to comply with this part. Such programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the employers. The use of any machinery, tool, material, or equipment which is not in compliance with any applicable requirement of this part is prohibited. Such machine, tool, material, or equipment shall either be identified as unsafe by tagging or locking the controls to

render them inoperable or shall be physically removed from its place of operation, i.e. guards missing from mowers, weed eaters, edger's, grinders, etc. Any unsafe piece of machinery or parts missing shall be tagged and marked out of order. The employer shall permit only those employees qualified by training or experience to operate equipment



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and machinery. This responsibility falls under the sports turf manager.

Personal protective equipment. Standards in this part require the employer to provide personal protective equipment (PPE), including respirators and other types of PPE, because of hazards to employees impose a separate compliance duty with respect to each employee covered by the requirement. The employer must provide PPE to each employee required to use the PPE, and each failure to provide PPE to an employee may be considered a separate violation. Training. Standards in this part require training on hazardous and related matters, such as standards requiring that employees receive training or that the employer train employees, provide training to employees, or institute or implement a training program, impose a separate compliance duty with respect to each employee covered by the requirement. The employer must train each affected employee in the manner required by the standard, and each failure to train an employee may be considered a separate violation.

The weather is forever changing; you can blame it on global warming or natural phenomena, but if one of your employees gets fatally sick from heat exhaustion or heat stroke, you might be investigated from OSHA and held accountable. Have precautions in place such as: more allowable breaks to cool down, and available water to prevent dehydration. Do your heavy workloads in the morning when it's a little cooler and more relaxed workloads in the afternoon when the sun is beating down with hot temperatures.

FLAMMABLE STORAGE & FIRE PROTECTION

Flammable liquid: Any liquid having a flash point below 100°F, except any mixture having components with flashpoints of 100°F or higher, the total of which make up 99 percent or more of the total volume of the mixture. Flammable liquids shall be known as class I liquids. Class I liquids are divided into three classes as follows: Class IA shall include liquids having flash points below 73°F and having a boiling point below 100°F; Class IB shall include liquids having flash points below 73°F and having a boiling point at or above 100°F; and Class IC shall include liquids having flash points at or above 73°F and below 100°F.

The turf manager needs to have a fire protection plan for all his areas of responsibility. The employer shall provide portable fire extinguishers and shall mount, locate and identify them so that they are readily accessible to employees without subjecting the employees to possible injury. Only approved portable fire extinguishers shall be used to meet the requirements of this section.

The employer shall assure that portable fire extinguishers are maintained in a fully charged and operable condition and kept in their designated places at all times except during use. The employer shall distribute portable fire extinguishers for use by employees on Class A fires so that the travel distance for employees to any extinguisher is 75 feet or less. The employer shall be responsible for the inspection, maintenance and testing of all portable fire extinguishers in the workplace.

At least two exit routes must be available in a workplace to permit prompt evacuation of employees and other building occupants during an emergency. The exit routes must be located as far away as practical from each other so that if one exit route is blocked by fire or smoke, employees can evacuate using the second exit route.

INJURY REPORTS

The purpose of this rule is to not only protect the worker, but to protect your company as well. Worker compensation frauds cost companies and insurance groups a lot of money, having documented records on file can aid in any investigation for fraud claims or law suits. If your company had 10 or fewer employees at all times during the last calendar year, you do not need to keep OSHA injury and illness records unless OSHA informs you in writing that you must keep records. However all employers covered by the OSH Act must report to OSHA any workplace incident that results in a fatality or the hospitalization of three or more employees. If your company had more than 10 employees at any time during the last calendar year, you must keep OSHA injury and illness records unless your establishment is classified as a partially exempt industry.

REASONS FOR OSHA INSPECTIONS

This information courtesy of James B. Meehan, PE, CSP, Iowa State: Don't wait for

an incident to occur to take action on a CFR to be in compliance, this will not help you, the damage is already done. Have someone from your crew to volunteer as a safety officer and help aid you in finding deficiencies and correcting them. Remember to document everything and file it accordingly, this can only help you in an event that some unfortunate incident happens, you are well covered with documentation training, PPE employee issues, etc. There are several ways you might find yourself getting inspected, however, the most common are:

Imminent danger: Allegations of an imminent danger situation will receive highest priority. The inspection will be conducted within 24 hours of notice of the imminent danger to OSHA unless extraordinary circumstances exist.

Fatality and catastrophe: Accidents will be investigated if they include any of the following conditions:

One or more fatalities;

Three or more employees hospitalized for more than 24 hours;

Significant publicity.

Program inspections based upon Federal OSHA priorities.

Employee or ex-employee complaint: Complaints are investigated by inspection or by letter. If OSHA formalizes the complaint by a letter, your letter reply to the complaint is a serious report, not to be taken lightly. Complaints to OSHA that are signed by an employee will always result in an inspection. The inspection, however, may be limited to the items in the complaint.

Programmed inspection: OSHA policy requires that programmed inspections will be conducted in industries where OSHA expects to achieve a significant impact or has targeted specific hazards.

Follow-up inspection: OSHA can re-inspect to assure that an employer has abated the violations that have been cited. Fines are usually approximately ten times higher for "Failure to Abate" citations.

TIPS TO HELP YOU GET IN COMPLIANCE

From the point of view of the OSHA inspector:

Don't make me wait. It just tells me you're not ready. Nothing you can do at the last minute is going to make much dif-

TOP 10 national OSHA VIOLATIONS

- | | | |
|-------------------------|-------------------------------|-------------------------------------|
| 1. Scaffolding | 4. Respiratory Protection | 7. Powered Industrial Trucks |
| 2. Fall Protection | 5. Lockout/Tag out | 8. Ladders |
| 3. Hazard Communication | 6. Electrical, Wiring Methods | 9. Electrical, General Requirements |
| | | 10. Machine Guarding |

ference anyway.

It's best to be open with me.

Don't try to block my line of site by bringing a bunch of employees along on the walk-through. I'll wait until I get to see what I want to see. Some of us use digital cameras. Some of us even videotape the inspection.

Be prepared to answer questions. Have all required OSHA documents, including those outlining safety plans, ready for me.

Don't discourage employees from talking to me. I'll talk to them one way or another. I find ways to slip employees my business card, and once I do, they usually call. If necessary, I'll get a subpoena to talk to your employees.

Don't lie to me. That makes me angry.

Think about hazards, not just standards, when you evaluate your workplace for safety. I look for hazards, not standard violations.

Have your training documents in order. I do look at them. If you have Hispanic employees, make sure you have documentation that they understood your safety training.

Plan ahead and designate a person or people who will meet with me. Make sure the person is prepared. It doesn't matter to me whether you have a full-time safety manager or not. That doesn't make me any tougher or easier on a company.

Check out OSHA's Field Operations Manual for inspectors. Even though it's written for inspectors, it's available to anyone for free on the OSHA website (you can download a PDF. It's a great resource to prepare any company for the possibility of an OSHA inspection.

BACK TO THE EPA

In 1976 Congress passed the Resource Conservation and Recovery Act (RCRA). This regulates hazardous and non-hazardous waste from our facilities. We all store oil, gasoline, pesticides, antifreeze and other chemicals. We all change our equipment and vehicle oil, antifreeze, gasoline and change out our florescent light bulbs from our shops, interior and exterior of buildings and parking lots. But how do we store them when they become waste?

Hazardous storage items could be motor oil, solvents, gas, antifreeze, paint, batteries and other chemicals. All containers must be secure and placed on or have secondary containment in case of spills or leaks. Hazardous waste storage items like used motor oil, used antifreeze, used gasoline and other used or contaminated chemicals along with burned out florescent light bulbs must be labeled with substance and have placards to identify their dangers. Also every state might have different regulations and protocol for hazardous storage and hazardous waste storage. Please go to <http://www.epa.gov/osw/wyl/stateprograms.htm> for your state's regulations and laws to be in compliance.

Finally, there is not enough room in this article to list every CFR that pertains to our sports turf industry however, we cover the es-

entials. Always cover yourself with documentation. A lot of us might already be in compliance with OSHA and the EPA; however we all need to showcase our environmental and safety efforts and procedures within our organizations.

I would like to challenge my cohorts to showcase their environmental and safety practices in future articles. There are tough laws and regulations coming down the road simply because of the finger pointing game that has been played over nutrient management or worse yet the green washing epidemic that has taunted our turfgrass industry to cover it up.

I commend all you sports turf managers that belongs to or are certified through an environmental organization, but remember we have to lead the way, not the organization. We have to implement change not tomorrow's sports turf manager. Let's hear what everyone else is doing and let's learn from each other. Let's all lead by example for a sustainable tomorrow. ■

Kevin Mercer is superintendent of grounds at St. Mary's College of Maryland.

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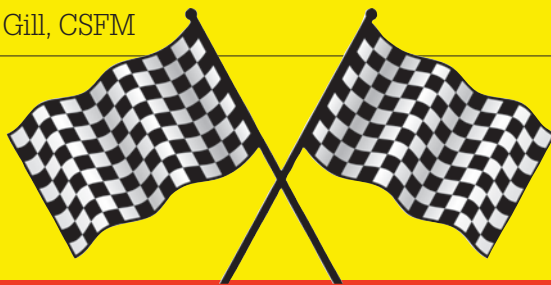
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PAINTING DAYTONA SPEEDWAY LOGOS

tougher than passing on the high side

RACE LOGOS have long been an important part of racing. They are just as much a spectacle for fans as they are an effective advertising tool for the sponsors. Race fans certainly take the logos for granted and probably don't give much thought to how they are produced but imagine a big race at Daytona without the Daytona logo front and center in the infield.

Kenny Bogner and Missouri Turf have been painting the Daytona logos since 1998. I have been working for Kenny for several years now at the Kansas Speedway and now on the traveling crew for as many races as my day job will allow. Here is a recount of my recent trip to Daytona with Kenny; also with us were veteran logo painters Tony Wagoner and Kenny's son, Justin.

After flying in to Daytona late Saturday night, our workweek starts early Sunday morning. As we drive to the maintenance facility located behind turn 2, I notice the 3-story high wall of earth and turf that is the structural support for the near straight up banking of Daytona. The backside of the tracks turn is so steep that it must be mowed with a remote control mower.

At maintenance, after uncrating the equipment and supplies, the first task is to sort through dozens of white, plastic 55-gallon barrels to find the correct patterns, or stencils if you prefer, for the 2012 Coke Zero 400 race weekend. Yes, I said 55-gallon barrels. These logos are so big that the patterns barely fit into the barrels for shipping and

storage. The Daytona letters and flags alone are 200 feet long and 80 feet high. This pattern is so large that it is in three separate pieces requiring three 55-gallon barrels for storage.

For this race weekend, we have 11 patterns to layout and paint including Nascar.com, Subway Jalapeno 250, Sprint Cup, three Coke Zero 400's, 7-11 Qualifying Day, Nationwide Dash for Cash, TNT, ESPN and, of course, the Daytona logo. All patterns were located except for the Sprint Cup and NASCAR.com. We later found out that those patterns were still at the Kentucky Speedway and had not yet been shipped to Daytona. To anyone else, this would be a major problem but Kenny and Justin are not concerned. If the patterns don't make it by Wednesday, they will just lay it out using gridlines in the grass. I am always amazed how they can remain so calm when things don't go as planned.

Since our rental car won't hold much paint, the speedway supplies us with one utility golf cart and a 1980-something half ton Chevy pickup. This truck is perfect because we really don't care if we get a little paint in the bed or on what's left of the seat and it runs well most of the time. Just have to remember to tap hard on the gas pedal when it reaches 15 mph to get it to shift to second. I guess that makes it a semi-automatic transmission. On this first day the old truck is loaded with staples, strings, a rolling tape measure, dozens of cans of white aerosol paint and as many 55-gallon drums of pat-

terns as will fit in the rusty old bed and we're off to the track.

We drive under the backstretch bleachers, through an opening in the concrete wall and we are on the track. We make a left turn towards turn 2. As we approach the turn, I was truly in awe of the steepness of the banking. I really think that if we drove the old Chevy up the banking, we would almost immediately start rolling over right back down to the apron. There was a track services crew replacing foam behind the safer barrier. It is so steep; they had to use a telescopic forklift to reach up to the wall from the apron to provide support as they worked at the top of the steep bank.

We continued our trek around the famous track until we reached the 7-acre infield. I turned off the noisy old truck and then heard nothing. The track was strangely quiet considering there would be a major racing event here in about 120 hours. Daytona Grounds Manager, Sam Newpher, had the bermuda-grass perfectly cut to about $\frac{3}{4}$ inch. Kenny's first task is to lay out and string the centerline that stretches from pit entrance to pit exit, parallel to pit road through the infield. Then, using the start/finish line as the center line perpendicular to the string, he measures toward pit entry and again to pit exit to set locations for each of the massive logos. The Daytona logo is set in the middle and below the string line, the Coke Zero logos are on either side of the Daytona logo and centered on the string line and all other logos are outside of each of the Coke Zero logos and



above the string as viewed from the bleachers.

Now that we have the logo locations, it's time to roll out the patterns. As we struggle to pull the huge sheets of carefully folded and rolled plastic out of the barrels, we are overcome by the stench of stagnant water that has been sealed in the barrel for months while stored in the Florida heat. There is no time to dry out these patterns; we have to put them away wet.

After we unfold the pattern, we pull it tight against the string and center it to the mark. Then pull the corners tight and staple one side. Then one of us will start stapling the top side and another will staple the bottom, then the other end. Once stapled tight, we "dot" the pattern with white turf paint. When complete, the plastic sheet pattern is immediately removed. The patterns are always folded the same way for storage which makes it much easier to lay out. Folds are always left to right toward pit exit, then rolled toward the bleachers. This process is repeated until all patterns have been dotted in the grass.

Due to the heat and bright sun, we want to finish the layout before lunch to avoid burning the grass through the clear plastic sheeting. The next step is to string all straight lines within the logo. Kenny believes that the logo should look as good at ground level as it does from the bleachers or the press box cameras or even from the blimp. He does not like crooked lines. All straight edges are strung as are the tops and bottoms of all lettering. This really is the difference in an average looking logo and a masterpiece. The many tight strings are one reason why it is very important to wear high top, waterproof boots when painting logos with Kenny. Of course you want to keep your feet dry but also to keep from getting your ankles cut by the strings when you trip over them.

The rest of the day is spent spraying white paint. We run 2 guns from each pump so we are always working in pairs on each logo. While spraying white, we will dust the areas that will be yellow with white as a base coat since yellow does not cover green grass very well on its own. By just dusting these areas, it is still easy to see the edges of the areas that will be painted yellow later. We will spend the rest of Sunday painting white. At the end of the day Sunday, we put the pumps

and tips in water and switch to the really important work of exercising the huge bass in Lake Lloyd.

LONG WEEK AHEAD

When we arrived at 7 am Monday, I was surprised to see that the Florida humidity had turned our bright white logos to a dull, almost light gray shade. I could tell this was going to be a long week! It is still quiet on the track except for the occasional clank of a dropped tent pole and the low drone of forklifts and trucks coming from the parking lots outside the track. One pump was changed to yellow and the other to red. Even though it is fairly easy to change to different paint colors on these airless machines, it is easier yet to just move the pump from one logo to the next painting the same color at each logo.

While Justin and Tony moved through the infield painting yellow at each logo, Kenny and I stayed with the two Coke Zero logos painting red then we moved our pump to the other logos painting the small amount of red in each of them. With such large logos, it is important to apply paint very evenly and as lightly as possible. When finished, we want the logo to look like a uniform carpet of color. This means we must avoid "caking" the paint on the grass by misting on the paint from multiple directions. This is tricky, especially along the edges of letters and shapes.

With almost 60,000 square feet of logos to paint in 4 days, there is no time to use boards to create crisp edges. Instead, we must have a steady hand on the gun and always be aware of where you are in the huge sea of colors. When Justin and Tony finish yellow, they switch to light blue. Kenny and I are in red most of the day, switching to black to finish the day. But of course, the day is not complete until Lake Lloyd provides more lunger largemouths.

Tuesday morning, the track is no longer silent as the seemingly endless fleet of tractor-trailers arrives to unload and mount tires on wheels. Network people have now invaded the space around our 7-acre island of art to string cables and mount cameras and microphones. Kenny and I stay in black most of the day while Justin and Tony finish blues then switch to black also. The winds have really picked up today. When you are trying

hard to mist paint wind is your enemy especially with black paint. All colors are now first coated and since another mist coat is yet to be done, some black overspray will not cause much of a problem. However, it is important to avoid the overspray onto the green bermudagrass by spraying into the wind along the unpainted edges.

It's Wednesday morning, July 4, and the Daytona International Speedway has become a city in itself both inside and outside the track. Network trucks, race team souvenir trucks, exhibit trucks, RV's and tents are filling the space around the outside. The infield has swollen with team haulers, drivers' motor coaches, more network trucks and NASCAR's fleet of support trucks and equipment. NASCAR officials are measuring and setting up timing equipment, walking the track to inspect the asphalt and the walls. Safety trucks and jet dryers are arriving from Talladega, Charlotte, Chicago and Michigan. Tour trams are passing through pit lane and winding around to the start finish line so eager tourists can take pictures in front of flag stand. No one in this city has taken this holiday off, especially the tired and sore logo paint crew.

By the way, the Sprint Cup and NASCAR.COM patterns are still missing 48 hours before the track goes "hot," the entire left side of the infield remains void of logos, Kenny remains cool while me and everyone else in this temporary city wonder how he can possibly pull this one off. Justin and Tony pressure up their pump to go from black paint to clean water then back to white. They will start the second mist coat of white on everything. This coat of white is critical especially for the giant Daytona letters. This coat must be applied lightly and very evenly so the letters do not show different shades of white.

As Kenny is preparing to lay out and hand outline the remaining logos, an Angel arrives from the shipping and receiving building to deliver two 55-gallon drums filled with the patterns for the remaining logos. I noticed Kenny kneel down and rest his head in his hand. He said he was just stretching his back but I know what he was really doing! Justin and Tony arrived quickly to help us lay out and "dot" both patterns. I had been doing some time lapse video work earlier in the week, but here was an opportunity to set up

the camera once and get time lapse of a very famous logo from green grass to final coat in one day.

We put our pump to white and painted white on both logos followed by yellow, red, blue and black to complete both logos before lunch. The pit road rumor mill was very busy talking about how Kenny's new laser device that was mounted on a tripod along the crash wall above the Sprint Cup logo enabled him to complete that logo in just a few hours. We decided to let the rumors run wild!

After lunch, we put our pump back to white so we could make sure that all the white was second coated in the same day to ensure uniformity of brightness throughout the infield. We finished early and it was a holiday, so of course the only thing left to do is catch more bass in Lake Lloyd before heading back to the condo to enjoy fireworks on the beach.

We had been getting occasional rain showers and the intense heat created the need for Sam to run irrigation Wednesday night. The combination of irrigation, rain and humidity makes it very difficult to hold some colors, especially red, yellow and black. With white second coated and stable, we decided to repaint all red, yellow and blue on Thursday morning. After lunch, we had to finish painting and clear the infield of all of our equipment and paint buckets since practices and time trials would begin bright and early Friday. We decided that Friday night, after the Nationwide race, we would re-paint all black in addition to repairing any logos that get hit as a result of spins or crashes to be ready for the Sprint Cup Race Saturday night.

We were finally able to sleep late Friday morning to rest and recover. Since Sunday, we have loaded, hauled, carried and sprayed more than 320 5-gallon buckets of paint. At 50 pounds per bucket, that is 8 tons of paint. It was time to rest. Kenny flew back to Kansas City to layout and cut new patterns for clients leaving the three of us to deal with the logo carnage that usually results from the typical Daytona "big one" crash. While there were plenty of crashes and the "big one" at the start/finish line, only 2 logos were damaged so we were able to repair damage and re-paint black in all logos by 2:00 am Saturday to end the work week.

Every race and every different logo has

been a new learning experience for me and Daytona is no exception. Working with Kenny and his crew at multiple tracks including Kansas, Richmond and Daytona, I have a new respect for this job. Our crew must make sure every logo looks perfect no matter what the condition of the turf and every track is different. Kenny and Justin have worked hard to develop and teach us new methods

that reduce the amount of paint needed, minimize damage to the turf and deliver top quality logos. ■

Jody Gill, CSFM is the Grounds Coordinator at the Blue Valley School District in Overland Park, Kansas. He can be reached at 913-239-4121 or email at jgill@bluevalleyk12.org.

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Environmental management and employee safety

“WE WANT TO PUT A 5 MILLION POUND STRUCTURE ON THE BASEBALL FIELD, are you ok with that?” This is the question I was asked nearly a year and half before the event would even take place. Knowing full well this was an opportunity the Indians organization couldn’t pass up and an event that most likely no other groundskeeper would ever have the opportunity to tackle, I needed to make a few phone calls first.



Much like the setup for a Supercross event on the West Coast we felt confident about the field, but what about the weather in Indianapolis in January and February? The events were the 2012 DirecTV Celebrity Beach bowl, followed by invite-only Super Bowl party, and post-game Super Bowl party for the New England Patriots.

The best case for this event was the time we had to plan and Indians front office including the groundskeeper in all the field-related decisions. Oh and not to forget, the structure, a portable airplane hangar, would need to be trucked in through the grounds area with only a height of 11’ 4” piece by piece. When completed the structure would stand 372 feet long x 164 feet wide x 66 feet tall. Not exactly “portable.” It would take nearly 3 weeks to setup and 3 weeks to tear down for roughly 10 hours of use.

Since we knew this structure would only be setup on the outfield turf and the field would be replaced entirely, we got a head start on our renovation during the fall before the Super Bowl. Also knowing we only had about a window of 2 weeks to replace the field in the spring, the bulk of the work had to be done before the event. In the fall we sod cut, by hand, the old turf roughly 20,000 sq. ft. and donated to a local golf course. We then removed 3-4 inches of old contaminated sand and the 7-inch column of infield mix that had built up

over the 8-year lifespan of the field. Then we put all the pieces back together, 2 inches of sand, 4 inches column of infield mix, and thin cut Kentucky bluegrass sod from Tuckahoe Turf Farms, thus doing the math dropping the field an inch.

The construction was done in combination with contractors Nolan Thomas and Company and J and D Turf. The field graded to .5% slope out to our tarp drains was finished in about 3 weeks. We did the “infield” portion in the fall for a couple reasons, time frame in the spring but also to give the most wear portion of the field the most time grow-in and hopefully withstand what would be one of the hottest/driest summers of all time.

After many meetings to decide what flooring we would use as a base, we decided to go with a 6-inch road base gravel layer. This would allow for cranes, forklifts, vehicles, you name it to move in and out and turn without the risk buckling like the other flooring options. Before the gravel was in place, a layer of plastic was put down on the field, which would eliminate gravel from moving into the rootzone layer of the field. The 1,000 tons of gravel would be laser graded, watered, and compacted. And the weather issue we thought we were going to have, the guys were wearing shorts and short sleeve t-shirts throughout most of the project. With only one day of snow, couple days of rain, most of the time we had an unseasonably warm winter.

As the gravel started to settle, ¾-inch plywood was laid around the perimeter of the entire structure, which is where the concrete

would be poured. With the massive size of the structure, just over 1 million pounds of concrete would be needed as ballast. Concrete pump trucks located on the left and right field concourses with 250 foot booms pumped concrete constantly for 3 days. All contractors on site knew the importance of the field and stadium and took all precautions to make sure nothing was damaged or left behind. The grounds shop was swept 2-3x a day, no traffic allowed on fall renovation work, and plywood placed to protect outfield warning track and subgrade. The engineers on the project calculated that the weight on the field was roughly 150 lbs/per sq. ft. when the project was finished. With that in mind, we really had no reason to have concern for underground irrigation and drainage.

From there the next 2 weeks the structure skeleton was built and draped with fabric skin and end zone bleachers were built. The four-sided LED board has hung from the ceiling, VIP seating down the sidelines, and then finally 700 tons of beach sand arrived at midnight 4 days before the event. The Operations department watched the ballpark in shifts the week leading up to the Super Bowl; my shift was 5 pm to 5 am. We spent the wee hours of the morning leveling the sand, laying out the playing surface, watching the light guys play with their toys and on occasion playing golden tee or basketball on the Dan Patrick Show set.

When the event was finally underway, the main attraction a 1-hour celebrity sand football game followed by a 1-hour concert with The Fray. After the brief show the sand was covered with 4 x

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8-foot sheets of decking and transformed into a wicked night club scene with headliner Katy Perry hosted by Peyton Manning and Mark Cuban. The following night we hosted the post-game party for the New England Patriots, with acts like Earth, Wind, & Fire, LMFAO, Maroon 5, and Steven Tyler from Aerosmith. The next morning at 7 am crews were at the door to begin tear down.

Once the two 60-ton cranes had de-constructed the structure we had to remove the gravel and concrete. All 1 million pounds of concrete were broken down with a jack hammer and hauled to the recycling plant. The hardest part was removing the gravel base that was now just as hard as concrete. Using a wheel loader, skid-steer, man-power, and a sweeper the contractor, Just Pushing Dirt, had given us the field back with nearly every piece of gravel picked up and a once pristine field now smelled like a pig farm and not one part of the field was destroyed, scuffed, or out of place except the dead turf.

Getting the field back around February 25, my assistant and I tilled the outfield to a depth of about 1 inch. We then used a skid-steer and wheel loader to push the old turf and organic material into piles before contractor Nolan Thomas and his team showed up. The old turf was trucked away to an organic recycling dump site. Nolan was then able to use a GPS guided dozer and scrape off approximately 3 inches of old compacted/contaminated USGA sand. That sand was then trucked to our parking lot and donated to a parks department and picked up free of charge! HUGE SAVINGS! They would use the 2500 tons of old sand as topdressing for their fields.

Taking only about a week's time, the 300 tons (1") of USGA sand was laser graded and sodded with 1-inch-thick cut sod from Tuckahoe Turf farms. Some areas of the renovation that allowed the

Indians to save some cash: We removed the old turf and had it all in piles before contractor showed up in the spring. In the fall we removed and donated all the old turf, no dump fees. All the old sand (600 tons) instead of paying dump fees was hauled off free of charge to golf courses and parks departments. Edging of the new field was all done by the Indians grounds crew. We installed and adjusted all irrigation heads and fixed all the breaks from tilling of the new rootzone. We applied all the rootzone amendments (Endo-Roots & 16-28-12 Starter) and helped out where ever Nolan or Tuckahoe needed us.

The sod which came in dormant was installed the week of March 12 and took roughly 3 days to complete. The sod was pushed mowed the day of installation at a height of 1.25 inch and rolled with a 3-ton roller. We fertilized 3x before opening day with roughly each app at .6 lbs/N/1000 of Nature Safe 12.2.6. We also began introducing our custom blend of Kentucky bluegrass seed (Midnight Star, Bewitched, Bedazzled, and Impact) monthly starting the week of the sod installation. After the first week the reel mower was put on the sod and cut to a height of 1 inch and the baseball season was underway.

As I write this article 5 ½ months after the last piece of sod was laid and the hottest/driest summer on record, the field is performing beyond expectations. Only needing to sod the area in front of mound 1x and the Kentucky bluegrass sod has showed only little signs of wear and stress throughout the whole season (85 games). After successfully completing one of the largest events ever to take place on a baseball field, I now wonder what is in store for us next. ■

Joey Stevenson is head groundskeeper for the Indianapolis Indians.