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Apr 10, 2008



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**SURVEY**

What's your take on the he-said/he-denied back and forth over the alleged use of banned substances by Roger The Rocket Clemens? At stake is his enshrinement in the most over-rated club in the world, the MLB Hall of Fame. Clemens, a seven time Cy Young winner is the most dominant pitcher since my all-time favorite Bob Feller of the Cleveland Indians. (What a contrast in their careers - indeed the times -with Feller serving in the U.S. Navy during WWII at the peak of his career, and Clemens suspected of cheating.)

Dust off his spot in the Hall of Fame. He's clean.	17%
Not only did he do it, he lied about it, too.	83%

## New school construction: Plan ahead for safe, playable fields

Dec 19, 2005  
By:Lynne Brakeman  
Athletic Turf News



This hastily built sports field was full of bumps and hollows that created an uneven, muddy and unsafe playing surface. Jim Puhalla used his 8-step process to correct the surface defects.

"Some things that look easy are actually the hardest to do," observes Jim Puhalla, president of [Sportscape International, Inc.](#) He says it's not as easy to get a well-drained, smooth, safe athletic field as many school planners think. "It all starts in the design phase, that's where I like to get involved."

Puhalla says his company regularly gets urgent requests from school systems that have recently completed a new school construction project, only to find that the "finished" athletic fields are bumpy, muddy and unsafe for play. Generally, no money will have been set aside to properly finish the athletic fields.

"I think it's kind of odd. They'll just build the school and pay no attention to the sports fields," Puhalla says. "They'll have the general contractor clear a wooded area, strip the soil and do the grading. But when it comes to the final work of building the fields, there's no money in the budget."

The result: an uneven, bumpy surface not suited for a sports field. Water doesn't drain properly, low spots become muddy, it can't be mowed properly and student athletes are at risk of turned ankles and knee injuries.

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Puhalla recommends school authorities plan ahead to hire a company with athletic field experience to come in near the end of a school construction project to check the grade and finish the field surfaces before they are seeded or sodded.

"Ask companies about their experience and references from past sports field jobs. You should evaluate companies to finish your sports fields just the way you would evaluate any company you were hiring for skilled work," Puhalla advises.

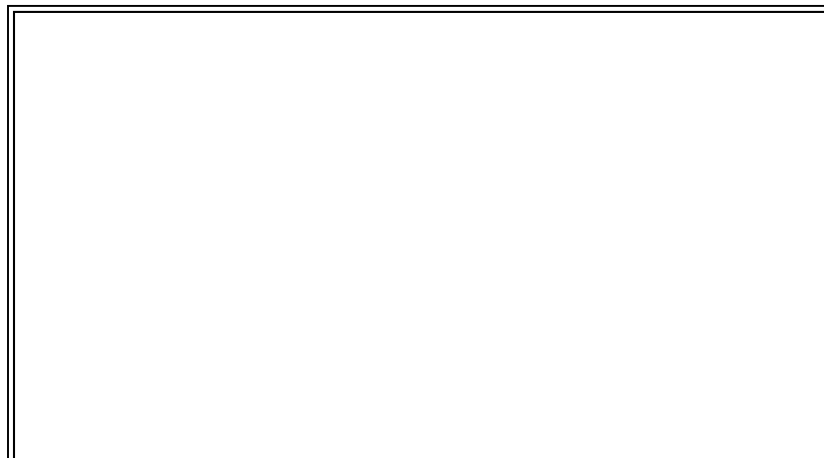
Puhalla recommends eight general steps to correct uneven fields.

### 1. Survey to verify slope

Puhalla says you don't necessarily need an engineering company to survey an existing site. An experienced sports field contractor will use a grid pattern to calculate the slope. It should be a consistent minimum of 1% or a maximum of 2%. If the slope is less than 1%, strip drains should be added to the field to keep the water from collecting. If the slope is more than 2%, it's time to start grading. Most stadium fields are built with a crown in the center, but for all-purpose practice fields, Puhalla usually grades them so they slope one direction — side to side or end to end.

### 2. Import soil for fills

Puhalla says it's important to choose a soil type that matches the existing soil. If you use fine soil over a porous soil, it creates a layering effect that prevents proper drainage. If a field is just a little bumpy, and doesn't need regrading, topdress with coarse sand. But always avoid putting fine materials over coarse materials because it traps water.



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Here, a contractor delivers new topsoil in preparation for the project. Note the operator in the background working on aerating the low spots before the new topsoil is worked into the field.

"If you have a native topsoil field, most other native topsoils will match it," Puhalla says.

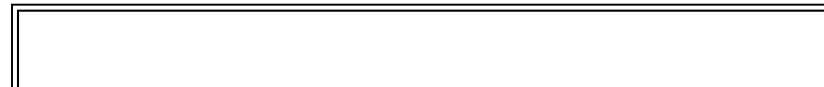
Now that you've got delivery of the proper soil, there's one more step before actually moving that soil onto the field.

### **3. Aerate low spots**

Puhalla says skipping this step will create the potential for soil layering that will trap water near the surface.

"Both air and water need to move through your soils to help the root zones," Puhalla notes. "Layering stops water from moving. If the water doesn't move, the turf roots won't be able to move either."

### **4. Fill in low spots to match existing grade**

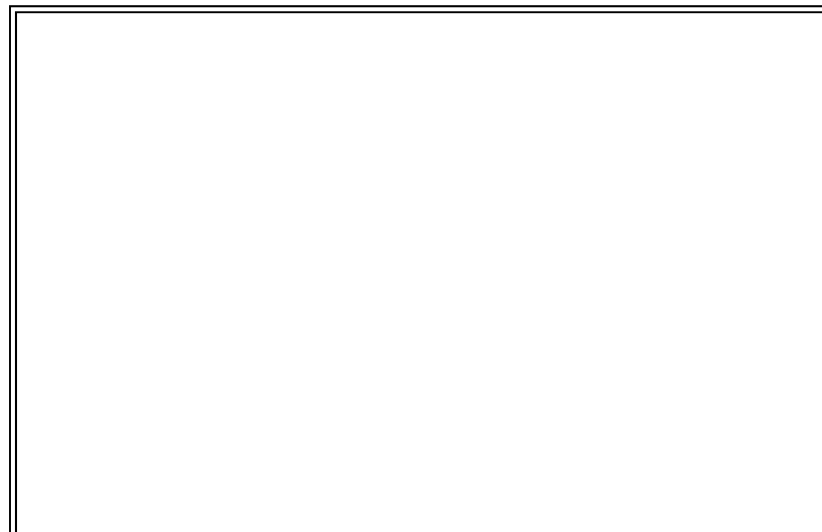




An uneven grading job resulted in low spots that collected water and created hazardous, muddy conditions. Here the skid steer operator moves topsoil to fill the low spot.

### 5. Cut high spots

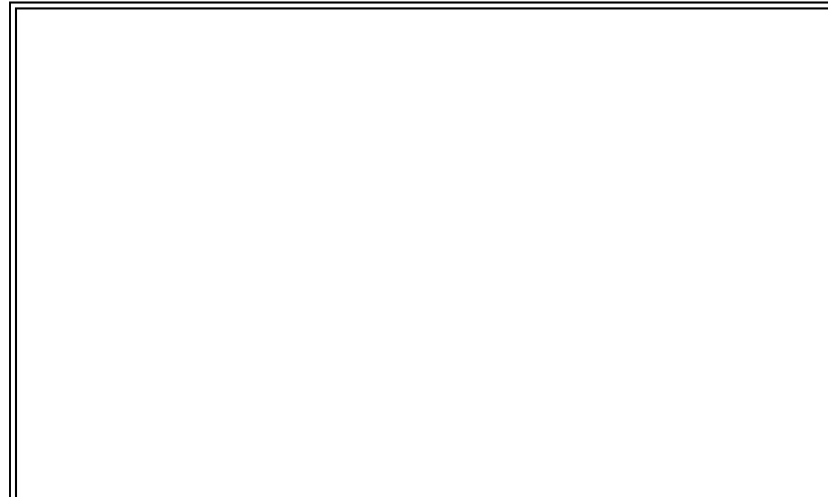
High spots need to be cut down so surface water will run off the field correctly.





### 6. Aerate the entire field

Once the low spots have been aerated and the high spots have been cut down, but *before* the topdressing is laid down, the entire field needs to be aerated to loosen the existing soil and prevent a layering effect.





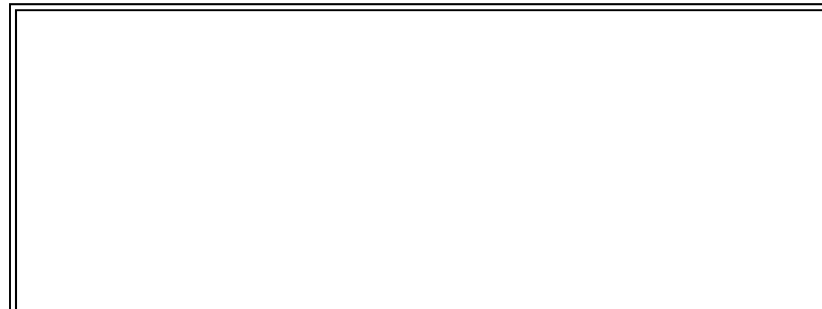
An operator aerates the entire field in preparation for adding a 3/8-in. deep layer of topdressing.

## 7. Topdress to level the surface

Puhalla recommends about one and a half yards of topdressing per 1,000 sq. ft. to create a 3/8-in. deep topdressing layer.

"If you put down too much topdressing you'll kill the existing grass," Puhalla warns. "You don't want to bury the grass."

After the topdressing is added, he drags a 9-ft.-wide leveler across the field to fill in the divots and low spots.



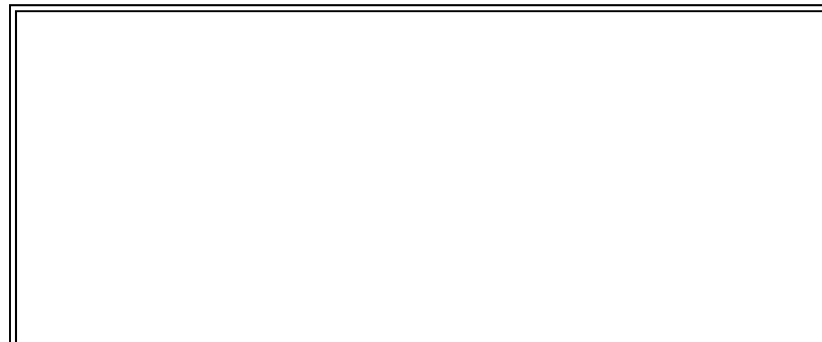


A 9-ft.-wide leveler fills in the divots and low spots to ensure an even surface before seeding.

### 8. Slit seed, fertilize and water

Puhalla says the advantage of using a specialized piece of equipment like a slit seeder is that it creates better seed-to-soil contact. Better seed-to-soil contact means better germination. Spring is the best time for this step.

"We do broadcast seed on top of the ground. But the ones that fall into the slit are the ones that germinate," Puhalla says, adding that spring is the best season for this step.





Slit seeding ensures good seed to soil contact.

There's actually a ninth step to Puhalla's process:

### **9. Keep them off the field**

Puhalla says it takes about a week to finish this renovation process. Then it is critical to keep athletes off the field for at least a month. If the field can be protected for three months, until the fall, that would be best.

"If you want a field ready for the spring, you would have to do this in late summer, maybe mid-August for cool season turf," Puhalla says. "The turf will need from August into November to be mature for the following spring. You can't seed too late in the fall, or your field will be unavailable for fall, spring and summer."

### **How expensive?**

Puhalla says fixing a badly built field isn't necessarily an expensive project. If you can determine that the grade is correct, filling, leveling and reseeding a field might be done for between \$15,000 to \$25,000. Considering the liability a school faces for the safety of student athletes, this investment in a level, well-drained, safe athletic field is within the reach of most schools, Puhalla believes.

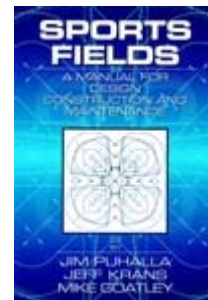
"I think the schools need to be aware that if they don't pay attention during a school construction project, they will end up with athletic fields that can't be used," he adds. "School authorities need to plan ahead to involve a company with proven experience in building athletic fields. Ideally, that company would be involved in the planning, even though the actual work of finishing a field usually happens towards the end of a school construction project."

Jim Puhalla is founder and president of [Sportscape International](#) located in Boardman, OH. From its headquarters, the company performs design and construction work throughout North America, and also dispatches crews to maintain sports fields for long-term customers.

Puhalla is co-author of two books on athletic field design, construction and maintenance.

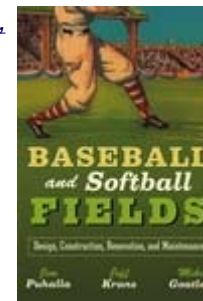


Jim Puhalla.



*Sports Fields: A Manual for Design, Construction and Maintenance*, by Jim Puhalla, Jeff Krans and Mike Goatley, Wiley, 1999.

*Baseball and Softball Fields: Design, Construction, Renovation and Maintenance*, by Jim Puhalla, Jeff Krans and Mike Goatley, Wiley, 2003.



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