



PENDER COUNTY
Parks & Recreation



ATHLETIC FIELD MAINTENANCE GUIDELINES



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Section 1

Baseball and Softball Field Maintenance

A. Determining Field Playability

The decision to play on fields that are too wet is the number one cause of damage to ball fields and the top reason for player injury. And often, techniques used to make a wet field “playable” cause additional damage. Making the tough call to postpone a game due to wet conditions is the best decision for player safety and to preserve season-long playability of the ball fields.



**If there's
standing water
on 5% of the
infield, it's TOO
WET for play!**



If your shoe
leaves an
impression like
these, it's **TOO**
WET for play!



Incredible amounts of **damage** can occur on a ballfield when it is played on when the infield is too soft. Chances are very good that if a field is used when wet, damage will prevent them from being playable the next day.

But more importantly, it is **UNSAFE** for players and increases their chances of being injured!

B. Water Removal Technique for Skinned Infields

The most important mistake to avoid is the removal or movement of the infield mix. A level field will drain better and have fewer puddles. Low spots or depressions catch and hold water **EVERY TIME!**

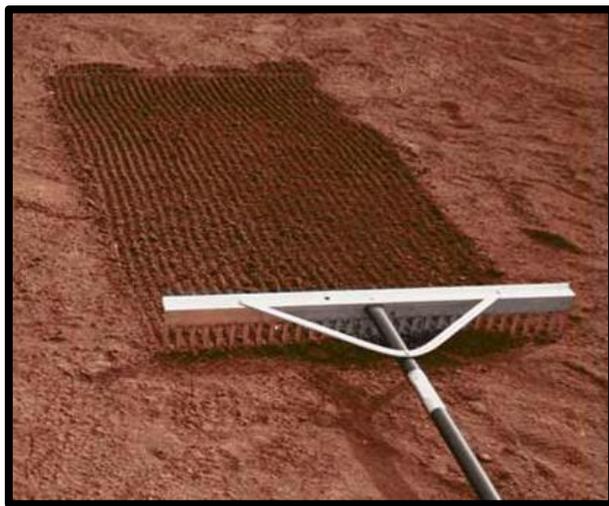
Using a leaf blower is one of the less damaging ways to remove water from the infield. Blow the water to the sides of the field and not towards the outfield or home plate.

DO NOT Use These Methods on Wet Fields!

- **DO NOT** use brooms, squeegees, or the backside of the field rakes to push or pull standing water off of the infield skin.
- The undesirable result is infield mix are picked up along with the water and pushed off or pulled into the lip. This ends up building the lip higher, creating a natural dam, and also making a low spot or depression where the water collected initially.
- **DO NOT** remove muddy infield mix from the field.
- The undesirable result is a low spot or depression where the infield mix was removed.

These unfortunate techniques move infield material and leave a low spot or depression that will **hold water every time it rains.**

After the standing water has been removed, use a rake to loosen the infield mix so it will dry more quickly. Allow time to air dry.



C. Addition of Field Drying Agents

Calcined and vitrified clay marketed under various brand names are the most common products used to assist with wet infield conditions. These products should be used cautiously for two reasons: they are expensive and they change the properties of the infield mix when used abundantly.



Never use more than 3-4 bags of drying agent to make a field playable!!

Let Mother Nature do her evaporative magic first!!

Once the field is stable enough to walk on and you are not leaving foot (mud) prints, then you can work to dry the low spots by removing the freestanding water first.

Only then should you use drying agent to finish the drying process.

Steps for Applying a Drying Agent

1. First remove as much water as possible using a leaf blower.
2. Use a shovel or hand to evenly apply a thin layer of the drying agent. **Thin means less than ½."**
3. The material may be lightly incorporated using a rake or left on top of the infield mix.

Applying too much drying agent

- Wastes money!
- Excess drying agent remains on the field afterward and can help store more water at the surface, particularly in a rain event as the calcined clay drying agent gorges itself with water. *This may actually slow the drying process if too much is sitting on the surface.*
- On a field without a water source, you can suffer from the field getting too dry and hard as the calcined clay sucks every bit of moisture out of the infield skin.

D. Infield Grooming Techniques

1. **Remove the bases and plug the base anchor sleeve** before beginning to prepare the infield. Dragging an infield without removing bases and pulling the drag over the top of them causes infield mix to build up around the bases slowly burying them and harder to remove. This also destroys the consistency of the surface grad across the infield.
2. Cut down any high areas under or around bases with an iron rake or aluminum field rake.
3. Scarify the field with a field rake.
4. Drag the field with a drag mat or broom. *It is very important to: **GO SLOWLY** and **VARY** the dragging pattern **EVERY TIME** the field is groomed.*
5. When finished dragging, stop 5 to 6 feet before the edge of the skin and lift the drag. Shake any excess infield mix off before exiting the field.
6. Exit the field in a **different location each time** to prevent build-up of infield mix in one location.
7. Hand rake out the pile left from the field drag.
8. Hand rake: base paths end-to-end, home plate, and the back radius of the infield.



- **DO NOT** pull the drag or mat into the grass for any reason.
- **DO NOT** drag all the way to the outfield turf.

Dragging infield material into the turf edges causes problems and can make a field unsafe.

When dragging the infield, if the drag wanders onto the turf edges, it deposits infield mix into the turf edges which is then glued in by rainfall and irrigation cycles, unless cleaned out fairly soon afterwards. As this material builds up in the turf, it creates a lip which becomes a natural dam impeding the free flow of rainfall off the playing surface.

To help alleviate this problem, **stay a minimum of 6 inches away** from the edge of the outfield turf. This will help to reduce the incidence of lip build-up. Additionally, after dragging the infield, use a push broom or leaf rake to pull loose material out of the turf edges and back onto the infield.

E. Skinned Infield Leveling

Baseball and Softball fields are designed with a specific slope to drain water from their surface. Keeping the infield slope correct will prevent puddling and therefore field closures. Players sliding, mechanical field groomers, and other factors contribute to un-level skinned infields. **A diligent approach to correcting high or low spots is one of the most important ways to keep the infield slope.**

For small areas, use a leveling rake.

1. Pull the material from a high spot and deposit it in a low area.
2. If the infield mix is dry, wet the leveled area and compact it with a tamper or the grooming machine tires. Otherwise, it will not stay in place.



Section 2

Grass Field Maintenance

(Soccer, Football, Lacrosse)

A. Determining Field Playability

The decision to play on fields that are too wet is the number one cause of damage to grass fields and the top reason for player injury. And often, techniques used to make a wet field “playable” cause additional damage. Making the tough call to postpone a game due to wet conditions is the best decision for player safety and to preserve season-long playability of the ball fields.



If there's
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Incredible amounts of **damage** can occur on a ballfield when it is played on when the infield is too soft. Chances are very good that if a field is used when wet, damage will prevent them from being playable the next day.

But more importantly, it is **UNSAFE** for players and increases their chances of being injured!



**If your shoe
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B. Water Removal Techniques for Grass Fields

The most important mistake to avoid is the removal or movement of soil from the field. Fields are designed with a specific slope to drain water from their surface and low spots or depressions catch and hold water EVERY TIME!



For shallow puddles, use a roller squeegee.

- Only use roller squeegees made for turf.
- Apply downward pressure on the handle as you walk.
- Push standing water toward the outside of the field, never toward the middle.

DO NOT Use These Methods on Wet Fields!

- **DO NOT** use brooms to disperse puddles.
- **DO NOT** remove muddy soil or turf from the field.

All of these unfortunate techniques leave a depression or low spot that will hold water every time it rains. Leveling a low spot is the best method to prevent puddling. **The Parks and Recreation Department is responsible for field leveling.**

C. Field Drying Agents

Calcined and vitrified clay marketed under various brand names are the most common products used to assist with wet field conditions. **Calcined clay products are the only type Pender County Parks and Recreation Department approves for grass fields.**

These products should be used cautiously for two reasons: they are expensive and they change the properties of the grass rootzone when used abundantly.



Never use more than 3-4 bags of calcined clay to make a field playable!

Steps for Applying a Drying Agent

1. First remove as much water as possible using the squeegee.
2. Use a shovel, or hand to evenly apply a thin layer of the calcined clay drying agent. **Thin means less than ½" deep!**
3. Use a spring-tine rake to spread and level the material. Do not use a rigid garden rake because it will pull out clumps of grass.

D. Portable Goals

Soccer and Lacrosse fields would be incomplete without the portable goals that provide the target for scoring! The primary concern with moveable goals is their ability to tip over and cause an injury. Hardware or weight bags can be used to secure the bottom crossbars to prevent tip-overs but must be done safely and correctly.



Stakes, bag weights and plate weights are three approved methods to prevent tip-overs!



Move the goals for all non-game events! This significantly reduces wear at the goal mouth.

