Little League
Official Community

PLAYING FIELD OPERATIONS & MAINTENANCE MANUAL

Lakeview Knothole Little League

PURPOSE STATEMENT

Proper operation and maintenance of our playing fields is critical for keeping our facilities safe, and in good playing condition. Routine maintenance, utilizing proper techniques, is necessary to achieve desirable outcomes. Consistently following the simple procedures contained in this manual will help achieve these goals, while also greatly reducing the need for costly large-scale renovations. This document was prepared to help everyone learn proper techniques for managing our shared facilities.

INTRODUCTION

Athletic fields represent the pinnacle of landscape care and maintenance. They are expected by many to function well and look amazing. This is especially true for baseball and softball fields. To achieve even mediocre results, everyone working on the fields must have some basic knowledge of how ballfields are constructed, and the proper methods for maintaining them.

Field Types

Ballfields generally consists of two distinct materials with very different management needs, 1) Turfgrass, and 2). Infield soil. Both Little League Baseball and Little League Softball fields can be constructed with a “skinned” infield, which is all exposed soil, or a turf infield with soil basebaths. Both types of fields have exposed soil areas that consist of one of the following profiles:

- Single-Layer Profile - A single 4” to 6” layer of infield soil.
- Two-Layer Profile - A 4” to 6” layer of infield soil topped with a thin layer of topdressing (typically ¼ - ½ inch deep).

These two types of profiles have different management needs. In either case, the top ½” needs to be managed routinely (ideally on a daily basis). It is important to not disturb the soil too deep, as this leads to numerous field management problems. This is particularly true for fields with a two-layer profile.

Drag Equipment

Scarifying Drags – used to loosen the top layer of the infield surface for drying and/or consistent surface compaction. These include nail drags, spike drags, and chain harrows. The nail drag is ideal for game play field prep.

When purchasing or building scarifying drags, lightweight is better. Heavy drags will dig too deep when the material is wet and soft. Choose models where weight can be added to achieve the proper depth.

Float or Finish Drags – used to smooth and level the surface and evenly distribute loose material after scarifying, or after game play. A float drag will give the surface a smooth uniform depth of loose material for more consistent bounces and better resiliency. The two primary types are:

Steel mat drags

Open metal mesh mats that grab material and pulverizes chunks. Excellent at breaking up soil chunks and transporting material from one area to another. Excellent for single-layer profiles but sometimes too aggressive for two-layer profiles.

Cocoa mat drags

Dense fiber mats that hover over the surface and do not transport material. They are not good for breaking up soil chunks. Excellent for top dressed fields, or in wet conditions.

GENERAL OPERATION AND MAINTENANCE PROCEDURES

The following techniques and procedures are applicable to all of our playing fields. Detailed information for each specific ballfield is included in the next section of this manual.

Mowing

Mowing should be completed based on grass height. Never mow more than 1/3 of the grass leaf blade in a single mowing. Removing more than 1/3 of the leaf plate weakens the plant and causes long-term degradation of the turf surface. Mowing will need to be completed more frequently during peak growing season.

The ideal height for general turf is 2". The following chart provides species specific heights for common types of turf grasses.

Type of Grass	Best Mowing Height
Bluegrass	1 – 1 ½ in.
Tall fescue	2 in.
Zoysia	½ - 1 in.

DO NOT MOW IF THE SOIL IS TOO WET. This can create ruts that collect surface water and are hard to repair. It also causes soil compaction. Avoid creating windrows and clumps of grass, or rake and remove them prior to completion. Remove grass clippings from all skinned surfaces.

Maintaining Grass Edges

Maintaining grass edges is important for player safety and proper field play. Periodic edging will help keep lips from forming and keep field dimensions accurate. Get started by laying out the grass edges per the applicable Little League Field Layout diagrams.

1. Use string lines and ground pins to establish the grass edges.
2. Edge the entire infield with a mechanical edger (if available), or a hand edger.
3. Once the edge is cut, follow with a hand "loop" edger to remove any stubborn grass. Be careful to not dig in with the hand edger. The goal is to remove unwanted debris while minimally impacting the infield material.
4. Rake debris into small piles, then pick up and remove with a scoop shovel.
5. If required, hand rake infield material towards the grass edge to ensure a smooth transition between surfaces.

Dragging an Infield Skin

Infield dragging, or scarifying, means and methods are very important to the overall condition of a playing field. Ideally, you should have no more than ¼" to ½" of loose material on your infield at any time. (A player's cleats should be able to go through the loose layer and grip the compacted layer under it.) This assures there is not excessive loose material that reduces the quality of play and can easily be pushed off the field and into the turf by a drag mat, player movement, or heavy rains.

- Nail dragging is much more effective with a little moisture in the surface material. For a hard, dry infield, apply a light to moderate coat of water prior to dragging. Allow some time for the soil to soak in the water and "set up" before starting to scarify.
- Start and stop in different locations every time you drag. This helps prevent from forming low spots at the starting point and high spots at the ending point.
- For skinned infields, rotate the drag pattern start location based on the hands of a clock. Always start the pattern in a different location from one time to the next.
- When dragging with a machine, stay at least six inches (6") away from the edge of any turfgrass. This border area should be hand groomed (hand drag, coco mop, or rake) to keep infield material from migrating into the turf and forming a lip.
- Concentrate more on firm areas and less on loose areas.
- Always go over the surface at least twice, using a cross-cutting pattern. Drag one direction, then drag another pass perpendicular to the first pass. This fully opens the surface layer and helps prevent ripples from forming.
- Drive slow! Moving the drag quickly displaces material and alters the grade of the field. This leads to problems like low spots that puddle water and lips at turf edges.
- When using a steel mat drag, always finish where you started. This redeposits the captured material in the starting location where it pulled material to load the mat.

Infield Drying Procedures

After a rain event, everyone wants to get back to using fields as quickly as possible. However, moving equipment onto the field before it has adequately firmed will only create more work and longer delays.

When dealing with standing water, first try to remove as much as possible. *Do not push water off the field with a broom or squeegee.* This practice pushes material out of place and makes the problem worse the next time. Puddle pillows work well for this task.

To begin, place the puddle pillow in the puddle and push down. Release pressure to soak up water. Once saturated, carry the pillow off the field and wring it out. Repeat the process until all standing water is removed. Next, hand broadcast calcine clay onto the surface to soak up any remaining water. (DO NOT USE PRODUCTS LABELED AS "QUICK DRY"; These materials will clog soil pores over time and make ponding problems worse.

If your foot sinks into the playing surface, you need to wait longer for the sun and wind to dry the field! After the field has firmed up enough that your footprints are not leaving a depression, it's time to begin the final drying. Nail drag the entire skin to expose additional surface area to the sun and wind for quicker drying.

If standing water is present on game day, follow this process:

1. Remove the standing water using puddle pillows.
2. Hand broadcast a thin layer of calcined clay onto the surface, and work it into wet areas with a hand rake.
3. If the field is still somewhat soft (i.e. your footprints leave slight impressions), scarify the wet areas with a wet rake. Push the rake away from you to avoid dragging soil.
4. After the scarified soft soil has dried, come back and cross-cut in the opposite direction.
5. Once the field has firmed up enough for equipment, nail drag the entire skin and let it sit until close to game time.

6. Before pregame is to begin, broadcast additional calcine clay.
7. Finish the surface with a float drag.

Misc.

Watch for buildup of infield mix and/or topdressing in the direction water flows and/or wind blows. Move this material back into the playing field as needed.

CONCLUSION

This document covers the "why" and "how-to" of general ballfield operation and maintenance. The information contained here has been identified as the current best practices to maintain the long-term playability of our facilities. While there are many other ways to complete these tasks, they are often counterproductive to achieving our league's long-term goal of providing safe and attractive fields that provide the best possible playing experience.

Keeping our ballfields in top playing condition requires a commitment from everyone involved. Consistent routine maintenance is necessary to avoid field degradation and the need to constantly spend significant money and effort to repair our fields. *Each team manager is responsible for maintaining the LKLL facilities that they use.* We recommend that each manager identify a group of parents willing and able to assist with field prep and cleanup for each of your practices and games. Identify a point person, and make a plan for sharing this workload so you can focus on the many other responsibilities of a team manager.

The last section of this document contains detailed operation and maintenance instructions for each individual field. Use these as a reminder of your responsibilities as a user of our shared facilities.

Stoneboro 10u/12u Field

Overview:

This field is constructed with a traditional turf infield with a skinned basebath, home plate area, and elevated pitching mound consisting of DuraEdge Classic mix. There is a thin layer of topdressing material on the basepath.

Before Each Use:

1. IF FIELD IS TOO WET: Remove moisture using the “Infield Drying Procedures” detailed in the LKLL Operations & Maintenance Manual.
   IF FIELD IS TOO DRY: Wet the field to proper moisture content (moist, but not so wet that soil will stick to tools). Allow enough time for the water to soak in and for the soil to firm up.
2. Nail drag the skinned areas using the “Parallel Drag Pattern”. Follow a path parallel to the turf edges of the infield skin, working your way inward. Stay at least 6” from all turf edges.
3. Cross-cut the skinned areas by nail dragging with the “Overlapping Circles Pattern”. Go very slow to avoid creating low spots and focus on areas that are firmer. Stay 6” from all turf edges.
4. Finish drag the skinned areas with a steel drag mat using the “Parallel Drag Pattern”. Finish where you start dragging, and stay at least 6” from all turf edges.
5. Use a shovel to collect any trash (e.g. large clumps, small stones, etc.) collected by the drag, and remove it from the field. Level the remaining clean soil with a rake.
6. Finish field prep by hand raking the skinned areas around bases, home plate, and adjacent to turf edges, being careful to avoid pushing infield material into the turfgrass.

After Each Use:

1. Check for any field damage that needs to be addressed with advanced maintenance and notify the LKLL Vice President of Baseball.
2. Finish drag the skinned areas with a steel drag mat using a “Parallel Drag Pattern”. Finish dragging where you started, and stay at least 6” from turf edges.

Stoneboro 8u Field

Overview:

This field has a skinned infield consisting of indeterminate material. The infield playing surface consists of an **indeterminate sand mix.**

Before Each Use:

1. IF FIELD IS TOO WET: Remove moisture using the “Infield Drying Procedures” detailed in the LKLL Operations & Maintenance (O&M) Manual.
   IF FIELD IS TOO DRY: Wet the field to proper moisture content (moist, but not so wet that soil will stick to tools). Allow enough time for the water to soak in and for the soil to firm up.
2. Nail drag the skinned areas using the “Inward Swirl”, “Overlapping Ovals”, or “Figure 8s” drag pattern. Bases should be removed and replaced with base plugs before starting. Always start on an outside edge of the infield and in a different location than the previous time. Always start on an outside edge of the infield, and in a different location than the previous time. Finish near the center, and stay at least 6” from all turf edges.
3. Finish drag the skinned areas with a steel drag mat, using the “Figure 8s” drag pattern. Finish where you started dragging, and stay at least 6” from all turf edges.
4. Use a shovel to collect any trash (large clumps, small stones, etc.) collected by the drag, and remove it from the field. Level the remaining clean soil with a rake.
5. Finish field prep by hand raking the skinned areas around bases, home plate, and adjacent to turf edges (being careful to avoid pushing infield material into the turfgrass), and replace the bases. If possible, apply a light coat of water immediately prior to chalking field lines.

After Each Use:

1. Check for any field damage that needs to be addressed with advanced maintenance and notify the LKLL Vice President of Softball.
2. MAKE SURE ALL CHALK IS REMOVED FROM THE LINE CHALKER.
3. Finish drag the skinned areas with a steel drag mat, using an “Inward Swirl” drag pattern. Start near a field edge and finish in the middle of the field behind the pitching mound. Stay at least 6” from turf edges.

Stoneboro T-ball Field

Overview:

This field has a skinned infield consisting of indeterminate material. The infield playing surface consists of

Before Each Use:

After Each Use:

Jack Jones Field 1

Overview:

This field has a skinned infield and a single-layer profile. The infield playing surface consists of over 6 inches of DuraEdge Classic Mix. There are two pitching plates, one is set at 35' and the other is set at 40'.

Field Equipment:

Bases: Rogers Change Up Base Set (youth)
Ground Anchors: Champro steel ground anchor, crimped style (set in concrete)
Pitching plates: Set at 35' – Movable Pitching Plate (6" x 24")
Set at 40' – Four Sided Pro Pitching Plate

Before Each Use:

6. IF FIELD IS TOO WET: Remove moisture using the "Infield Drying Procedures" detailed in the LKLL Operations & Maintenance (O&M) Manual.
   IF FIELD IS TOO DRY: Wet the field to proper moisture content (moist, but not so wet that soil will stick to tools). Allow enough time for the water to soak in and for the soil to firm up.
7. Nail drag the skinned areas using the "Inward Swirl", "Overlapping Ovals", or "Figure 8s" drag pattern. Bases should be removed and replaced with base plugs before starting. Always start on an outside edge of the infield and in a different location than the previous time. Always start on an outside edge of the infield, and in a different location than the previous time. Finish near the center, and stay at least 6" from all turf edges.
8. Finish drag the skinned areas with a steel drag mat, using the "Figure 8s" drag pattern. Finish where you started dragging, and stay at least 6" from all turf edges.
9. Use a shovel to collect any trash (large clumps, small stones, etc.) collected by the drag, and remove it from the field. Level the remaining clean soil with a rake.
10. Finish field prep by hand raking the skinned areas around bases, home plate, and adjacent to turf edges (being careful to avoid pushing infield material into the turfgrass), and replace the bases. If possible, apply a light coat of water immediately prior to chalking field lines.

After Each Use:

1. Check for any field damage that needs to be addressed with advanced maintenance and notify the LKLL Vice President of Softball.
2. MAKE SURE ALL CHALK IS REMOVED FROM THE LINE CHALKER.
3. Finish drag the skinned areas with a steel drag mat, using an "Inward Swirl" drag pattern. Start near a field edge and finish in the middle of the field behind the pitching circle. Stay at least 6" from turf edges.

Jack Jones Field 2

Overview:

This field has a skinned infield and a single-layer profile. The infield playing surface consists of indeterminate material.

Field Equipment:

Bases:
Ground Anchors: Champro steel ground anchor, crimped style (set in concrete)
Pitching plates: Set at 35' –
Set at 40' –

Before Each Use:

1. IF FIELD IS TOO WET: Remove moisture using the "Infield Drying Procedures" detailed in the LKLL Operations & Maintenance (O&M) Manual.
   IF FIELD IS TOO DRY: Wet the field to proper moisture content (moist, but not so wet that soil will stick to tools). Allow enough time for the water to soak in and for the soil to firm up.
2. Nail drag the skinned areas using the "Inward Swirl", "Overlapping Ovals", or "Figure 8s" drag pattern. Bases should be removed and replaced with base plugs before starting. Always start on an outside edge of the infield and in a different location than the previous time. Always start on an outside edge of the infield, and in a different location than the previous time. Finish near the center, and stay at least 6" from all turf edges.
3. Finish drag the skinned areas with a steel drag mat, using the "Figure 8s" drag pattern. Finish where you started dragging, and stay at least 6" from all turf edges.
4. Use a shovel to collect any trash (large clumps, small stones, etc.) collected by the drag, and remove it from the field. Level the remaining clean soil with a rake.
5. Finish field prep by hand raking the skinned areas around bases, home plate, and adjacent to turf edges (being careful to avoid pushing infield material into the turfgrass), and replace the bases. If possible, apply a light coat of water immediately prior to chalking field lines.

After Each Use:

1. Check for any field damage that needs to be addressed with advanced maintenance and notify the LKLL Vice President of Softball.
2. MAKE SURE ALL CHALK IS REMOVED FROM THE LINE CHALKER.
3. Finish drag the skinned areas with a steel drag mat, using an "Inward Swirl" drag pattern. Start near a field edge and finish in the middle of the field behind the pitching circle. Stay at least 6" from turf edges.

APPENDIX