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### Purposes of Maintenance

What we need to accomplish

- Safety
  - Protect users
  - Eliminate health & longevity
- Playability
  - Usage dependent
- Preserve investment
  - Availability/Usage
  - Community assets (financial & political)

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### "Regular maintenance should be based on the amount of use, the type of use ..."

Milo George  
athleticmanagement.com, January 29, 2015

Amount of use      Intensity of use

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### "...the area on which the field sits" ...

Milo George  
athleticmanagement.com, January 29, 2015

Vegetation    Animals/Insects    Debris/wind    Runoff

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### "...and the time of year."

Milo George  
athleticmanagement.com, January 29, 2015

Season      Moisture      Temperature

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### Usage vs Maintenance

#### Maintenance Intervals

As per manufacturer spec

- 2 to 6\* weeks
- (\* = each specific type of turf)
- 80 hours
- 100 hours

Usage hours increase maintenance dates become more frequent.

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### Interpreting appearance

"Excessive wear shows up much more slowly with synthetic turf than natural grass, so by the time you see the problem in synthetic turf, there's not much you can do."

Milo George  
Athleticmanagement.com, January 29, 2015

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### Interpreting Appearance

- ▶ Learn by observation
  - Regular inspection/interaction (shadow principle)
- ▶ Loose fibers
- ▶ Seam visibility
- ▶ Ridges/valleys



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Regular Maintenance

"Stick to the maintenance plan"  
Tad Dunn  
Southern Illinois University

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### Maintenance

- ▶ Keep clean
  - Litter, leaves, seeds, gum
- ▶ Safety
  - Fibers, Infill, Seams
- ▶ Playability
- ▶ DO NOT over maintain
  - Fiber break down
  - Lose infill
  - Hardness
  - Dull appearance
  - Decrease life span


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### Maintenance Equipment & Tools

- ▶ Broom
- ▶ Sweeper
- ▶ Magnet
- ▶ Vehicle
- ▶ Carpet rake
- ▶ Spaghetti spoon
- ▶ Gum freeze spray
- ▶ Blower
- ▶ Tube sack/bucket

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### Inspect






"Walk the grounds regularly, keeping a keen eye out to identify issues."  
David Rush  
Kent State University

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### Clean



- ▶ Daily
- ▶ Litter
- ▶ Leaves
- ▶ Seeds
- ▶ Gum
- ▶ Foreign debris
- ▶ SIGNAGE

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### Wear areas




- ▶ Inspect wear areas
- ▶ Rake infill back in
- ▶ Add infill to wear areas
- ▶ Work in to fibers

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### Broom

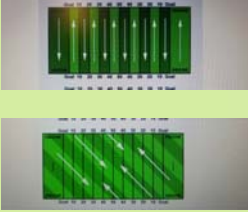
- ▶ Broom
  - redistribute infill
  - smooth surface
  - alternate direction
    - w/carpet grain (reverse)
    - 45 degree angle
  - after adding infill
  - Not when wet



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### Broom Pattern

- No heavy down pressure
- With seams
- Angles
- Reverse directions
- Alternate starting points
- End at start position
- Change pattern regularly



Synthetic Turf Council: "Guidelines for maintenance of infilled synthetic sports fields", Page 7.

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### Magnet




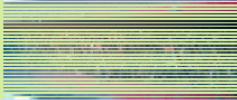
- ▶ Bobby pins
- ▶ Screws, bolts, nuts
- ▶ Snaps
- ▶ Safety pins
- ▶ Cleats



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### Sweeper vacuum

- ▶ Remove debris from inside turf
  - Lint (bio: hair & skin)
  - Solid objects
- ▶ Rejuvenate infill and fibers
- ▶ Soften turf
- ▶ Less frequent application
- ▶ With seams
- ▶ Slow travel speed
- ▶ Empty hopper frequently

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### Maintenance Specialized



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## Add infill

"On average, an athlete or end user will carry off two to three pounds of infill material during a playing season."  
 Jim Cornelius  
sportsturfonline.com, June 30, 2016




"If it was an all rubber system, you'd be installing rubber only. If it was a sand/rubber mix field, you would install the material, pre-mixed."  
 Darren Gill  
 FieldTurf


- ▶ Daily in wear areas
- ▶ Seasonally
- ▶ By hand
- ▶ Top-dresser

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## Infill Depth Measurements



Specific areas  
 Random measuring in area  
 Record  
establish history  
 compare to previous readings



Millimeters/inches  
Slide measuring rod down to the backing  
 Read the depth

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## G-Max

- ▶ Initial testing (baseline)
- ▶ Annual (independent)
- ▶ Record



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## Annual Service

- ▶ Assurance policy
- ▶ Independent critique of field
- ▶ Service
  - Inspect
  - Infill depth
  - G-max
  - Sweep - vacuum
  - Report



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## Repair




- Remove infill
- Cut carpet
- Tape edges
- Seam tape
- Glue
- Close
- Weight seam

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## Synthetic Turf Record

Month	Day	Date	Task	Product	Amount	Who	Notes

Daily maintenance (what, product used, sweep, broom, etc)  
 Usage  
 Repairs  
 Infill depths  
 G-max

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## Shadow Principle

Let our influence reach to the users, administrators, etc.

"Solicit feed back from coaches and players on playing conditions of the turf."  
Tad Dunn  
 Southern Illinois University

"Work with your team and make sure everyone is on the same page. Listen to your coaches and work with them."  
David Rush  
 Kent State University

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## Maintenance

*Be Proactive*

▶ "We started preparing for the (2003) Super Bowl 20 minutes after the bowl game finished."

Steve Wightman  
 Former Head Groundskeeper: Mile High Stadium - Denver Broncos & Denver Bears; Jack Murphy/Qualcomm Stadium - San Diego Chargers, San Diego Padres & San Diego State University Aztecs  
 Past President STMA  
 MLB Groundskeeper Hall of Fame


▶ "It is a process, Keep up on it"

David Rush  
 Kent State University

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## Sports Turf Managers Needed

"However, I believe that many of the same wear patterns and the basic rules of natural grass management also apply for synthetic turf."  
Milo George (athleticmanagement.com January 16, 2015)




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Knowledge  
 Skills  
 Experts on the field

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## Questions & Answers

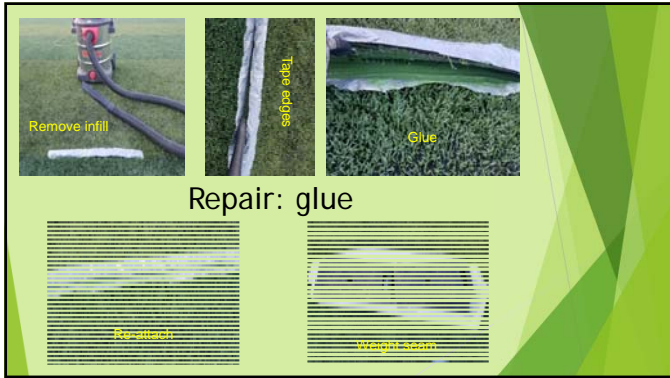


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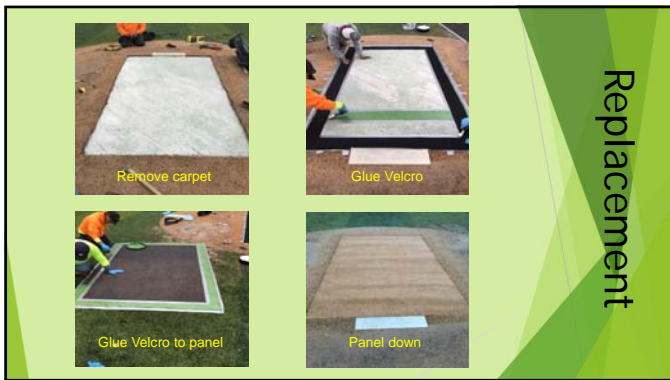
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