

TURFGRASS NUTRIENT MANAGEMENT STANDARD

FACT SHEET: *Low Traffic Turfgrass Areas*



Low traffic turfgrass areas are defined as those turf areas used by less than 10 people per acre per week

Soil testing

- Collect 10 sub-samples from a representative area to a depth of 6”
- Soil should be analyzed for available phosphorus every 5 years
- Representative areas are locations that have similar management, soil types, topography, and turfgrass species
- Submit sample(s) to soil testing lab that uses Bray-1 or Mehlich-3 analysis.

Phosphorus Fertilizer Applications

- The amount of P_2O_5 applied should be in accordance with the soil test interpretations listed in Table 1 on the back of this fact sheet.

Nitrogen Fertilizer Applications

- No more than 1 lb N/1000 ft² may be applied at any one time unless material is entirely natural organic in which case up to 2 lbs N/1000 ft² may be applied
- Areas where clippings are removed may apply up to 4 lbs N/1000 ft² each year
- Areas where clippings are returned may apply up to 3 lbs N/1000 ft² each year – annual applications up to 4 lbs N/1000 ft² are allowable for these areas during the first 2 years following establishment

TURFGRASS NUTRIENT MANAGEMENT STANDARD

FACT SHEET: *Low Traffic Turfgrass Areas*



Mehlich III and Bray P1 extractable phosphorus interpretations and fertilizer recommendations for low traffic turfgrass areas

Phosphorus Concentrations				Interpretation	Phosphorus Fertilizer Recommendations	
Mehlich III		Bray P1			lbs P ₂ O ₅ /1000 ft ²	lbs P ₂ O ₅ /acre
ppm (mg/kg)	lbs/acre	ppm (mg/kg)	lbs/acre			
0 – 10	0 – 20	0 – 5	0 – 10	Very Low	3	131
11 – 15	21 – 30	6 – 10	11 – 20	Low	2	87
16 – 25	31 – 50	11 – 15	21 – 30	Medium	1	44
26 – 35	51 – 70	16 – 20	31 – 40	Optimal	0	0
> 35	> 70	> 20	> 40	Very High	0	0

TURFGRASS NUTRIENT MANAGEMENT STANDARD FACT SHEET: *High Traffic Turfgrass Areas*



High traffic turfgrass areas are defined as those turf areas used by more than 10 people per acre per week that are regularly mowed and irrigated¹

Soil testing

- Collect 10 sub-samples from a representative area to a depth of 6”
- Soil should be analyzed for available phosphorus every 5 years
- Representative areas are locations that have similar management, soil types, topography, and turfgrass species
- Submit sample(s) to soil testing lab that uses Bray-1 or Mehlich-3² analysis.

Phosphorus Fertilizer Applications

- The amount of P₂O₅ applied should be in accordance with the soil test interpretations listed in the table on the back of this fact sheet.

Nitrogen Fertilizer Applications

- No more than 1 lb N/1000 ft² may be applied at any one time unless material is entirely natural organic in which case up to 2 lbs N/1000 ft² may be applied
- Athletic Fields and tee boxes with native soil root zones are allowed up to 8 lbs N/1000 ft² each year
- Athletic Fields and tee boxes with sand based root zones are allowed up to 10 lbs N/1000 ft² each year
- Putting greens, fairways and other high-traffic areas with native soil root zones are allowed up to 5 lbs N/1000 ft² each year
- Putting greens, fairways and other high-traffic areas with sand based root zones are allowed up to 8 lbs N/1000 ft² each year

¹ If all of these requirements are not met, follow the low-traffic fertilization recommendations

² Mehlich III has been specifically calibrated for sand and push up tees & greens, and fairways; while Bray P1 has interpretations only for “high traffic”. However, both soil tests are acceptable for use in determining P fertilizer requirements.

TURFGRASS NUTRIENT MANAGEMENT STANDARD FACT SHEET: *High Traffic Turfgrass Areas*

Mehlich III and Bray P1 extractable phosphorus interpretations and fertilizer recommendations for high traffic turfgrass areas

Type of Turf	Phosphorus Concentrations				Interpretation	Phosphorus Fertilizer Recommendations	
	Mehlich III		Bray P1			lbs P ₂ O ₅ /1000 ft ²	lbs P ₂ O ₅ /acre
	ppm (mg/kg)	lbs/acre	ppm (mg/kg)	lbs/acre			
General High Traffic	0 – 15	0 – 30	0 – 12	0 – 24	Very Low	5	260
	16 – 30	30 – 60	13 – 25	25 – 50	Low	3.5	175
	31 – 45	61 – 90	26 – 37	51 – 74	Medium	2	100
	46 – 60	91 – 120	38 – 50	75 – 100	Optimal	1	65
	> 60	> 120	> 50	> 100	Very High	0	0
Sand Tees & Greens	0 – 6	0 – 12	N/A	N/A	Very Low	3	130
	7 – 12	13 – 24	N/A	N/A	Low	2	90
	13 – 18	25– 36	N/A	N/A	Medium	1	45
	19 – 24	37 – 48	N/A	N/A	Optimal	0.5	20
	> 24	> 48	N/A	N/A	Very High	0	0
Push-up Tees and Greens	0 – 6	0 – 12	N/A	N/A	Very Low	5	220
	7 – 12	13 – 24	N/A	N/A	Low	3.5	150
	13 – 18	25– 36	N/A	N/A	Medium	2	90
	19 – 24	37 – 48	N/A	N/A	Optimal	1	45
	> 24	> 48	N/A	N/A	Very High	0	0
Fairways	0 – 15	0 – 30	N/A	N/A	Very Low	6	260
	16 – 30	30 – 60	N/A	N/A	Low	4	175
	31 – 45	61 – 90	N/A	N/A	Medium	2.5	100
	46 – 60	91 – 120	N/A	N/A	Optimal	1.5	65
	> 60	> 120	N/A	N/A	Very High	0	0

TURFGRASS NUTRIENT MANAGEMENT STANDARD FACT SHEET: *Turf Establishment & Renovation*



The establishment period is defined as the 12 months following the seeding or sodding of a turfgrass area. The renovation period is defined as the 12 months following inter- or over-seeding.

Soil testing¹

- Collect 10 sub-samples from a representative area
 - Soil samples should be taken to 6" depth, except from putting greens where 4" samples are more appropriate
- Representative areas are locations that have similar management, soil types, topography, and turfgrass species. An example of a representative area might be all sand greens on a golf course, or it could be individual greens if the turf manager deems this appropriate.
- Submit sample(s) to soil testing lab that uses Bray-1 or Mehlich-3 analysis. If possible plan to sample at least 2 months prior to establishment or renovation – soil test results less than 5 years old may be used

Phosphorus Fertilizer Applications

- The amount of P₂O₅ applied should be in accordance with the soil test interpretations listed in Table 1 on the back of this fact sheet. Note that different interpretations exist depending on if the area is to be seeded or sodded.

Nitrogen Fertilizer Applications

- No more than 1 lb N/1000 ft² may be applied at any one time
- No more than 6 lbs N/1000 ft² may be applied during the establishment or renovation period except on sand-based root zones, putting greens, and athletic fields. On these areas an annual maximum of 10 lbs N/1000 ft² is allowed

¹ In the event that soil testing is not practical, apply no more than 1 lb N/1000ft² using a starter fertilizer. Document the specific reasons why soil testing results were not obtained.

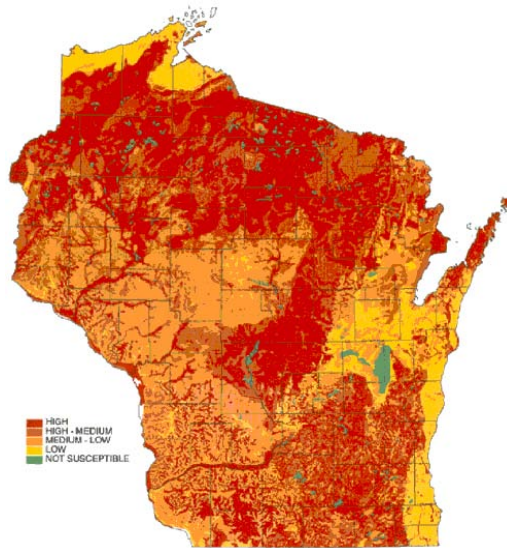
TURFGRASS NUTRIENT MANAGEMENT STANDARD FACT SHEET: *Turf Establishment & Renovation*

Mehlich III and Bray P1 extractable phosphorus interpretations and fertilizer recommendations for newly seeded and sodded turfgrass areas.

Turf Establishment	Phosphorus Concentrations				Interpretation	Phosphorus Fertilizer Recommendations	
	Mehlich III		Bray P1			lbs P ₂ O ₅ /1000 ft ²	lbs P ₂ O ₅ /acre
	ppm (mg/kg)	lbs/acre	ppm (mg/kg)	lbs/acre			
Newly seeded area	0 – 25	0 – 50	0 – 15	0 – 30	Very Low	3	131
	26 – 50	51 – 100	16 – 30	31 – 60	Low	2	87
	51 – 75	101 – 150	31 – 45	61 – 90	Medium	1	44
	76 – 100	151 – 200	46 – 50	91 – 100	Optimal	0	0
	> 100	> 200	> 50	> 100	Very High	0	0
Newly sodded area	0 – 20	0 – 40	0 – 10	0 – 20	Very Low	3	131
	21 – 40	41 – 80	11 – 20	21 – 40	Low	2	87
	41 – 60	81 – 120	21 – 30	41 – 60	Medium	1	44
	61 – 80	121 – 160	31 – 40	61 – 80	Optimal	0	0
	> 80	> 160	> 40	> 80	Very High	0	0

TURFGRASS NUTRIENT MANAGEMENT STANDARD

FACT SHEET: *Groundwater Management Areas*



Above: Potential for groundwater contamination in Wisconsin. Image credit: WDNR

Application Restrictions

1. Application of fertilizer is restricted on saturated or frozen soils¹
2. Prior to any fertilizer application, all tile inlets and similar infrastructure must be covered
3. Application of fertilizer is restricted within 100 feet upslope of a direct conduit to groundwater (i.e. fractured bedrock)
4. For soils classified as hydraulic group A, or those with less than 20 inches to bedrock, or those with less than 12 inches to water table fertilizers with >50% slow release N can be used in accordance with the rest of the Nutrient Management Standard. Fertilizers with < 50% slow release N should be applied at rates < 0.25 lb N/1000 ft².

¹ Fertilizer can be applied if it is intended to melt snow or ice on high traffic areas

TURFGRASS NUTRIENT MANAGEMENT STANDARD

FACT SHEET: *Surface Water Management Areas*



Application Restrictions

- Application of fertilizer is restricted on saturated or frozen soils¹
- Sweep up all fertilizer inadvertently applied to an impervious surface
- Avoid drift of liquid fertilizer into water bodies
- **TYPE I SURFACE WATER MANAGEMENT AREAS:** are areas within **1,000 feet** of the ordinary high water mark of navigable waters² that consist of a lake, pond, or flowage and within **300 feet** of perennial rivers or streams. Restrictions are as follows:
 - Use N fertilizers with < 50% slow release N on slopes steeper than 10%
 - Do not apply fertilizers in these areas when rainfall is expected to occur within 24 hours unless the application is watered-in sufficiently
- **TYPE II SURFACE WATER MANAGEMENT AREAS:** within **20 feet** of water bodies mentioned above:
 - Only foliar (liquid) applications of N and P are allowed
 - Exception: Drop spreaders may be used on *golf course greens and surrounds* within the 20 foot zone
 - No more than 2 lbs N/1000 ft² may be used annually

¹ Fertilizer can be applied if it is intended to melt snow or ice on high traffic areas.

² Navigable Waters: The State of Wisconsin defines navigable waters as those with a bed differentiated from adjacent uplands and enough water to allow navigation by a recreational craft of the shallowest draft on an annually recurring basis. ("Navigable waters of the U.S." are different). These do not include glacial pothole lakes, or ponds without outlets.