

## Appendix B

# List of Regional Clean Water Guidelines for Fertilization of Urban Turf

### Right Formulation:

**Regional Guideline 1:** Fertilizer applicators should have soil lab-tested (via a state university extension service or other professional lawn care service) before seeding a new lawn and at least once every three years following establishment.

**Regional Guideline 2:** Fertilizer applicators should choose a phosphate-free fertilizer for use on established turf, unless a recent soil test (conducted within 12 months of planned application) shows an available phosphate deficiency.

**Regional Guideline 3:** Manufacturers of turf fertilizer intended for maintenance of established turf should formulate these products as phosphate-free fertilizers.

**Regional Guideline 4:** Manufacturers of turf fertilizer containing available phosphate should label these products as lawn starter or lawn repair products.

**Regional Guideline 5:** Manufacturers of turf fertilizer should formulate all nitrogen turf fertilizers to provide at least 20 percent of total nitrogen as slow release nitrogen.

### Right Rate:

**Regional Guideline 6:** Turf managers seeking to grow new turf, reseed bare or thin areas, or fix an available phosphate deficiency exhibited by a soil test should follow soil test recommended application rates for phosphate.

**Regional Guideline 7:** Turf managers seeking to grow new turf, reseed bare or thin areas, or fix an available phosphate deficiency should apply no more than 1 lb of active phosphate per 1,000 square feet per year, unless a soil recent soil test (within 12 months of the planned application) specifically recommends a higher application.

**Regional Guideline 8:** Fertilizer applicators using a nitrogen fertilizer, other than an Enhanced Efficiency Fertilizer, in areas of normal environmental sensitivity\* should apply no more than 0.7 lb of water soluble

nitrogen per 1,000 square feet and no more than 0.9 lb of total nitrogen per 1,000 square feet with each application.

**Regional Guideline 9:** Fertilizer applicators using a nitrogen fertilizer in areas of normal environmental sensitivity\* should apply no more than 3.25 lbs total nitrogen per 1,000 square feet per year.

**Regional Guideline 10:** Manufacturers of turf fertilizer should label products containing nitrogen in such a way that Regional Guidelines 8 and 9 will be met if an applicator, using properly calibrated equipment, correctly follows the label directions.

**Regional Guideline 11:** Fertilizer applicators should ensure that spreader equipment is on the correct setting and is calibrated properly prior to use (see Appendix E for resources related to calibration).

**Regional Guideline 12:** Fertilizer applicators using a nitrogen fertilizer, other than an Enhanced Efficiency Fertilizer, in environmentally sensitive areas\* should apply no more than 0.5 lb of water soluble nitrogen per 1,000 square feet and no more than 0.7 lb of total nitrogen per 1,000 square feet with each application.

**Regional Guideline 13:** Fertilizer applicators using a nitrogen fertilizer in environmentally sensitive areas\* should apply no more than 2.0 lbs total nitrogen per 1,000 square feet per year.

**Regional Guideline 14:** Unused turf fertilizer should be returned to its original container and stored in a safe place for future application. Weighing the bag and recording the weight prior to storage will aid in determining how much area the remaining fertilizer will cover.

**Regional Guideline 15:** If disposal of turf fertilizer is absolutely necessary, it should be taken to a household hazardous waste facility. Unwanted fertilizer should never be purposefully over-applied to grass; dumped in a storm drain, wetland, or water body; or emptied into a toilet or sink.

*\*Environmentally sensitive areas are defined as areas that are particularly vulnerable to fertilizer nutrient loss*

and/or where direct transmission of fertilizer nutrients to surface water or ground water is likely. They are generally thought to include areas in close proximity to water bodies and wetlands (especially those impaired for nutrients or of exceptional quality), wellhead protection Zones I & II, areas in close proximity to private wells, coastal zones, areas with steep topography, areas overlying single-source aquifers, areas with exposed bedrock, and areas with very sandy soil. Areas of normal sensitivity do not fit this definition. States and municipalities may wish to further define these areas. It should be noted that more stringent ordinances (to the extent that they are not pre-empted by state law), management plan requirements or guidelines for specific impaired watersheds may exist or may yet be developed. These regional guidelines are not intended to supplant local efforts.

**Right Time:**

**Regional Guideline 16:** Fertilizer applicators should never apply fertilizer to turf during the winter or when the ground is wholly or partially frozen, and should be aware of and compliant with any state-legislated cut-off dates.

**Regional Guideline 17:** Fertilizer applicators should not apply fertilizer containing nitrogen or phosphate during summer dormancy.

**Regional Guideline 18:** Fertilizer applicators should always consult a local weather forecast prior to a planned fertilizer application and should never apply fertilizer to turf when a major rain event expected within 48-hours.

**Regional Guideline 19:** Fertilizer applicators should not apply fertilizer immediately following a major rain event when the soil is still saturated.

**Regional Guideline 20:** Manufacturers of turf fertilizer intended for retail sale for application on urban turf should include the following message in a legible and conspicuous manner on at least one side of the fertilizer label: “Do not apply near water, storm drains or drainage ditches. Do not apply if heavy rain is expected. Apply this product only to your lawn, and sweep any product that lands on the driveway, sidewalk, or street back onto your lawn.”

**Regional Guideline 21:** Fertilizer applicators should time applications as described in Tables A and B below, based on the desired number of applications per year and whether in an environmentally sensitive area.

Table A

<b>Non-sensitive Areas</b>				
Time of year*	Number of Annual Fertilizer Applications			
	Once	Twice	Three Times	Four Times
Spring (late April to early May)		≥50% N as SRN ≤0.9 lb TN/1000 ft <sup>2</sup>	20-50% N as SRN ≤0.9 lb TN/1000 ft <sup>2</sup>	20-50% N as SRN ≤0.8 lb TN/1000 ft <sup>2</sup>
Late Spring (late May to early June)			20-50% N as SRN ≤0.9 lb TN/1000 ft <sup>2</sup>	20-50% N as SRN ≤0.8 lb TN/1000 ft <sup>2</sup>
Summer (mid July to mid August) <b>Irrigated turf only</b>				50-75% N as SRN ≤0.8 lb TN/1000 ft <sup>2</sup>
Late Summer (early September)	≥75% N as SRN (enhanced efficiency fertilizer) ≤3.2 lb TN/1000 ft <sup>2</sup>	≥50% N as SRN ≤0.9 lb TN/1000 ft <sup>2</sup>	20-50% N as SRN ≤0.9 lb TN/1000 ft <sup>2</sup>	20-50% N as SRN ≤0.8 lb TN/1000 ft <sup>2</sup>
<b>Rationale:</b>	Helps turf recover from summer stress. High SRN in EEF product will provide nutrition throughout fall and again in spring.	Provides nutrition during active growth/prior to summer stress and during fall recover, with SRN provided throughout the growing season.	Provides nutrition immediately prior to and during active growth, and during fall recovery.	Provides nutrition throughout the growing season.
*Indicated timing is based on the central New England climate. Applicators in far northern and high elevation areas (northern NH, VT, ME, NY) should consider making spring applications 1 or 2 weeks later and fall applications 1 or 2 weeks earlier than indicated. Applicators in far southern areas (coastal RI, CT, NY) should consider making spring applications 1 or 2 weeks earlier and fall applications 1 or 2 weeks later than indicated.				

Table B

Time of year*	Number of Annual Fertilizer Applications		
	Once	Twice	Three Times
Spring (late April to early May)		≥50% N as SRN ≤0.7 lb TN/1000 ft <sup>2</sup>	20-50% N as SRN ≤0.6 lb TN/1000 ft <sup>2</sup>
Late Spring (late May to early June)			20-50% N as SRN ≤0.6 lb TN/1000 ft <sup>2</sup>
Summer (mid July to mid August)	Not recommended in sensitive areas	Not recommended in sensitive areas	Not recommended in sensitive areas
Late Summer (early September)	≥75% N as SRN (enhanced efficiency fertilizer) ≤2 lb TN/1000 ft <sup>2</sup>	≥50% N as SRN ≤0.7 lb TN/1000 ft <sup>2</sup>	20-50% N as SRN ≤0.7 lb TN/1000 ft <sup>2</sup>

\*Indicated timing is based on the central New England climate. Applicators in far northern and high elevation areas (northern NH, VT, ME, NY) should consider making spring applications 1 or 2 weeks later and fall applications 1 or 2 weeks earlier than indicated. Applicators in far southern areas (coastal RI, CT, NY) should consider making spring applications 1 or 2 weeks earlier and fall applications 1 or 2 weeks later than indicated.

**Right Place:**

**Regional Guideline 22:** Fertilizer applicators should never purposefully apply fertilizer to paved surfaces such as roads, driveways, patios, or footpaths. Incidental spills should be cleaned immediately by sweeping up spilled fertilizer granules and returning them to the bag, while incidentally scattered granules should be swept from paved surfaces back onto the lawn.

**Regional Guideline 23:** Fertilizer applicators should not apply fertilizer to bare ground unless reseeding.

**Regional Guideline 24:** Fertilizer applicators should not spread fertilizer on turf immediately adjacent to water bodies and wetlands and should be aware of any “no fertilization” buffer zones in state legislation.

**Regional Guideline 25:** Before fertilizing, fertilizer applicators should use a tarp, drop-cloth, or similar covering to cover stormwater conveyances immediately adjacent to lawns, including storm drains, ditches and swales. Scatter that collects on the cover should be shaken or swept onto the turf.

**Right Supporting Actions:**

**Regional Guideline 26:** Following fertilizer application, turf managers should water in the fertilizer using 1/4 – 1/3 inch of water; correct watering should dissolve the fertilizer granules but should not create run-off.

**Regional Guideline 27:** Turf managers should mow grass to roughly 3 inches in length, and should leave clippings on the lawn.

**Regional Guideline 28:** If it is not practicable to leave clippings on the lawn, turf managers should contain them in yard bags or compost heaps. Clippings should never be allowed to collect on paved surfaces and should never be dumped in water bodies, storm drains, or wetlands.

**Regional Guideline 29:** Turf managers wishing to use soil amendments, manure, or compost should first have the organic material tested for extractable phosphorus and nitrogen content (via a state university extension service or other professional lawn care service).

**Regional Guideline 30:** Turf managers should not use soil amendments, manure, or compost containing available phosphate above trace amounts unless a soil test indicates a need for additional phosphate.

**Regional Guideline 31:** Turf managers should correct excessive soil acidity indicated by a soil test by applying agricultural lime as directed by the soil test result.

**Regional Guideline 32:** Turf managers should aerate turf at least once every two years, preferably in the spring or fall.

**Regional Guideline 33:** Turf managers should evaluate turf areas for sparse and bare patches annually and should reseed/overseed areas, preferably with a seed mix containing fine fescues, where continued turf growth is desired and practicable. If turf is not desired or will not grow due to site constraints, different landscaping should be established.