

The Northeast Voluntary Turf Fertilizer Initiative



Summary of Comments and Discussion from Stakeholder Meetings 3 and 4: Regional Clean Water Guidelines for the Use of Turf Fertilizer

March 12, 2013: Save the Bay Center, Providence, Rhode Island

March 26, 2013: New Hampshire DES Regional Office, Portsmouth, New Hampshire

Comments on Overall Scope and Tone of Regional Guidelines:

- It needs to be clearer who the intended audience for the guidelines is.
 - Different audiences will have different levels of technical understanding (home owners vs. professional home/commercial landscapers vs. sports turf managers).
 - May need a “guidelines light” stand-alone document that is specifically geared towards homeowners.
 - There was some disagreement about who is the most important audience to reach with outreach: some say homeowners, others say poorly trained landscape professionals, others say retailer employees. It may be important to reach all three of these groups with targeted messaging.
 - If the guidelines are specifically for ornamental or low maintenance turf (e.g. lawns and commercial low-traffic landscapes), that should be made clear in the document title.
- The guidelines as they are currently drafted are too complicated and require too much math/technical understanding to be an effective public outreach tool.
 - Outreach materials need to give homeowners simple actions that they can easily do (e.g. follow package instructions, go over whole lawn once, store leftover fertilizer).
 - Providing simple teaching tools to the public might be more effective than passing laws or writing guidelines.
- NEIWPC should work on improving the tone of document, highlighting healthy/well-managed turf as an effective/ environmentally friendly land cover.
 - The document introduction should include the big picture of nutrients and water quality and state the relative importance of turf fertilizer run-off relative to other major sources (wastewater treatment, agricultural runoff, atmospheric deposition, etc.).

- Stakeholders held differing opinions about the suitability of turf as a buffer next to a water body.
 - Everyone agrees that a grassy buffer/filter strip is far better environmentally than a farm field or impervious surface right up to the edge of a stream or body of water. However, forest or woody vegetation provides some additional ecological benefits including shade, coarse organic matter to the stream, wildlife habitat, etc.
- The guidelines should make a more overt reference to the “Four R’s” of fertilization: right product, right rate, right place, right time.
- While the existing guidelines aren’t appropriate for sports/recreational turf because they don’t take important factors like playability and player safety into consideration, many in the golf industry feel that it is important for them to work with the Initiative partners on separate guidance for golf/performance turf so they are seen as good actors on the issue and not unfairly painted as major polluters.
- The guidelines should do a better job of cross-referencing existing technical guidance from university extensions.

Specific Comments on Introduction:

- NEIWPC should remove the statistic about 40-50% of land use in suburban areas being turf - this statement is often taken out of context.
 - If the sentence is not removed, NEIWPC should include a citation for the statistic.

Specific Comments on Phosphorus Guidelines (Feb 2013 Draft Parts I & II):

- There is still disagreement between stakeholders about the role of organic products in maintaining a healthy lawn.
 - Maintaining 5% organic matter in soil is generally considered a soil structure BMP, resulting in a looser soil that is better able to infiltrate.
 - Adding organic matter to soil (via compost, composted manure, biosolid-derived products, etc.) generally requires the unavoidable addition of some phosphorus.
 - NEIWPC should emphasize the benefit of organic products for establishing new turf/repairing damaged areas - source of organic matter + P
- Many stakeholders feel that do-at-home soil test kits are not accurate and their use should not be encouraged.
- Conscientious lawn care professionals do base their decisions about what fertilizer to put down and application rate on soil test results.
- There is a lot of skepticism about the willingness of homeowners to send soil away to get tested.
- It is important to highlight that fertilizer applied to new turf areas should be raked in using a steel rake to prevent fertilizer movement.
- There is ongoing disagreement about the effects of different forms of phosphorus.

- Citric extractions used to develop the product label measure the amount of plant available phosphorus - the guaranteed analysis for phosphate is not intended to count insoluble forms of phosphorus.
- Organic proponents argue that the types of active phosphate in compost/organic based products are not as prone to runoff or leaching as super-triple phosphate and that the phosphate addition through use of organic products is outweighed by the benefit of increasing soil organic matter and improved soil structure to promote infiltration.
- Regulators will try to calculate nutrient runoff reductions due to fertilizer laws using sales figures from major manufacturers/retailers.
- So far, fertilizer phosphate bans have not resulted in measurable changes in receiving water quality.
 - Fertilizer is just one piece of the picture, and regulators do not expect to see measurable improvements until many nutrient sources are addressed successfully.

Specific Comments on Nitrogen Guidelines (Feb 2013 Draft Parts I & II):

- NEIWPC needs to make sure that user guidelines match up with the formulation/labeling guidelines.
 - Although a user would have to use a product that is 22% slow release nitrogen to perfectly hit the 0.7lbs water soluble nitrogen to 0.9lbs total nitrogen ratio, the state laws that address nitrogen (Maryland and New Jersey's) require 20% slow release nitrogen.
 - Consistency will help ensure that the types of products recommended by the guidelines are actually available.
- The role of leaching to groundwater is important in nitrogen dynamics and water pollution.
 - If the guidelines ignore the role of watering practices on nitrogen leaching, then they are only telling half of the story.
- The guidelines should speak to frequency and timing of application - another very important component of overall turf management and likelihood of runoff/leaching.
 - Stakeholders recommend that NEIWPC utilize existing UConn and UMass guidance on timing.
 - Products with high a high percentage of slow release nitrogen should be applied less frequently than products with lower percentages.
- Golf course managers (particularly on Cape Cod) believe that the relative contribution of nitrogen from golf courses to groundwater has been routinely overstated, but that golf courses make an easy target for regulation compared to homeowners.
- Market research shows that homeowners fertilize on average ~1.7 times per year. It is unlikely that with two or fewer applications, most homeowners are exceeding the annual total nitrogen application rate suggested by the guidelines, but they may be putting more than the recommended amount of nitrogen for a single application down each time.

- NEIWPC should consider a lower nitrogen guideline (0.4 lb of water soluble nitrogen per 1000 square feet per application) for environmentally sensitive areas/sandy soils.
- NEIWPC should consider a lower annual nitrogen guideline of ~1.6 lbs/1000 square feet per year for older (>10 year) lawns or lawns with highly organic soil (>6% organic content).
- NEIWPC should write the guidelines such that they leave room for industry research and development on new products (like enhanced efficiency products). If products can be formulated to release nutrients as plants need them with more accuracy, there is less potential for runoff.
- NEIWPC should specifically include products formulated with nitrification inhibitors/urease inhibitors in the definition for enhanced efficiency products. This is in agreement with AAPFCO Publication #65.

Specific Comments on Fertilizer Application Best Management Practices (Feb 2013 Draft Part III):

- See comments above (under Nitrogen Guidelines) about timing of application and watering practices.
- Spreader calibration and use is still a missing piece of the puzzle that is poorly understood by homeowners.
- Homeowners generally need guidance or tools to help them estimate their lawn size.
 - Simple GIS tools (Google Earth) might help.
 - Generally, calculating areas of polygons on Google Earth requires the pro license (cost of \$400 per user per year), but it is possible to estimate areas using the ruler “line” tool that is enabled on the free version - it just takes a more work.
 - Fertilizer applicators would benefit from a written or video guide to estimating lawn size either using a measuring tape or pacing (may already be available via university extensions?).
- Once lawn size is established, homeowners need guidance on how much fertilizer to buy.
 - If label instructions match up well with the Maryland and New Jersey nitrogen application limits and the guidelines also adopt these limits, then home users can just buy the size bag that best matches their estimated lawn size and follow label directions.
 - There is a UConn extension calculator which will tell you how much fertilizer you need (in pounds) if you enter lawn area, desired nitrogen application rate and total nitrogen percentage in the product.
- It is questionable how willing home owners (and some professionals) will be to obtain soil test results before fertilizing.
- Promoting the use of a lawn care log-book or journal might help homeowners track their fertilization practices.

Specific Comments Other Clean Water/Healthy Lawn Practices (Feb 2013 Draft Part IV):

- NEIWPC should include recommendations about aeration/dethatching, which can increase turf's infiltration rate and reduce runoff, promote deeper rooting, etc.
 - UMass and UConn likely have recommendations that can be adapted/referenced.
- Many stakeholder recommend that NEIWPC remove the following statements/guidelines about the use of pesticide and combination pesticide-fertilizer products:
 - "Avoid use of pesticides as a preventative measure" - pesticides that are used to treat grubs or neutralize weed seeds (i.e. pretreatment) are generally much less toxic to the environment than pesticides needed to combat a well-established pest population and can be used in lesser amounts.
 - "Avoid use of pesticide/fertilizer combo products" - would have large negative impact on professional lawn care industry, which uses combo products at greater frequency than homeowners. Again, the chemicals in combo products tend to be less toxic than stand-alone pesticides that might later be necessary to treat emerged/mature weeds. Also, if an applicator chooses two stand-alone products instead of a combo product, it increases the opportunity for error in calculating application rate/application practice.
- If touching on pest control at all through the guidelines, NEIWPC should do so from an Integrated Pest Management (IPM) perspective.
- The "mow high" recommendation is good for homeowners, but need to understand it won't work everywhere - playgrounds, athletic fields and golf courses where safety and/or playability are high priority. There will also be areas where aesthetic needs won't allow high grass due to homeowners association bylaws, local ordinances, etc.
- The guidelines should include recommendations about the use of low input grass species like tall and fine fescues.
- In addition to leaving clippings on the lawn, the guidelines should stress the importance of keeping clippings off of pervious surfaces and away from storm drains.
- NEIWPC may want to reconsider the recommendation about letting the lawn go dormant - there are differing opinions amongst professionals about whether to water at all during the dormancy period. Depending on conditions, watering could nudge the lawn out of dormancy too early and decrease lawn health.

Comments on Outreach and Education on Lawn Fertilization

- It is important to start with outreach and education on watershed concepts - many people do not see how a lawn is connected to other lawns and to bodies of water via the storm sewer system.
- Stakeholders held differing opinions on which section of fertilizer users is most in need of education/outreach/training - homeowners or landscape professionals.
 - It is likely that education/outreach/training that was appropriately tailored for the audience would be beneficial to both groups.
 - Lawn care professionals generally receive some training and must be licensed to apply pesticides (but not fertilizer in most states - only New

Jersey and Maryland have plans for certification for professional fertilizer application).

- Home owners don't need any kind of training to go out and purchase/apply lawn chemicals.
- Stakeholders held differing opinions on the primary/most important source of information to DIY users: product labels or retail store clerks/retail signage.
- Improving information available to customers at retail garden/hardware stores might involve training for employees (many of whom may be temporary/seasonal) or open to the public training for anyone.
- It is important that the messages conveyed by outreach materials, particularly signs used at retail outlets, are not alarmist or aimed at scaring consumers away from caring for their lawns.
 - It is important that retail signs are updated to reflect the current product formulations - for example, now that most major manufacturers have removed phosphate from the majority of turf fertilizers, it may not be appropriate to have signs that discuss the risk of applying phosphate.
- Many home users rely on the bag label for information, so the best outreach and education efforts might involve the creation or promotion of tools to help homeowners best use the information on the product label (e.g. tools to help estimate lawn size, spreader calibration assistance, lawn care log book, 3" x 5" card or trifold of best practices, etc.).
 - Sticky labels to help reseal partially used fertilizer bags might be another useful option.
 - YouTube/online videos, smartphone apps and web-linked QR codes are all popular and modern outreach tools.
- Outreach for home owners should not be overwhelmingly complicated or too long (as the draft guidelines are) - pictures and diagrams (or videos and other interactive tools) are often more effective than lots of text.
- Some local watershed groups have successfully used pledges and other grass roots campaigns to motivate home owners to be more mindful of potential lawn care impacts on water quality.
- It is important for outreach messaging and strategies to be informed by available social research on peoples' lawn care behavior and attitudes.
- There are a lot of existing networks that can be used to share a regional message on clean water lawn care such as master gardeners networks, landscaping/nursery industry professional organizations and networks, university extensions, gardening clubs, homeowners associations, and municipal stormwater education programs.
- There is a potential role for NEIWPC as a regional clearing house for links to existing guidance from university extensions, watershed groups, fertilizer manufacturers, etc.
 - If most of the information that homeowners need is out there somewhere, NEIWPC shouldn't try to reinvent the wheel.